

# BOOK OF ABSTRACTS AND PROCEEDINGS

44th International Conference of the  
Stress, Trauma, Anxiety, and  
Resilience Society (STAR)

July 19th to 21st, 2023

University of Algarve, Faro, Portugal



# TECHNICAL INFORMATION

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44th International Conference of the Stress, Trauma, Anxiety, and Resilience Society (STAR)

July 19th to 21st, 2023 | University of Algarve, Faro, Portugal

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# INTRODUCTION

Stress and anxiety situations are increasing problems in recent years. In fact, anxiety disorders take first place in the ranking of global psychopathology, followed by depression. Many of these situations are traumatic, and it is essential to develop resilience to make people and communities more resilient to prevent these situations.

Several factors have contributed to this, including the high demand in the professional activity, the breakneck pace people have to live and make decisions, the high competitiveness, the lack of social support, the lack of control in many situations, the uncertainty and the insecurity. Recently, it has also highlighted the economic crisis and unemployment, the healthy problems, namely because of the Covid pandemic, and the war in Ukraine, as major factors for stress, anxiety and trauma that many people have.

It is increasingly important that people know how to handle these situations, through their coping strategies, and resilience skills.

Trying to understand the phenomena of stress and anxiety, as well as ways to evaluate these psychological variables, Charles Spielberger, who had been President of the American Psychological Association (APA), formed the Society for Test Anxiety Research (STAR Society), in 1980). This designation was changed to Stress and Anxiety Research Society, in 1991, and was again changed in 2020, becoming the Stress, Trauma, Anxiety, and Resilience Society (STAR Society).

This Society is a multi-disciplinary, international organization of researchers who share interests in theoretical, experimental and applied aspects of anxiety, stress, trauma, coping and resilience. Its members meet annually to present and exchange research findings and clinical applications on a wide range of stress and anxiety related phenomena.

Since the first conference in Belgium, the annual STAR conferences provide a unique opportunity to learn and share research and interventions carried out on these topics throughout the world. Every year STAR conferences attract many of the most world-renowned researchers in the field of stress, anxiety, trauma and resilience. At STAR conferences there are participants from many countries, allowing for a multicultural environment and the creation of research networks with colleagues from all over the world. In addition, STAR conferences are very collegial and personable, and provide plenty of opportunities for discussions, exchanges of ideas, and professional and interpersonal networking. Every year STAR conferences attract many of the most world-renowned researchers in the field of clinical and health psychology.

The field of Health Psychology, particularly in aspects related to managing stress and anxiety, as well as resilience and coping, it's an important scientific area at the University of the Algarve. In addition to the scientific production in this area, the organization of conferences has been instrumental in the affirmation and recognition of this scientific area at this University. Namely, precisely 10 years ago, we organized the 34th STAR world congress, which has been a good experience for the participants, according to the feedback given to us.

The history of this society is an indicator of its importance and quality, so it is with great honor and a sense of responsibility that we organized this STAR conference.

Now, 10 years later, we organize the 44th STAR International Congress, and we hope that this Congress will also be remembered as a good experience for all participants, in person or remotely, contributing to increase cooperation between colleagues from various countries in the field of stress, trauma, anxiety and resilience.

After a period of pandemic, resulting from Covid-19, in which it was not possible to hold congresses in person, we will hold the 44th STAR Conference in a hybrid format, with participation being able to take place in person or remotely.

The program adopts the usual structure of the STAR conferences, with opportunities for scientific as well as social exchange. We also wanted to introduce a cultural component, so the casual meeting, which precedes the start of STAR congresses, coincides with the opening of the exhibition “Stress approach by Visual Arts”.

Bearing in mind the importance of peace today, we decided that the theme of the 44th congress would be “Peace with yourself and others, for a less stressful and more resilient world!”.

The diversity and high quality of the Faro conference submissions enabled us to compile a scientific program which builds a bridge between theory and application. With its multidisciplinary focus, the scientific program covers a fine selection of topics which we hope will provide many opportunities for stimulating exchange with participants from all over the world.

More than 200 communications were presented in the form of lectures, symposia, free communications, and posters, by participants from more than 30 countries.

Bearing in mind that many participants are from Portuguese and Spanish speaking countries, although the official language of the congress is English, presentations were permitted in Portuguese and Spanish.

This book of abstracts and proceedings intends to leave a record of the works presented at this congress, being organized with the abstracts of the 4 conferences, the 10 symposiums, the 18 parallel sessions and the 47 posters, followed by the proceedings with the papers sent by some of the

authors. At the end, the list of authors is presented, with their contacts and affiliations, in order to allow the continuation of scientific cooperation between congress participants.

Coordinator  
Saúl Neves de Jesus

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# INDEX

<b>INTRODUCTION</b> .....	3
<b>CONFERENCES</b> .....	20
1. Does Dr. Google know better than my physician? – cyberchondria as a new anxiety phenomenon .....	21
2. Flexible preparadeness: Showcasing action in portuguese schools targeting pupils and teachers anxiety, after pandemics .....	22
3. Flood trauma and recovery: Systemic lessons from flood-prone Malaysia.....	24
4. New cognitive-affective trainings to promote adaptive emotion regulation and stress resilience .....	25
<b>SYMPOSIUMS</b> .....	26
1. Dealing with the Challenges of the Modern World in an Educational Context .....	27
2. Mixed-methods stress audits in high-pressure environments .....	32
3. Translating Stress and Coping Research to Help People to Deal with Stress in Diverse Populations.....	37
4. Multiple aspects of combat service: Between resilience and vulnerability.....	42
5. The multifinality of childhood maltreatment in adulthood” .....	47
6. Aging in the Shadow of COVID-19 Stress: Psychiatric Trauma Symptoms, Sleep Disturbances, Accelerated Psychological and Epigenetic Aging are Respectively Mitigated by Less Loneliness, Resilience, Positive Aging Stereotypes and Mindfulness.....	53
7. Cardiovascular responses to acute psychological stress: research across the field.....	59
8. Interpersonal Trauma: The Complex Pathways Involved in its Detrimental and Transmissible Effects .....	65
9. Effects of the Russian-Ukraine War: Role of Resilience, Mastery and Self-Efficacy in Dealing with Threat and Distress .....	71
10. Psychology of Health and Well-being applied to Tourism .....	75
<b>FREE COMMUNICATIONS</b> .....	80



PARALLEL SESSIONS 1 .....	81
1. Positive youth development and resilience in a sample of Spanish emerging adults .....	81
2. Predictive model of family accommodation in mothers of Mexican adolescents with emotional problems .....	82
4. Analysis of the conceptual structure of the relationship between disability and perceived stress .....	84
5. Socio-educational characteristics of stress in university students	85
6. Relationship between aggression, daily stress and coping in children from 3 to 6 years of age.....	86
PARALLEL SESSIONS 2.....	87
1. Social inequalities in depressive symptoms of children with cancer and their parents .....	87
2. Relations between coping strategies and quality of life of children with cancer and their parents .....	88
3. Dropout Intentions of Soldiers in Mixed-Gender Combat Battalions: A Longitudinal Analysis During Basic and Advanced Combat Training..	89
4. Mental health difficulties among psychologists - how vulnerable are we?.....	90
5. Perception of life events in adolescents before and during confinement by COVID-19 .....	91
6. The contribution of mindfulness long term training on personal and professional coping for therapists living in a conflict zone .....	92
PARALLEL SESSIONS 3.....	93
1. Well-Being and Resilience at Work During the COVID-19 Pandemic among Researchers Within the Mental Health Field In Croatia: A Four Wave Longitudinal Study .....	93
2. Integrative Self Development Education for University Student Wellbeing.....	94
3. Self-compassion and psychological wellbeing in construction apprentices.....	95
4. The association between daily routines and affective disorders amid and after COVID-19: A systematic review and meta-analysis.....	96
5. The Meaningfulness of Life: Where can we find it? .....	97

6. Resilience of Families with Complex Needs whose Children Manifest Behavioural and Emotional Problems: Oximoron or Possibility?.....	98
<b>PARALLEL SESSIONS 4</b> .....	100
1. Work-Family Conflict and Relationship Satisfaction During Covid-19: The Role of Dyadic Coping.....	100
2. Resilience and Subjective Well-Being in Helping Professionals: The protective role of Hope in Burnout.....	101
3. Burden, quality of life, coping and resilience – contributions to studies of families with children with cerebral palsy.....	102
4. Adaptation and Validation of the Resilience Scale for Children.	103
5. Adaptation and validation of the Child and Youth Resilience Measure for the Portuguese culture .....	104
6. Effectiveness of a Muscle Relaxation Intervention in Distressed Patients with a Chronic Diabetic Foot Ulcer: A Longitudinal Study .....	105
<b>PARALLEL SESSION 5</b> .....	106
1. Training for Healthcare Professionals from a Contextual Behavioral Approach for the management of suicidal risk.....	106
2. The role of depression in the link between self-disclosure and relationship quality in military couples: A dyadic approach .....	107
3. Mixed-couples: Should I Stay or Should I Go? The effects of acculturation on psychological health and well-being and life satisfaction in non-Jewish, English-speaking partners of Jewish-Israelis living in Israel.....	108
4. A Ride in an Autonomous car: A Journey Experience .....	109
5. Circadian rhythm and sleep disruptions as predictors of prenatal stress and depression symptoms.....	110
<b>PARALLEL SESSIONS 6</b> .....	111
1. Attachment styles and reactions of Ukrainian citizens to war trauma .....	111
2. Blast Injury: Losing a Mother to Intimate Partner Femicide.....	112
3. Enhancing PTG in a PTSD Intervention for Couples: Client and Therapist Successes and Challenges .....	113

4.	A Theoretical Perspective on Burdening Factors and Resources to Prevent Secondary Traumatization among Animal Activists .....	114
5.	Linking minority stress to substance abuse in LGB adults: The mediating effect of sexual harassment.....	115
6.	Sisu and perceived equality modulate well-being in workplace	116
<b>PARALLEL SESSIONS 7</b> .....		117
1.	A Mindfulness-Based Intervention for Perfectionism: A Pilot Study.....	117
2.	Where do I look first? The time course of attentional bias in behavioral inhibited children .....	118
3.	Is cognitive behavioural therapy effective in Anxiety Disorders when there is comorbidity with Autism Spectrum Disorders? .....	119
4.	Sentimento de comunidade, temperamento e participação comunitária em idosos institucionalizados .....	120
5.	Resiliência e Empoderamento para um Envelhecimento Saudável [Resilience and Empowerment for Healthy Aging] .....	121
6.	A perspectiva dos jovens sobre cidades amigas da idade [The perspective of young people on age-friendly cities] .....	122
7.	Coping Strategies and Quality of life in Adults with asthma: implications for clinical practice.....	123
<b>PARALLEL SESSIONS 8</b> .....		124
1.	Eye gaze behavior during a face-to-face conversation: effects of anxiety, conversational role and partner gaze direction? .....	124
2.	COVID-19 Anxiety, Parenting and Child Emotion Regulation: A cross-cultural study with Brazilian and Portuguese parents .....	125
3.	When the times get tough the toughs get funny: Means by which humor buffers against death anxiety emerged during the COVID-19 outbreak .....	126
4.	Germans' psychological responses to refugees: Differentiating patterns of threat perceptions, attitudes, intergroup emotions, and their antecedents.....	127
5.	Specific Learning Disorders and Parental Anxiety of Childs' Learning.....	128
6.	User experiences of an online intervention for PTSD in Arabic.	129

PARALLEL SESSIONS 9.....	130
1. Relationship between adverse childhood experiences, currently available resources and life satisfaction of professional helpers.....	130
2. Training medics for stress resilience.....	131
3. Community Resilience in the Face of Wildfires: A Portuguese Adaptation of The Index of Perceived Community Resilience .....	132
4. Posttraumatic growth after the earthquake: the role of resilience.....	133
5. The good, the bad, the lonely: How the interaction between the positive and negative effects of supportive relationships influence both loneliness and psychological distress.....	134
PARALLEL SESSIONS 10 .....	135
1. The role of positive interpretations and positive rumination on predicting resilience: a longitudinal study .....	135
2. Self-compassion, well-being and relationship satisfaction among married couples in ultra-orthodox Israeli society .....	136
3. Distress and mental well-being among young people exposed to an ongoing threat throughout their life: Risk factors and resilience resources.....	137
4. Work-related coping behaviour and experience patterns in prospective teachers across European countries .....	138
5. Executive and resilient?: a systematic review of studies testing the relation between components of executive functions and different forms of resilience .....	139
6. Emotion Regulation and Parental Burnout: A systematic review and meta-analysis .....	140
PARALLEL SESSIONS 11 .....	141
1. Trauma-focused psychological intervention programs for children and adolescents who have experienced domestic violence: A systematic review about efficacy and effectiveness .....	141
2. Narrative Exposure Therapy for firefighter with post traumatic stress disorder: a case report.....	142
3. Prematuridade e Trauma.....	143

4. The impact of early life stress on the development of adult depression and anxiety: the role of emotion regulation, coping strategies and personality traits .....	144
5. Mothers' childbirth-related posttraumatic stress symptoms: The protective role of informal and formal support .....	145
<b>PARALLEL SESSIONS 12</b> .....	146
1. Anxiety, Depression, and Social Media .....	146
2. Does Dr. Google know more than my gynecologist - cyberchondria during pregnancy .....	147
3. Students' self-efficacy and test anxiety: A mixed methods evaluation of self-efficacy's adaptive role in navigating test anxiety... ..	148
4. Contributing and Inhibiting Factors of Healing from Trauma from the Perspective of Women who Received Inpatient Treatment for Severe Trauma-Related Symptoms Including Eating Disorders.....	149
5. Trait Anxiety, Self-Compassion, and Complicated Grief: Examining the Distinct Role of Perceived Social Support.....	150
6. Stress mindset is associated with COVID-19 acute stress symptoms one year into the pandemic .....	151
<b>PARALLEL SESSIONS 13</b> .....	152
1. Resource Management for Adolescents: Conception and Evaluation of a Conservation of Resources-Training .....	152
2. Assessing stress responding and recovery during high-fidelity training in pre-hospital emergency medicine.....	153
3. Evaluating a digital mindfulness-based psychoeducation program among cancer survivors: A preliminary analysis .....	154
4. How teacher and classmate support relate to students' stress and academic achievement .....	155
5. Well-being and stress management increases through an online intervention with University students pursuing a teaching career .....	156
<b>PARALLEL SESSIONS 14</b> .....	157
1. Work-family conflict, coparenting and father involvement among dual-earner couples .....	157
2. Does attachment style moderate crossover of stress and burnout in married couples?.....	158

3. A Scoping Review of Collegiate Student’s Stress during COVID-19.....	159
4. The different shames of burnout: A scale development and validation study.....	160
5. Principals’ Experiences of Stress and Coping within COVID-19..	161
6. Psychological Distress and Barriers to Utilization of Mental-Health Services Among Collectivistic Minorities: The Case of the Bedouin Arab Community in Israel .....	162
<b>PARALLEL SESSIONS 15</b> .....	164
1. Ethnic Identity as an Explanatory Factor of Emotional Distress Symptoms: Validation of the Ethnic Identity Scale – Arabic version (EIS-Ar).....	164
2. Ethnic Identity & Barriers to using Mental Health Services among Arab-Bedouin Women coping with Emotional distress .....	165
3. Dark Chocolate Consumption and Well-Being: A Prospective Study Among Nurses .....	166
4. The Mediating Role of Emotional Distress in the Relationship Between Differentiation of Self and the Risk of Eating Disorders .....	167
5. Modeling Linkages Between Self-Efficacy, Normalization, and Well-Being Factors Among Israeli Mothers of Children with Neurodevelopmental Disorders .....	168
6. The intrapersonal and interpersonal processes of fear of recurrence among cervical cancer survivors: A qualitative study .....	169
<b>PARALLEL SESSIONS 16</b> .....	171
1. The impact of hybrid comprehensive telerehabilitation on anxiety in heart failure – the TELEREH-HF Randomized Clinical Trial.....	171
2. Depression and suicidal ideation in students after social lockdown due to COVID-19 .....	172
3. Partner-related factors associated with mothers’ postpartum posttraumatic stress symptoms: What matters most and how? .....	173
4. Psychometric properties of the European Portuguese version of the modified perinatal PTSD questionnaire (PPQ-II).....	174
5. Daily associations between meaning-making and meaning made in cancer patient-caregiver dyads: interaction and mediating effects ....	175

6. Understanding college students' knowledge of services and support seeking behaviors according to race, ethnicity, and citizenship in the US.....	176
<b>PARALLEL SESSIONS 17</b> .....	177
1. Dissociative amnesia – a stress- and trauma-based psychiatric disease.....	177
2. The 'Two-hit hypothesis' of stress-related dissociative amnesia	178
3. School Leadership as a predictor of teacher stress during and coming out of COVID-19 .....	179
4. The Experience in School after the Loss of a Parent: Children, Adolescents and Young Adults.....	180
5. The Differences in Social Anxiety Levels Between Syrian Young Adult Refugees and Turkish Young Adults.....	181
6. Experiences and perceived Post Traumatic Growth in childhood cancer survivors and their siblings .....	182
<b>PARALLEL SESSIONS 18</b> .....	183
1. The Relationship Between Sociopolitical Stress and Intimate Partner Violence Among Palestinians in Israel: Examining Cognitive Appraisals and Psychological Distress as Serial Mediators.....	183
2. The Relationship Between National Racism and Child Abuse Among Palestinians in Israel: The Moderating Role of Coping Strategies .....	184
3. Health-Related Quality of Life and Mental Distress in Cortisol Responders vs. Non-Responders to Psychosocial Stress in Patients after Acute Coronary Syndromes.....	185
4. The relationship of being permanently online, emotions and parental stress of mothers. The role of educational training .....	186
5. Sources of stress and anxiety symptoms in university students during the pandemic.....	187
6. Extrinsic Emotion Regulation Choice: the Role of Depression Symptoms .....	188
<b>POSTERS</b> .....	189
1. Action crisis and personal goals in post-trauma rehabilitation process – a pilot study.....	190

2. The Moderating Role of Subjective Nearness to Death in The Relationship Between Posttraumatic Stress Symptoms and Future Time Perspective Among Middle-life and Old Adults .....	191
3. Understanding the Role of the Coach-Athlete Relationship in Promoting Thriving in Gymnastics: An Autoethnography .....	192
4. Impact of post-COVID conditions on mental health: A qualitative study.....	193
5. Living with Stigma and Discrimination during COVID-19 pandemic: The association with contamination/quarantine, stress, anxiety, and cognitive-emotional regulation strategies .....	194
6. Fear of SARS-CoV-2 Infection and its Association with Anxiety Symptoms in Portuguese University Students: The mediation role of Stress and Sleep Difficulties .....	195
7. Cyberchondria and its instruments – a review .....	196
8. The mediator role of experiential avoidance in the relationship between mental health symptoms and severity indicators of self-harm among adolescent psychiatric patients.....	197
9. Anxiously or avoidantly in love and under stress – how will I treat you? A dyadic diary study .....	198
10. Coping Profile Differences on High-School and Collegiate Academic Achievement: A Person-centered Approach.....	199
11. The 5Cs of positive youth development and healthy lifestyles in a sample of Spanish emerging adults .....	200
12. Differences by demographic and socioeconomic variables in positive youth development in Spanish undergraduates .....	201
13. Self-acceptance as a preventive resource in German social work students living with their parents .....	202
14. Harmful sisu mediates the relationship between stress and the tendency to drop out of studies among university students.....	203
15. Women Friendly: The effectiveness of a woman-centered childbirth intervention .....	204
16. What forms of adversity do the lay public classify as traumatic? Exploring consensus and dissensus in lay representations of trauma	205
17. COVID-19 Lockdown: Experience, Perception, and Coping .....	206



18. The role of teachers in cyberbullying through emotion regulation and social support to foster resilient factors.....	207
19. Managing diversity from the employers' perspective as a resource for integrating women from minority groups .....	208
20. The Brief COPE: Measurement invariance and psychometric properties among community and at-risk Portuguese parents .....	209
21. What factors explain anger and mental health during the COVID-19 pandemic? The case of Israeli society.....	210
22. Psychological Functioning During the COVID-19 Lockdowns: A Three-Wave Longitudinal Study .....	211
23. Mindfulness and Perfectionism Related Distress: The Mediating Role of Motivation .....	212
24. Anxiety and Emotion Regulation Difficulties among Young Adults with Self-Harming Behavior.....	213
25. Progressive Muscle Relaxation in people with alcohol dependence.....	214
26. Mindfulness: intervention program for people with alcohol dependence .....	215
27. Effect of head-down-tilt (HDT) as gravitational stress measured by the vegetative tone (Kerdo index).....	216
28. The promotion of well-being and happiness as coping strategies in tourism: An exploratory study .....	217
29. Anxiety and Perceived Cognitive Functioning in Cancer Survivors: an Exploratory Correlation Study.....	218
30. Self-evaluative salience of physical appearance as a common factor for social anxiety and eating disorders .....	219
31. A Trauma-Focused CBT for Victims of Domestic Violence Living in Shelters: A Protocol for a Randomized Controlled Pilot Trial .....	220
32. The association between minority stress and psychological distress: The moderator role of self-compassion .....	221
33. Growth out of a crisis: characteristics of a family climate that help one parent's long-term coping, due to a life threatening disease of the other parent.....	222
34. Does gender influence the anxiety levels of pre-trial detainees?.....	223

35. Stress, Trauma, Anxiety and Resilience: Discrimination, Depression and Anxiety in the Islamic Community in Portugal .....	224
36. Parental Stress, Prematurity and the NICU .....	225
37. Coping Adaptativo e Qualidade de Vida em doentes com VIH/SIDA.....	226
38. Relationship between microaggression and perceived stress in people belonging to sexual minorities .....	227
39. Anxiety, depression and suicidal ideation in young-adult women victims of dating violence .....	228
40. Domestic violence and post-traumatic stress disorder: a case report.....	229
41. Factors fostering resilience and post-traumatic growth during the Covid-19 pandemic: A systematic review.....	230
42. Genetic vs enviromental factors in time perspective: A twin study.....	231
43. Comparison between an in-person and a synchronous online mindfulness-based intervention: a quasi-experimental study .....	232
44. Cyberbullying e empatia numa amostra de jovens portugueses.....	233
45. The search for well-being of university professors: is this possible?.....	234
46. Difference and influential analysis of irrational beliefs and competitive anxiety among Hungarian athletes .....	235
47. Child's well-being and mother's life satisfaction: Examining the role of mother's social support in a two-wave multi-source study .....	236
<b>PROCEEDINGS</b> .....	237
1. A perspetiva dos jovens sobre cidades amigas da idade.....	238
2. Análisis de la estructura conceptual de la relación entre la discapacidad y el estrés percibido .....	248
3. Coping strategies and quality of life in adults with asthma: implications for clinical practice .....	264
4. COVID-19 Anxiety, Parenting and Child Emotion Regulation: a Cross-Cultural Study with Brazilian and Portuguese Parents.....	279

5. Effect of Head-Down-Tilt (HDT) as Gravitational Stress Measured by The Vegetive Tone (Kerdo Index).....	296
6. Fear of SARS-CoV-2 infection and its association with anxiety symptoms in Portuguese university students: the mediation role of stress and sleep difficulties .....	314
7. Is cognitive behavioral therapy effective in anxiety disorders when there is comorbidity with autism spectrum disorders? .....	326
8. Resiliência e Empoderamento para um Envelhecimento Saudável [Resilience and Empowerment for Healthy Ageing] .....	335
9. Sentimento de comunidade, temperamento e participação comunitária em idosos institucionalizados [Sense of community, temperament and community participation in institutionalized elderly].....	351
10. Sisu and perceived equality modulate well-being in workplace.	369
11. Living with Stigma and Discrimination during COVID-19 pandemic: The association with contamination/quarantine, stress, anxiety, and cognitive- emotional regulation strategies .....	385
12. The Development of Children’s Connection with Nature and the Effects on Resilience .....	396
<b>CONTACTS AND AFFILIATIONS</b> .....	415

# CONFERENCES

# 1. DOES DR. GOOGLE KNOW BETTER THAN MY PHYSICIAN? – CYBERCHONDRIA AS A NEW ANXIETY PHENOMENON

**Nataša Jokić-Begić**

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## ABSTRACT

In the modern era, the internet plays a crucial role in providing health information, with an overwhelming 80% of people turning to online resources for this purpose. While the internet's accessibility can be highly beneficial, recent research highlights a concerning aspect: frequent searches for health-related information can have adverse effects on one's mental well-being. This growing concern is referred to as cyberchondria, wherein individuals experience heightened anxiety due to extensive online health-related searches. The universal nature of cyberchondria has led to significant attention, considering its potential to distress individuals and influence their health behaviors. This presidential address aims to present a comprehensive overview of research in the field, divided into four main parts. Firstly, it delves into potential risk factors associated with cyberchondria, such as gender (being female), age (younger individuals), higher education, or the presence of psychological disorders. Understanding these risk factors can shed light on the reasons behind cyberchondria's prevalence. Secondly, the address focuses on the measurement of cyberchondria, which is still an evolving area of study. The lecture introduces the Short Cyberchondria Scale (Jokić-Begić et al., 2017), a convenient tool for cross-cultural research and internet application. Although the scale has demonstrated potential as a research instrument, further psychometric testing is required, especially in diverse cultural contexts, to ensure its reliability and validity. The third part of the lecture explores the role of cyberchondria in contributing to the development of pathological anxiety during the current pandemic period. As the pandemic has heightened health concerns and increased online information-seeking behaviors, understanding the interplay between cyberchondria and pandemic-induced anxiety becomes crucial. Finally, the address discusses future research directions in the realm of cyberchondria, along with practical implications. Identifying and addressing cyberchondria's implications can lead to better mental health outcomes and guide individuals to make informed and responsible choices in their health-related searches on the internet.

**Keywords:** cyberchondria, online health information searching, pandemic, anxiety, mental health

## **2. FLEXIBLE PREPARADENESS: SHOWCASING ACTION IN PORTUGUESE SCHOOLS TARGETING PUPILS AND TEACHERS ANXIETY, AFTER PANDEMICS**

**Margarida Gaspar de Matos, PhD**  
University of Lisbon, ISAMB, Portugal

### **ABSTRACT**

The mental health of children, adolescents and young people became a heightened concern during the pandemic. The Ministry of Education, through the DGEEC, established the "School Observatory of Psychological Health and Well-being" to address this issue in Portugal. Its main objective was to collect and track psychological health and well-being indicators in Portuguese schools to develop tailored intervention strategies according to the identified needs. Since 2022, the Observatory has published three reports and an e-book, which resulted in several recommendations that have influenced Portuguese public policies. The first report revealed that more than a third of Portuguese students and half of the participating teachers showed symptoms of psychological distress namely depressive and anxious symptoms. In the published eBook, in-depth studies showed that among students, girls, and older students were more psychologically vulnerable namely presenting more depressive and anxious symptoms. Meeting the recommendations for physical activity, sleep, and screen time and having stronger socioemotional skills were associated with fewer symptoms of psychological distress namely depressive and anxious symptoms. Regarding teachers, being older and having more years of service increases the likelihood of having psychological distress, while an effective school leadership and a positive school environment help mitigate these risk factors. A set of actions were previewed that included a "hands on" teachers' training with focus on Social Emotional Competences and Self-Care, a whole school approach including psychologists and principals and a Platform to get teachers connected sharing good practices. The primary research will be repeated in 2024 to monitor the impact of the implemented recommendations.

Another national program addressing psychological health in the community is The Cuida-te+ Program (Take Care +)/ Portuguese Institute of Sports and Youth (IPDJ) that aims to promote youth health and healthy lifestyles. It targets young people aged 12 to 25. Was presented the evaluation of the Cuida-te+ Program (Take Care +) through the coordination and monitoring of the work of 19 Trainee Psychologists, centered in the 18 districts of the Mainland (2 in Lisbon) and in the following devices: *Mobile Units/ Vans* that

allow meeting young people in schools and on their living communities, *Youth Health in Portal/* aiming at increase Health Literacy and *Youth Health Counseling Offices/* where a pre-post quasi experimental study was carried on highlighting a decrease on stress and on depressive and anxious symptoms and an increase of quality of life perception among the young people that were included in the program. Both the *School Observatory of Psychological Health and Well-being /DGEEC* and the *Cuida-te+ Program/IPDJ* are innovative in the European space and promising in their objectives, resources and proximity option.

**Keywords:** schools, children and adolescents; young people; teachers; lifestyles; mental health, national program

### **3. FLOOD TRAUMA AND RECOVERY: SYSTEMIC LESSONS FROM FLOOD-PRONE MALAYSIA**

**Alvin Lai Oon Ng**

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#### **ABSTRACT**

Malaysia has been hit by floods more often recently, on top of the annual monsoons have been wreaking havoc in flood prone areas. These floods significantly impact the livelihood of communities in various ways including loss of home, health, lives and financial security. Very few researches have been done to study psychological functioning following flood exposure in Malaysia. Flood relief centers typically provide physical aids and basic necessities, but there is hardly any access to psychological help. Although psychological first aid, as well as mental health and psychosocial support are increasingly more common in these relief centers, there is little or no research into their efficacy and impact. This keynote addresses the concerns of flood trauma and processes for recovery in Malaysia by looking at available data from psychological interventions and post-trauma functioning. Systemic factors that contribute to recovery and prevention of future trauma are discussed in line with global evidence-based policies and standards, as well as opportunities for further studies. The main take home points for this presentation are: (1) psychosocial help during disasters should address systemic and secondary stressors, and not just individual factors of distress; (2) disaster response strategies would benefit from being informed by data; (3) much needs to be researched on with regards posttraumatic growth following regular flood disasters; (4) given the current climate crisis with significantly increased natural disasters, upscaling of interventions for trauma recovery is more necessary than ever; and (5) opportunities exist for validation of existing methods of post-disaster management and risk assessments for future disasters.

**Keywords:** flood, posttraumatic growth, psychosocial support, disaster management, Malaysia



## 4. NEW COGNITIVE-AFFECTIVE TRAININGS TO PROMOTE ADAPTIVE EMOTION REGULATION AND STRESS RESILIENCE

**Alvaro Sanchez Lopez**

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### ABSTRACT

Scientific research has made considerable progress in identifying cognitive-affective mechanisms underlying the onset and maintenance of stress-related symptomatology, such as depression and anxiety. It has been shown that attentional control deficits, negative attention and interpretation biases, and impairments in emotion regulation are key features affecting the capacity to develop resilient responses to stress and adversity that increase the vulnerability to emotional psychopathologies. However, little is known about the interplay among these cognitive-affective mechanisms, as a means to inform new fine-grained interventions targeting them to effectively promote stress resilience. This keynote addresses this issue, and presents different studies using innovative eye-tracking methods and online implementations using new technologies to investigate the relationships among distorted attention-interpretation processes and emotion regulation and their role in reducing emotional symptoms and facilitating stress resilience. Ultimately, the series of studies presented show strong empirical support on: 1) how specific mechanisms of attentional inhibition regulate emotional interpretations that account for individual differences in emotional responses to stress; 2) how new lab-based intervention strategies can be developed to modify such attentional control and cognitive bias impairments to improve emotion regulation; and 3) how these methods can be fully implemented online as multi-session remote interventions that reduce the use of maladaptive emotion regulation and buffer against the effects of major stressor in real life contexts. Ultimately, these new interventions are promising as add-on modules that can be used to maximize the effectiveness of psychological interventions to reduce the pernicious emotional effects of major stress.

**Keywords:** attention training, cognitive biases, emotion regulation, online psychological interventions, stress resilience

# SYMPOSIUMS

# 1. DEALING WITH THE CHALLENGES OF THE MODERN WORLD IN AN EDUCATIONAL CONTEXT

Coordinated by Erica Frydenberg  
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## GENERAL ABSTRACT

The contemporary world is full of challenges that individuals and communities need to meet. To meet these challenges, children need to become skilled and resourceful. This symposium covers programs that are designed to build social emotional skills that contribute to coping resources in children and their teacher.

The first two papers describe resilience building through an environment education program delivered in an early childhood setting in Melbourne, Australia. The two papers draw upon a similar data base reporting both qualitative and quantitative aspects of the studies.

The third paper reports on resilience building in a Taiwanese early childhood setting and the fourth paper in the symposium reports on a resilience training program for teachers so as to enable them to offer quality social emotional programs to their students.

Together these four papers illustrate how schools have become powerful vehicles for the development of social emotional skills as key contributors to wellbeing.

**Keywords:** resilience, nature, education program, early childhood, social-emotional programs

# COMUNICATION 1

## DEVELOPING RESILIENCE THROUGH CHILDREN'S CONNECTION WITH NATURE

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### ABSTRACT

Amongst the challenges both emerging and past in the forms of natural disasters (bushfires), pandemics (Covid-19), and other technological changes, the necessity for children to develop resilience to deal with adversities, foreseen and unforeseen, is of vital importance. The development of resilience has been studied from the early years of a child, consequently there has been growing interest in examining the effects of nature and the well-being of children.

**Objectives:** The current study aims to investigate the effects of children's connection with nature and the effects on resilience through a qualitative study.

**Method:** The study employed a mixed methods approach and was conducted within an Early Learning Centre in Melbourne, Australia. Children aged 4-5 years old took part in a Learning in Nature program. The focus of this presentation will be the thematic analysis that was conducted with 662 student draw-tellings with reference to the qualitative data collected during the start and end program stage.

**Results:** 4 themes emerged from our findings: naming and nature cycles, fostering of intrapersonal connections, facilitation of interpersonal relationships, and children seeing themselves as agents of change within the environment. Moreover, the results from this study provides preliminary support for nature contact and the positive effects on resilience factors, namely, social relationships, cognitive functioning, and self-esteem.

**Conclusion:** This study corroborates with the findings that interacting with the natural environment can bring social-emotional benefits and learning to children. Results from this study could prove beneficial for researchers and educators within ecopsychology, early developmental, and positive psychology.

**Keywords:** connection to nature, resilience, interpersonal connection, intrapersonal connection, agency

# COMUNICACION 2

## RESPONDING TO ENVIRONMENTAL CHALLENGES IN THE EARLY YEARS

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### ABSTRACT

Early childhood education for sustainability (ECEFS) provides an opportunity to instill sustainable attitudes and behaviours towards the environment from a young age, alongside social emotional Social and Emotional Learning (SEL) outcomes. It is theorised that EFS provides opportunities for children to work together, overcome challenges in the natural environment and develop concern for the more-than-human world, resulting in improved social skills, coping strategies and empathy.

**Objectives:** The current study investigated Learning in Nature Program (LNP), and ECEFS curriculum, investigate change in environmentally sustainable attitudes and SEL outcomes.

**Methods:** Following the implementation of a LNP program data from the 2021 (n = 27) and 2022 (n = 56) cohorts on the Strengths and Difficulties Questionnaire, Empathy Questionnaire and Children's Coping Scale were subjected Analysis of Variance. This was supported by qualitative data, including parent questionnaires (n = 17) and children's drawings.

**Results:** Significant decreases in Peer Problems ( $\eta^2 = .18$ ), Emotion Problems ( $\eta^2 = .23$ ), Hyperactivity ( $\eta^2 = .23$ ), Conduct Problems ( $\eta^2 = .15$ ), Negative Coping Emotional Inhibition ( $\eta^2 = .12$ ) and Negative Coping Emotional Expression ( $\eta^2 = .3$ ) were observed as expected. Significant increases in Positive Coping ( $\eta^2 = .43$ ), Prosocial Behaviour ( $\eta^2 = .28$ ) and Empathy Prosocial Actions ( $\eta^2 = .23$ ) were also observed.

The hypothesis that children's pro-environmentally sustainable attitudes and behaviours would increase after completing the LNP was generally supported with qualitative data from parent questionnaires and children's drawing-tellings.

**Conclusions:** This evaluation of the LNP supports the expansion of similar EFS programs to other early childhood settings.

**Keywords:** coping, early childhood education, education for sustainability, empathy, social and emotional learning

# COMUNICATION 3

## SKILLING CHILDREN FOR EVERYDAY LIFE: COPE-RESILIENCE IN TAIWAN

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### ABSTRACT

**Objectives:** The objective of this presentation is to explore the effectiveness of the Chinese COPE-Resilience Program in building resilience in young children by examining whether gender and age influence the acquisition of social-emotional skills. Resilience is an outcome of healthy social-emotional development and effective coping skills, and this study aims to understand the program's impact on these outcomes.

**Method:** The study involved a quasi-experimental design in a privately managed public preschool in Taipei, Taiwan, with 60 children (30 Pre-K and 30 Kindergarten) participating in the intervention. The program's impact on children's emotional knowledge, empathetic responses, empathy, prosocial behavior, inhibitory control, working memory, problem behavior, and positive and negative coping were assessed before and after the six-week intervention.

**Results:** The program's effectiveness was mostly unaffected by children's class level and gender, except for measures of teacher-rated empathy and positive and negative coping. Kindergarten children demonstrated a higher level of empathy than Pre-K children, with a significant increase observed in empathy scores from pre- to post-intervention. Girls in the Pre-K class initially displayed more positive coping than boys, but the frequency of their positive coping behavior decreased dramatically after the program. Conversely, no gender differences were observed in the kindergarten class before the program, but a significant increase was observed in girls after the program.

**Conclusion:** These findings highlight the importance of age, gender, and teacher differences in program outcomes and confirm the effectiveness of the Chinese COPE-Resilience Program in children aged four to six years old in Taiwan.

**Keywords:** coping, early childhood education, gender and age difference, empathy, social and emotional learning

# COMUNICATION 4

## SOCIAL EMOTIONAL LEARNING: BUILDING RESILIENCE AND RESOURCEFULNESS IN LIFE FOR CHILDREN AND ADULTS ALIKE

Marissa Yi-Hsuan & Jie-Shu Hwang  
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### ABSTRACT

**Objectives:** In today's challenging world, social emotional learning (SEL) is essential for both children and adults. SEL equips individuals with critical life skills such as self-awareness, self-regulation, empathy, and social skills. The BEST ME program was conducted to enhance the social-emotional competencies of teaching professionals in Taiwan, enabling them to better support children's development in this area and promoting their mental health and social emotional skills.

**Method:** Thirty-seven teachers in the special education sector participated in this study. The effectiveness of the program was evaluated by measuring changes in teachers' mental health and their social-emotional skills before and after a five-session workshop. In addition to quantitative data, teacher feedback was collected throughout the program, which provided additional insights into the program outcomes and allowed for a more personal and subjective perspective on their experiences and growth throughout the program.

**Results:** The findings of the study indicate that the BEST ME program had a significant positive impact on the social-emotional skills and mental health of the participating teachers. The results demonstrated improvements in all measures assessed, including self-awareness, self-management, social awareness, relationship skills, depression, anxiety, and stress. In addition, feedback from the teachers indicated that they felt empowered, loved, and enriched as a result of their participation in the program. They also expressed confidence in their ability to transfer and apply the skills they learned to their work with students.

**Conclusion:** These results suggest that the BEST ME program may be a valuable resource for improving the well-being and effectiveness of teachers in the special education sector.

**Keywords:** social and emotional learning, professional development, teacher well-being

## 2. MIXED-METHODS STRESS AUDITS IN HIGH-PRESSURE ENVIRONMENTS

**Coordinated by Lee Moore**

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### GENERAL ABSTRACT

Workplace stress is now considered a 21st century global health epidemic as it is linked to seven out of the 10 leading causes of death (Cooper et al., 2009). According to the Health and Safety Executive (2021), jobs showing the highest stress are those where individuals are required to perform under high-pressure (e.g., medicine, policing, sport). Thus, urgent research is needed to identify the essential ingredients required to develop effective stress management interventions (Bowling et al., 2012). One tool that is particularly useful in this regard is a stress audit, which uses a variety of methods to comprehensively identify key stressors, the impact of such stressors on important outcomes (e.g., health, performance, well-being), and 'at-risk' groups (Nielsen et al., 2010). Despite the potential benefits of stress audits, they have rarely appeared in the literature to date (see Rumbold et al., 2018 for an exception). Thus, the aim of this symposium is to showcase innovative and rigorous mixed-methods stress audits from a range of high-pressure domains (i.e., emergency medicine to elite sport). After a brief introduction, in the first presentation, Dr Zoe Anchors will present preliminary data from an audit run with over 7,000 ambulance staff in the south-west of England. Next, in the second presentation, Dr Lee Moore will outline the key findings from an audit conducted with ~200 midwives from an NHS Trust in the UK. Then, in the third presentation, Dr Rachel Arnold will summarize the results of an audit performed with over 400 police personnel from three UK forces. Next, in the final presentation, Mr Tommy Hughes will present the results of an audit run with ~800 employees from a championship-winning Formula One team. The symposium will conclude with a summary highlighting the potential value of stress audits and a facilitated interactive discussion.

**Keywords:** appraisals, coping, human thriving, stressors, well-being



# COMUNICATION 1

## EXAMINING THE OCCUPATIONAL STRESS EXPERIENCED BY AMBULANCE STAFF: A MIXED- METHODS STRESS AUDIT

Zoe Anchors, Lee Moore, Rachel Arnold, Helen Nicholson, Nicola Walsh,  
& Sarah Voss

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### ABSTRACT

**Objectives:** UK ambulance staff are the most burnt out in the NHS and work stress is a key reason for staff absence. Work stressors such as lack of manager support and poor work-life balance have previously been identified for ambulance staff. The current study will investigate which specific stressors have the most negative impact on health, well-being, performance, and intention to leave; whether these impacts are mediated by cognitive appraisals or coping strategies; and which ambulance staff are most at risk of stress-related problems.

**Methods:** A mixed-methods stress audit will be conducted amongst ambulance staff in Southwest England (n = 7045), comprising an online survey and individual interviews. The survey will assess the entire stress process (stressors, appraisals, coping), key outcomes (mental health, well-being, performance, and intention to leave), and stress management preferences. Semi-structured interviews (n = 8) will explore stress experiences and future stress management intervention ideas.

**Results:** Data collection will begin in April 2023. Multiple regression analyses will be used to examine the relationships between predictors (e.g., stressors) and outcomes (e.g., well-being). ANOVAs and t-tests may also be used to explore differences between groups (e.g., lone vs. team responders). A full thematic analysis of all qualitative data will be conducted.

**Conclusions:** Findings will: (1) identify which stressors are having the most negative impact on ambulance staff, (2) understand why this impact may occur, and (3) which staff are most at-risk. This vital information will inform the effective development and delivery of tailored stress management interventions.

**Keywords:** ambulance staff, health and wellbeing, occupational stress

## COMUNICATION 2

# A MIXED-METHODS STRESS AUDIT AMONG MIDWIVES IN THE UNITED KINGDOM

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### ABSTRACT

**Objectives:** UK midwives report high workplace stress, with ~70% considering leaving the profession (Hunter et al., 2019). Existing literature has mostly identified key stressors (e.g., staff shortages), and has failed to adequately assess other key components of the stress process (e.g., appraisals). Thus, to extend past research, this study used a stress audit to identify key stress-related variables (e.g., coping), at-risk groups (e.g., trainees), and future stress management preferences (e.g., organizational change).

**Methods:** A concurrent mixed-methods stress audit was conducted with midwives in one NHS Trust. Seventy-one midwives (Mage = 39 years, SD = 11) completed an online survey assessing stressors (e.g., control, role), stress appraisals (i.e., challenge vs. threat), coping strategies (e.g., avoidance-focused), and key outcomes (e.g., mental health). Ten midwives were also interviewed in-depth.

**Results:** Quantitative data revealed that more role-related strain, poorer peer support and relationships, and threat appraisals predicted worse mental health. Moreover, less control and more role-related strain predicted poorer performance, while less control, poorer manager support, more change-related strain, and threat appraisals predicted greater intentions to leave. Older and more experienced midwives were particularly at-risk to deleterious outcomes (e.g., mental ill-health). Analysis of the qualitative data generated themes organized into four dimensions: stressors (e.g., staff shortages), responses (e.g., negative emotions), coping (e.g., clock watching), and impact (e.g., headaches).

**Conclusions:** The findings of this study offer a comprehensive and novel insight into the stress experiences of midwives and have important implications for stakeholders (e.g., NHS trusts, policymakers) interested in better supporting midwives with workplace stress.

**Keywords:** coping, healthcare, intervention, pressure, strain, stressor

## COMUNICATION 3

# “I DON’T HAVE TIME TO CUDDLE A DOG!” A MIXED-METHODS OCCUPATIONAL STRESS-AUDIT IN THE UK POLICE FORCE

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### ABSTRACT

**Objectives:** A renewed emphasis on improving the health and well-being of UK police officers is essential due to rising workplace stress, absenteeism, and turnover. The purpose of this study was to conduct a stress audit which examines the impact of stressors encountered in the police, why this impact occurs, and who is “at risk”.

**Methods:** 405 police personnel (Mage = 41 years) participated in this mixed-methods stress audit. Officers completed a questionnaire assessing stressors, appraisals, coping, mental rest, psychological safety, resilience, and outcomes (e.g., burnout, physical health, and thriving). Additionally, 20 police officers (Mage = 43 years) participated in a follow-up interview.

**Results:** Quantitative results suggested that experiencing particular stressors frequently, appraising work as a threat, more passive coping, less mental rest, and lower psychological safety and resilience were associated with deleterious outcomes (e.g., lower thriving, poorer physical health, higher burnout, greater intentions to leave). The quantitative data also revealed ‘at-risk’ groups (e.g., older, female, supervisors). Thematic analysis of the qualitative data generated six themes including: Going above and beyond; people can make (or break) the place; keeping leadership attached and congruent; personally dealing with it; moving beyond an organizational tick box; and struggling to thriving. Areas of convergence, divergence, or explanation were identified between datasets.

**Conclusions:** Overall, this audit furthers understanding of the key stress-related predictors of police personnel’s health and wellbeing, as well as explanations for these relationships. The presentation will discuss the implications of the findings for supporting police personnel and creating an environment that enables thriving.

**Keywords:** appraisal, pressure, strain, thriving, workplace.

## COMUNICATION 4

# A MIXED-METHODS HUMAN THRIVING AUDIT OF MERCEDES AMG HIGH-PERFORMANCE POWERTRAINS (HPP)

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### ABSTRACT

**Objectives:** In the fast-paced world of Formula One (F1), performance has been prioritized over employee well-being. However, F1 teams are starting to recognize the power of helping their employees thrive (i.e., to both perform optimally and experience high well-being). Thus, this study aimed to enhance our understanding of the key enablers, inhibitors, and processes of human thriving within a high-pressure domain (i.e., F1) and organization (i.e., Mercedes AMG HPP).

**Methods:** A concurrent mixed-methods design was used. Seven hundred and seventy-six employees (698 male, 78 female; Mage = 39 years, SD = 12) completed an online survey assessing thriving (e.g., positive affect, vitality, and subjective performance) as well as key enablers (e.g., coping strategy use), inhibitors (e.g., workplace stressors), and processes (e.g., challenge appraisal). Additionally, 20 follow-up interviews were conducted (Mage = 33 years, SD = 10).

**Results:** Regression analyses identified various significant predictors of thriving including key enablers (e.g., manager support), inhibitors (e.g., dysfunctional coping), and processes (e.g., challenge appraisal). Quantitative data also revealed 'at-risk' groups (e.g., team leaders and managers). Qualitative findings highlighted an array of contextual (i.e., high-demand environment, team culture, leadership) and personal (e.g., mindset, coping strategies, motivation) enablers and inhibitors of thriving.

**Conclusions:** Overall, the results highlight various key enablers, inhibitors, and processes of thriving in Mercedes AMG HPP, including some unique factors that have not been uncovered before (e.g., mindset and dysfunctional coping strategies). The results will be vital in developing an evidence-based intervention focused on helping employees thrive in the high-pressure world of F1.

**Keywords:** cognitive appraisal, human thriving intervention, positive psychology, stress audit.

### **3. TRANSLATING STRESS AND COPING RESEARCH TO HELP PEOPLE TO DEAL WITH STRESS IN DIVERSE POPULATIONS**

**Coordinated by Erica Frydenberg**

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#### **GENERAL ABSTRACT**

The focus of this symposium is to demonstrate that what we know about stress, coping and resilience can be utilised across different demographic and cultural contexts to enhance wellbeing and build capacity.

The first paper focuses on how a program developed in an Australian cultural setting can be translated and adapted into an Asian community, namely Taiwan, The second paper illustrates the many ways that stress management and coping skills can be developed in an elderly adult population in New Zealand with those who have some limitations and impairment in functioning. The third paper demonstrates how young people in different parts of the globe who are orphans, refugees and those living in residential care can be provided with support through interventions in their local community.

The final paper argues that coping skills themselves whilst contributing to resilience, need to be supplemented with practices that contribute to ongoing wellbeing such as doing good and drawing on what is considered to be the individual's latent energy to go beyond resilience and develop fortitude.

Collectively these four papers demonstrate that stress and coping research can be put to the service of the community to contribute to communal good as well as to benefit diverse individuals around the globe to develop their capacities to deal with life circumstances.

**Keywords:** stress, coping, resilience, diverse population

## COMUNICATION 1

# TRANSLATING AND DEVELOPING A COPING-BASED SOCIAL EMOTIONAL LEARNING PROGRAM FOR YOUNG CHILDREN IN ASIA: LESSONS FROM THE CULTURALLY-ADAPTED COPE-RESILIENCE PROGRAM IMPLEMENTATION IN TAIWAN

Marissa Yi-Hsuan & Erica Frydenberg

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### ABSTRACT

**Objectives:** The presentation aimed to highlight the importance of early social emotional competencies (SEC) in children's development and introduce the COPE-Resilience program, while exploring its theoretical foundations and cultural considerations for implementation.

**Method:** To ensure cultural relevance, the COPE-Resilience program underwent an extensive translation process and was implemented through multiple phases in three preschools in Taiwan. The study involved 13 teachers and 168 children, with progress measured using standardized assessments of emotional knowledge, empathy, coping style, school readiness, and problem behavior. Fidelity of program delivery, teaching styles, teacher attributes, and other cultural considerations were also assessed to ensure the program's effectiveness.

**Results:** Findings across the sequential study phases provided preliminary support for the use of the Chinese COPE-Resilience program in preschools and kindergartens in Taiwan. The program demonstrated its cross-cultural utility by positively increasing children's SEC (i.e., emotional knowledge, empathetic responses, empathy and inhibitory control) in six weeks, sustained some of its effect for six months, buffered negative behaviour, increased school readiness and successfully prompted teachers to reflect on their own SEL practices.

**Conclusion:** The study's results highlight the benefits of implementing SEL programs in Asia, including Taiwan. The findings underscore the importance of providing teacher resources and curriculum supports for successful implementation. The COPE-Resilience program's success in Taiwan provides a roadmap for other countries to adapt and implement similar programs to promote children's social and emotional development.

**Keywords:** coping, social emotional learning, early childhood, program adaptation

## COMUNICATION 2

# TARGETING THE MANAGEMENT OF STRESS AND COPING IN OLDER ADULTS

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### ABSTRACT

**Objectives:** Aging is a complicated issue. People want to live long lives yet old age carries a negative stereotype. After retirement the sense of self, and resilience, can change. Social services to meet the challenges of aging are generally under-resourced. This presentation reports briefly on three studies begun during the global COVID pandemic to demonstrate the value of providing older adults with accessible community resources that strengthen resilience, coping and well-being.

**Method:** Participants in studies 1 and 2 were older couples where one partner lives with dementia. Participants in study 3 were members of either the University of the Third Age or a dementia day programme. Materials depended on the research questions and included standardised psychometric tests (e.g. the Geriatric Depression Scale); objective assessments (e.g. actigraph sleep watches); and subjective measures (e.g. thematic aperception). Procedure. In study 1 participants were guided through a museum of cultural significance, exploring strengths, weaknesses and interests. In study 2 dementia participants trialled Virtual Reality (VR) over a six week period, assessing risks and benefits. Study 3 was a single VR session involving reminiscence.

**Results:** In study 1, test scores and changes in retelling an autobiographical story, showed the importance of simple, free activities on well-being. Study 2 established benefits of VR, without negatively impacting sleep, or balance. Study 3 is a work-in-progress.

**Conclusion:** There are potentially society-wide advantages in providing community-based resources, for older adults, like VR in libraries, to increase their subjective well-being and resilience in times of existential threats.

**Keywords:** older adults, resilience, virtual reality

# COMUNICATION 3

## RESILIENCE PROMOTION AMONG YOUTH WITHOUT FAMILY TO LEAN ON

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### ABSTRACT

**Objectives:** Youth without family to lean on – i.e., orphans; asylum-seekers; children living in residential care; etc. – encounter major stresses and outstanding difficulties upon their transition to emerging adulthood. This is due to the obligation to depart from their (temporary) residential place and move on to independent life, internal debates that frequently arises whether to explore who are their biological parents and/or to return to live with their biological parents; etc. Thus, successful management of stresses and the development of personal resilience are essential for this youth's future life.

**Method:** Based on inputs coming from different parts of the globe, this presentation will discuss several of the common stresses that this youth globally encounter and some of the local interventions that try to promote their coping skills and resilience.

**Results:** Recent trends in the world's human society (e.g., international mobility) have made emerging adults' journey to adulthood longer and more frustrating, especially when there is no available family support. There are encouraging examples of how institutionalized intervention can help and promote this youth positive development. Yet, there are major challenges that should globally be address, such as establishment of common definitions of terms; better explorations of optimal mentor-mentee relationships; etc.

**Conclusion:** It is suggested that across the various populations, cultural differences play a major role in the ways of implementation but the basic approach to mentoring and foster youth without family to lean on ability to flourish, upon transition from their childhood's and adolescent's developmental settings are common.

**Keywords:** resilience, emerging adulthood, intervention, (no) family support



# COMUNICATION 4

## COPING IN GOOD TIMES AND BAD: DEVELOPING FORTITUDE

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### ABSTRACT

**Objectives:** Stress and coping are arguably one of the most widely researched areas in the field of psychology. Whilst the stress literature focuses on what are our concerns and strains coping is what we do about our stresses and worries. From the key foundational researchers in the field of coping there has been a positive psychological focus on how we appraise situations and how we build our resources, personal and interpersonal, to cope with what life dishes up in good times and in bad. But there is more to life than just what we do to manage circumstances thus the concept of fortitude adds value and meaning.

**Method:** This presentation will address the relationship between coping, resilience and fortitude and how these concepts can be readily translated to provide a resource to the community.

**Results:** Whether we are resilient or not is generally an external judgement, so it is helpful to go beyond the concept of resilience. Whilst the theories promoted by coping researchers can be effectively incorporated into practice, the presentation will illustrate how doing good by individuals and communities helps to provide meaning and purpose, adding to the positive approaches to health and wellbeing.

**Conclusion:** When it comes to resilience there tends to be an emphasis on adversity, but switching this to include talk about health, wellbeing and capacity to flourish is helpful. Hence, the aspect of resilience that focuses on growth enables us to increase our capacity to deal with whatever comes our way. Additionally, by drawing on what Emilia Lahti terms 'latent energy', coupled with contributing to the social good adds to a more permanent sense of purpose, achievement, and life satisfaction.

**Keywords:** coping, resilience, fortitude

## 4. MULTIPLE ASPECTS OF COMBAT SERVICE: BETWEEN RESILIENCE AND VULNERABILITY

Coordinated by Michael Weinberg & Shai Shorer  
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### GENERAL ABSTRACT

Exposure to combat trauma may affect veterans' personal, inter-personal, social and emotional state. These aspects have been of great interest for researchers and clinicians over the past decades, as understanding these trajectories could offer in-depth notions of veterans' coping mechanism, resilience resources and its affect over their emotional development.

The current symposium will include empirical quantitated and qualitative research presentations which will provide a broader understanding of veterans' coping process. Two quantitated presentations will focus on the relationship between resilience, social support, emotional distress, PTSD symptoms and male depression among Israeli veterans who participated in a group nature-assisted intervention for processing combat experiences. Additionally, two qualitative studies will broaden these notions, and address the experience of veterans' perception of their self-identity, peer support and recovery processes. Taken together the presentations offer a wide understanding of trauma exposure influences. Thus, following the symposia participants will:

1. Acknowledge different pathways following exposure to combat trauma.
2. Understand different mechanisms underlying resilience in veterans.
3. Learn about the healing potential of novel, evidence-based nature-assisted interventions, that promote resilience and emotional development within trauma survivors.

**Keywords:** resilience, trauma, veterans, nature-assisted therapy, self

## COMUNICATION 1

# RESILIENCE, EMOTIONAL PROCESSING AND POST-TRAUMATIC STRESS IN ISRAELI VETERANS WHO PARTICIPATED IN NATURE-ASSISTED GROUP INTERVENTION

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### ABSTRACT

**Objective:** The risk of post-traumatic stress is high following military service, due to the inevitable exposure to potentially traumatic events. However, most veterans do not develop PTSD, assumingly due to high resilience and efficient coping mechanisms. The current study aimed to explore the association between veterans' emotional processing, emotional expression, and posttraumatic stress symptoms, and to examine resilience' moderating effect on this interaction.

**Method:** 595 Israeli veteran combatants (mean age=32.9; SD=6.4) who are still engaged in reserve service completed trauma exposure questionnaires, Post-Traumatic Stress Symptoms (PTSS) scales, emotional processing and expression, and resilience questionnaires. Bootstrap moderation test was conducted using PROCESS.

**Results:** 96% of the participants reported having experienced a life-threatening event during their military service. Mean scores of PTSS were low and were negatively associated with emotional expression and resilience. A significant emotional expression-by-resilience interaction was found for PTSS, thus low emotional expression was associated with higher PTSS only in participants who exhibited low resilience.

**Conclusions:** Emotional expression is a protective factor against PTSS in low-resilience veterans. These findings underscore the need to identify veterans who lack emotional processing mechanisms, and to help them both with nurturing emotional resilience techniques, as well as emotional support. Such emotional interventions could be provided as a primary prevention intervention during the service. Group interventions seem to have the potential to serve as a platform for nurturing such skills.

**Keywords:** veterans, resilience, emotional processing, emotional expression

## COMUNICATION 2

# THE RELATIONSHIP BETWEEN DEMOGRAPHIC CHARACTERISTICS, SOCIAL SUPPORT, PTSD, AND MALE-DEPRESSION FOLLOWING MILITARY SERVICE

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### ABSTRACT

**Objective:** Military veterans who served in combat units may experience emotional distress following exposure to traumatic events during their service. Such emotional distress may manifest as PTSD and depression symptoms. The present study aimed to examine the relationships between personal characteristics, social support, PTSD, and depression symptoms among Israeli veterans.

**Methods:** Five hundred and ninety-five male veterans (N=595) completed demographic, social support, PTSD, and male-depression questionnaires. Structural-equation-model (SEM) analyses were conducted in two stages. In the first stage, associations between age, education, financial statues, injury during service, social support, PTSD and male depression symptoms were examined. In the second stage, these relationships were examined relative to four unique male depression subscales: anger, withdrawal, substance use, and restricted emotions.

**Results:** The first SEM demonstrated that lower education, injury, and less social support were associated with PTSD. PTSD and lower levels of social support were both associated with depression symptoms. The second SEM, which examined these associations in relation to the depression subscales, demonstrated that social support and PTSD were associated with all four subscales. However, there were different levels of associations between social support and PTSD and the different depression subscales. Financial status and injury were also associated with the anger subscale.

**Conclusions:** These findings call for sensitivity to different male depression characteristics among veterans. Attention should be paid to anger manifestations, as they may cover deeper depressed feelings. Clinicians and researchers should consider social support, education level, financial status, and injury during military service, their trajectories and relationships with PTSD and male depression symptoms.

**Keywords:** veterans, social support, PTSD, male depression

## COMUNICACION 3

# FOREVER WARRIORS? A QUALITATIVE STUDY OF COMBAT SERVICE'S IMPACT OVER VETERAN'S IDENTITY

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### ABSTRACT

**Objective:** The present study examined the effects of military service on the identity of Israeli men who served as combat soldiers. Specifically, this study examined how the service impacted changes in participants' worldview, values, and choices they took later in life.

**Methods:** 14 Israeli male veterans (Mean Age=32.53, SD=2.4) who participated in a nature-assisted group intervention for processing military-related traumatic experiences (namely: B'Shvil) completed semi-structured, qualitative in-person interviews. Data were analyzed according to narrative approach.

**Results:** Three main themes were detected: (1) "Transitions", which deals with the effect of shifting between different stages of life during the army service, over participants' feelings, identity, and worldview. (2) "The emotional pendulum", which describes the movement between emotional connection and dissociation, in light of the continuous identity formation, while coping with the changing world of a 'discharged soldier'. (3) "Between fragmentation and integration of identities", which focuses on the integration of self' parts, and on the group intervention's impact over veterans' identity and well-being.

**Conclusions:** This work adds to previous research, showing that serving as combatants impacts and shapes the identity, relationships, worldview and decision-making processes of veterans. It deals with the experience of life after exposure to combat trauma, highlighting the existence of internal contradictions between different self-parts. Moreover, it suggests a deeper view into paradoxical 'discharged soldier' identity, which military veterans often carry.

**Keywords:** veterans, identity, self, qualitative research

## COMUNICATION 4

# PEER SUPPORT FOLLOWING COMBAT EXPOSURE AND ITS CONTRIBUTION TO RECOVERY: CREATING A LANGUAGE THAT NOT EVERYONE UNDERSTANDS

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### ABSTRACT

**Objective:** One of the key factors associated with recovery from post-traumatic stress is the social support trauma survivors receive. However, social support between trauma survivors themselves – that is, peer support, its potential benefits and pitfalls, and its association with recovery, have not received adequate attention in the literature. This study aims to learn about the ways in which peer support contributes to recovery from military post-traumatic stress and to identify the mechanism that underlies it.

**Method:** Eight military trauma survivors were interviewed regarding their experience with peer support. The analyses used thematic and structural methods.

**Results:** Peer support was found to promote recovery in two main ways: by giving meaning to the traumatic experience and by enabling empathy, identification, and understanding. The underlying mechanism was found to be the unique language that peers create and share, a language consisting of both military and trauma language. The combination of these two languages allows survivors to recognize the difficult and painful parts of the trauma, alongside experiencing competence and strength, which in turn promotes recovery. However, peers may remain isolated, as those around them (e.g., family, friends and professionals) do not speak their unique language.

**Conclusions:** This study reflects the importance of peer support during the recovery process from trauma, and sheds light on the two languages peers share. At the same time, peer support may act as a double-edged sword as it separates these individuals from others who did not share their trauma.

**Keywords:** peer support, combat exposure, challenges, advantages

## 5. THE MULTIFINALITY OF CHILDHOOD MALTREATMENT IN ADULTHOOD”

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### GENERAL ABSTRACT

Childhood maltreatment (CM) is a global public health problem. CM has been recognized as a complex trauma and it may implicate multiple adverse personal and interpersonal outcomes in adulthood. As adults, CM survivors are at risk for behavioral, cognitive, physical, and mental health problems, as well as disrupted social and family relations. The current symposium will showcase a collection of five innovative studies illuminating the multiple effects of CM on adult personal and interpersonal functioning. The presentations will elucidate several mechanisms by which CM adversely affects a range of important outcomes in adulthood, including parental functioning, marital quality, and relationship satisfaction, as well as physical health and psychological well-being at different stages in adult life. We will also introduce protective mechanisms for the long-term effects of CM. The symposium will present research conducted in several countries and using a variety of methods, including a 32-year longitudinal study, laboratory observations, a dyadic study, and/or large-scale surveys. Together, the studies provide new insights into the processes by which abusive relationships in childhood continue to affect individuals, couples, and families in adulthood. The studies also provide new evidence on several protective factors for adaptive adult personal and interpersonal functioning in the face of CM. The evidence emerging from these studies indicates that interventions focused on personal (e.g., self-compassion, body boundary), interpersonal (e.g., couple communication), and social (e.g., social network) functioning may help adults exposed to CM to show resilience in their close relationships as well as their mental and physical health. Given that CM is a prevalent and underreported universal problem affecting a multitude of outcomes (i.e., multifinality), CM-informed interventions may make a significant societal contribution.

**Keywords:** childhood maltreatment, interpersonal relations, physical health, mental health, resilience

## COMUNICATION 1

# THE EFFECTS OF CHILDHOOD MALTREATMENT ON SOCIO-EMOTIONAL DEVELOPMENT AND ADULT PARENTING: A PROTECTIVE FUNCTION FOR SOCIAL NETWORK SIZE

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### ABSTRACT

**Objectives:** This study examined whether childhood maltreatment (CM) can lead to poor socio-emotional development, which can negatively impact the eventual parental functioning of the maltreated individual. We also examined whether having a large social network might be a protective resource for parents with a maltreatment history.

**Methods:** We examined these ideas using the Minnesota Longitudinal Study of Risk Adaptation, which followed approximately 170 individuals from birth to middle adulthood. Early maltreatment severity (ages 0-5) was assessed by experiences of abuse and/or neglect during infancy and early childhood. Socio-emotional competence (ages 5-16) was assessed with a composite of teacher ratings of the child's social competence and emotional health in kindergarten, 1st, 2nd, 3rd, and 6th grades, and high school. Adult parenting was assessed using a semi-structured interview at age 32 and observations of parental supportive presence in parent-child interactions. The size of the social network at age 32 was assessed by the number of individuals the participants wrote in as part of their inner, middle or outer social circle.

**Results:** In a moderated mediation analysis, CM severity forecasted low socio-emotional competence, which in turn predicted more negative parental orientations and lower observed parental support. However, having a large social network, especially friends in one's inner circle, buffered this effect.

**Conclusion:** While CM is a risk factor for impaired socio-emotional development and less positive and supportive parenting, having a large social network of close friends may protect against this process.

**Keywords:** childhood maltreatment, socio-emotional development, parental functioning, social network, resilience



## COMUNICATION 2

# OBSERVED MARITAL COMMUNICATION AS A MECHANISM BY WHICH A HISTORY OF CHILDHOOD MALTREATMENT HINDERS THE MARITAL SATISFACTION OF BOTH PARTNERS

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### ABSTRACT

**Objective:** Childhood maltreatment (CM) has been identified as a significant risk factor for lower marital satisfaction. Moreover, even without being exposed to CM, partners of individuals with a CM history may experience poor intimate relationships. Although a healthy marriage has long been recognized as a key predictor of mental and physical health, the mechanism by which CM affects one's own and one's partner's marital satisfaction remains largely unknown. Relying on the Couple Adaptation to Traumatic Stress model, the current study examined whether observed negative couple communication mediates the associations between CM and actor and partner marital satisfaction.

**Methods:** A sample of 115 Israeli married couples completed self-report questionnaires assessing CM and marital satisfaction and engaged in a 10-minute conflict discussion task assessing negative communication behaviors.

**Results:** An Actor Partner Interdependence Model indicated that CM experienced by women was indirectly linked with lower marital satisfaction in men and women through communication behaviors. Specifically, women who were exposed to CM expressed greater negative communication behaviors, which in turn were associated with lower marital satisfaction in men and women.

**Conclusion:** The study identifies a mechanism by which a history of CM in one partner cascades across life and affects the marital satisfaction of both dyad members by undermining their couple communication. These findings suggest that interventions designed to promote couple communication in women exposed to CM may facilitate healthy intimate relationships for both partners.

**Keywords:** childhood maltreatment, couple interaction, marital quality, actor partner interdependence model

## COMUNICATION 3

# THE MEDIATING ROLE OF SELF-COMPASSION BETWEEN CHILDHOOD MALTREATMENT AND SATISFACTION WITH INTIMATE RELATIONSHIPS

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### ABSTRACT

**Objective:** Childhood maltreatment has been consistently linked with lower-quality of adult intimate relationships. However, only relatively scant research has addressed the mechanisms underlying this link, with the majority of research focusing on negative psychological processes. The current study sought to expand the research by focusing on positive processes in this link. Specifically, it tested the mediating role of self-compassion in the association between childhood maltreatment and relationship satisfaction.

**Methods:** A convenience sample of 667 individuals reporting on being in an intimate relationship was drawn from a larger sample from an online survey and filled out self-report questionnaires.

**Results:** Childhood maltreatment was indirectly linked with intimate relationship satisfaction through the (partial) mediation of self-compassion.

**Conclusion:** These findings elucidate the mediating role of self-compassion, an important transdiagnostic protective factor related to elevated satisfaction with intimate relationships. The findings highlight the potential contribution of Mindfulness and Compassion-Based Programs with survivors of childhood maltreatment who are presumably at risk for dissatisfaction with intimate relationships.

**Keywords:** childhood maltreatment, self-compassion, intimate relationships

## COMUNICATION 4

# A DOUBLE BURDEN – CHILDHOOD MALTREATMENT AND MENTAL ILLNESS AS RISK FACTORS FOR INCREASED BODY-MASS-INDEX

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### ABSTRACT

**Objective:** Individuals with mental illness are at increased risk for obesity, which has been attributed to psychotropic medications and to the behavioral, cognitive, and social consequences of their underlying psychiatric disorders. Curiously, childhood maltreatment (CM) is rarely considered as an explanatory factor, though it is a recognized risk factor for obesity in the general population. We sought to identify the type and timing of CM that conveys the greatest risk and to assess the respective contributions of exposure, psychopathology, and medications to body-mass-index (BMI) and obesity.

**Methods:** CM were assessed with the Maltreatment and Abuse Chronology Exposure (MACE) scale in inpatients with mental illness (N=261, 18-40 years) and a matched community control group without lifetime psychiatric diagnoses (N=81). Conditioned random forest regression was used to identify the most important type and time risk factors.

**Results:** BMI was higher and obesity was more prevalent (15.2%) in individuals with mental illness than in controls (4.9%). Parental abuse at 4-5 and peer-related violence at 7-13 years of age were the most important risk factors for increased BMI. Any exposure to these adverse experiences increased the risk of obesity by 2.68-fold (95%-CI 1.36-5.30, p=.005) and fully mediated the association between mental illness and BMI. Antipsychotic and antidepressant use were not significant risk factors for increased BMI.

**Conclusion:** Risk for obesity is an important ecophenotypic difference between maltreated and non-maltreated individuals with the same primary psychiatric disorder. Recognizing this important link may aid in the development of therapeutic strategies to mitigate this risk.

**Keywords:** Maltreatment and Abuse Chronology Exposure (MACE), body-mass-index, obesity, mental illness

## COMUNICATION 5

### "WHEN THE BODY ECHOES THE TRAUMA" – SENSE OF BODY BOUNDARIES AMONG CM SURVIVORS

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#### ABSTRACT

**Background:** Body boundaries represent the sense of oneself as a physical entity. Disruption of body boundaries may be associated with various forms of childhood maltreatment. These acts can impair victims' recognition of their body boundaries, especially when the abuse occurs at an early developmental stage when children do not yet have a clear sense of their bodies or their body boundaries.

**Objective:** The aim of this presentation is to examine the implications of childhood maltreatment on survivors' sense of their bodies.

**Methods:** In a series of independent studies, more than 500 students, around 400 women during their transition to motherhood, and more than 300 elder people filled out a battery of questionnaires assessing their history of childhood abuse and neglect, their sense of body boundaries, and other adjustments, functionality, and well-being variables.

**Results:** Results of the studies reveal that a history of childhood maltreatment is associated with a sense of disrupted body boundaries. In addition, it was found that a history of childhood maltreatment and disrupted body boundaries during pregnancy are associated with fear of childbirth, and postpartum posttraumatic stress disorder (PTSD). Finally, disrupted body boundaries among elderly was associated with a low sense of mastery and reduced subjective well-being.

**Conclusion:** The findings of these studies suggest that early life experiences of abuse and neglect may color the individuals' bodily experiences and adjustment in different contexts and periods of the life span.

**Keywords:** body boundaries, childhood maltreatment, adult adjustment, well-being

## **6. AGING IN THE SHADOW OF COVID-19 STRESS: PSYCHIATRIC TRAUMA SYMPTOMS, SLEEP DISTURBANCES, ACCELERATED PSYCHOLOGICAL AND EPIGENETIC AGING ARE RESPECTIVELY MITIGATED BY LESS LONELINESS, RESILIENCE, POSITIVE AGING STEREOTYPES AND MINDFULNESS**

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### **GENERAL ABSTRACT**

The outbreak of COVID-19 was especially challenging for older adults. Five presented studies depict how COVID-19 stress experienced by older adults links with a variety of severe negative outcomes, yet can also be mitigated by other variables. The first two studies were cross-sectional: Study 1 (Greenblatt-Kimron) found a robust link between older adults' COVID-19 worries and psychiatric symptoms of depression, PTSD and complex PTSD. Study 2 (Grossman), showed COVID-19 loneliness linking with sleep disturbances, and how this link was moderated by resilience and COVID-19 stress levels. Study 3 (Shrira) applied a diary method revealing that higher COVID-19 stress experienced the day before predicted feeling of accelerated aging and negative affect on subsequent days. Study 4 (Bigon) demonstrated that trait-like mindfulness prior to COVID-19 prospectively predicted less age-related losses during COVID-19 (over a year later) but not the opposites direction, and that this link was mediated by subjective-age fluctuations (due to COVID-19 stress). Study 5 (Hoffman) revealed how mindfulness reversed epigenetic aging in older adults with high COVID-19 stress. In each of the five studies factors that mitigate these effects were also revealed. Presentations are preceded by a general introduction and followed by a discussion.

**Keywords:** COVID-19 stress, trauma, sleep, age-related-losses, mindfulness

# COMUNICATION 1

## POSTTRAUMATIC REACTIONS AMONG OLDER ADULTS DURING THE COVID-19 PANDEMIC

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### ABSTRACT

**Objectives:** ICD-11 post-traumatic stress disorder (PTSD) and complex PTSD have been under-studies in the older population. The current study focused on posttraumatic reactions among older adults during the COVID-19 pandemic. Namely, the associations between traumatic exposure prior to the pandemic, COVID-19 worries, depression, and loneliness with current PTSD and CPTSD among older adults.

**Methods:** Five hundred and twenty Israeli older adults (average age=72.66±3.75, range 68-87) were recruited using a web-based survey company (Ipanel, Israel). Participants completed questionnaires of demographic details, self-rated health, COVID-19 worries, trauma exposure, depressive symptoms, level of loneliness, PTSD and CPTSD.

**Results:** Univariate logistic regression revealed that trauma exposure, COVID-19 worries, depression, and loneliness were associated with PTSD. Multinomial logistic regression revealed that only trauma exposure was associated with PTSD among older adults with PTSD compared to those not reaching the PTSD cutoff level. In the comparison between older adults suffering from CPTSD with those not reaching the PTSD cutoff level, being married and higher levels of trauma exposure, COVID-19 worries, depression, and loneliness were associated with higher levels of CPTSD.

**Conclusions:** Results suggest that specific factors may be significant psychological correlates of CPTSD symptoms among older adults during the COVID-19 pandemic. Identifying these factors could assist practitioners in tailoring more effective interventions.

**Keywords:** PTSD, CPTSD, trauma exposure, COVID-19 worries, depression, loneliness

## COMUNICATION 2

# THE LINK BETWEEN COVID-19 LONELINESS AND IMPAIRED SLEEP IN OLDER ADULTS WAS MODERATED BY COVID-19 STRESS LEVELS AND RESILIENCE

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### ABSTRACT

**Objectives:** Older adults experienced distress and loneliness due to social distancing during COVID-19, this in turn may have catalyzed poor health outcomes including impaired sleep. This study aimed to assess if COVID-19 related loneliness was linked with impaired sleep. A second goal was to assess whether this loneliness-sleep association would be moderated by one's level of COVID-19 stress and resilience.

**Methods:** Using a web-based public platform, 243 Israeli older adults (mean age =  $69.76 \pm 3.75$ , age range = 60–92) were sampled. Measurements: Participants completed measures of COVID-19 related loneliness, sleep problems, COVID-related stress, and resilience.

**Results:** COVID-19 related loneliness was linked with impaired sleep and this association was more robust among older adults with higher COVID-19 related stress or among those with lower resilience.

**Conclusions:** Considering these variables of loneliness, high stress levels, and resilience, one may facilitate detection of- and intervention for- older adults' vulnerability to aversive effects of pandemics, like COVID-19, where social distancing and loneliness may be necessary. Yet such loneliness may lead to detrimental sleep disturbances when stress levels are higher.

**Keywords:** COVID-19 stress, sleep, loneliness, resilience

## COMUNICATION 3

# ECOLOGICAL ASSESSMENT OF DAILY COVID-19 STRESS AND SUBJECTIVE VIEWS OF AGING AMONG OLDER ADULTS

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### ABSTRACT

**Objectives:** COVID-19 related stress may trigger unfavorable subjective views of aging in the general population and among older adults in particular. Such views may further undermine late-life wellbeing and health. The current ecological assessment study addressed daily covariance of stress related to COVID-19, subjective views of aging, and negative affect (NA).

**Methods:** Seventy-five Israeli older adults (average age=66.7±9.5, range 50-88) completed daily assessments across two weeks (a total of 1,027 reports). The study took place when COVID-19 cases reached pandemic highest in Israel (November 2021 to February 2022). Participants completed daily reports of COVID-19 stress, other types of stress, subjective rate of aging (subjective accelerated aging), ageist attitudes, and NA.

**Results:** All main variables showed significant within-subject variance (meaning they showed notable daily fluctuations). Experiencing higher COVID-19 stress predicted feeling to be aging faster and reporting higher NA the next day. Multilevel moderated mediation models showed that the effect of COVID-19 stress on NA was mediated by feeling to age faster, and that mediation effect was significant on days participants further held higher ageist attitudes. Stress not directly related to COVID-19 did not predict next days' subjective rate of aging.

**Conclusions:** Findings suggest that COVID-19 stress may increase negative views of one's own aging which in turn heighten negative emotions. This is especially true on days when older adults adopted ageist stereotypes, possibly as they feel being assimilated within the age group they devalue.

**Keywords:** COVID-19 stress, diary-study, ageism, negative-emotion, accelerated aging



## COMUNICATION 4

# THE LONG-TERM CONNECTION BETWEEN TRAIT-LIKE MINDFULNESS AND PSYCHOLOGICAL AGE-RELATED LOSSES IS MEDIATED BY PERCEIVED COVID-19-RELATED FLUCTUATIONS IN SUBJECTIVE-AGE

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### ABSTRACT

**Objectives:** The first period of COVID-19 has detrimentally impacted older adults, causing them more psychological losses. The current study aimed to examine whether one's trait-like level of mindfulness (at Wave 1 [W1]) would subsequently predict less age related psychological losses at Wave 2 [W2], and whether this link would be mediated by one's perceived COVID-19 related fluctuations in subjective-age (how much did you subjective age fluctuate as a result of COVID-19).

**Method:** One hundred and forty three older adults (Age=69.3±9.46, range 53-92, 53% Female, 74% academic education, and 80% middle-high socioeconomic status). Participants, were sampled by a convenience and agreed to be assessed during both waves.

**Results:** W1 trait-like mindfulness significantly predicted less losses a year-and-a-half later; the opposite direction of losses predicting better mindfulness was not significant at all. This link was mediated by one's perceived COVID-19-related fluctuations in subjective age.

**Conclusions:** In addition to clarifying the temporal sequencing of trait-like mindfulness and psychological age-related losses, the results further suggest that this prospective longitudinal link maybe especially relevant during a time of increased stress, as in COVID-19. Further, the mechanism of a stable subjective-age may reflect a strong identity that is less impacted by external stress, and thus one is less likely to experience subsequent age-related loss. We advocate exploration of how mindfulness may enhance the well-being of older adults in coping with age-related stress, over-and-beyond COVID-19.

**Keywords:** trait-like-mindfulness, COVID-19, subjective-age-fluctuations, age-related-losses

## COMUNICATION 5

### THE EFFECT OF HIGH COVID-19 STRESS ON BIOLOGICAL AGING IS BUFFERED BY MINDFULNESS

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#### ABSTRACT

**Objectives:** The first year of COVID-19 was stressful for many older adults. Stress is linked with faster biological aging. Mindfulness which enables better coping with stress should slow biological aging. This study addressed how mindfulness would impact biological aging of older adults suffering from high levels of COVID-19 stress.

**Methods:** Forty Israeli older adults who were 65 and older (average age=72.85±5.5, range 65-85) were recruited in a convenient sample. This study included three waves of questioning (W1-W3), at W1 (4-weeks prior to COVID-19) participants completed questionnaires comprising different measures, after which the 8-week mindfulness course began. At W2 (8-weeks later) and W3 (8 months later), questions also included COVID-19 stress. At all waves saliva samples were given, from which epigenetic markers of aging were discerned. Biological aging was computed by subtracting the epigenetic age obtained at W2 from that obtained at W3.

**Results:** Biological aging was regressed on Group (mindfulness vs. control) and Covid-19 stress. While older adults in the control group who suffered from high W2-COVID-19 stress aged biologically by almost 3 years during these 6-months, in the mindfulness group the biological age was turned back by 2.7 years at W3. Results remained after controlling for demographics and general anxiety levels.

**Conclusions:** Mindfulness may be a very potent intervention in helping older adults cope with the detrimental high stress levels, not only psychologically, but also in terms of slowing one's biological aging.

**Keywords:** mindfulness-based-stress-reduction, COVID-19-stress, epigenetic-aging

## 7. CARDIOVASCULAR RESPONSES TO ACUTE PSYCHOLOGICAL STRESS: RESEARCH ACROSS THE FIELD

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### GENERAL ABSTRACT

Correlational and prospective research has demonstrated that extreme (i.e., exaggerated and blunted) cardiovascular responses to acute psychological stress are associated with adverse health and behavioural outcomes.

The present symposium brings together five researchers from three countries (England, Ireland, United States) who are in varying career stages to discuss their recent research examining cardiovascular responses to acute psychological stress. The presentations will span multiple research designs incorporating cardiovascular stress reactivity, including experimental laboratory manipulations, cross-sectional studies, and prospective designs.

First, Dr. Brian Hughes will present an experimental study to elucidate the importance of social evaluation on the relationship between Type D personality and cardiovascular responses to stress. Next, Dr. Annie Ginty will present prospective data demonstrating that cardiovascular responses to acute psychological stress are associated with real world cognitive performance outcomes. The symposium will then use cross-sectional designs to highlight the role protective factors play in more optimal responses to stress. Ailbhe Dempsey will present data examining the role of religiosity and spirituality on cardiovascular reactivity. Dr. Siobhan Howard will discuss the role psychological flexibility plays in cardiovascular reactivity adaptation to repeated stress. Lastly, Dr. Sarah Williams will present data examining the role of heart rate reactivity and interpretations of physiological arousal in mediating the relationship between stress mindset and stressor-evoked anxiety.

The present symposium will use the latest research in the field of cardiovascular stress reactivity to demonstrate the breadth of this research area and to identify potential factors that may be beneficial for future interventions.

**Keywords:** stress, cardiovascular stress reactivity, coping, individual differences

## COMUNICATION 1

# TYPE D PERSONALITY EXACERBATES THE IMPACT OF SOCIAL FACTORS ON CARDIOVASCULAR STRESS REACTIVITY AND HABITUATION

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### ABSTRACT

Type D personality has been linked to cardiovascular disease and, in laboratory studies, to distinctive patterns of cardiovascular reactivity to stress. However, whether findings for reactivity are subject to social factors in laboratory settings is unclear. In this experiment, 80 college students performed two consecutive 6-minute serial subtraction tasks while their blood pressure and heart rate were measured at 2-minute intervals. Half of the participants performed the experiment alone, while the other half did so with the experimenter present. A near-significant interaction between time and condition suggested that social presence resulted in greater habituation of heart rate responses across stress exposures. The influence of the Type D components negative affect (NA) and social inhibition (SI) on between-condition differences in cardiovascular function throughout the session was examined using mixed-factorial analyses of covariance (ANCOVAs). The analyses revealed a significant effect for NI x SI (i.e., Type D personality) on heart rate profiles ( $p = .046$ ). This was accounted for by the fact that participants with higher Type D scores were more likely to find the 'alone' condition more stress-inducing than the 'social presence' condition, whereas participants with lower Type D scores were more likely to find the opposite. The results suggest that: (a) participants find it harder to habituate during stress when alone compared to when another person is present; and (b) this problem is significantly greater for participants who score high on Type D personality. This further implicates Type D personality as a psychological factor contributing to adverse stress-related cardiovascular function, and highlights the potential influence of social factors in laboratory research.

**Keywords:** cardiovascular reactivity, habituation, heart rate, stress, social influence, Type D personality

## COMUNICATION 2

# HEART RATE REACTIVITY TO ACUTE PSYCHOLOGICAL STRESS IS ASSOCIATED WITH ACADEMIC PERFORMANCE ACROSS MULTIPLE DOMAINS

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### ABSTRACT

Cardiovascular reactivity to acute psychological stress has been associated with cognitive function and future cognitive decline. However, previous work has examined cardiovascular reactions and cognitive function in a laboratory setting. The present two studies aimed to examine the association between cardiovascular reactivity to acute psychological stress and academic performance. In Study 1, 131 participants (84% female, mean age [SD] = 17.99 [0.42] years) in the England attended a laboratory visit containing a standardized acute psychological stress paradigm (resting baseline, mental arithmetic task) during their final year of high school. Heart rate (HR) was recorded throughout. Reactivity was calculated as: mean stress HR – mean baseline HR. Performance on their Advanced Level Qualifications (A-levels; subject based qualifications required for entry to university) were obtained one year later. Higher HR reactivity was associated with better performance ( $\beta = .180$ ,  $p = .034$ ) on A-level exams in the model adjusting for confounding variables. In Study 2, 136 participants (72.9% female, mean age [SD] = 19.11 [0.71] years) in the United States completed the same laboratory paradigm and HR measurements during the first two years of their undergraduate degree program. Overall undergraduate grade point average (GPA) was obtained 3 years later. Higher HR ( $\beta = .182$ ,  $p = .039$ ) was associated with higher GPA in a model adjusting for confounding variables. Together, these studies demonstrate that HR reactivity to acute psychological stress in the laboratory is associated with “real world” outcomes that include elements of cognitive function, performance under pressure, and perseverance.

**Keywords:** stress reactivity, heart rate, cognitive function

## COMUNICATION 3

# RELIGIOSITY, SPIRITUALITY, AND CARDIOVASCULAR RESPONSES TO ACUTE PSYCHOLOGICAL STRESS

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### ABSTRACT

Religious involvement or the intensity of religion is linked with lower risk of all-cause mortality (McCullough et al., 2000), offering a protective factor in the development of cardiovascular diseases. Some research have identified that religiosity is associated with lower cardiovascular reactivity to stress, identifying a potential direct mechanism of effect. The current study aims to examine the association between religiosity and spirituality and cardiovascular responses to stress and investigate if it is religiously, or spirituality, that may influence stress responses (if any). Utilising a standardised stress testing protocol 110 healthy young adults completed a cognitive stressor following a resting baseline period. Continuous cardiovascular assessment was recorded by Finometer. Spirituality and religiosity were assessed using the Beliefs and Values Scales scale and the Centrality of Religiosity Scale, respectively. Analyses examined the association between religiosity and spirituality on cardiovascular responses to novel stress. This study extends the literature by examining the association between religiosity and spirituality and psychophysiological indices of stress reactivity. This research will enhance the understanding of psychology of religion and spirituality and will have implications for prognosis, and rehabilitation programmes, promoting healthier cardiac outcomes.

**Keywords:** religiosity, spirituality, cardiovascular reactivity, novel stress

# COMUNICATION 4

## PSYCHOLOGICAL FLEXIBILITY AND CARDIOVASCULAR STRESS-RESPONSE ADAPTATION TO RECURRENT STRESS DEMANDS

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### ABSTRACT

Psychological flexibility is a dynamic psychological construct that describes a person who can adapt to changing demands and situations. This psychological factor is associated with a range of positive psychological states and adjustment. However, its association with psychophysiological indicators of stress reactivity has yet to be established. In this study, 114 young adults completed the Paced Auditory Serial Addition Task (PASAT), which is a cognitively demanding stressor used in laboratory studies of stress reactivity. Participants completed the PASAT on two occasions in the same laboratory sitting, separated by a 8-minute inter-task interval. Continuous monitoring of blood pressure and heart rate were assessed using Finometer. Psychological flexibility was assessed using the Psy-Flex scale and the Multidimensional Psychological Flexibility Inventory. Analyses examined whether those high in psychological flexibility showed an enhanced capacity to show physiological adaptation to recurrent stress, where the stressor employed identical task demands. This study will establish if there is a positive association between psychological flexibility and cardiovascular stress-response adaptation to recurrent stress.

**Keywords:** cardiovascular reactivity, adaptation, heart rate, stress, psychological flexibility

## COMUNICATION 5

# PERCEPTIONS OF PHYSIOLOGICAL AROUSAL, NOT ACTUAL HEART RATE REACTIVITY, MEDIATES THE RELATIONSHIP BETWEEN STRESS MINDSET AND STRESSOR-EVOKED ANXIETY

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### ABSTRACT

A more stress is enhancing mindset (i.e., the belief that stress can have enhancing consequences) has been associated with lower general anxiety. However, the extent to which stress mindset is related to anxiety in response to acute psychological stress, and the mechanisms explaining the stress mindset-anxiety relationship have yet to be sufficiently investigated. This study examined whether heart rate reactivity or perceptions of physiological arousal mediated the relationship between trait stress mindset and cognitive and somatic anxiety experienced in response to a 4-minute mental arithmetic stress task. 447 university students completed a measure of trait stress mindset before undergoing the mental arithmetic task while their heart rate was measured every 2 minutes. After the task, participants indicated how physiologically aroused they were during the task and how cognitively and somatically anxious they felt. Mediation analyses revealed a more stress-is-enhancing mindset predicted lower cognitive ( $\beta = -.09$ ,  $p = .044$ ) and somatic ( $\beta = -.10$ ,  $p = .030$ ) anxiety. This relationship occurred indirectly through perceived physiological arousal (Cognitive anxiety:  $\beta = -.06$ ,  $CI = -.11 - .01$ ; Somatic anxiety:  $\beta = -.08$ ,  $CI = -.15 - -.02$ ) but not actual heart rate reactivity. Specifically, a more stress-is-enhancing mindset was associated with lower perceived physiological arousal which in turn was associated with lower anxiety. Findings suggest that although stress mindset does not relate to actual heart rate reactivity, it results in participants perceiving that their physiology is lower which is related to experiencing less anxiety during psychological stress.

**Keywords:** anxiety, cardiovascular reactivity, heart rate, stress mindset, perceptions



## 8. INTERPERSONAL TRAUMA: THE COMPLEX PATHWAYS INVOLVED IN ITS DETRIMENTAL AND TRANSMISSIBLE EFFECTS

Coordinated by Yael Lahav

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### GENERAL ABSTRACT

Prolonged interpersonal trauma may not only lead to detrimental consequences among survivors, but may also have transmissible, or contagious effects, manifested in intergenerational transmission as well as survivors' internalization of the perpetrator's experience. The current symposium, which introduces novel findings drawn from four studies, aims to discuss these processes among Holocaust survivors and their families, as well as survivors of intimate partner violence. The first presentation (Maytles et al.) tackles the pertinent challenge of maintaining well-being among older adult Holocaust survivors, by revealing the stronger buffering effect of a sense of meaning in life against negative mental health outcomes among Holocaust survivors compared to controls. The second presentation (Greenblatt-Kimron et al.) shows how different facets of traumatic outcomes are uniquely transmitted to younger generations within Holocaust survivor families, emphasizing the distinct role of event centrality. The third presentation (Avidor et al.) looks at whether insecure-anxious attachment among offspring of Holocaust survivors might be associated with elevated vulnerability when coping with stress during the first waves of the Coronavirus pandemic. Lastly, the fourth presentation (Lahav), explores the paths through which trauma exerts its effects within close relationships, by focusing on the role of identification with the aggressor in explaining symptomatology among intimate partner violence survivors.

Together, this symposium underscores the ongoing struggle of trauma survivors to maintain mental health and positive relationships, and the mechanisms underlying the transmissible effects of protracted, interpersonal trauma.

**Keywords:** interpersonal trauma, intergenerational transmission, identification with the aggressor, holocaust survivors, intimate partner violence

## COMUNICATION 1

# THE HOLOCAUST EXPERIENCE AND ITS ROLE IN THE ASSOCIATION BETWEEN MEANING IN LIFE, DEPRESSIVE SYMPTOMS AND LIFE SATISFACTION

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### ABSTRACT

**Objective:** Holocaust survivors often reveal long-term posttraumatic sequelae such as depressive symptoms, alongside more salutogenic outcomes such as life satisfaction. The present study sought to shed light on the interplay between Holocaust experience and meaning in life and its connection with mental health. Specifically, we examined whether Holocaust experience moderated the relationship between meaning in life, depressive symptoms, and life satisfaction. **Methods:** The sample consisted of 95 participants, 44 Holocaust survivors ( $M_{age}=82.77$ ,  $SD=6.59$ ) and 51 comparisons without Holocaust experience ( $M_{age}=77.52$ ,  $SD=7.78$ ). Participants were interviewed regarding their background characteristics, meaning in life, depressive symptoms, and life satisfaction. **Results:** Participants reporting higher meaning in life showed lower depressive symptoms and higher life satisfaction. There was an interaction between meaning in life and Holocaust experience, suggesting that meaning in life was associated with lower depressive symptoms and higher life satisfaction to a stronger degree among Holocaust survivors than comparisons. **Conclusions:** The findings indicate that meaning in life may serve as a buffering factor for mental health among Holocaust survivors who have reached old age. The results provide insight for tailoring treatment interventions among older adults who have been exposed to prolonged traumatic experiences or genocide, that focus on meaning in life, to enhance mental health.

**Keywords:** Holocaust survivors, meaning in life, depressive symptoms, life satisfaction, genocide

## COMUNICATION 2

# THE MEDIATING ROLE OF SECONDARY TRAUMATIZATION IN THE RELATIONSHIP BETWEEN POSTTRAUMATIC STRESS DISORDER IN HOLOCAUST SURVIVORS AND EVENT CENTRALITY IN SUBSEQUENT GENERATIONS

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### ABSTRACT

**Objectives:** The multigenerational repercussions of massive trauma produce individual, family, and community health difficulties. The study examined event centrality in an intergenerational perspective in Holocaust families, particularly, the mediating role of secondary traumatization between Holocaust survivors' posttraumatic stress disorder (PTSD) and event centrality in subsequent generations.

**Methods:** Participants included 92 Holocaust survivor-offspring-grandchild triads (Holocaust G1-G2-G3) and 67 comparison triads (Comparison G1-G2-G3), aged 18 and above living in Israel, recruited to participate in a research seminar via social media. Measures included background characteristics, difficult life events (completed by G1), PTSD symptoms (completed by G1), event centrality (completed by G2 and G3), and secondary traumatization (completed by G2 and G3).

**Results:** Holocaust G1 reported higher levels of PTSD symptoms relative to Comparison G1. Holocaust G2 and G3 reported higher secondary traumatization relative to Comparison G2 and G3, respectively. Holocaust G3 also reported higher scores in event centrality relative to Comparison G3. In survivor families, the indirect effect of PTSD symptoms in Holocaust G1 predicted Holocaust G2's secondary traumatization, which subsequently predicted Holocaust G3's secondary traumatization. Moreover, PTSD symptoms in Holocaust G1 predicted Holocaust G3's event centrality through secondary traumatization in both Holocaust G2 and G3 and event centrality in Holocaust G2. In the comparison groups, trauma transmission was not observed in three generations.

**Conclusions:** Findings elucidate unique intergenerational transmission of the Holocaust trauma in survivor families, which comprise both personal and societal constituents. Moreover, the findings show that event centrality is a distinctive mechanism in intergenerational transmission in survivor families.

**Keywords:** intergenerational transmission, secondary traumatization, event centrality, Holocaust trauma

## COMUNICATION 3

# THE INTERGENERATIONAL TRANSMISSION OF THE TRAUMA OF THE HOLOCAUST: DOES INSECURE ANXIOUS ATTACHMENT STYLE PLAY A ROLE IN COPING DURING THE CORONAVIRUS PANDEMIC AMONG OFFSPRING OF HOLOCAUST SURVIVORS?

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### ABSTRACT

**Objectives:** The detrimental effects of the Holocaust have often been shown to be transmitted to the next generations, the offspring of Holocaust survivors (OHS), through mechanisms of secondary traumatization. One specific concomitant of vulnerability among some OHS is an insecure attachment pattern. The present study sought to delineate the coping of OHS and non-OHS older adults in Israel during the first coronavirus lockdown. We hypothesized that an insecure attachment style would moderate the association between secondary traumatization and difficulties during the lockdown. **Methods:** Participants were 135 Israeli community-dwelling older adults between the ages of 60-89 ( $M = 67$ ;  $SD = 5.4$ ); 67 were OHS and 68 were not. They filled out self-report questionnaires on-line, during the summer of 2021, including demographic details; subjective successful aging; secondary traumatization; attachment patterns; and questions pertaining to their difficulties and experiences during the first coronavirus lockdown in Israel. **Results:** Among the general sample, there was a positive correlation between insecure-anxious attachment and difficulties during the lockdown. Among OHS, there was a positive correlation between secondary traumatization and successful aging. However, insecure-anxious attachment did not moderate the association between secondary traumatization and difficulties during the lockdown. **Conclusions:** Secondary traumatization appears to be a source of vulnerability among OHS. While insecure-anxious attachment also seems to be associated with more susceptibility to stress, it did not play a role in explaining the coping of OHS in the present sample. Possible explanations for these findings, their significance, as well as limitations of the study will be discussed.

**Keywords:** offspring of Holocaust survivors, secondary traumatization, future orientation, successful aging

## **COMUNICATION 4**

### **IDENTIFICATION WITH THE AGGRESSOR AND DISTRESS IN LIGHT OF INTIMATE PARTNER VIOLENCE**

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#### **ABSTRACT**

**Objectives:** Intimate partner violence (IPV), is a global public health concern that affects millions of women worldwide. IPV is related to a plethora of mental health detriments, including trauma-related distress and depressive symptoms. According to trauma scholars, IPV victims may develop strong bonds with their abusive partners, a phenomenon known as identification with the aggressor (IWA), in order to survive the abuse. Nevertheless, this defensive reaction is claimed to become entrenched in survivors' mentality and to intensify their psychological distress. The current study explored these suppositions for the first time. **Methods:** This study among a convenience sample of 297 women, investigated IWA in light of current versus past IPV as well as the associations between IWA, trauma-related distress, and depressive symptoms. **Results:** Whereas women who reported current IPV had elevated trauma-related distress and depressive symptoms compared to women who reported past IPV, no differences were found in IWA levels between the groups. Identification with the aggressor was associated with trauma-related distress and depressive symptoms, and had unique contribution in explaining symptomatology above and beyond background characteristics and IPV features (i.e., relationship status, economic dependence upon the abusive partner, IPV status, and IPV frequency). **Conclusions:** The complex relational dynamics between IPV victims and their abusive partners, as manifested in IWA, may become habitual and impede recovery among survivors.

**Keywords:** intimate partner violence, identification with the aggressor, PTSD, depression

## COMUNICATION 5

# ESCAPING FROM POVERTY AS A SOURCE OF STRESS - THE RELATIONSHIPS OF REACTANCE AGAINST THE RESTRICTION OF FREEDOM DUE TO FINANCIAL STATUS AND MAKING A SPENDING-ORIENTED ECONOMIC DECISION

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### ABSTRACT

**Objective.** Being poor is a source of chronic stress (Evans & Kim, 2013). Some theorists conceptualize poverty as a restriction of freedom (e.g., Sen, 2000). Nevertheless, according to the reactance theory (Brehm & Brehm, 1981), when something threatens people's freedom, they experience psychological reactance, i.e., a state that motivates them to restore their freedom. This research project aimed to determine whether people actually perceive poverty as a restriction of freedom and whether the reactance state against financial status mediates between satisfaction with one's income and the intention to make a spending-oriented economic decision, which characterized poor people (Shah et al., 2012; Yang, 2016).

**Methods.** The study (n = 300; 150 females) was conducted through an online research panel in a cross-sectional model. A series of self-report scales measuring examined variables were used.

**Results.** Results showed that most participants (85%) perceived poverty as a restriction of freedom, and poverty was perceived as one of the most freedom-limiting experiences. The study demonstrated that less wealthy participants were more convinced that their financial situation limited their freedom. Reactance against one's financial situation mediates the relationship between participants' financial status and intention to take a high-interest loan, save money, and spend money.

**Conclusions.** The results suggest that the perception of financial status limits freedom and can influence spending-oriented economic decision-making, contributing to the deterioration of people's economic situation. In conclusion, it will be discussed how reactance against one's financial situation can lead to stress through economic deterioration.

**Keywords:** poverty, reactance, economic decisions, stress

## 9. EFFECTS OF THE RUSSIAN-UKRAINE WAR: ROLE OF RESILIENCE, MASTERY AND SELF-EFFICACY IN DEALING WITH THREAT AND DISTRESS

Coordinated by Esther Greenglass

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### GENERAL ABSTRACT

The unprovoked attack on Ukraine by Russia on February 24, 2022 led to widespread death, injury, destruction of property and environment, and uprooted millions from their homes. For those in Ukraine, the invasion threatened their lives, their health, their homes, and created intense worry. At the same time, people across the world have been watching the war on social media. Previous research has shown that exposure to large-scale violence can lead to psychological distress. The war has resulted in widespread distress not only in those living in Ukraine, but also in neighboring nations, as well as in those who have been following the war in countries farther away from Ukraine. This symposium consists of three papers that studied the distress that has resulted in those living in Ukraine as well as in individuals outside Ukraine. One paper examined national resilience across Ukraine in the first few weeks of the invasion as well as PTSD symptoms as they related to different forms of social and motor disability. Findings showed national resilience was associated with trust in others and with perceiving oneself as able to 'bounce back' after illness. Another paper studied the influence of concerns about the war on psychological distress in a sample of adult Poles. Resilience, at both the national and personal levels, served as a protective factor. In a third paper, participants in European countries (Germany, Finland, and the Czech Republic) spent more time watching the war on social media, and reported greater worry, anger, anxiety, and denial than individuals in North America (Canada and the USA). Self-efficacy was negatively associated with anxiety. These papers assessed the extensive distress experienced as well as the role of psychological resources in alleviating distress such as resilience, self-efficacy and mastery. Implications of the findings for applications and for psychological stress theory are discussed.

**Keywords:** Russian-Ukrainian war, psychological distress, resilience, mastery, self-efficacy

# COMUNICATION 1

## NATIONAL RESILIENCE, DISABILITY AND DISTRESS DURING THE RUSSIAN-UKRAINIAN WAR

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### ABSTRACT

**Objectives:** The 2022 Russian invasion of Ukraine has created several major challenges for this nation but few studies have examined resilience and its relationship to distress at a national level. We examined national resilience in the first few weeks of the invasion (April 2022).

**Method:** We used data collected by a Ukrainian national survey to examine national resilience across Ukraine (N=2000). National resilience was assessed using a single factorial scale, alongside indices of income and family loss, interpersonal trust, subjective trauma and individual ability to 'bounce-back' after a health threat. Additional analyses assessed PTSD symptoms as they related to different forms of disability, both social and motor.

**Results:** In a linear regression national resilience was most strongly associated with trust in others, but was also associated with not moving from home, being in a predominately Ukrainian-speaking region, perceiving oneself as able to 'bounce back' after illness, and being younger. PTSD symptoms were associated with disability across domains, both social and motor.

**Conclusions:** Data collected six weeks into the conflict suggest high levels of national resilience in Ukraine, but also high levels of PTSD symptoms in this population. Interpersonal trust was a key factor in national resilience, alongside displacement from home. Those suffering from a range of both motor and social disabilities are at risk of PTSD and may require particular support during this very difficult time.

**Keywords:** disabilities, PTSD, resilience, Russian-Ukrainian war



## COMUNICATION 2

# INFLUENCE OF SENSE OF DANGER DUE TO THE RUSSIAN-UKRAINIAN WAR, AND SENSE OF NATIONAL AND PERSONAL MASTERY ON PSYCHOLOGICAL WELL- BEING

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### ABSTRACT

**Objectives:** Genuine concerns regarding the threat of Russian aggressive expansion already surfaced in eastern European countries in the aftermath of the illegal annexation of Crimea in 2014. The current Russian-Ukrainian war made these fears and worries even more palpable. This study examined the influence of concerns about the war in neighboring Ukraine on psychological distress symptoms in a sample of adult Poles.

**Method:** Data were collected via internet panel in early February 2022 (Wave 1), before the invasion, and August 2022, about five months after the war began (Wave 2). N = 1246, 56% women, average age = 52. Outcome variables, assessed both in Waves 1 and 2, were: generalized distress, negative affect, and irritability. Focal predictors, assessed in Wave 2, were: sense of danger and worries due to the Russian-Ukrainian war, sense of country's mastery (beliefs in country's ability to cope with adversities), and sense of personal mastery (beliefs that one can effectively manage life's challenges).

**Results:** Hierarchical regression analyses controlling for socio-demographics, COVID-19 and other life stressors, showed that sense of danger and worries predicted more distress, negative affect, and irritability. Additionally, sense of country's mastery and personal mastery each were negatively associated with all three outcomes.

**Conclusions:** Prospective analyses showed that the Russian-Ukrainian war was associated with psychological distress in citizens of neighboring Poland. Both indicators of country's mastery and personal resilience served as protective factors. These results will be discussed within the context of notions concerning the influence of historical and current collective (national) trauma on societies' well-being.

**Keywords:** Russian-Ukrainian war, mastery, psychological well-being

## COMUNICATION 3

# WATCHING THE WAR IN UKRAINE AND PSYCHOLOGICAL FACTORS: COMPARISONS BETWEEN EUROPE AND NORTH AMERICA

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### ABSTRACT

**Objectives:** Reports indicate that millions of people have been watching the war in Ukraine. This research studies the relationship between hours watching the war and psychological distress reactions.

**Methods:** 1263 university students responded to an online questionnaire related to watching the war in Ukraine. Participants were students in five national samples from Europe (Germany, Finland and the Czech Republic) and North America (Canada and the USA).

**Hypotheses:** Since European countries are closer to the site of the war, and historically have greater ties with the countries at war than North American countries, it was expected that psychological distress, anxiety, anger and denial, while watching the war, would be greater in European participants than in North American ones. Second, worry about the war should be significantly higher with more hours watching the war, and anxiety should decrease with more self-efficacy.

**Results:** European participants, compared to their North American counterparts, had more relatives or friends in Ukraine and Russia, and spent more hours watching the war, worried more about the war, and experienced greater anxiety, anger and denial. Results of path analyses performed separately with the European and North American data showed that in both samples, number of relatives/friends in Ukraine or Russia was indirectly related to worry about the war through hours spent watching the war. Greater worry about the war was related to anxiety, anger, and denial that the war was happening. Self-efficacy was negatively related to anxiety.

**Conclusions:** Effects of the war on psychological distress were far-reaching, extending to countries far from Ukraine. Theoretical and practical implications are discussed.

**Keywords:** Russian-Ukrainian War, North America, Europe, psychological distress

## **10. PSYCHOLOGY OF HEALTH AND WELL-BEING APPLIED TO TOURISM**

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### **GENERAL ABSTRACT**

The Psychology of Health and Well-Being has become increasingly important in the context of tourism, with health tourism being an emerging area in Portugal.

This symposium seeks to survey research carried out on some psychological variables in the context of tourism, with the aim of providing an overview and exploring the main results obtained, seeking to lay the foundations for investigations to be carried out in the future. In particular, studies already carried out on well-being, mindfulness and meaningful experiences in tourists will be analyzed, through literature reviews and empirical investigations.

Keywords: mindfulness, positive psychology, tourism, well-being

## COMUNICACION 1

# WELLNESS TOURISM: A BIBLIOMETRIC ANALYSIS APPROACH OF THE LAST DECADE: 2012-2022

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### ABSTRACT

Health and wellness are intricately related with overall satisfaction and quality of life that has been contributing to the high demand for specialized wellness services at most tourist destinations. Wellness vacations can both reduce stress levels and foster positive emotions, leading to a healthy balance of body, mind, and spirit in addition to providing satisfying consumer experiences that enhance personal well-being. A bibliometric review was designed to investigate which are the most-cited articles and the most contributing authors, journals, and countries in wellness tourism research; which is the relationship among topics in terms of co-occurrence of keywords; what are the main trends of research; and what impact the pandemic had on wellness tourism research. The data collection was performed in January 2023 through the Web of Science and Scopus databases. Articles published between January 2012 and December 2022 were selected. The screening process generated 73 peer-reviewed empirical articles published in English-language journals, with tourists as sample. The results revealed that the most investigated topics were tourists' motivations, well-being, perceived restorative environment, and loyalty and revisit intentions. It was also verified that the number of publications in the field of wellness tourism increased exponentially in the wake of the pandemic outbreak, especially in the year 2022. This research represents a contribution to investigation on wellness tourism since previous bibliometric reviews have not distinguished wellness tourism from medical tourism. Additionally, an analysis of the impact of the pandemic was performed.

**Keywords:** bibliometric analysis, COVID-19, tourists, wellness, wellness tourism

## COMUNICACION 2

# AN OVERVIEW OF MINDFULNESS THEORIES APPLIED TO TOURISM: SYSTEMATIC REVIEW UPDATE AND BIBLIOMETRIC ANALYSIS

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### ABSTRACT

**Objectives:** The concept of mindfulness has been widely researched, and its application has been extended to different contexts. In Tourism, several studies point out numerous psychological benefits when tourists experience mindful states during their trips. The main objective was synthesising existing scientific studies about mindfulness in the tourism context by providing an overview of applied mindfulness theories and exploring the main results obtained.

**Methods:** In order to achieve the established objective, a systematic review was conducted, complemented by a bibliometric analysis. Scientific studies listed in the WOS, SCOPUS, PubMed and PsycInfo databases were analysed using PRISMA guidelines. Twenty-five studies were selected for review from 670 records identified.

**Results:** The results show a positive association between mindfulness and pleasant travel experiences, indicating that travellers who adopt states of mindfulness while travelling will exhibit more pro-environmental behaviours, feel more satisfied, and have more memorable experiences, which will strengthen their loyalty to their destination.

**Conclusions:** This study addresses the lack of bibliometric studies in this field by offering a comprehensive literature assessment. By providing implications for research and tourism management, it also identifies common areas of current study interest, provides insights into often explored subjects, and aims to increase awareness of the relevance of the concept of mindfulness in visitor experiences and well-being.

**Keywords:** bibliometric analysis, mindfulness, systematic review, tourism, tourist experience

## COMUNICACION 3

# THE ROLE OF MOTIVATIONS IN THE PROMOTION OF WELL-BEING AND HAPPINESS: AN EXPLORATORY STUDY

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### ABSTRACT

**Introduction:** Well-being and subjective happiness are fundamental to improving people's lives, being tourism an activity that generates new meanings allied with tourists' preferences and motivations. Thus, the development of positive emotions and well-being is expected to depend on the motivations that lead to a determined activity.

**Objectives:** This proposal explores how different motivations to engage in tourist experiences influence tourists' well-being and happiness.

**Methodology:** This study assessed 92 Portuguese participants, mainly female (70.7%), aged from 20 to 82 years old (M=39). Participants answered the Wellness Tourism Motivations Scale, Tourism Well-being Scale, and Subjective Happiness Scale. Data analysis was made with the software SMART-PLS4.

**Results:** The inner model revealed good psychometric qualities, such as the indicators' reliability ( $\lambda > .707$ ), internal consistency ( $\alpha > .7$ ;  $\rho_a > .7$ ;  $\rho_c > .7$ ), convergent (AVE  $> .5$ ) and discriminant validity ( $.85 < HTMT < .90$ ). The structural model highlighted that the dimensions "self-care" ( $r^2=.279$ ), "healthy food and diet" ( $r^2=.231$ ), and "rest and relaxation" ( $r^2=.122$ ) explain most of the variance of the construct motivation, which suffers most of the influence of well-being's dimensions meaningfulness ( $\lambda = .804$ ), spirituality ( $\lambda = .787$ ), accomplishment ( $\lambda = .746$ ), and creativity ( $\lambda = .688$ ).

**Conclusions:** The results highlighted five topics of promotion of well-being and happiness in tourism: 1) Self-care; 2) Nature and its significance; 3) Rest and relaxation; 4) Learning and promotion of well-being; 5) Meaning. Investing in activities promoting well-being and happiness can be the innovative strategy of tourism campaigns that enhance the tourists' role in designing their own experience and the meaning attached.

**Keywords:** happiness, motivations, positive psychology, tourism, well-being

## COMUNICACION 4

# TOURISM'S WELLBEING INDICATORS IN MADEIRA ISLAND - NATURE VS GASTRONOMY: AND INFORMAL COMPARISON

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### ABSTRACT

Wellbeing research in Tourism has been on an exponential rise in the last few years. Particular focus is given to what is now known as positive tourism, a sub-field of positive psychology that intends to look into wellbeing as a psychological variable in the development of tourism experiences. Thus, in the last few years, the authors have been part of the “Wellbeing Tourists Project” which aimed to analyze wellbeing from this perspective, in Madeira Island, Portugal. Previous studies that came out from this project have looked into what activities could be linked to better well-being for tourists visiting this island. The current study is an overall reflection and informal comparison of two major indicators that came out as being relevant for tourists’ well-being in this project, namely nature, and gastronomy. In one of the previous studies and considering nature as a favorite activity for tourists, psychological variables such as positive emotions, creativity, and positive relationships had higher means. In a second study where gastronomy was considered the most enjoyed activity, positive emotions, creativity, and engagement showed higher numbers. This comparison is interesting showing that positive emotions and creativity (uniqueness of the experience) are both important aspects of tourism experiences of wellbeing. While only a reflection and informal comparison, positive emotions and creativity seemed to be common grounds for experiencing well-being in tourism activities. Implications for practice and future studies will be discussed.

**Keywords:** well-being, tourism, positive emotions, creativity, Madeira

# FREE COMMUNICATIONS



# PARALLEL SESSIONS 1

## 1. POSITIVE YOUTH DEVELOPMENT AND RESILIENCE IN A SAMPLE OF SPANISH EMERGING ADULTS

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### ABSTRACT

Positive Youth Development (PYD) model is a strength-based perspective of transition to adulthood derived from developmental systems theory that posits that healthy development emerges because of the alignment between internal strengths and contextual assets. Literature to date has indicated that PYD is associated with some thriving indicator, although more research is needed concerning resilience skills. The aim of this study was to examine the relationships between PYD and some indicators of resilience, i.e., adaptive responses to positive and negative affect. A cross-sectional study was conducted in winter and spring of 2021 with a sample of 1044 emerging adults from 11 universities in Spain, who completed online self-report measures. The results showed that PYD was positively associated with adaptive responses to positive affect (i.e., savouring, and self-focused positive rumination) and to negative affect (i.e., distraction). Furthermore, negative correlations were observed with maladaptive responses to both positive (i.e., dampening) and negative affect (i.e., depressive rumination). These results highlight the need to integrate the resilience education and PYD promotion within the design of interventions to enhance psychological adjustment in university context.

**Keywords:** PYD, resilience, youth, positive affect, negative affect, cross-sectional

## 2. PREDICTIVE MODEL OF FAMILY ACCOMMODATION IN MOTHERS OF MEXICAN ADOLESCENTS WITH EMOTIONAL PROBLEMS

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### ABSTRACT

**Objective.** The aim of this study was to know the influence of family functioning (FF), coping strategies (CS) and anxiety sensitivity (AS) on family accommodation (FA) in mothers of Mexican adolescents with emotional problems (EP). **Methods.** We carried out a cross-sectional and predictive study (CONACyT/PAPIIT-IT300223 funding). **Participants.** An intentional sample consisted of 204 mothers aged 28-65 years ( $M=40.83$ ;  $SD=6.015$ ) of adolescents with EP participated. **Instruments.** The Family Functioning Scale (FACES-III), the Coping Scale for Adults (CSA), the Anxiety Sensitivity Index (ASI-3) and the Family Accommodation Scale (FAS-SR) were applied on-line. **Procedure.** The evaluation included an informed consent form. Variables that were statistically significant in the correlation bivariate analyses, FF, CS, and AS were entered as predictors in the linear regression analysis using the stepwise method. **Results.** Participants had a mental health diagnosis (31.9%). High levels of FA ( $M=1.56$ ;  $SD=.813$ ), FF ( $M=2.24$ ;  $SD=.377$ ), CS ( $M=1.93$ ;  $SD=.362$ ) and AS ( $M=1.52$ ;  $SD=.641$ ) were found. We observed statistically significant positive associations ( $p<0.05$ ), between all FAS factors ( $M=1.56$ ;  $SD=.813$ ), and the Social ( $r=.446$ ) and Physical ( $r=.366$ ) factors; and statistically significant negative associations with Cohesion ( $r=-.193$ ) and Stress reduction ( $r=-.225$ ) factors. Cohesion ( $\beta=-.169$ ;  $p<.008$ ) and Stress Reduction ( $\beta=-.169$ ;  $p<.007$ ) negatively predicted FA. Social ( $\beta=.300$ ;  $p<.000$ ) and Physical factors ( $\beta=.185$ ;  $p<.033$ ) were predictors of FA ( $R^2=.259$ ;  $rR^2=.245$ ;  $F=17.431$ ;  $p<.05$ ). **Conclusions.** Mothers who showed accommodation reported low cohesion, low use of strategies focused on reducing stress, and great concerns related to social perception and physical reactions to anxiety.

**Keywords:** family accommodation, anxiety sensitivity coping strategies, family functioning, mothers

### 3. STRESS, REPETITIVE THINKING, AND MENTAL HEALTH IN UNIVERSITY STUDENTS

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#### ABSTRACT

**Background:** Mental disorders in university students are a growing attention problem in the international community due to their high prevalence and serious consequences. One of the reasons for this lies in the high stress young people face in university life. A transdiagnostic process that, when interacting with stress, can generate various disorders is repetitive negative thinking.

**Objectives:** To determine the effect of daily life stress and repetitive negative thinking on the prediction of anxious-depressive symptoms and substance use in university students for 14 days.

**Method:** Momentary Ecological Assessment (EMA) developed through a mobile application (App). 300 university students recruited from various faculties responded to the anxiety and depression scales of the SCL-90 questionnaire, problematic alcohol use, AUDIT, problematic use of marijuana, CAST, weekly use of alcohol and marijuana; plus the RRS (rumination and negative reflection) and PSWQ (worry) repetitive thinking styles questionnaires, and a sociodemographic form. For 14 days, the students answered items about stress and repetitive reactive thinking.

**Preliminary results:** Differences by sex are observed in favour of women in symptoms of anxiety, depression, and stress levels; differences in substance use are slight. Regression analysis with stress as a variable better explain affective symptoms than substance use. The analysis of the complete model are in development, they will be available by the date of the congress.

**Keywords:** stress, negative repetitive thinking, mental health, university students

## 4. ANALYSIS OF THE CONCEPTUAL STRUCTURE OF THE RELATIONSHIP BETWEEN DISABILITY AND PERCEIVED STRESS

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### ABSTRACT

The presence of disability has been found to elevate levels of perceived stress both at individual and group levels, primarily through self-reported indicators. However, a comprehensive understanding of this relationship is required. This study seeks to analyze the conceptual structure of the stress-disability binomial research. A quantitative bibliometric analysis was conducted to explore the keywords of the author of 378 articles and reviews on the topic of "perceived stress and disability," published in the SCI and SSCI impact indicators up until 2022. Using the bibliometrix library, co-occurrence of authors' keywords was analyzed, resulting in the identification of six areas of analysis: 1) Stress, depression, and anxiety; 2) Disability associated with family and health; 3) Perceived stress, coping, and mindfulness; 4) Quality of life, health, and well-being; 5) Social support and caregivers for developmental disabilities; 6) Pain and perceived stress. The findings indicate the significance of psychological states in physical and intellectual disabilities, as well as the importance of individual, group, and societal factors in effective coping. The study concludes by emphasizing the value of these insights in guiding future research and funding priorities.

**Keywords:** perceived stress, disability, bibliometrics, conceptual structure, lines of research

## 5. SOCIO-EDUCATIONAL CHARACTERISTICS OF STRESS IN UNIVERSITY STUDENTS

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### ABSTRACT

Stress is one of the determinants of quality of life and academic performance in higher education. The objective of this communication is to identify the social and educational determinants associated with stress reported by university students. A quantitative, transactional study was carried out on a representative sample of 941 students from a Spanish university, selected proportionally by degree, sex, and academic year. The classification analysis using the CHAID algorithm of multidirectional statistical tree of the Perceived Stress Scale (PSS-14, Spanish version) included independent social variables (sex, age, and type of family cohabitation) and educational variables (academic year and field of study). A tree was generated with a depth of 3 levels and 8 nodes, which included discrimination by sex, academic year, and field of study. Sex is the main factor that influences perceived stress ( $F(1,481)=30.760$ ,  $P<0.000$ ), with women ( $\bar{X}=28.99$ ,  $SD=7.79$ ) reporting higher levels of stress than men ( $\bar{X}=25.19$ ,  $SD=7.15$ ). The profile with the highest level of perceived stress belongs to women studying in their first academic year (13.3% of the student body). These results can help design policies to support students and improve their conditions in higher education, as recommended by the European Higher Education Area

**Keywords:** perceived stress, profile, young adults, university, CHAID, data mining

## 6. RELATIONSHIP BETWEEN AGGRESSION, DAILY STRESS AND COPING IN CHILDREN FROM 3 TO 6 YEARS OF AGE.

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### ABSTRACT

**Objective:** To analyze the relationship between aggression, daily stress and coping in Mexican children aged 3 to 6 years. **Method.** A non-experimental, cross-sectional, correlational type with indirect data the study was conducted. A total of 187 caregivers of children 3 to 6 years old participated, who reported information of their children, of whom 48.1% were boys and 51.9% girls. The non-probabilistic sample was obtained from schools in Mexico City. To measure aggression, the subscale of the CBCL /1.5-5 was used (Achenbach & Rescorla, 2000), to measure daily stress and coping, the scales of daily stress and coping for preschoolers, answered by caregivers, were used (Monjarás et al. in press). **Results and conclusions:** A low correlation was obtained between total daily stress and aggression in 3- to 6-year-old children of  $r = .23$ . With respect to the relationship between aggression and the different areas of daily stress, low correlations were also found,  $r = .15$  with the stress of fantasies and fears,  $r = .16$  with school stress, and  $r = .31$  with stress in the relationship with parents. Between aggression and coping, a high correlation was observed with dysfunctional coping ( $r = .64$ ) and low with difficulties in directly solving the problem ( $r = .21$ ), with avoidant coping ( $r = .28$ ) and with emotional coping ( $r = .33$ ). Finally, it was concluded that the variable related to coping that had the highest correlation with aggression was dysfunctional coping; with respect to stress, the variable that had the highest correlation with aggression was the relationship with parents, although this was low. According to several studies, daily stress and the use of dysfunctional coping strategies function as a mediator in psychopathology such as aggression (Seiffge-Krenke et al., 2010; Trianes & Morales, 2010).

**Keywords:** stress, coping, aggression, early children

## PARALLEL SESSIONS 2

### 1. SOCIAL INEQUALITIES IN DEPRESSIVE SYMPTOMS OF CHILDREN WITH CANCER AND THEIR PARENTS

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#### ABSTRACT

**Objectives:** About 2000 children and adolescents under the age of 18 are diagnosed with cancer each year in Germany. Due to current medical treatment options, high survival rates for many tumor diseases can be achieved. Nevertheless, the patients have to cope with a number of side-effects related to the treatment. These can have a negative impact on mental health. This study explored inequalities in depressive symptoms in children with cancer and their parents.

**Methods:** Data was collected in a prospective, multicenter study in Germany. Patients between the ages of 10 and 18 years and their parents who were treated for leukemia, a brain tumor or a sarcoma were interviewed within the first month after diagnosis using standardized questionnaires. Depressive symptoms were measured using the Children's Depression Screener (Child-S) and the Hospital Anxiety and Depression Scale (HADS-D). Analysis was done by linear regression analysis.

**Results:** Sixty-three patients (mean age: 14, SD = 3, 30% female) and one parent each participated. According to the cut-off, 63% of the children and 65% of the parents were classified as depressive. There was a negative association between socio-economic status and depression in parents but not in children. Particularly income was the determining predictor of the mental health of the parents.

**Conclusion:** Low-income parents are especially burdened by their children's cancer diagnosis and they should be offered psychosocial support.

**Keywords:** children and adolescents, cancer, pediatric oncology, social inequalities, depression

## 2. RELATIONS BETWEEN COPING STRATEGIES AND QUALITY OF LIFE OF CHILDREN WITH CANCER AND THEIR PARENTS

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### ABSTRACT

**Objectives:** In Germany about 2000 children and adolescents are diagnosed with cancer each year. Patients face numerous long-term effects related to the treatment. Yet, there are no robust results that focus relations between children's quality of life and leveraged coping styles. Moreover, most studies gather data via parents only.

**Methods:** Data was collected in a prospective, multicenter study in Germany. Patients between the ages of 10 and 18 years who were treated for leukemia, a brain tumor or a sarcoma as well as one parent were interviewed within the first month after diagnosis using standardized questionnaires: Coping Questionnaire for Children and Adolescents With Chronic Health Conditions (CODI), Coping Health Inventory for Parents (CHIP-D), Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents (KINDL), and the short form for physical and mental health (SF-12). For data analysis linear regression was used.

**Results:** 63 patients (mean age: 14, SD=3, 30% female) plus one parent participated. Children's physical and mental health was negatively related to emotional reaction coping subscale only, while only mental health was positively related to acceptance coping. Parents mental health was negatively related to CHIPFAM subscale (Maintaining family integration, cooperation, and an optimistic definition of the situation) and positively related to CHIPSUP subscale (Maintaining social support, self-esteem, and psychological stability) and their child's mental health.

**Conclusion:** Emotional coping styles like crying or being frustrated were found to be related to lower mental health in underage cancer patients. Therefore, support offers should focus especially on this group.

**Keywords:** children and adolescents, cancer, pediatric oncology, coping, well-being



### 3. DROPOUT INTENTIONS OF SOLDIERS IN MIXED-GENDER COMBAT BATTALIONS: A LONGITUDINAL ANALYSIS DURING BASIC AND ADVANCED COMBAT TRAINING

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#### ABSTRACT

This study presents a longitudinal analysis of the gender integration process in four mixed-gender combat battalions. Our main research interest was to explore the psycho-sociological processes occurring during combat training that result in balanced mixed-gender combat units. The effects of gender and masculinity norms, unit prestige, and perceived physical fitness on the decision to leave combat training allowed us to see how these processes develop. Men and women soldiers completed questionnaires at three points in time during basic and advanced combat training process. T1 (week 3 of training program) included 295 participants (192 women); T2 (week 14) included 163 participants (115 women); and T3 (week 25) included 135 participants (87 women). Participants assessed their dropout intentions, unit prestige, perceived health and masculinity norms. Results revealed a gradual process of resemblances in dropout intentions between men and women over time. In addition, there were no gender differences in the perceptions of masculinity and perceived physical fitness across time. As expected, we found that masculinity norms, unit prestige, and perceived physical health correlated with dropout intentions. While perceived physical health contributed significantly to all three measurements of dropout intentions, unit prestige negatively predicted dropout intentions at T1 but was non-significant at T2 and T3. Finally, a negative association was indicated between masculinity norms and dropout intention among females, but this was found to be non-significant for males. Overall, our results contradict previous studies on gender integration in the military that present critical views of female combatants and their integration into the combat arms of the armed forces.

**Keywords:** mixed-gender combat battalions, dropout, masculinity norms, physical health, unit prestige

## 4. MENTAL HEALTH DIFFICULTIES AMONG PSYCHOLOGISTS - HOW VULNERABLE ARE WE?

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### ABSTRACT

Despite promoting the importance of mental health care, research shows that psychologists and mental health professionals often neglect their own mental well-being. However, there is a lack of research on the prevalence of mental disorders among psychologists.

This study aimed to examine the frequency of mental disorders among psychology students and psychologists in Croatia and to determine whether psychologists are vulnerable to mental health difficulties during their studies. An online survey was conducted with 250 psychology students and 259 master's level psychologists.

Results indicated that 45% of students and 26% of psychologists reported experiencing mental disorders at some point in their lives. Currently, 61% of students and 29% of psychologists were experiencing symptoms of mental disorders. Anxiety disorders, mood disorders, eating disorders and OCD were the most common among both groups. Notably, 30% of psychologists reported experiencing mental health difficulties before or during their studies. Moreover, 49% of students and 27% of psychologists had sought help from a mental health specialist in the last five years. Those who did not seek help often cited feelings of shame or fear of stigma.

In conclusion, psychologists are vulnerable to development of mental disorders already during their studies. It is necessary to emphasize the importance of taking care of one's own mental health among psychologists, educate them on how to take care of their own mental health and normalize the seeking of psychological help.

**Keywords:** mental health, psychologists, psychology students

## 5. PERCEPTION OF LIFE EVENTS IN ADOLESCENTS BEFORE AND DURING CONFINEMENT BY COVID-19

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### ABSTRACT

Adolescence is a developmentally challenging stage: developing an identity, achieving independence, and achieving socially responsible and acceptable behavior are essential during this period (Lee-Manning, 2002; Masten & Cicchetti, 2016). Confinement influenced the development of these challenges due to the perception of positive and negative life events that can act as risk or protective factors for mental health (Barcelata & Rodríguez, 2021; Cheong, 2022). The objective of this study granted by DGAPA-PAPIIT IN301523 was to compare the positive and negative life events perceived by adolescent before and during confinement due to COVID-19. Method. Participants were 274 senior high school students between 14 and 18 years old ( $M = 16.08$  years;  $SD = .982$ ). The Life Events Questionnaire (Lucio & Durán, 2003) was applied in person and online. The informed consent of their parents for adolescents under 18 and the assent of all the participants were obtained. Results were analyzed quantitatively by the Student's t-test for independent samples and qualitatively through content analysis of an open question. Results: The findings indicated differences in positive and negative life events perceived by adolescents before and during the COVID-19 lockdown, gender differences were also obtained. The events considered most annoying by participants were interpersonal and school problems and the most pleasant were school achievements and making virtual friends. Conclusion. This information has implications for supporting the best functioning of adolescents.

**Keywords:** adolescents, life events, lockdown for COVID-19

## 6. THE CONTRIBUTION OF MINDFULNESS LONG TERM TRAINING ON PERSONAL AND PROFESSIONAL COPING FOR THERAPISTS LIVING IN A CONFLICT ZONE

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### ABSTRACT

**Background and Objectives:** It has been suggested that mindfulness training can provide therapists with coping mechanisms and influence their perceptions of self and other; however, how does mindfulness help therapists cope in a stressful security situation as well as in time of COVID - 19 pandemic both as Israeli citizens who live in a war zone and as therapists who are working with patients? Is the unique objective of this paper?

**Method:** Ten female therapists, who live and work in the western Negev and which completed a three years' mindfulness therapy training, were interviewed. A thematic analysis was used in order to trace the main themes.

**Results:** Interviewees reported that their own coping process heightened as result of being able to put aside intrusive thoughts and feelings that used to paralyze them and focus on active coping focused on what is needed to do promptly. Most also noted a more accepting attitude of themselves, devoid of self-criticism or blame as for what they have should or should not have done when facing a stressful situation. In relation to their patients, they were more empathetic to the behaviors and emotions expressed by their patients and reported that they use the mindfulness tools (such as meditation) in their therapeutic sessions.

**Discussion and Conclusions:** The results will be discussed through the prism offered by Lazarus and Folkman (1991). Implications of the outcomes of mindfulness training for those living in areas under the shadow of war will be suggested.

**Keywords:** mindfulness, therapists, stress and coping, war zone

## PARALLEL SESSIONS 3

### 1. WELL-BEING AND RESILIENCE AT WORK DURING THE COVID-19 PANDEMIC AMONG RESEARCHERS WITHIN THE MENTAL HEALTH FIELD IN CROATIA: A FOUR WAVE LONGITUDINAL STUDY

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#### ABSTRACT

**Objectives:** Work-related well-being and resilience are important within the academic setting as high work-related well-being has positive associations with workplace productivity, creativity, cooperation, and job performance. Unfortunately, recent research shows alarming levels of mental health risks and declining well-being among researchers, which has been highlighted within the ReMO COST Action (CA19117) that represents research community focused on addressing mental health and well-being within academia.

To develop evidence-based policies to monitor and foster researchers' well-being, it is necessary to assess the state of researchers' work conditions and their well-being and resilience. This is particularly important for mental health professionals who tend to be under additional burden and burnout risk given the negative impact of the COVID-19 pandemic on mental health.

**Methods:** To gain more insight into these matters, building upon the job demands-resource theory, in this four-wave longitudinal study (between 2020 and 2022) we investigated a) work-related well-being and resilience, and b) their work conditions, and personal and social resources among 45 researchers from the mental health field in Croatia (86.7% female, Mage=42.98). The study was part of a larger project on resilience of professionals in mental health field.

**Results and Conclusions:** The results of demonstrated that majority of participants experienced negative impact of COVID-19 pandemic on their work conditions. Moreover, results showed that aspects of well-being (i.e., work engagement, resilience, positive and negative affect, burnout) were moderate and remained relatively stable throughout the two years, and that personal, social and job resources provide the well-being and resilience fostering role.

**Keywords:** well-being at work, burnout, researcher mental health and well-being, ReMO COST Action, job and personal resources

## 2. INTEGRATIVE SELF DEVELOPMENT EDUCATION FOR UNIVERSITY STUDENT WELLBEING

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### ABSTRACT

Self-development and wellbeing courses for students are slowly emerging in university settings. At National Taiwan University, the popular course, "The Science of Joyful Living", combines integrative social work, positive psychology, and neuropsychology approaches with yoga, mindfulness and meditation. The Course promotes self-awareness, self-discovery, and self-empowerment to increase resilience and body-mind-spirit balance. Self-compassion methods are weaved throughout the interconnected modules to foster resilience.

Each semester, local and foreign undergraduate students from diverse academic backgrounds enroll in both the offline and online versions of the Course. During the 2021-2022 academic year, a mixed method research study was offered as an option to all enrolled students. Fall 2021 included online and offline groups and Spring 2022 included only an online group during Taiwan's major COVID outbreak. The Self Compassion and Perceived Stress Scales measured changes in self-compassion and perceived stress pre and post Course (N=89). The results revealed a significant interaction effect between group and time showing all groups significantly increased their self-compassion. Offline and online during COVID groups saw a significantly greater increase compared to the online group. Additionally, the online during COVID group saw a significant decrease in perceived stress.

Individual interviews, focus groups and the survey's open-ended questions further confirmed the Course's diverse benefits. Data revealed post traumatic growth, increased self-worth and positive habits and greater distress management. Overall, the quantitative and qualitative outcomes validate each other and clearly highlight the Course's positive impact on students' well-being. The findings demonstrate the value of self-development and wellbeing courses in university settings.

**Keywords:** resilience, self development education, integrative, self compassion, student wellbeing

### 3. SELF-COMPASSION AND PSYCHOLOGICAL WELLBEING IN CONSTRUCTION APPRENTICES

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#### ABSTRACT

**Objectives:** The nature of the construction industry creates many specific mental health risks caused by factors such as high production pressures, dangerous work, complex decision-making and the macho culture. Construction apprentices frequently experience poor mental health and are at particular risk for suicide. However, the presence of individual-level protective factors, such as self-compassion, may reduce risk, becoming more salient at increasing levels of distress and psychopathology. We examined the relation between self-compassion and psychological wellbeing, comprising six dimensions of positive functioning. **Methods:** Our sample of New Zealand construction apprentices (N = 252) in our cross-sectional study were mostly male (82.5%) with an average age of 30.77 (SD = 10.03), who completed online self-report measures: Self-Compassion Scale–Short Form, Scales of Psychological Well-Being, and Kessler Psychological Distress Scale. **Results:** Self-compassion was positively and significantly related to psychological wellbeing and negatively associated with psychological distress. Further, self-compassion uniquely predicted all six dimensions of psychological wellbeing, indicating that self-compassionate construction apprentices experienced more self-acceptance, positive relationships with others, personal growth, purpose in life, environmental mastery, and autonomy than apprentices who exhibited less compassion toward themselves. **Conclusions:** Our findings highlight self-compassion as a significant contributor to lower levels of mental distress and higher levels of all facets of psychological wellbeing. Future studies are needed to determine optimal ways to support construction apprentices in becoming more self-compassionate for their enhanced wellbeing.

**Keywords:** self-compassion, psychological wellbeing, psychological distress, construction apprentices

## 4. THE ASSOCIATION BETWEEN DAILY ROUTINES AND AFFECTIVE DISORDERS AMID AND AFTER COVID-19: A SYSTEMATIC REVIEW AND META-ANALYSIS

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### ABSTRACT

**Objectives:** This study aims to conduct a systematic review and meta-analysis on the associations between daily routines and affective disorders amid and after the COVID-19 pandemic and factors that moderated the associations.

**Methods:** PsycINFO, Web of Science, PubMed, MEDLINE were systematically searched up to October 2022 (PROSPERO: CRD42023356846). Independent variables included capability, frequency, and regularity of daily routines (i.e., physical activity, diet, sleep, social activities, leisure activities, work and studies, alcohol, smoking, others). Dependent variables included psychiatric symptoms and/or disorders (i.e., depressive, anxiety, PTSD, general psychological distress).

**Results:** We will present the results based on the 93 eligible studies conducted in six different continents. In addition to the quantitative syntheses of effect size of the correlation between daily routines and psychiatric symptoms/disorders, subgroup analyses were conducted on different types of daily routines and affective symptoms/disorders. Moderator analyses investigated the roles of demographics (e.g., country/region, income, age, gender, marital status, education level, employment status) and study design (e.g., cross-sectional vs. prospective, study quality) in the associations between daily routines and different psychiatric conditions.

**Conclusions:** Our results will offer more unifying evidence that tests the potential important link between daily routines and mental health, and in addition, socioeconomic determinants of the strength of this association under COVID-19. We will discuss the importance of conceptual clarity for defining and assessing daily routines to (1) better inform its link with psychiatric outcomes and (2) guide study design and hypothesis. The role of behavioral adjustments in protecting mental health under large-scale disasters will be highlighted.

**Keywords:** daily routines, affective disorders, determinants, mechanisms, COVID-19



## 5. THE MEANINGFULNESS OF LIFE: WHERE CAN WE FIND IT?

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### ABSTRACT

**Objectives.** The objectives are to describe the contents, validity and findings of the meaning-based measure of the Meaningfulness of Life (MOL) which consists in applying the theory of meaning (Kreitler & Kreitler) to the issue of life's meaningfulness.

**Methods.** The subjects were cancer patients and healthy controls. The measures were the MOL, a questionnaire which provides the subject's profile of meaning and a quality of life scale. The meaning-based measure of MOL includes statements describing meaningfulness of life in terms of the 22 basic content categories of the system of meaning, e.g., to be active and be doing things, to experience many different emotions. Subjects are requested to state on a 4-point scale the extent to which each of the items contributes to their sense of meaningfulness of life.

**Results.** The results of the MOL measure in samples of cancer patients and healthy individuals are presented, analyzing the relations between the MOL scores and scores on the Meaning Test and quality of life. The findings support the validity of the MOL in both patients and healthy subjects and show that the domains constituting one's MOL are correlated highly with the meaning assignment tendencies characterizing the individual in general, differ from those used for expressing the meanings of constructs such as Life and Happiness, and are correlated with specific domains of quality of life.

**Conclusions.** The findings support the validity of the new measure of MOL and may serve as basis for devising interventions designed to improve meaningfulness of life.

**Keywords:** meaning, meaningfulness of life, cancer

## **6. RESILIENCE OF FAMILIES WITH COMPLEX NEEDS WHOSE CHILDREN MANIFEST BEHAVIOURAL AND EMOTIONAL PROBLEMS: OXIMORON OR POSSIBILITY?**

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### **ABSTRACT**

Families whose children manifest emotional and behavioural problems often face numerous stressors, such as poorer sociodemographic status, high-conflict and domestic violence as well as parental violence toward child, substance dependence of family members, harsh and inconsistent parenting, weaker family cohesion, chaotic family organization, weaker family social support, etc. However, considering circular causality and the reciprocal processes in all dynamic systems, including families, behavioural and emotional problems can be a consequence of these risks, but also a contributing factor to new difficulties in the family. Because of the dynamic challenges they face, these families are often referred to as 'families with complex needs'. Such families are rarely considered resilient. Also, there is a lack of research on resilience of those families. However, the question arises whether this is justified or whether it is just a trivialisation of the complex situation these families find themselves in? Can these families be considered resilient or on the (possible) path to resilience, and if so, under what circumstance? Family resilience is dominantly defined as process (DeHaan, Hawley, & Deal, 2002; Patterson, 2002; Walsh, 2016) of achieving good outcomes in the face of significant risk/adversity, facilitated by protective factors/processes (Windle, 2011, Patterson, 2002; Walsh, 2016). In this study, we conducted group interviews with 8 families to examine two key criteria for family resilience: facing significant risk and achieving good outcomes. Therefore, this study aims to answer the following research questions: 1) What do family members identify as the risks they face? 2) How do family members understand good outcomes in relation to the risks they face? Four themes were identified: Families with complex needs and multiple risks at different levels; Survival; Positive shifts due to previous changes; and Wish for togetherness and good communication. The contribution of this paper is in the consideration of conceptualization of family resilience. The perspective of the family members in this study demonstrated that family resilience for families with complex needs whose children have emotional and behavioural

problems is not an oxymoron, but a real possibility which could be seen as an intervention need and goal.

**Keywords:** family resilience, emotional and behavioural problems, family members perspective

## PARALLEL SESSIONS 4

### 1. WORK-FAMILY CONFLICT AND RELATIONSHIP SATISFACTION DURING COVID-19: THE ROLE OF DYADIC COPING

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#### ABSTRACT

The COVID-19 pandemic is associated with several relevant changes at individual, relational, family, and work levels. Health professionals had greater exposure to the virus and were subject to higher stress levels than the general population. On the other hand, professionals in telework seem to have been mainly challenged by the management of work with the family. In this study, we tried to integrate this variable related to the professional situation that deals with the adverse effects of the work-family conflict on the couple's satisfaction, as well as explore the protective role of dyadic coping strategies. 474 people residing in Portugal in an intimate relationship for at least 3 years completed the questionnaire. Data were collected from the Portuguese Version of the Work-Family Conflict Scale – Portuguese Version (Vieira et al., 2014), Dyadic Coping Inventory – Portuguese Version (Vedes et al., 2010), and Kansas Marital Satisfaction Scale (Schumm et al., 1983). Preliminary results showed that work-to-family conflict is greater for health professionals than for telework couples. There was also an indirect effect of the professional situation (health professional or teleworker) on marital satisfaction, explained by the increase in this work to family conflict. Finally, different coping strategies were explored as moderators of this negative effect. The results will be discussed considering clinical intervention strategies.

**Keywords:** work-family conflict, relationship satisfaction, portuguese couples, dyadic coping, quantitative research

## 2. RESILIENCE AND SUBJECTIVE WELL-BEING IN HELPING PROFESSIONALS: THE PROTECTIVE ROLE OF HOPE IN BURNOUT

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### ABSTRACT

The aim of this study was to analyze burnout, hope, resilience, and subjective well-being in a sample of helping professionals, and examine the protective role of hope in the influence of burnout on resilience.

A quantitative, comparative approach, with a cross-sectional, exploratory, and descriptive correlational design was conducted on a sample of 97 helping professionals (N = 97), aged 22 to 66 years (M = 44.35; SD = 9.82). The data collected included sociodemographic data and four self-reported questionnaires (Measuring State Resilience, MSR; Copenhagen Burnout Inventory, CBI; Positive Affect and Negative Affect Schedule, PANAS; and Work Hope Scale, WHS). The results indicated that, although helping professionals present high levels of burnout, they reveal the presence of resilience, a protective factor for their emotional balance. The investigation also demonstrated that higher levels of hope increase resilience and subjective well-being, and that hope exercise an indirect effect on the negative influence of burnout on resilience, neutralizing the effect of burnout on resilience.

Hope is thus assumed to be a protection factor that will be reflected in coping with stressful situations with greater emotional balance and mental health. In this sense, it would be crucial to develop intervention programs that promote hope in these professionals.

**Keywords:** helping professions, resilience, subjective well-being, hope; burnout

### **3. BURDEN, QUALITY OF LIFE, COPING AND RESILIENCE – CONTRIBUTIONS TO STUDIES OF FAMILIES WITH CHILDREN WITH CEREBRAL PALSY**

**Inês Silva & Maria Helena Martins**

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#### **ABSTRACT**

The present study aimed to analyze and explore the relationships between burden, quality of life, coping and resilience in parents of children with Cerebral Palsy. In this quantitative investigation, with a cross-sectional, descriptive and correlational design, 34 subjects participated (24 mothers; 10 fathers), aged between 31 and 60 years. In this study were used a Sociodemographic Questionnaire, the Caregiver Burden Scale (EDC), the EUROHIS-QOL-8, the Stress Coping Scale (Brief COPE) and the Family Resilience Assessment Scale (FRAS).

The results showed that families with children with Cerebral Palsy have moderate levels of burden, good quality of life, an above-average range of coping strategies and high levels of family resilience. The results showed that the age influences parental burden and their coping strategies. Parent's academic qualifications influence burden, quality of life and resilience. No significant relationships were found between marital status and family structure and the studied variables. It was found that the greater the burden perceived by parents, the lower their quality of life. It was also found that the more resilient parents are, the better their quality of life; and that the more coping strategies they present, the more resilient they are. In these families, the variables that significantly predict resilience are coping, quality of life and child's age.

Through this study, we realize that the caregivers are more often the mothers and that they have higher levels of burden and lower quality of life than fathers. The resilience is predicted by coping strategies, quality of life and children's age.

**Keywords:** cerebral palsy; burden, quality of life, coping, resilience

## 4. ADAPTATION AND VALIDATION OF THE RESILIENCE SCALE FOR CHILDREN

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### ABSTRACT

Resilience is conceptualized as a process that makes possible to overcome difficulties, despite risks and adversities. Current research argues that resilience is a crucial process for children's development, allowing them to successfully face the risks and adversities they may encounter in their lives, constituting one of the most recent health prevention responses. Despite this, in our country there are few scales that aim to assess resilience adapted and validated for children. The Child and Youth Resilience Measure - R scale aims to assess resilience in different age groups. The present study aimed to adapt and validate this scale for children. After translation and retroversion, it was applied to a sample of 531 children, aged between 5 and 9 years ( $M = 6.92$ ;  $SD = 1.42$ ). The results of the Exploratory and Confirmatory Factor Analysis show a scale structure with three factors and 8 items. The scale presents adequate psychometric properties and acceptable adjustment values ( $\chi^2 = 37.310$ ;  $gl = 17$ ;  $p < .003$ ;  $\chi^2 / gl = 2.195$ ;  $GFI = .955$ ;  $AGFI = .904$ ;  $CFI = .854$ ;  $TLI = .760$ ;  $RMSEA = .077$ ). The statistical analysis shows that the scale presents adequate indicators of reliability and validity for children aged between 5 and 9 years old, who use the Portuguese language, providing a better understanding of resilience in this population and enabling future interventions.

**Keywords:** scale validation, psychometric properties, factor analysis, resilience assessment, children

## 5. ADAPTATION AND VALIDATION OF THE CHILD AND YOUTH RESILIENCE MEASURE FOR THE PORTUGUESE CULTURE

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### ABSTRACT

Understanding and assessing the mechanisms that underpin resilience is an area of crucial importance in mental health research. The assessment of resilience in children and young people can provide technicians with a deeper understanding of how to intervene in situations of vulnerability and risk. The present study aimed to adapt and validate the Child and Youth Resilience Measure – CYRM-28, developed by Liebenberg et al. (2012). After translation and retroversion, the Resilience Assessment Scale - Children and Youth (EAR-CJ) was applied to a sample of 442 children and young people, aged between 12 and 17 years ( $M = 13.84$ ;  $SD = 1.51$ ). A Sociodemographic Questionnaire and the Risk Status Checklist were also used to assess risk in the development of the subjects in the sample. The Exploratory Factor Analysis results replicated the original structure, showing good psychometric results. Confirmatory Factor Analysis revealed poor adjustment quality indexes, and the suggested changes were introduced, increasing the model's fit. The main values obtained were:  $\chi^2 = 206.245$ ;  $df = 120$ ;  $p < 0.000$ ;  $\chi^2 / gl = 1.718$ , good adjustment;  $GFI = 0.922$ , good adjustment;  $AGFI = 0.905$ , good adjustment;  $CFI = 0.940$ , good adjustment;  $TLI = 0.920$ , good adjustment;  $PGFI = 0.898$ , very good adjustment;  $RMSEA = 0.072$ , good adjustment. The results indicate that EAR-CJ has acceptable psychometric properties to be used in children and young people aged between 12 and 17 years, in portuguese context, providing a better understanding of resilience in this population, and enabling future interventions.

**Keywords:** resilience, children and youth, adaptation and validation of the scale, psychometric properties



## 6. EFFECTIVENESS OF A MUSCLE RELAXATION INTERVENTION IN DISTRESSED PATIENTS WITH A CHRONIC DIABETIC FOOT ULCER: A LONGITUDINAL STUDY

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### ABSTRACT

Diabetic foot ulcer (DFU) healing is a complex and slow process that depends on several factors such as the patient's physical health condition. However, psychological factors such as distress may also influence DFU development and recurrence, being commonly reported by patients with DFU. This study analyses the effectiveness progressive muscle relaxation on DFU healing and quality of life (QoL) of clinically distressed patients. Fifty-four patients that received standard care treatment were randomly assigned to one of three groups: muscle relaxation, neutral sessions (active control) and no intervention (passive control). Primary outcomes were DFU healing and QoL, while secondary outcomes were perceived stress, psychological morbidity, and illness (DFU) representations. Patients were assessed at baseline (T0), two months after (T1), and four months later (T2). Comparisons between groups showed that muscle relaxation and neutral sessions groups reported more healing improvements than the passive control group at T1, while muscle relaxation showed more improvements than passive control groups at T2. At T1, the muscle relaxation group showed less threatening DFU representations compared to active control participants. Within group analysis showed healing and physical QoL improvements in all groups, while mental QoL only improved in active control participants. Progressive muscle relaxation intervention should be included in the multidisciplinary treatment and rehabilitation plan for clinically distressed patients with a DFU.

**Keywords:** distress, diabetic foot ulcers, muscle relaxation, healing, quality of life

## PARALLEL SESSION 5

### 1. TRAINING FOR HEALTHCARE PROFESSIONALS FROM A CONTEXTUAL BEHAVIORAL APPROACH FOR THE MANAGEMENT OF SUICIDAL RISK

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#### ABSTRACT

It is necessary to strengthen the capacity to intervene from the community and the healthcare services network from a comprehensive care of people with suicidal behavior. **Objective:** to train community and healthcare professionals in the use of clinical guidelines that establish evidence-based principles for the management of suicidal risk as well as for the treatment of associated mental health problems, based on a Dynamic Model of Orders for Suicide Risk (MODORIS). **Method:** for the design of the course and selection of contents, round tables were held with experts on the subject, and once the contents were validated, the course was assembled based on an instructional design (AIDDE). **Results:** the course was carried out during four generations, with a total number of 7251 participants, of which 3444 have been certified, 882 men and 2782 women (M= 40). The qualitative and quantitative evaluations show the acceptance of the course content in terms of course operation, planning, scheduling, programmatic teaching content, methodology and teaching competence. Likewise, the participants reported that after the course they could apply management protocols for cases at risk of suicide, and a reduction of the stigma regarding their opinion about suicide is observed. **Conclusion:** This was the first time in Mexico that health personnel from public health services were trained on suicide risk management, based on current clinical models for immediate attention from health and community health services.

**Keywords:** healthcare professionals, suicidal risk, evidence-based approach

## 2. THE ROLE OF DEPRESSION IN THE LINK BETWEEN SELF-DISCLOSURE AND RELATIONSHIP QUALITY IN MILITARY COUPLES: A DYADIC APPROACH

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### ABSTRACT

**Objectives:** Self-disclosure has generally been related to better mental health and better relationship quality in military couples. Little research has focused on the mutual influences romantic partners have on each other. The current study examines the dyadic relations between couple self-disclosure and relationship quality of veterans and their spouses, as well as the mediating role of depression within this relationship.

**Methods:** 63 Israeli combat veterans (all male) and their spouses (all female) (N=126) self-reported the levels of couple self-disclosure; relationship quality; and depression symptoms.

**Results:** Veteran self-disclosure was associated with better relationship quality as perceived by both partners. Spouse self-disclosure was associated with relationship quality as perceived by the spouse, but not the veteran. Veteran depression was associated with worse relationship quality in both partners, and spouse depression – with worse spouse relationship quality only. Finally, veteran self-disclosure was related to less depression in veterans but not their spouses, and spouse self-disclosure was unrelated to depression.

**Conclusions:** The study highlights the important role of self-disclosure within the relationship of military couples, as well as indicates the role of depression in moderating this relationship. Moreover, results disentangle veterans' and spouses' mutual influences. Male veterans' relationship quality appears to be related to their own symptomatology and self-disclosure, while female spouses' relationship quality seems to be affected by both their own and their partners' mental health and self-disclosure.

**Keywords:** self-disclosure, relationship quality, depression, military couples, dyadic approach

### **3. MIXED-COUPLES: SHOULD I STAY OR SHOULD I GO? THE EFFECTS OF ACCULTURATION ON PSYCHOLOGICAL HEALTH AND WELL-BEING AND LIFE SATISFACTION IN NON-JEWISH, ENGLISH- SPEAKING PARTNERS OF JEWISH-ISRAELIS LIVING IN ISRAEL.**

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#### **ABSTRACT**

Mixed-marriage couples must often negotiate cultural boundaries to preserve and protect important aspects of their lives, including their psychological health, and to maintain social, familial, and relationship harmony. In Israel, where many challenges exist for non-Jewish partners of Jewish-Israelis, adaptation to a new identity and successful acculturation are key to both psychological well-being and life satisfaction. A mixed-methods, triangulation design was undertaken to explore the lives and acculturative experiences of this group. English-speaking participants completed a self-report survey (N = 66, M = 35.9; SD = 10.53, 95.5% female) that included an assessment of their Hebrew language skills, acculturative stress, perceived discrimination, psychological distress and well-being, and life satisfaction. Participants' willingness to embrace Israeli culture, Jewish identity, and desires to stay in Israel were also examined. Correlation and regression analyses were conducted to examine associations among variables. Thematic analyses of qualitative responses contextualised and triangulated quantitative findings. Results suggest high levels of acculturative stress, perceived discrimination, and distress among non-Jewish partners is common. Well-being and life satisfaction were positively associated with willingness to embrace Israeli culture and stay in Israel, but not with a willingness to embrace Jewish identity. Moreover, the findings suggest that psychological well-being and life satisfaction are achievable by developing psychological resilience and intercultural competence, that, in addition to sufficient time to adjust to Israeli culture, and being willing to stay and settle in Israel, help to promote psychological health and a quality of life.

**Keywords:** acculturative stress, psychological well-being, mixed marriage couples

## 4. A RIDE IN AN AUTONOMOUS CAR: A JOURNEY EXPERIENCE

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### ABSTRACT

The knowledge on the perceived experience of the passengers using an autonomous car is still limited. In the current study, we used a longitudinal experimental design as well as qualitative analysis to map and define the emotions, attitudes, and behavioral intentions of 22 elderly over the age of 60 (Mean=66.50; SD=4.15) female passengers traveling in an autonomous vehicle. During the experiment, passengers were asked to ride an autonomous vehicle and a vehicle driven by a driver in a testing ground for an approximately 10-minute ride, three times, one week apart. Participants reported their positive and negative affect (PANAS; Watson et al., 1988), their attitudes towards an autonomous car (adapted from Venkatesh et al., 2012) as well as their behavioral intentions to use an autonomous car in the near future (Hassan et al., 2019). Finally, participants were interviewed three times. The preliminary results indicated a gradual positive change over time in attitudes and behavioral intentions of the passengers. There was an observed tendency towards an increased positive emotion towards the autonomous vehicle, compared to a regular vehicle, over time. The qualitative analysis supported the quantitative findings, elderly women expressed positive attitudes, feelings, and behavioral intentions towards the new technology.

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**Keywords:** autonomous car, attitudes, behavioral intentions, positive affect, negative affect, technology

## 5. CIRCADIAN RHYTHM AND SLEEP DISRUPTIONS AS PREDICTORS OF PRENATAL STRESS AND DEPRESSION SYMPTOMS

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### ABSTRACT

Circadian rhythm and sleep are related to health, but there is little data on the relationship between the sleep/wake rhythm and mood at different stages of pregnancy. The aim of this prospective study was to investigate the associations of circadian rhythm and sleep disruptions with stress and depression among women in early and late pregnancy. The participants were 26 pregnant women. Objective and subjective measures of circadian rhythm and sleep were administered, namely actigraphy and the Biological Rhythms Interview of Assessment in Neuropsychiatry. The Perceived Stress Scale and the Edinburgh Postnatal Depression Scale were also used. Subjectively perceived circadian rhythm disruptions were positively related to stress. Tendency to maintain a regular rhythm of sleep and activity in early pregnancy and subjectively perceived disruptions of circadian rhythms in late pregnancy were positively associated with prenatal depression in late pregnancy. Sleep fragmentation and long time spent in bed at night in early pregnancy were positively associated with stress and depression in late pregnancy. The results suggest the importance of flexibility and the ability to adapt one's circadian activities to the demands of the situation of pregnancy-related changes in lifestyle. They also indicate the significance of good-quality uninterrupted night sleep in early pregnancy.

**Keywords:** circadian rhythms, prenatal stress, prenatal depression

## PARALLEL SESSIONS 6

### 1. ATTACHMENT STYLES AND REACTIONS OF UKRAINIAN CITIZENS TO WAR TRAUMA

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#### ABSTRACT

The aim of the presentation is to present the results of research aimed at understanding the universal mechanisms of coping with experienced traumas (here: war trauma), in connection with several types of factors. The respondents are Ukrainian citizens (about 500 people), both those who stayed in Ukraine after the start of the war invasion in 2022, and immigrants staying in Poland. The psychological situation of a man forced to cope with the conditions of the ongoing war is more difficult, the more traumas he experienced earlier, especially in childhood. Therefore, among the 5 methods used in the research, concerning mainly the specificity of experiencing and reacting to strong threats (PCL-5, PSPDQ1-R, PTGI), we also include those diagnosing closeness to parents and secure and insecure attachment styles (SCBP, ASQ). The research was conducted in Ukraine under the guidance of a Ukrainian psychotherapist in a hybrid way (on-line and in the form of direct contact), and in Poland in several academic centers in Krakow, Wrocław, Lublin), in the form of paper and pencil. We expect that the results of the research, in accordance with the set goals, will not only enable a deeper understanding of the mechanisms involved in responding to war trauma, but also the selection of some subjects for trauma therapy. The results of the research can therefore be used in the preparation of a strategy of psychological and therapeutic help not only for the people covered by the research, but also for other groups at risk of experiencing trauma (here: war).

**Keywords:** war trauma, attachment styles, Ukrainian citizens

## 2. BLAST INJURY: LOSING A MOTHER TO INTIMATE PARTNER FEMICIDE

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### ABSTRACT

**Objective:** This constructivist-qualitative research project examined the unique meanings constructed by female offspring to the loss of a mother to intimate partner femicide. **Method:** Twelve in-depth semi-structured interviews were conducted with bereaved Israeli female offspring whose biological mothers were murdered by their biological fathers. Each participant was interviewed once, face-to-face, for an average of 4.5 hours. Data were analyzed using Braun and Clarke's (2006) thematic analysis method. **Results:** Participants described the various 'psychological injuries' they sustained and how these wounds remained open throughout their lives as they repeatedly re-live the painful fact of their loss. Furthermore, limited familial and stigmatized social discourses affected the participants' inability to fully process the loss and thereby heal some of their psychological 'wounds.' **Conclusion:** The damage caused by the violent act of having one's mother murdered by one's father preceded many years and decades after the loss event, and the participants' loss experience remained confusing, unbearable, and incomprehensible, indicating that time does not heal all wounds. Our findings bear legal and political recommendations for policy regulations and rights related to offspring co-victims of intimate partner femicide concerning the development of better-suited care programs and the need to fight the stigmatization of homicide survivors. The findings may also guide healthcare professionals as they help clients cope with the devastating effects of their traumatic loss.

**Keywords:** bereavement, intimate partner homicide, meaning-making in loss, trauma, violence



### 3. ENHANCING PTG IN A PTSD INTERVENTION FOR COUPLES: CLIENT AND THERAPIST SUCCESSES AND CHALLENGES

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#### ABSTRACT

**Objectives:** Although the concept of post-traumatic growth (PTG) is well-established, we know little about its development in PTSD interventions. Moreover, we have scant knowledge about PTG changes in PTSD therapies for couples – namely, how PTG is facilitated in both couple members, and how the idea of PTG is fostered by therapists. The aim of the current presentation is to present a qualitative analysis of PTG manifestations in a cognitive-behavioral conjoint therapy (CBCT) clinic in Israel, specifically the way PTG is manifested and the challenges faced by both therapists and couples in conceptualizing and promoting PTG. **Methods:** Fourteen heterosexual cohabiting dyads, in which one partner had PTSD, participated in a pilot trial of CBCT. Both authors analyzed video documentation of the intervention's 14th and 15th sessions. **Results:** Three main PTG changes emerged: in the self, in relation to others, and in life paths and priorities. In addition, the role of the partners as validating and identifying PTG or, alternatively, as impeding PTG, was documented. Lastly, the challenges for both clients and therapists in terms of processing PTG alongside PTSD were described. **Conclusions:** The study unveiled unique aspects of how PTG is facilitated and/or impeded by the partner. It also showed that in order to facilitate PTG, therapists and supervisors must understand and be aware of their attitudes, in order to promote PTG in PTSD interventions.

**Keywords:** PTSD post traumatic growth, intervention, couples

## 4. A THEORETICAL PERSPECTIVE ON BURDENING FACTORS AND RESOURCES TO PREVENT SECONDARY TRAUMATIZATION AMONG ANIMAL ACTIVISTS

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### ABSTRACT

People who are committed to animals are exposed to a high risk for stress (Käufer et al., 2020) and secondary traumatization (Käufer & Schwanzer, 2022). They report an overwhelming feeling in the context of the violence against animals in slaughterhouses, fur farms and animal laboratories (Granovetter, 2021).

The objective of this work is to identify relevant burdening and protective factors to prevent secondary traumatization among animal activists. To identify those factors, a comprehensive literature review was approached. There are only two studies about secondary traumatization among animal activists (Granovetter, 2021; Käufer & Schwanzer, 2022). Therefore, in this presentation, we focus on the theoretical perspective on secondary traumatization and on studies about stress experiences among animal activists.

Collective and subjective pressure to perform, and destructive social conflicts have been identified as important burdening factors for secondary traumatization in general (Figley, 1995; Falkai, 2020) and also field specific for stress in animal activists (Turina, 2018; Gorski et al., 2018). Crucial resources are social support within the movement, self-efficacy as well as self-care. This basic assumption builds on the model for creation of compassion satisfaction (Radey & Figley, 2007). In addition, animal activists themselves also reported social support as a relevant resource within the movement (Gaarder, 2008). A model on resources and burdening factors based on a comprehensive literature review has been developed. In further studies, this model will be tested via quantitative studies.

**Keywords:** secondary traumatization, animal activists, resources, burdening factors, social movements

## 5. LINKING MINORITY STRESS TO SUBSTANCE ABUSE IN LGB ADULTS: THE MEDIATING EFFECT OF SEXUAL HARASSMENT

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### ABSTRACT

**Objective:** Despite an alarming rate of sexual harassment among LGBT individuals, a handful of studies investigated this topic. Employing a psychological mediation framework, the current study investigated the interaction between minority stress and psychoactive substance abuse mediated by sexual harassment among LGBT individuals.

**Method:** One hundred and forty-seven Israeli LGBT individuals, half of them female, answered a questionnaire measuring internalized homophobia, concealment, discrimination, sexual harassment, and psychoactive substance abuse. Their mean age was 30, they had 13 years of education on average, most were secular and reported above average or average economic status and good health. Logistic hierarchical regression models were conducted to test the proposed relations and mediating hypotheses.

**Findings:** Whereas positive correlations were found between incidents of discrimination and the use of cigarettes, and between internalized homophobia and drinking, sexual harassment correlated with an increase in the use of cannabis and hard drugs. Sexual harassment was found to mediate the relationship between minority stress and the use of cannabis and hard drugs, but not cigarette smoking and binge drinking. In addition, sexual harassment correlated significantly with incidents of discrimination and concealment of identity. No gender differences were found in sexual harassment of LGBT individuals.

**Conclusion:** Discrimination and sexual harassment are related, but different constructs. Minority stress appears to be linked directly and indirectly, via sexual harassment, to the use of psycho-active substances by LGBT individuals. Interventions addressing the prevention or mitigation of sexual harassment experienced by LGBT individuals are likely to attenuate the negative effects of minority stress on their levels of substance use.

**Keywords:** substance abuse, minority stress, discrimination, sexual harassment, LGBT

## 6. SISU AND PERCEIVED EQUALITY MODULATE WELL-BEING IN WORKPLACE

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### ABSTRACT

Beneficial and harmful sisu (i.e. fortitude) diametrically affect well-being and work stress. To unveil the linkage, candidates for mediating factors include general stressors, e.g. social environment, and stressful life events. We investigated how the two dimensions of sisu are contingent on acute stressors and emerge in relation with perceptions of organizational justice by analyzing worries concerning life and work.

As part of labor union survey, 1618 participants answered 18-item Sisu Scale operationalizing fortitude, WHO-5 well-being index, and questions on equality and preceding and present challenges and worries. Classified into 10 categories, most prevalent worries regarded health (44.6%), work demands (27.4%) and work status (24.0%). Linear and logistic regression were used to determine the effects of equality together with beneficial and harmful sisu on well-being and the probability of reporting different worries, in conjunction with age and gender.

As expected, sisu and equality predicted well-being individually and in interaction: the effects were more prominent in low-equality workplaces. Harmful sisu was associated with increase in health worries, whereas beneficial sisu diminished them, in turn increasing work demands worries. Women reported more worries. Work-related worries lessened and well-being increased with age.

Sisu scale demonstrated invariance in item loadings (full) and intercepts (partial) regarding gender and age, thus proving psychometrically solid in a blue-collar sample, thus supplementing previous student samples. Low equality in workplace identifies as stress context, where the previous findings on the role of sisu to well-being become pronounced. The significant connection between harmful sisu and health-related worries warrants for further research.

**Keywords:** sisu, fortitude, stress, well-being, workplace equality

# PARALLEL SESSIONS 7

## 1. A MINDFULNESS-BASED INTERVENTION FOR PERFECTIONISM: A PILOT STUDY

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### ABSTRACT

Perfectionism is a trait strongly associated with increased resistance to psychological treatment, often present in anxiety disorders. Currently, cognitive-behavioral therapy (CBT) for perfectionism is the leading intervention in reducing perfectionism, but a new alternative, mindfulness-based interventions (MBIs), has been emerging. Despite promising results from these, there are still gaps in the literature regarding the mechanisms underlying MBIs' effectiveness.

The main aim of this study is to investigate the effectiveness of an 8-week MBI (Mindfulness Based Cognitive Therapy) (MBCT) on reducing clinical perfectionism. Motivation is also hypothesized to mediate this change.

Frost's Multidimensional Perfectionism Scale, Five Facet Mindfulness Questionnaire, and Academic Motivation Scale was handed out to 80 university students, and those who showed higher than average levels of clinical perfectionism were invited to participate in the intervention (N=18). Measures were taken before the intervention and immediately after the last session. Changes over time in all variables were inspected through statistical analysis.

There was a decrease over time in adaptive and in maladaptive perfectionism, though there was a stronger reduction on the latter. Extrinsic motivation also decreased post-intervention. There was an increase in trait mindfulness and in intrinsic motivation at post-intervention. The results suggest that changes in motivation could underlie MBCT effectiveness, and future intervention studies could work to implement this factor into treatments for perfectionism.

**Keywords:** intervention study, mindfulness, motivation, clinical perfectionism, university students

## 2. WHERE DO I LOOK FIRST? THE TIME COURSE OF ATTENTIONAL BIAS IN BEHAVIORAL INHIBITED CHILDREN

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### ABSTRACT

Recent work suggests that behaviourally inhibited (BI) children show a specific attentional bias toward potential threats in the environment, and that such bias might be a vulnerability factor for the late development of anxiety symptomatology. However, the experimental tasks that have been used to assess attentional bias do not capture its time course, precluding the characterization of the attentional pattern (avoidance versus vigilance). This study examined the time-course of attentional bias in 124 inhibited and non-inhibited children (M-age = 5.38 years) using eye movement as an index of selective attention. Participants completed a free-viewing eye-tracking task, in which were presented with pairs of visual stimuli (Happy-Angry faces, Happy-Neutral faces, Angry-Neutral faces, Object-Neutral face). Although both groups prefer to fix the social stimulus (neutral face) rather than an object, fixations on the social stimulus were more likely in the high BI group than in the low BI group.

When a pair of faces was presented, both groups fix preferentially the emotional face (happy or angry) rather than the neutral one. However, high BI children fix angry faces more quickly and for a longer time compared to the low BI group, while fixations at the happy face were more likely in the low BI group. Considering the Angry-Happy pair stimulus, no significant differences between high and low BI children were observed. Overall, results provide further evidence of hypervigilance patterns for emotional stimuli in behaviourally inhibited children.

**Keywords:** behavioural inhibition, attentional bias, time course, children

### 3. IS COGNITIVE BEHAVIOURAL THERAPY EFFECTIVE IN ANXIETY DISORDERS WHEN THERE IS COMORBIDITY WITH AUTISM SPECTRUM DISORDERS?

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#### ABSTRACT

**Objectives:** The aim of this study is to conclude whether cognitive behavioural therapy (CBT) is effective in Anxiety Disorders when there is comorbidity with Autism Spectrum Disorder (ASD).

**Methods:** A PubMed search was performed with the MeSH terms "cognitive behavioral therapy in anxiety AND autism spectrum disorder".

**Results:** The literature showed that CBT is superior to waitlist in response rate (76.5% versus 8.7%) and remission rate (52.9% versus 8.7%). Furthermore, a 2018 study showed significant reductions on clinician and parent reports of child's anxiety and on anxiety disorder severity.

The literature showed that more severe internalizing problems predicted poorer treatment outcomes especially in standard versus personalized CBT. On the other hand, the findings of some studies indicate that externalizing symptoms were associated with poorer treatment outcomes in CBT. However, the results of a 2020 study suggest that a CBT approach yields positive impact for treatment outcomes in young people with ASD and comorbid externalizing problems, particularly among those with comorbid ADHD.

Parent involvement may be particularly beneficial for children with ASD, as their participation may enhance generalizability of skills across settings.

Some ASD features such as elevated repetitive behaviors and restricted interests predicted poorer treatment outcomes mostly in standard CBT but have less of an impact in personalized CBT.

**Conclusions:** Although, randomized controlled trial showed that both standard and personalized CBT are effective in youth with ASD, a parent-involved and adapted version performed slightly better in this population.

**Keywords:** Anxiety Disorders, Autism Spectrum Disorder, Cognitive Behavioural Therapy

#### **4. SENTIMENTO DE COMUNIDADE, TEMPERAMENTO E PARTICIPAÇÃO COMUNITÁRIA EM IDOSOS INSTITUCIONALIZADOS [SENSE OF COMMUNITY, TEMPERAMENT AND COMMUNITY PARTICIPATION IN INSTITUTIONALIZED ELDERLY]**

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##### **ABSTRACT**

Institutionalization is a scenario that can be viewed positively or negatively, depending on the temperament of the elderly person. The reference to the active citizenship of the elderly in society implies talking about their community participation and their sense of community. It is precisely in this line of thought with three axes (sense of community, temperament and community participation in institutionalized elderly) that the objective of this investigation arises, to know how the temperament of institutionalized older people, their sense of community and their level of community participation has implications for healthy aging in the community. Three Studies were carried out: Study I- knowing the perspective of institutionalized older people; Study II - to understand the perception that professionals and people from the community have about institutionalized older people in our research in the domains of temperament, sense of community and community participation; Study III- understanding the experts' perspective on the temperament of institutionalized older people, their sense of community and their level of community participation has implications for healthy aging in the community. For this purpose, in study I, three psychological assessment instruments (Community Feeling Index II, Community Participation Questionnaire, and EAS Temperament Scale for Adults) were administered to 17 institutionalized elderly people.

The results showed that temperament has high levels of sociability. Community participation is low and there is some dissatisfaction on the part of the elderly due to the fact that they consider that they are rarely with their family, friends, neighbors, participating in religious services and in organized community activities. As for the feeling of community, the results obtained led to the conclusion that the perception of this feeling is reduced.

According to the professionals' opinions, the temperament of the elderly tends to vary depending on their own personality or age and sociability, the existence of healthy habits and greater monitoring, by both the institution and the family, are considerations factors promoting well-being associated



with temperament; Community participation is important and older people tend to like and want to participate.

Given the evidence of the results obtained, a proposal was presented for an intervention project called "(A)beautiful age", whose mission was to improve the levels of participation of institutionalized elderly people, in order to increase their sense of community, taking into account the your temper.

**Keywords:** idosos institucionalizados, envelhecimento, sentimento de comunidade, temperamento, participação comunitária

## **5. RESILIÊNCIA E EMPODERAMENTO PARA UM ENVELHECIMENTO SAUDÁVEL [RESILIENCE AND EMPOWERMENT FOR HEALTHY AGING]**

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### **ABSTRACT**

Longer lives are evidence of one of humanity's most remarkable achievements. They reflect advances in economic, social, personal and health development. Faced with this reality, it is important to rethink what it is to be an elderly person and what it is like to flourish and reach this stage of life with health and well-being. The Decade of Healthy Aging (2020-2030) is a time of opportunity for adaptations and investments to promote healthy aging. In the World Report on Aging and Health (WHO, 2015) Healthy Aging means developing and maintaining the functional ability that allows well-being in old age. This functional ability is determined by an individual's intrinsic capacity (combination of all of the individual's physical and mental capacities), the environment in which he or she lives (understood in the broadest possible sense and including the physical, social and political environments) and by the interactions between them. Life choices and environmental circumstances determine the trajectory. This study focuses on the psychological skills of older adults. Its main objective is to show how psychological empowerment and resilience contribute to the health path of each individual. A systematic review of the literature was carried out to integrate the existing information, which followed the PRISMA principles, generating data that help decision-making and strategies that lead to good practices. The results made it possible to outline training strategies of a psychological nature to implement "Ageing in place" in an age-friendly community, where the promotion of resilience and empowerment of older adults are present.

**Keywords:** older adults, ageing in place, healthy aging, resilience, empowerment

## **6. A PERSPETIVA DOS JOVENS SOBRE CIDADES AMIGAS DA IDADE [THE PERSPECTIVE OF YOUNG PEOPLE ON AGE-FRIENDLY CITIES]**

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### **ABSTRACT**

**Objectives:** “Aging in place” means the ability to continue to live at home and in the community over time, safely, empowered, resiliently and independently. It is important that it be considered as the first option due to the advantages of social inclusion and emotional reward that it brings. A city friendly to older people, it is an accessible and inclusive urban environment that promotes active aging in its three pillars: health, participation and security. Citizens can make their contribution, particularly younger people, many of whom are future professionals who support aging with health and resilience. The present study aims to know the perspective of young people about their own aging and their understanding of whether the city where they live is friendly to the elderly.

**Methods:** Exploratory, cross-sectional, descriptive, qualitative study. The Checklist of Fundamental Characteristics of Age-Friendly Cities from the World Health Organization was used, and a Survey of Young People on Perception of Aging. It had 20 participants, students of the Higher Professional Technical Course in Psychogerontology between 18 and 21 years old, from the city of Beja, Portugal.

**Results:** Participants consider that their aging is related to positive aspects, such as the presence in the future of more technological aids to support their old age, and the importance of maintaining autonomy. The Checklist showed that Beja, in general, is friendly to older people, but needs to invest more in mobility, proximity services and gerontotechnology.

**Conclusions:** In view of the evidence, we consider that a city friendly to older people needs to also take into account the intergenerationality and literacy of aging with health and well-being, empowering and giving an active voice to the elderly and meeting their needs, resilience and autonomy.

**Keywords:** jovens, “ageing in place”, cidades amigas da idade, resiliência, promoção da saúde

## 7. COPING STRATEGIES AND QUALITY OF LIFE IN ADULTS WITH ASTHMA: IMPLICATIONS FOR CLINICAL PRACTICE

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### ABSTRACT

The present study aimed to evaluate the quality of life and the way people deal with the disease in a sample of adult people diagnosed with asthma. Following this, the sociodemographic questionnaire, the WHOQOL-bref, and the Brief-COPE were administered. The sample consisted of 50 people with asthma, of whom 33 (66%) were female and 17 (34%) were male, and the mean age was 55,94.

In general, regarding the sociodemographic characteristics, for quality of life, statistically significant differences were found for age, whereas for the coping strategies, statistically significant differences were found in some dimensions, for literacy, and age. In terms of clinical features, there were shown statistically significant differences in the follow-up time, the existence of another chronic health problem, psychological/psychiatric follow-up, and diagnosis of asthma in family members, in relation to the quality of life and, as regards the coping strategies, there were found statistically significant differences for the follow-up time, existence of another chronic health problem, psychological/psychiatric follow-up, diagnosis of asthma in family members and type of medication.

Considering the results that were obtained in this study, it is essential to have more studies to identify the most adaptive coping strategies that are related to good asthma control, in order to provide guidelines for the development of interdisciplinary interventions that are capable of acting on a biopsychological level, of promoting a better quality of life.

**Keywords:** coping strategies, quality of life, asthma

# PARALLEL SESSIONS 8

## 1. EYE GAZE BEHAVIOR DURING A FACE-TO-FACE CONVERSATION: EFFECTS OF ANXIETY, CONVERSATIONAL ROLE AND PARTNER GAZE DIRECTION?

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### ABSTRACT

**Objectives:** Social anxiety has long been related to reduced eye contact. The present study aimed to determine whether gaze avoidance by more socially anxious individuals is a habit (related to social anxiety) or a momentary effect of state anxiety in a face-to-face conversation. Meanwhile, this study investigated the effect of conversational role and partner gaze direction on gaze behaviour during the conversation.

**Methods:** Participants (N = 61, age-range 17-30 years, 89% female) had a getting acquainted conversation with a same-sex confederate for approximately 10 minutes. We alternated conversational roles (talking vs. listening) and manipulated the confederate's gaze direction (direct vs. averted). Participants' gaze behaviour was registered with eye-tracking glasses. Their social anxiety and state anxiety were measured using questionnaires.

**Results:** The results revealed greater state anxiety was associated with reduced eye gaze throughout the conversation whereas no effect of social anxiety was found. Furthermore, the results showed that the negative association between state anxiety and eye gaze was particularly strong when the confederate directly looked at the participant and also when the participant was talking. In addition, the study found main and interaction effects of conversational role and partner gaze direction on eye gaze behaviour during the conversation.

**Conclusions:** Together, the current results shed light on factors that influence eye gaze behaviour in a face-to-face social setting and provide initial evidence that, in the general population, eye gaze avoidance is more related to heightened state anxiety than to social anxiety.

**Keywords:** social anxiety, state anxiety, eye gaze, eye-tracking, face-to-face conversation

## 2. COVID-19 ANXIETY, PARENTING AND CHILD EMOTION REGULATION: A CROSS-CULTURAL STUDY WITH BRAZILIAN AND PORTUGUESE PARENTS

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### ABSTRACT

**Objectives:** Parental anxiety and parenting styles have been linked with children's emotional adjustment. Overall, the pandemic had relevant psychological impacts, such as anxiety symptoms, particularly on parents who struggled with the added burden on work-family life balance. This cross-cultural study aims to explore how COVID-19 anxiety and parenting styles impact children's emotion regulation in two different Portuguese-speaking countries.

**Methods:** Data was collected online from a sample of 190 Brazilian and 109 Portuguese parents (80.9% women), whose children had a diverse range of ages ( $M = 8.38$ ;  $SD = 4.30$ ). The applied protocol included the COVID-19 Anxiety Scale (CAS), the Parental Authority Questionnaire for Parents (PAQ-P), and socio-demographic questions. Hierarchical multiple regression models tested how COVID-19 anxiety and parenting styles (authoritative, authoritarian or permissive) predict child emotional adjustment (emotion regulation or lability/negativity).

**Results:** In the Brazilian sample, parental COVID-19 anxiety ( $\beta = 0.16$ ) and a more authoritarian parenting style ( $\beta = 0.17$ ) predicted higher children's lability/negativity; even controlling the effects of children's age ( $R^2 = 0.11$ ). In the Portuguese sample, where parental COVID-19 anxiety was quite lower [ $M = 1.55$  versus  $3.13$ ;  $t(279.821) = -3.760$ ,  $p < 0.001$ ], children's greater negativity was only predicted by a low authoritative parenting style ( $\beta = -0.30$ ;  $R^2 = 0.22$ ).

**Conclusions:** A better understanding of the impact of parents' COVID-related anxiety and parenting styles on children's emotional dysregulation in different cultural contexts stresses the importance of families' interventions in other potential epidemics within a contextual framework.

**Keywords:** COVID-19 anxiety, parenting styles, child's emotional regulation, Portuguese-speaking parents

### 3. WHEN THE TIMES GET TOUGH THE TOUGHS GET FUNNY: MEANS BY WHICH HUMOR BUFFERS AGAINST DEATH ANXIETY EMERGED DURING THE COVID-19 OUTBREAK

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#### ABSTRACT

**Objective:** According to Terror Management Theory (TMT), three common buffers minimize the anxiety of mortality salience: affirmation of a) one's cultural worldview, b) the self and one's personal values, and c) one's significance in the context of close personal relationships. The current study aimed to examine the contents of memes, which were distributed on social media during the COVID-19 outbreak, to explore the means by which humor buffers against death anxiety.

**Method:** A sample of 237 memes that were distributed through social media during the COVID-19 pandemic outbreak was analyzed using a hybrid approach of qualitative methods of thematic analysis, incorporating both the data-driven inductive approach of Boyatzis (1998) and the deductive, a priori template-of-codes approach outlined by Crabtree and Miller (1999).

**Results:** The data demonstrates three means by which humor buffers against death anxiety, a) humor as a means for connecting to cultural worldviews; b) humor as a means for inclusion in group; c) humor as a means to gain a sense of control.

**Conclusions:** Clutching humor and happy thoughts may serve the function (central to terror management theory) of preventing the conscious mind from being paralyzed by the terror of death

**Keywords:** TMT, COVID-19, death anxiety, humor

## 4. GERMANS' PSYCHOLOGICAL RESPONSES TO REFUGEES: DIFFERENTIATING PATTERNS OF THREAT PERCEPTIONS, ATTITUDES, INTERGROUP EMOTIONS, AND THEIR ANTECEDENTS

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### ABSTRACT

Members of receiving societies can respond to the arrival and resettling of refugees very differently. Research has shown that person-centered factors related to social identity can affect the level of perceived threat towards refugees, which in turn are linked to the nature and intensity of intergroup emotions and attitudes towards refugees. However, not much is known about patterns of cognitive-affective-attitudinal responses that members of receiving societies display towards refugees.

This study used latent profile analysis to examine whether a sample of Germans (N= 910) may be classified into distinct response profiles. Participants completed a cross-sectional online survey, which covered threat perception types (symbolic threat, realistic threat, negative stereotypes), intergroup emotions (anxiety, hope, anger, and happiness), attitudes, and antecedents related to social identity (identity as German, contact experience, empathy).

We identified four different profiles of Germans. One group (13,1 %) displayed high threat perceptions, strong negative intergroup emotions, and negative attitudes toward refugees while reporting low intercultural contact experiences. A second group (28,6 %) showed antagonistic characteristics with positive perceptions and attitudes. The largest group (41,4 %) displayed moderate threat perceptions, intergroup emotions, and attitudes toward refugees. The last profile (16,9 %) showed a slightly elevated but otherwise matching pattern to the largest group, except for a strong display of intergroup anxiety.

In essence, most respondents report positive attitudes toward refugees (86,9%) and a rather low sense of threat (70%). Knowledge about different perceptions and emotions can help to create effective interventional programs and information campaigns.

**Keywords:** refugees, attitudes, latent profile analysis, intergroup emotions, threat perceptions

## 5. SPECIFIC LEARNING DISORDERS AND PARENTAL ANXIETY OF CHILDS' LEARNING

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### ABSTRACT

Specific learning disorders (SLD) are difficulties in learning based on neurological developmental disorders. SLD disturb acquisition of reading, spelling, writing, or mathematical skills. SLD do not result from intellectual, hearing or vision impairments or of poor instruction, socio-cultural or acquired conditions.

Individuals with SLD face emotional and psychological difficulties that have further effects on their performance. Students often experience shame and embarrassment due to their poor academic performance and tend to have low self-esteem and often exhibit learned helplessness. SLD persist into adulthood and may manifest in non-academic domains.

SLD can be a source of stress for families of children with this disability. It is often reported that children with SLD have higher prevalence of anxiety and parents (mothers in particular) of children with SLD develop mild anxiety levels by the time this hidden disability is diagnosed.

Questionnaires distributed to 417 parents through social media measured anxiety levels concerning their child being in the initial phase of learning – last kindergarten year (compulsory kindergarten), or first or second grades. Anxiety levels of 93 self-identified parents with SLD were compared with 320 non-SLD parents and 123 parents who suspect their child has SLD with 290 parents who don't suspect their child has SLD.

The data indicate that parents with SLD and parents who suspect their child has SLD report more anxiety due to their child being in the initial phase of reading, writing and mathematics learning. Compared to parent having SLD suspecting the child has SLD was a stronger predictor of anxiety levels.

**Keywords:** learning disorder, anxiety, parents



## 6. USER EXPERIENCES OF AN ONLINE INTERVENTION FOR PTSD IN ARABIC

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### ABSTRACT

The following study describes the usability and the acceptability of an online intervention for the treatment of post-traumatic stress disorder (PTSD), PTSD Coach Online (Possemato et.al., 2016) that was culturally adapted and translated into local Egyptian dialect (blinded for review). The adapted intervention was piloted in a randomised control trial with 87 Egyptians meeting clinical criteria for a diagnosis of PTSD (blinded for review). Of the 87 participants who completed the treatment condition, 15 participants (10 females, 5 males) were randomly selected to take part in a semi-structured interview to explore their user experience. Favorable feedback centered on the program's ease of access, user-friendly tools and cultural appropriateness. Participants also described benefits including increased awareness of PTSD, symptom reduction and increased willingness to seek psychological support online or in person. In contrast, participants highlighted some drawbacks of the online program, particularly the need for further support or some kind of 'human' interaction as well as feelings that the information was not sufficiently personalized and that activities could have been more interesting. The findings suggest that while the PTSD Coach Online-Arabic is unlikely to be an effective stand-alone support, given that approximately half of the sample indicated that the availability of online tools is important for both accessibility of mental health care, particularly for those concerned with stigma, it may be an important supplemental offering for other forms of ongoing care and support. Future research may consider integrated approaches to care that were highlighted as being of particular interest to participants.

**Keywords:** PTSD, online, trauma

## PARALLEL SESSIONS 9

### 1. RELATIONSHIP BETWEEN ADVERSE CHILDHOOD EXPERIENCES, CURRENTLY AVAILABLE RESOURCES AND LIFE SATISFACTION OF PROFESSIONAL HELPERS

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#### ABSTRACT

Existing research on the well-being of professional helpers is mainly focused on the professional aspect. There is very little data on their subjective wellbeing, as well as on the factors that contribute to it. So far, studies have shown that professional helpers have higher numbers of adverse childhood experiences (ACE), as well as higher levels of life satisfaction compared to the general population. This could indicate process of resilience, which is facilitated by internal and external resources. Our study aims to explore the contribution of ACE as well as internal and external resources in explaining life satisfaction among professional helpers, as well as to determine the moderating influence of internal and external resources on the relationship between ACE and life satisfaction. The research was conducted on a sample of 622 professional helpers, including pedagogues, psychologists, social pedagogues, and social workers. The results of the hierarchical regression analysis indicate that adverse childhood experiences, as well as internal (resiliency and general self-efficacy) and external resources (perceived social support from special person and family) significantly contribute to determining the life satisfaction of professional helpers. There are no significant interaction effects of resources and ACE, but together they contribute to explaining 1.5% variance. At the same time, the introduction of interaction effects in the last step resulted in the loss of the predictive significance of ACE in explaining life satisfaction. These results indicate the long-term effects of ACE on life satisfaction, as well as the possible synergistic or cumulative effect of resources.

**Keywords:** adverse childhood experiences, life satisfaction, resources, professional helpers

## 2. TRAINING MEDICS FOR STRESS RESILIENCE

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### ABSTRACT

This paper follows the development of a resilience intervention being trialled at St George's, Hospital Medical School designed for medical students, staff, working doctors and allied health professionals.

The intervention is a 6-week course that can be delivered via Microsoft Teams in person or remotely, or as a standalone automated course delivered over the internet or mobile phone applications. The course is comprised of 6 one-hour sessions each spaced a week apart. Topics covered include: What is resilience; self-care, goal setting and planning to enhance motivation and confidence; thinking styles and common biases; self-regulation, strategies to manage unhelpful thoughts and emotions; the self, values and beliefs - encouraging more flexible thinking and behaviour; the social self; social interaction; and improving well-being to build better relationships.

The course has currently been delivered to over 200 medic and allied health professional students. Well-being is measured prior to the start of the course and at the end of the course using the Warwick-Edinburgh mental wellbeing (Tennant, Hiller, Fishwick, et al., 2007). Mean score at baseline to date is 41.24 (SD=6.57). Mean score at end of course to date is 48.71 (SD=7.56). A T-test demonstrates the rise is significant  $t=4.22$   $p<.05$ . However, findings need to be taken with caution due to lack of a matched control group.

The presentation will chart the development of this work and site it within the broader stress and resilience literature.

**Keywords:** resilience, stress, emergency services, training

### 3. COMMUNITY RESILIENCE IN THE FACE OF WILDFIRES: A PORTUGUESE ADAPTATION OF THE INDEX OF PERCEIVED COMMUNITY RESILIENCE

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#### ABSTRACT

Community resilience can be defined as the ability of human communities to deal with and recover from stressors (such as climate change), reaching a higher level of functioning. The applicability of resilience to the community highlights the key importance of collective actions, interactions, or abilities, when socioecological systems are exposed to severe and unexpected changes, like wildfires.

The present study aims to develop the Portuguese version of the Index of Perceived Community Resilience (IPCR), an instrument that was recently developed to assess community resilience in the context of wildfires in Canadian rural communities. According to the original study, the IPCR consists of 11 items targeting key features of the most prominent resilience models and is a concise yet robust index that provides a useful composite measure of perceived community resilience: Leadership and Empowerment, Community Engagement and Non-Adverse Geography.

To develop the IPCR Portuguese version, a face-to-face and online research protocol will be applied in a non-random sample with at least 150 participants resident in two contrasting samples (communities exposed to fire within the last 2 years vs. communities from non-high-risk areas of fire). Results will be analysed in terms of validity (construct, convergent) and reliability (internal consistency, temporal stability) of the IPCR Portuguese version. Despite conceptual and methodological challenges of measuring community resilience, this study will provide the first community resilience assessment instrument adapted for Portugal and may contribute to future interventions with the community to foster resilience to natural disasters, such as wildfires.

**Keywords:** community resilience, Index of Perceived Community Resilience, validation study, wildfires, climate change

## 4. POSTTRAUMATIC GROWTH AFTER THE EARTHQUAKE: THE ROLE OF RESILIENCE

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### ABSTRACT

Posttraumatic growth (PTG) indicates a positive personal transformation after threatening occurrences such as earthquakes. On the territory of the Republic of Croatia, residents of the cities of Petrinja, Sisak, Glina, and the surrounding areas witnessed several devastating earthquakes, while smaller ones are still ongoing. The aim of this study was to examine whether and how resilience mediated the association between DASS symptoms and posttraumatic growth in Croatian adult citizens exposed to earthquakes from the end of December 2020 until the end of June 2022. From a cross-sectional sample survey data of 88 participants from the areas of Croatia that were most affected by the earthquakes are included in this analysis. The severity of depression, anxiety, and stress symptoms were assessed using the Depression Anxiety Stress Scale (DASS). The resilience was assessed by the Connor-Davidson Resilience Scale 25 (CD-RISC-25), and to assess posttraumatic growth the Posttraumatic Growth Inventory (PTGI) was used. Using Hayes's (2013) mediation process analysis, we have tested the direct effect of depression, anxiety, and stress symptoms on posttraumatic growth, as well as the indirect effect of resilience as a mediator. Resilience mediated the relationship between depression, anxiety, and stress symptoms and posttraumatic growth. This finding suggests that depression, anxiety, and stress symptoms have a direct positive impact on posttraumatic growth but also indirectly affect posttraumatic growth through the process of resilience seen as a multisystemic factor. Our results highlighted the importance of developing resilience as a tool that can reduce DASS symptoms and contribute to posttraumatic growth.

**Keywords:** Depression, Anxiety and Stress, resilience, posttraumatic growth, earthquake, mediation analysis

## 5. THE GOOD, THE BAD, THE LONELY: HOW THE INTERACTION BETWEEN THE POSITIVE AND NEGATIVE EFFECTS OF SUPPORTIVE RELATIONSHIPS INFLUENCE BOTH LONELINESS AND PSYCHOLOGICAL DISTRESS

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### ABSTRACT

Supportive relationships influence individuals' psychological well-being as well as their experience of psychological distress. Similarly, they also influence their experience of loneliness. Utilising a cross-sectional survey ( $N = 147$ ,  $M = 43.84$ ;  $SD = 13.67$ , 57.1 female), the present study extended previous research by examining the interaction among the positive and negative effects of supportive relationships influence and the experience of loneliness, and in turn how this experience results in psychological distress. Scales employed included a measure of the positive effects of supportive relationships, the negative effects of supportive relationships, loneliness, and psychological distress. Correlational analysis revealed significant associations among all variables. Logistic regression found that both the positive and negative effects of supportive relationships predict psychological distress, again confirming earlier findings. Path analysis found that both the negative effects of supportive relationships and the experience of loneliness, mediate the influence of the positive effects of supportive relationships on psychological distress. This study therefore extends our understanding of the connection between supportive relationships and loneliness and thus warrants further investigation. The findings have practical implications for the delivery and design of interventions for individuals who report feeling lonely. Currently, loneliness-focused interventions in Australia, for example, typically involve connecting an individual with another individual, or a group. However, if an individual's feelings of loneliness are grounded in the negative effects of their supportive relationships, rather than a lack of support offered by such options, it seems unlikely that these interventions would be effective in significantly reducing psychological distress and/or loneliness.

**Keywords:** supportive relationships, negative effects of supportive relationships, loneliness, psychological distress

# PARALLEL SESSIONS 10

## 1. THE ROLE OF POSITIVE INTERPRETATIONS AND POSITIVE RUMINATION ON PREDICTING RESILIENCE: A LONGITUDINAL STUDY

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### ABSTRACT

**Objectives:** Interpretation biases and emotion regulation strategies (ERs) are crucial mechanisms for adaptively dealing with stressful situations. However, no studies have analyzed the predictive role of both components (cognitive and affective) jointly to explain long-term resilience. In our study, we analyze a mediational model where interpretation biases predict ERs, which subsequently lead to long-term resilience outcomes.

**Methods:** 103 participants (72.8% female; mean age: 21.03) completed three-time assessments. At baseline, participants completed an objective measure of interpretation biases. One month later, participants filled out measures regarding their use of ERs (i.e., rumination, worry, reappraisal, positive rumination, and dampening of positive emotions) during the past month. Finally, one year later, participants' perceived stress during the last year, and current emotional psychopathology (i.e., depression) and well-being were assessed.

**Results:** Analysis showed that positive interpretation biases at baseline predicted the use of all ERs (except reappraisal) at one month (all  $p < .001$ ) and resilience at one year ( $r = .26$ ;  $p = .022$ ). Regarding ERs, only positive rumination was capable to predict resilience at one year ( $r = .42$ ;  $p < .001$ ). Finally, a mediational model supported the mediating role of positive rumination between positive interpretation biases and resilience. This model emerged even when controlled for perceived stress during the past year.

**Conclusions:** This study sheds some new light on the role of positive interpretation biases and positive emotion regulation to explain resilience in long term. This opens a new venue in terms of new mechanisms to understand and promote resilience.

**Keywords:** interpretation biases, positive rumination, resilience, longitudinal study

## 2. SELF-COMPASSION, WELL-BEING AND RELATIONSHIP SATISFACTION AMONG MARRIED COUPLES IN ULTRA-ORTHODOX ISRAELI SOCIETY

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### ABSTRACT

Self-compassion refers to the compassionate, kind, and caring attitude toward oneself when facing challenges and difficulties. Self-compassion is associated with personal wellbeing and relationship satisfaction. However, more diverse cultures and minority samples are needed to expand the knowledge regarding the association between self-compassion and relationship functioning, and the mechanism that mediates this association. The current study examines self-compassion's role in predicting marital satisfaction in Israel's collectivistic Ultra-Orthodox Jewish society. We hypothesized that self-compassion would predict increased marital satisfaction through the mediating role of increased wellbeing and acceptance of one's own and other's imperfections. Study 1 (N=88) included a cross-sectional sample. Participants filled the following questionnaires: self-compassion; wellbeing; relationship satisfaction, and acceptance of their own and their partner's flaws. Results supported the validity of self-compassion as a unitary construct in this collectivistic subgroup. In addition, self-compassion contributes to marital satisfaction through the mediated role of wellbeing. The second study (N=93 dyads) included married Ultra-Orthodox couples. The results indicated that both husbands' and wives' self-compassion increased their wellbeing, which ultimately increased their marital satisfaction. Unexpected results indicated that self-compassion was positively associated with one's acceptance of flaws, this mechanism can lead to decreased marital satisfaction in both husbands and wives. Finally, accepting spouse's flaws did not mediate the association between self-compassion and marital satisfaction. Research findings suggest that self-compassion could be a double-edged sword in a collectivist society and emphasize the need to examine both the beneficial and the downside aspects of self-compassion in diverse cultures.

**Keywords:** self-compassion, wellbeing, marital satisfaction, Ultra-Orthodox, acceptance of flaws



### 3. DISTRESS AND MENTAL WELL-BEING AMONG YOUNG PEOPLE EXPOSED TO AN ONGOING THREAT THROUGHOUT THEIR LIFE: RISK FACTORS AND RESILIENCE RESOURCES

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#### ABSTRACT

Over the past two decades, Southern Israelis have experienced conflict-related continuous collective stress (CCT). Psychological distress and post-traumatic stress disorder are possible effects of CCT. Interestingly, most individuals do not develop major psychological morbidities, which might indicate resilience. Young adults who grew up in communities adjacent to the Isarel-Gaza border (know in Israel as the Gaza Envelop) over the past 20 years have been exposed to CCT throughout their lives, and their transition to adulthood occurs after a complex start. In this study, we examine how CCT exposure affects distress and mental well-being among young people (18-23), as well as possible protective factors such as personal and collective resilience. A questionnaire was filled out by 307 young people who grew up under CCT. The findings revealed that 26.7% of participants had PTSD, and 15.9% with major depression. Mediation and moderation models showed a crucial role for resilience resources in mitigating CCT adverse effects. For example, those who live closer to the border had higher levels of depression, only when community resilience is low. Also, the longer a person has lived with CCT, the higher their family support and their mental well-being - which indicate high ability to mobilize and navigate resources. In addition, closer to the border, participants displayed more adaptive coping strategies and accordingly, their mental well-being was better. The current findings indicate the importance of social and community resilience resources for young people raised under CCT. Interventions that leverage resilience resources may benefit this population and others worldwide.

**Keywords:** continuous collective stress, resilience, mental distress, young adulthood

## 4. WORK-RELATED COPING BEHAVIOUR AND EXPERIENCE PATTERNS IN PROSPECTIVE TEACHERS ACROSS EUROPEAN COUNTRIES

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### ABSTRACT

**Objectives:** Considering the high levels of stress faced by teachers, individual's stress-related coping behaviour is crucial in protecting teachers' physical and mental health and in promoting a high level of professional effectiveness and the quality of education. This study focuses on the concept of personal experience with occupational stress and of the typical behavioural responses for coping with such stress, referred to as work-related coping behaviour and experience patterns (WCEP).

**Methods:** WCEP were assessed by the same named inventory involving 11 dimensions grouped into three main areas: professional commitment, coping capacity, and subjective well-being. The present study determined and compared WCEP in 1974 first-year teacher education students from Austria, Czech Republic, Germany, Poland, and Slovakia.

**Results:** The most important finding of this study is that teacher education students from countries of the former Eastern Bloc differ significantly from their counterparts from countries of the former Western Bloc. Specifically, 64% of Austrian and 59% of German teacher education students displayed healthy work-related patterns characterised by sufficient coping capacity and preserved well-being compared to only 39% of Polish, 39% of Slovak, and 37% of Czech students, who, in contrast, displayed mainly unhealthy work-related patterns characterised by reduced coping capacity and impaired well-being.

**Conclusions:** In conclusion, this alarming trend of increased prevalence of unhealthy work-related patterns in prospective teachers from countries of the former Eastern Bloc may have negative consequences not only for the individuals themselves but also for the quality of education in these countries. Counselling and psychological interventions should be an integral part of teacher education study programs especially in countries of the former Eastern Bloc.

**Keywords:** cross-country differences, coping, psychological vulnerability

## 5. EXECUTIVE AND RESILIENT?: A SYSTEMATIC REVIEW OF STUDIES TESTING THE RELATION BETWEEN COMPONENTS OF EXECUTIVE FUNCTIONS AND DIFFERENT FORMS OF RESILIENCE

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### ABSTRACT

**Objectives:** Increasing evidence points that Executive Functions (i.e., EFs) can be central markers of trait resilience and causal mechanisms of resilient responses to adversity. This may have crucial implications for mental health promotion, yet there is a lack of integration of this evidence. We thus systematically reviewed and analyzed extant research testing the relations of affective and non-affective (i.e., hot and cold) EFs (i.e., inhibition, flexibility and working memory updating) with all different forms of resilience (i.e., trait, process and/or outcome).

**Methods:** We conducted systematic searches through PubMed and PsychInfo. A total of 565 articles were initially identified. After two steps of title-and-abstract (n=565), and full-text reading filtering (n=74), 12 resulting studies were analyzed.

**Results:** Only 2 studies assessed working memory updating, whereas 3 and 7 studies assessed inhibition and flexibility, respectively. Most of studies were cross-sectional and analyzed trait resilience (n=10), whereas 2 were longitudinal (analyzing process and/or outcome resilience following adversity). Five studies included cold, 2 hot and 4 both types of EF measures. Results supported the hypothesis that all EF components account for higher levels of resilience, especially in its cold forms. Results for hot EFs were more heterogeneous and require further extension.

**Conclusions:** Results highlight the need to increase research on the role of EFs in resilient processes and outcomes, integrating the analysis of all EF components and expanding on the use of hot EF measures. This will provide precise insights of mechanisms accounting for resilient responses and adequate strategies to intervene them.

**Keywords:** executive functions, resilience, inhibition, flexibility, working memory

## 6. EMOTION REGULATION AND PARENTAL BURNOUT: A SYSTEMATIC REVIEW AND META-ANALYSIS

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### ABSTRACT

Parental burnout is a widespread and pervasive syndrome. It affects individuals' mental health and their parenting capabilities. Emotion regulation has been proposed as an important dimension for explaining parental burnout. A robust understanding of the role played by emotion regulation in parental burnout is crucial for supporting better psychological interventions. Thus, we conducted a systematic review and meta-analysis about the relationship between emotion regulation and parental burnout. A total of 34 independent samples ( $N = 12,702$ ) were included. Random effects models indicated that expressive suppression ( $r = .16$ ; 95% confidence interval [CI] = [.030, .276],  $p < .05$ ) was positively related to parental burnout and cognitive reappraisal was negative related to it ( $r = -.11$ ; 95% CI = [-.155, -.069],  $p < .001$ ). The results may help to identify ER as a target for parental burnout prevention programs and interventions.

**Keywords:** emotion regulation, parental burnout, expressive suppression, cognitive reappraisal, systematic review, meta-analysis

# PARALLEL SESSIONS 11

## 1. TRAUMA-FOCUSED PSYCHOLOGICAL INTERVENTION PROGRAMS FOR CHILDREN AND ADOLESCENTS WHO HAVE EXPERIENCED DOMESTIC VIOLENCE: A SYSTEMATIC REVIEW ABOUT EFFICACY AND EFFECTIVENESS

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### ABSTRACT

**Objective:** This study aimed to identify and analyze the effectiveness and efficiency of psychological intervention programs, trauma-focused, for children and adolescents who experienced domestic violence.

**Method:** Two independent judges followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA-P) guidelines and proceeded with the selection, extraction, and blind screening of articles, in two phases (title and abstract; full reading). Through the research question ("How effective are trauma-focused psychological intervention programs for children and adolescents who have experienced domestic violence?"), the judges searched for articles published between 2002 and 2023, in eight electronic databases, resulting in 208 articles. Of these, 106 were duplicates. The authors screened 102 titles and abstracts, according to the inclusion criteria, and 20 were fully read. Eight articles were included, and their quality was assessed using the Crowe Critical Appraisal Tool (CCAT).

**Results:** Eight studies were longitudinal, and five were Randomized Controlled Trials. The studies used six different intervention approaches, trauma-focused, and almost all (n = 7) included a component with caregivers. The number of sessions ranged between 8 and 40. The total number of participants was 1473: 812 children and adolescents (boys and girls, between 5 to 17 years) and 661 caregivers. The most evaluated areas of impact were trauma symptoms, psychological and behavioral functioning in children and parenting. These studies showed improvements between baseline, post-intervention, and follow-up, however, some didn't find differences between experimental and control groups.

**Discussion:** This communication will present the preliminary results of this Systematic Review.

**Keywords:** efficacy, effectiveness, trauma-focused intervention programs, children and adolescents, domestic violence

## 2. NARRATIVE EXPOSURE THERAPY FOR FIREFIGHTER WITH POST TRAUMATIC STRESS DISORDER: A CASE REPORT

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### ABSTRACT

**Background:** Firefighters are exposed to many traumatic events during work that might bring mental health problems. The high demand of quick responses to rescue people and the constant exposure to risk of death, not only theirs, but also other civilians, infectious diseases and blood, may lead to mental disorder, for instance posttraumatic stress disorder. Some studies conducted show the emotional impact caused by traumatic events on people in this line of work (Somerville et al., 2016; Park et al., 2016).

**Objectives:** Describe the treatment of a firefighter in the city of São Paulo - Brasil who completed Narrative Exposure Therapy (NET), a short-term trauma focused treatment.

**Methods:** PTSD diagnosis was measured with PSS-I. A traumatic event list was also applied. In total eight individual sessions approximately 120 minutes were conducted according to the NET manual.

**Results:** Before started the treatment, the firefighter could not work into confined spaces due his PTSD symptoms. After eight sessions, PTSD symptoms showed a clinically reductions, and the firefighter returned to work into confined spaces.

**Conclusions:** This case report showed that a short-term treatment can support firefighters with PTSD to improve their mental health. It also provides insides for the feasibility for implementing NET as a psychological intervention with Brazilian firefighter.

**Keywords:** PTSD, Narrative Exposure Therapy, intervention, firefighter

### 3. PREMATURIDADE E TRAUMA

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#### ABSTRACT

The premature birth and consequent admission of the baby to a neonatal care unit, is most often a potentially distressing, upsetting and often very stressful and traumatic experience for both parents. These experiences can lead to mental health changes, namely anxiety, depression and post-traumatic stress. It can also become a chronic stressful situation, as the baby may remain between life and death for several weeks or months, experiencing traumatic medical and surgical interventions and still not get well. Thus, regardless of individual differences and the multiplicity of factors influencing them, the emotional trauma associated with premature birth and the consequent admission of the baby to a NICU should be understood, recognised and never overestimated by the technicians providing care.

The authors propose in this presentation to reflect on the nature of the care provided by professionals in the context of the units. They highlight family-centred care, which focuses on the vital importance of the family for the recovery and well-being of the baby and parents after discharge. They also reinforce, associated with this model of intervention, trauma-informed care, which has come to recognise the importance of paying attention to the needs that arise as a result of the trauma of having a baby admitted to a neonatal unit and its impact in the medium and long term.

**Keywords:** prematurity, trauma and parenting

## 4. THE IMPACT OF EARLY LIFE STRESS ON THE DEVELOPMENT OF ADULT DEPRESSION AND ANXIETY: THE ROLE OF EMOTION REGULATION, COPING STRATEGIES AND PERSONALITY TRAITS

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### ABSTRACT

**Background:** Early Life Stress (ELS) is associated to increased risk of developing psychopathological symptoms later in life, or even mood or anxiety disorders. What is less understood is how putative risk and protective factors may mediate this relationship. Objective: Therefore, the main objective of this study was to analyze the mediating role of emotion regulation, coping and personality traits in the relationship between ELS and adulthood psychological distress in a large cohort of people residing in Portugal. **Method:** An online survey with a complete set of psychological standardized questionnaires was used to collect data in a total of 757 individuals aging 18 and older. Bootstrap analyses were performed in order to assess the mediator role of ER, coping strategies, and personality traits in the relationship between ELS and depressive and anxious symptomatology and stress in adulthood. **Results:** Results show that maladaptive strategies of emotion regulation (Depression -  $\beta = .80$ ; 95% CI [.40-.59];  $t = 2.38$ ;  $p < .05$ ;  $R^2 = 78\%$ ; Anxiety -  $\beta = .86$ ; 95% CI [.35-.53];  $t = 2.42$ ;  $p < .05$ ;  $R^2 = 74\%$ ; Stress -  $\beta = .88$ ; 95% CI [.38-.56];  $t = 2.69$ ;  $p < .01$ ;  $R^2 = 74\%$ ) and emotional coping (Depression -  $\beta = .89$ ; 95% CI [.38-.58];  $t = 2.86$ ;  $p < .005$ ;  $R^2 = 75\%$ ; Anxiety -  $\beta = .1.25$ ; 95% CI [.29-.45];  $t = 3.45$ ;  $p < .001$ ;  $R^2 = 62\%$ ; Stress -  $\beta = 1.27$ ; 95% CI [.31-.48];  $t = 3.79$ ;  $p < .0005$ ;  $R^2 = 62\%$ ) and avoidant coping (Depression -  $\beta = 2.69$ ; 95% CI [.10-.23];  $t = 6.92$ ;  $p < .0001$ ;  $R^2 = 26\%$ ; Anxiety -  $\beta = .2.33$ ; 95% CI [.11-.23];  $t = 6.20$ ;  $p < .0001$ ;  $R^2 = 28\%$ ; Stress -  $\beta = 2.38$ ; 95% CI [.12-.26];  $t = 6.65$ ;  $p < .0001$ ;  $R^2 = 29\%$ ), as well as elevated levels of neuroticism (Depression -  $\beta = .1.66$ ; 95% CI [.25-.44];  $t = 5.02$ ;  $p < .0001$ ;  $R^2 = 54\%$ ; Anxiety -  $\beta = 1.70$ ; 95% CI [.20-.37];  $t = 4.75$ ;  $p < .0001$ ;  $R^2 = 48\%$ ; Stress -  $\beta = 1.59$ ; 95% CI [.24-.42];  $t = 5.05$ ;  $p < .0001$ ;  $R^2 = 53\%$ ), were associated to increased levels of psychopathology. On the other hand, we results show that individuals with fewer experiences of ELS tend to have a more positive perception of quality of life and self-efficacy, along with fewer depressive, anxiety and stress symptoms ( $p < .001$ ). **Conclusion:** Current evidence suggests the relevance of relevant putative mediators between ELS and adult psychopathology, which



should be considered to develop psychological programs for the prevention and the treatment of mental disorders.

**Keywords:** early life stress, psychopathology, emotion regulation, coping strategies, personality traits

## 5. MOTHERS' CHILDBIRTH-RELATED POSTTRAUMATIC STRESS SYMPTOMS: THE PROTECTIVE ROLE OF INFORMAL AND FORMAL SUPPORT

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### ABSTRACT

**Objectives:** This study aimed to examine whether forms of informal and formal support predict postpartum post-traumatic stress symptoms and whether adverse delivery experiences and mothers' pre-birth psychological issues moderated this relationship.

**Methods:** A community sample of 526 Portuguese mothers of infants aged up to 24 months completed an online survey between February and March of 2020 that included the Modified Perinatal Post-Traumatic Stress Disorder Questionnaire, the Depression, Anxiety and Stress Scale-21, and questionnaires evaluating childbirth experience, various sources of support and maternal pre-birth psychopathology.

**Results:** When analyzing the role of all forms of formal and informal support together, more satisfaction with support received from friends and during hospital stay was significantly and independently associated with less birth-related PTSD symptoms. Overall, the moderation analyses revealed that all forms of formal support were significantly and negatively associated with birth-related PTSD symptoms, especially when mothers presented a high or moderate history of psychological problems. Moreover, the relationships between satisfaction with support during childbirth and hospital stay and birth-related PTSD symptoms were significant at low and high levels, and at moderate and high levels of, negative perceptions about birth, respectively.

**Conclusions:** The results highlighted the relevance of specific forms of support and contextual factors in the prevention of postpartum post-traumatic stress symptoms.

**Keywords:** posttraumatic stress symptoms, postpartum, support, delivery, mental health

# PARALLEL SESSIONS 12

## 1. ANXIETY, DEPRESSION, AND SOCIAL MEDIA

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### ABSTRACT

**Objectives:** Social media (SM) are an integral part of life in the 21st century. Despite positive effects of SM, associations between SM use and anxiety and depression symptoms have also been observed. The current study explores links between time spent on SM and type of use on the one hand and anxiety and depression on the other hand.

**Methods:** Online survey with 1129 female participants (aged 18-35 years) was used to collect data. The questionnaire contained sociodemographic data and indicators of life satisfaction, social support, social comparison, self-esteem, time spent on SM, and type of SM use. Depression and anxiety were measured by the Depression, Anxiety and Stress Scale (DASS-21). Multivariate regression analysis was used to explore hypothesized associations.

**Results:** Active SM use was significantly associated with both anxiety and depression. The dependent variables were also significantly linked to age, life satisfaction, social support, social comparison, and self-esteem. Social comparison moderated the association between time spent on SM and anxiety, as well as depression. Time spent on SM was not significantly associated with either outcome.

**Conclusions:** Given the observed moderation, SM use among individuals prone to upward social comparison appears to be a risk factor for adverse mental health outcomes. Learning how to navigate SM in a way that benefits our mental health seems vital, especially for individuals vulnerable to anxiety and depression.

**Keywords:** anxiety, depression, social media

## 2. DOES DR. GOOGLE KNOW MORE THAN MY GYNECOLOGIST - CYBERCHONDRIA DURING PREGNANCY

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### ABSTRACT

Anxiety is common during pregnancy, especially for women who encounter complications. While some pregnant women avoid all information that could exacerbate their anxiety, others spend a significant amount of time seeking health information from various sources, with the Internet being the primary source. For some women searching for health information online leads to relief of worries. For others, searching for health information online leads to a worsening of their worries, and can even intensify their anxiety, leading to compulsive searching known as cyberchondria. The aim of this research was to examine differences in health anxiety, pregnancy-specific anxiety, and cyberchondria depending on pregnancy complications. 360 pregnant women participated in the online questionnaire, recruited both in the hospital and online.

The results showed that women who experience complications during pregnancy have higher levels of health anxiety, pregnancy-specific anxiety and cyberchondria compared to those who do not have complications. Additionally, pregnant women who are anxious about their health and pregnancy are at a greater risk of developing cyberchondria. This is particularly pronounced in pregnant women who have complications, where the main predictive factor is pregnancy-specific anxiety.

In conclusion, pregnancy-specific and health anxiety are risk factors for cyberchondria in pregnant women. Our results provide important practical guidelines for raising awareness about the responsible use of health information from the Internet during pregnancy. Additionally, when working with pregnant women, special attention should be paid to their concerns related to pregnancy and ways of gathering information, as they are the primary generators of cyberchondria.

**Keywords:** pregnancy complications, cyberchondria, health anxiety, pregnancy-specific anxiety

### 3. STUDENTS' SELF-EFFICACY AND TEST ANXIETY: A MIXED METHODS EVALUATION OF SELF-EFFICACY'S ADAPTIVE ROLE IN NAVIGATING TEST ANXIETY.

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#### ABSTRACT

**Objectives:** This study tested whether findings from student seminar exercises would be invariant with the previous cohorts' means, variances, normality, reliability, and correlation on the study's two constructs: test anxiety and self-efficacy. Moreover, the study assessed whether students' qualitative evaluations of their scores on the two constructs would demonstrate their use of self-efficacy principles to self-regulate anxiety characteristics.

**Method:** N = 275, second year Psychology students completed a written, assessed exercise based on a validated measure of each (Revised Test Anxiety Scale with 20 items; Academic Self-efficacy Scale with 10 items). Each student wrote a 1, 500-word literature review around the two constructs along with a reflective evaluation of their scores in an assessed learning activity (module weighting: literature review = 70%; personal evaluation = 30%).

**Results:** Reliabilities for both measures were high (alphas > 0.8) and normality indicators were sound (skewness and kurtosis: < 0.1). As expected, the correlation between the two measures was moderate and negative ( $r = -0.50$ ,  $p < .01$ ), and all indicators demonstrate invariance with the previous cohort. Selections from students' statement banks indicate that: students see a causal link between the two constructs within their personal experience; self-efficacy beliefs and behaviours were seen as protectors from debilitating anxiety, and as key to navigating maladaptive anxiety responses.

**Conclusions:** Qualitative and quantitative dimensions converged in the outcomes. This presentation will trace the adaptive processes and personal agency implicated in using self-efficacy as a framework for navigating anxiety-inducing academic challenges.

**Keywords:** Test Anxiety, self-efficacy, mixed methods, self-regulation

#### **4. CONTRIBUTING AND INHIBITING FACTORS OF HEALING FROM TRAUMA FROM THE PERSPECTIVE OF WOMEN WHO RECEIVED INPATIENT TREATMENT FOR SEVERE TRAUMA-RELATED SYMPTOMS INCLUDING EATING DISORDERS**

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##### **ABSTRACT**

This research aims to examine factors which promote and inhibit healing from trauma from the point of view of women who participated in an inpatient program specialized in treating severe trauma-related symptoms including eating disorders. At the conclusion of this presentation, it should clear what works for these women, thus refining the therapeutic, psychiatric, and rehabilitative interventions crucial for this population.

Seventeen women were interviewed regarding their experiences in a trauma specialized inpatient program. Hospitalization duration ranged between 6-16 months and the interviews were conducted after discharge. Participants also completed extensive pre-post symptom measures.

Findings revealed that the women most valued their relationships with staff and peers and the psychoeducation they received regarding the long-term effects of abuse. The psychoeducation allowed them to finally "make sense" of what they felt for years and improved their ability to communicate their needs. They also valued the structured group treatment which allowed them to process emotions with the goal of healing. Negative comments were mainly directed at the nursing staff who were perceived as rigid and sometimes even as reenacting the trauma. This can be understood by considering that the nursing staff oversees setting boundaries, thus emphasizing the inherent split between the therapeutic function of trauma processing while simultaneously preserving and encouraging the women's skills and independency.

Findings will be discussed with the intention of promoting treatments in which trauma victims are partners in their own rehabilitation. The high value placed on professionals who are understanding, caring, and supportive has implications for community treatment. Particularly, nursing staff should have knowledge about traumatic stress—its causes and symptoms as well as the skills for managing it. Working in an interdisciplinary team can provide a supportive structure and perhaps prevent burnout and vicarious

traumatization. Thus, trauma-specialized staff can be most helpful to women healing from trauma.

**Keywords:** complex trauma, inpatient treatment, qualitative research

## 5. TRAIT ANXIETY, SELF-COMPASSION, AND COMPLICATED GRIEF: EXAMINING THE DISTINCT ROLE OF PERCEIVED SOCIAL SUPPORT

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### ABSTRACT

**Objectives:** Complicated grief (CG) is characterized by persistent and long-term psychological reactions following a loss experience. Research has shown that CG symptoms are associated with individual and relational factors. Nevertheless, the interaction between both factors is far from understood. In this cross-sectional study, we aimed at understanding if both trait anxiety and self-compassion were concurrently associated with CG symptoms and if each association was shaped by perceived social support.

**Methods:** Participation was based on online recruitment. After excluding participants who reported not to have experienced a loss, we conducted Exploratory Factor Analyses with principal axis factoring and promax rotation for the final sample (N = 549).

**Results:** Trait anxiety was found to be associated with lower self-compassion,  $p < .001$ , less perceived social support,  $p < .001$ , and more CG,  $p < .001$ . Results showed a significant interaction between trait anxiety and perceived social support,  $p = .013$ . Participants with higher trait anxiety reported more CG if they perceived to have less social support,  $p < .001$ , and not more social support,  $p = .067$ . Additionally, participants with higher self-compassion reported less CG if they perceived to have more social support,  $p = .043$ , and not less social support,  $p = .307$ .

**Conclusions:** Our findings show that perceived social support buffers the detrimental role of anxiety and enhances the protective role of being compassionate toward oneself, on CG symptoms. We offer insights on how to improve the well-being of people who are struggling to cope with a loss.

**Keywords:** complicated grief, trait anxiety, self-compassion, perceived social support

## 6. STRESS MINDSET IS ASSOCIATED WITH COVID-19 ACUTE STRESS SYMPTOMS ONE YEAR INTO THE PANDEMIC

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### ABSTRACT

A stress-is-enhancing mindset is associated with lower stress and better coping. However, prospective work examining the effects of stress mindset on perceived traumatic stress symptoms during a stressful real-world life event is limited. The present prospective study explored whether a greater stress-is-enhancing mindset measured before the onset of the COVID-19 global pandemic predicted later traumatic stress symptoms in response to the COVID-19 global pandemic. 179 university students (68% female; Mage = 19.31, SD = 0.79 years) completed a measure of stress mindset prior to COVID-19 pandemic onset as part of a larger study. The Impact of Event Scale-Revised (IES-R) were completed with respect to the COVID-19 pandemic 1 year into the pandemic. Stress mindset negatively predicted the IES-R subscales intrusion ( $\beta = -.19, p = .010$ ), avoidance ( $\beta = -.15, p = .042$ ), and hyperarousal ( $\beta = -.24, p < .001$ ) such that a more stress-is-enhancing mindset predicted lower intrusion, avoidance, and hyperarousal following the onset of COVID-19. Results demonstrate a potential buffering effect of a more positive stress mindset on traumatic stress symptoms following a traumatic life event providing critical information for future interventions to cope with stress.

**Keywords:** coping, coronavirus, resilience, prospective studies, stress

# PARALLEL SESSIONS 13

## 1. RESOURCE MANAGEMENT FOR ADOLESCENTS: CONCEPTION AND EVALUATION OF A CONSERVATION OF RESOURCES-TRAINING

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### ABSTRACT

Only few scientifically evaluated programs for adolescents at German Hauptschule exist, even though particularly these students need resource management trainings due to their challenging social environment. This study conceptualizes, implements, and evaluates a training, namely COR-T, for the target group using the conservation of resources theory (Hobfoll, 1989). It aims to create a deeper understanding of the student's psychosocial behavior. A total of 337 adolescents (64% male, 36% female) aged 14.54 years (SD = 1.31) participated in the training. Using three modules on social support, self-efficacy, and self-management, each lasting 90 minutes, adolescents were encouraged to use effective resource management. For quantitative evaluation, the training was accompanied by identical pre- and post-tests in the experimental and waiting control groups. With regard to psychosocial behavior, resources played a mediating role in functional coping processes. Furthermore, risk factors significantly contributed to the development of behavioral problems such as absenteeism. For the development of caravan pathways classes, teachers, and parents were crucial. The training has been effective in promoting social support, self-efficacy, and functional coping. Contrary to expectations, self-management was reduced. Antisocial-dysfunctional coping strategies, on the other hand, were inhibited. The results of these short training modules encourage further research efforts and more intensive, resource-based interventions.

**Keywords:** stress, adolescents, evaluation, conservation of resources-training



## 2. ASSESSING STRESS RESPONDING AND RECOVERY DURING HIGH-FIDELITY TRAINING IN PRE-HOSPITAL EMERGENCY MEDICINE

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### ABSTRACT

**Background:** Individuals who provide critical emergency care mount rapid psychobiological responses when faced with an incident. These responses are adaptive and ensure resources at time of demand; however, frequent activation with minimal opportunity for recovery can have negative consequences for health and wellbeing. Monitoring individuals engaging in real emergency situations would provide an understanding of their stress responses during critical care; however, this presents significant logistical challenges. A viable alternative is to assess individuals during high-fidelity training scenarios. This is the first assessment of psychobiological responding during high-fidelity training in pre-hospital emergency medicine.

**Methods:** In a sample of doctors and paramedics (N=27), psychobiological (state, cognitive and somatic anxiety, perceived demands and control, continuous heart rate, diurnal cortisol) measures were recorded for 10 days of training and a weekend of no activities. Training involved human factors, non-technical and surgical skills, and complex scenarios including road-traffic accidents, firearms incidents, and swift water rescue.

**Results:** Psychobiological responding during training was distinct from the weekend and characterised by significant increases in anxiety and elevated heart rate and diurnal cortisol secretion. The highest levels of anxiety were reported on days characterised by greater demand and lower perceived control of the day's events.

**Conclusions:** Higher psychobiological responding and lower control were most evident on the days comprising complex multiple scenarios. Given the high-fidelity of these scenarios this study gives unique insight into stress responding and recovery in pre-hospital emergency medicine and could be used to identify patterns of responding that impact upon health and wellbeing.

**Keywords:** stress, psychobiology, diurnal cortisol, heart rate, emergency medicine

### 3. EVALUATING A DIGITAL MINDFULNESS-BASED PSYCHOEDUCATION PROGRAM AMONG CANCER SURVIVORS: A PRELIMINARY ANALYSIS

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#### ABSTRACT

**Objectives:** Cancer survivors experience challenges that may affect their psychological well-being. This study aimed to evaluate the effectiveness of a digital-mindfulness (MindCAN) program, which were delivered real-time using a videotelephony software.

**Methods:** Cancer survivors were randomly assigned to either group: Digital-MindCAN, Palouse Mindfulness or wait-list control group. A convenience sample was recruited from a tertiary hospital in Singapore. A target sample size will be 150 participants, with 50 participants in each group. Primary outcomes encompassed objective stress and subjective stress. Secondary outcomes comprised psychological well-being, perceived relaxation, mindfulness, resilience, depression, and anxiety. Self-administered questionnaires and physiological measures were used to collect participants' responses. Focus-group interviews were conducted for intervention groups to elicit participants' feedback. Quantitative data were analyzed by descriptive statistics, analysis of covariance and repeated measures analysis of variance. Qualitative findings were analyzed using a realist evaluation method.

**Results:** A preliminary analysis included 30 participants (10 for each group). Most participants were Singaporean, Chinese and female. Quantitative results suggested that, in comparison to controls, the Digital-MindCAN program and Palouse Mindfulness reduced objective stress and subjective stress while enhancing perceived relaxation. Qualitative findings indicated that participants felt positive towards the mindfulness programs. Specifically, they reported that mindfulness breathing, body scan practice, let-go meditation and loving kindness were useful in reducing stress levels.

**Conclusion:** This RCT is the first to test the effectiveness of the technology-based, mindfulness-based intervention on cancer survivors in Singapore. Positive findings will add knowledge, inform clinical practice and provide directions to future research.

**Keywords:** anxiety, cancer survivors, mindfulness program, resilience, stress

## 4. HOW TEACHER AND CLASSMATE SUPPORT RELATE TO STUDENTS' STRESS AND ACADEMIC ACHIEVEMENT

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### ABSTRACT

According to the conservation of resources theory, social support provides resources to help overcome challenges. Although some empirical findings have emphasized the pivotal role of teacher support and/or peer support for students' stress and academic achievement, multilevel analyses that consider contextual class and individual student effects are scarce. The current study addresses this gap and further includes gender, socio-economic status, and neuroticism as covariates. Multilevel analyses in Mplus were conducted. All measures were taken at the student level and then aggregated to the classroom level to estimate class-level relationships.

Results. Analyses revealed that on the individual level, teacher support was related to higher ability to cope and lower levels of helplessness, while on the class level, peer support by classmates was related to higher ability to cope and academic achievement. The context effects also show that in classes with higher peer support, students are more likely to benefit in terms of coping ability and achievement, whereas in classes with higher teacher support, students tend to show less coping ability.

In conclusion, a positive class climate is needed above all to reduce the experience of stress and has a positive effect on academic performance. Thereby, the role of teachers differs from peer support, as individual students who perceive their teachers as supportive exhibit better stress management in general. On the other hand, if all teachers in a class are perceived as highly supportive, there may be a reversal effect insofar as students then tend to report fewer coping skills.

**Keywords:** teacher and peer support, helplessness, ability to cope, academic achievement, multilevel analysis

## 5. WELL-BEING AND STRESS MANAGEMENT INCREASES THROUGH AN ONLINE INTERVENTION WITH UNIVERSITY STUDENTS PURSUING A TEACHING CAREER

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### ABSTRACT

Teachers suffer more frequently than other occupational groups from mental and psychosomatic illnesses, which manifest themselves in symptoms such as exhaustion, fatigue, and tension. However, the health risks of teachers are already evident during their studies due to excessive demands and a lack of coping strategies.

To support students' well-being and stress management at an early stage, an intervention was designed consisting of seven sessions, each 1.5 hours over one semester. The sessions consisted of a) physical exercises lead by a yoga teacher, b) theoretical input about e.g., stress, resources, mindfulness, test anxiety and c) methods to promote growth mindsets.

A total of 111 students (experimental group: Mage = 22.0, SD = 3.2 years; 78% female) attended the seminar and participated in a questionnaire before and after the seminar. The control group consists of 400 students (Mage = 20.5, SD = 3.2 years; 71% female).

Results from linear mixed effects models in R revealed that students who participated in the seminar reported less emotional strains ( $b = -0.37$ ,  $p = 0.04$ ), increased psychological well-being ( $b = 0.27$ ,  $p = 0.01$ ), self-worth ( $b = 0.21$ ,  $p = 0.04$ ), and ability to cope ( $b = 0.26$ ,  $p = 0.00$ ). Those students also reported to be more confident ( $b = 0.20$ ,  $p = 0.03$ ) and to focus on the task ( $b = 0.25$ ,  $p = 0.02$ ) in test situations.

In conclusion, participating in the seminar can support students' well-being and stress management and should therefore be implemented in the curriculum to support future teachers continuously.

**Keywords:** teacher students, well-being, stress, intervention, linear mixed effects models

## PARALLEL SESSIONS 14

### 1. WORK-FAMILY CONFLICT, COPARENTING AND FATHER INVOLVEMENT AMONG DUAL-EARNER COUPLES

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#### ABSTRACT

**Background:** Contemporary parents face the challenge of balancing professional and parental demands, which introduced new dynamics on parenting. Because both mothers and fathers face the challenge of conciliating their own and partner's work, as well as parental obligations, work-family conflict (WFC) may emerge. How fathers engage in childcare is addressed as an important aspect to decrease mothers' burden, namely WFC. Yet, it remains underexplored how WFC influences father involvement in dual earner couples. Objectives: This study aims to examine how parents' WFC account to the perception of greater father involvement in childcare and to explore the mediating role of coparenting, using a dyadic approach. **Methods:** Both working mothers and fathers (n=268) of children aged 2-6 years old (Mage= 4.82; SD= 1.51; 53.1% boys) reported about WFC, coparenting and father involvement. **Results:** Findings uncovered significant partner indirect effect: lower father's WFC account to mother's perception of father's greater involvement in child's direct care through cooperative coparenting (effect  $-.03$ , SE=  $.02$ , 95% CI  $-.0650$ ,  $-.0035$ ). The crossover effect revealed how fathers' ability to decrease WFC accounts to a better perception of mothers regarding their coparenting and involvement in childcare, underling how WFC is transferred from the work environment to the familiar one. **Conclusions:** This result underlies how crucial is to support policies targeting families and the labor market in order to decrease the pressures related to professional and parental roles.

**Keywords:** work-family conflict, coparenting, parenting, father involvement, dyadic

## 2. DOES ATTACHMENT STYLE MODERATE CROSSOVER OF STRESS AND BURNOUT IN MARRIED COUPLES?

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### ABSTRACT

Crossover is an interpersonal process through which negative and positive experiences and states experienced by one person are transmitted to another person in the same social environment. Recently, crossover received much theoretical and research attention but the role of moderators in the crossover process has largely been neglected. In the current study we hypothesized that stress and burnout will cross over between romantic partners and the attachment style will moderate the level of crossover.

One hundred and twenty-three dual-working heterosexual couples participated. At Time 1 both partners filled out questionnaires measuring stress, burnout, and attachment style. At Time 2, after 1 month, both partners filed, again questionnaires measuring stress and burnout. They were analyzed using the actor-partner interdependence model, which takes interdependencies between couples into account.

Actor-partner effects were not significant for stress and burnout. Regarding stress, positive associations were found between male stress at T1 and female stress at T2, for high levels of female anxiety as well as between female stress at T1 and male stress at T2, for high levels of female avoidance. Regarding burnout, positive associations were found between female work burnout at T1 and male work burnout stress at T2, for high levels of female anxiety and avoidance.

Findings are discussed and theoretical as well as practical implications are suggested.

**Keywords:** crossover, stress, burnout, attachment

### 3. A SCOPING REVIEW OF COLLEGIATE STUDENT'S STRESS DURING COVID-19

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#### ABSTRACT

**Objective:** During the COVID-19 pandemic, universities around the world established learning environments in hopes of mitigating impacts on students and faculty. Nevertheless, college students reported significant increases in stress and decreases in wellbeing during this time. Three years removed from the onset of the pandemic, researchers are continuing to study how COVID-19 has affected the mental health of college students and their coping strategies. This scoping review, using the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) model, aims to evaluate this literature.

**Method:** This scoping review followed the PRISMA-ScR reporting guidelines to identify themes, concepts, and knowledge gaps of data-based studies in peer-reviewed journals between January 2020 and December 2022. These articles primarily focused on collegiate students' stress and coping strategies during the COVID-19 pandemic.

**Results:** The first literary search using 16 search terms (e.g., covid, higher education, stress, coping, etc.) produced 88 articles, 23 of which were excluded after the abstract review using an agreed upon list of criteria. After the research group separated into three teams and reviewed the remaining 65 full manuscripts, 14 were excluded, and 51 were kept for inclusion in the manuscript. Variables that were prevalent in the remaining articles consisted of increased loneliness, mindfulness as a coping skill, and difficulties with technology.

**Conclusion:** This review illustrates the significant impacts COVID-19 had on the stress and well-being of the collegiate population. The presentation will review our results in detail and provide a framework for future research and interventions.

**Keywords:** stress, college, coping

## 4. THE DIFFERENT SHAMES OF BURNOUT: A SCALE DEVELOPMENT AND VALIDATION STUDY

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### ABSTRACT

The purpose of the current study was to develop and validate a new construct to measure burnout shame. This scale was conceptualized according to four categories of shame, namely i) perceived transgression to moral, social and individual standards; ii) personal failure; iii) ostracism and social rejection; and iv) trauma. Supported by these dimensions, this research aimed to develop a valid and reliable tool to measure burnout shame considering the dimensions of emotional exhaustion, depersonalization, and cynicism. Burnout shame was conceptualized as employees' fears that their burnout attributes may be misinterpreted or evaluated negatively. Sample 1 consisted of 203 employees from different work settings. These participants were selected through appropriate sampling methods (Mean age = 28.07; S.D. = 8.42 years old). Twenty-nine items were initially extracted from literature reviews. After content and construct validity testing, eighteen items remained. The results supported the validity and reliability of a three-factor instrument (emotional exhaustion shame, depersonalization shame, and cynicism shame), labeled the Burnout Shame Scale (BSS). These factors demonstrated good construct validity (total explained variance = 53.53%) and Cronbach alphas ranging between .762 and .849. With a two-wave repeated-measures design, study 2 (N = 102) suggested a factor structure with convergent and discriminant evidence and positive and significant correlation with workplace pressure. The BSS can be considered a valid instrument for assessing why people hide their burnout symptoms while working. Accordingly, researchers are encouraged to explore and target more complex processes which may perpetuate burnout shame behavior.

**Keywords:** burnout, shame, workplace pressure, validity



## 5. PRINCIPALS' EXPERIENCES OF STRESS AND COPING WITHIN COVID-19

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### ABSTRACT

Principals' responsibilities contributed to stress prior to COVID-19, as their demands were numerous and constantly evolving. The recent pandemic appeared to exacerbate principals' stress and limit their access to resources for support. Principals' experiences of stress are of great concern due to the impacts to their wellness and their ability to effectively address their schools' needs. This study used interpretive phenomenological analysis (IPA) to examine principals' personal experiences of stress and coping during the 2021 to 2022 academic year. Researchers conducted 14 45-minute-to-1-hour long, semi structured interviews with principals from a large, suburban school district in Texas. Interviews inquired about principals' roles and responsibilities, stressors, supports, relationships with staff and students, and the impacts of COVID-19. Themes that emerged included principals' roles and responsibilities (e.g., creating a vision, addressing staffing needs), reasons principals chose to go into administration (e.g., helping others, wanting a new challenge), stressors in their work (e.g., lack of social connectedness, COVID-specific stressors), emotional outcomes from stress (e.g., hopelessness, overwhelm), resources supporting their work (e.g., self-care, delegating work), emotional outcomes from coping (e.g., hopefulness, optimism), and ways principals attempted to address stress within their schools (e.g., prioritizing care and support). The emergent themes appeared interrelated rather than isolated. These results can help inform our understanding of principals' stress during COVID-19, including impacts to personal and occupational experiences, and possible avenues for support and intervention.

**Keywords:** principal stress, principal coping, stress appraisals

## 6. PSYCHOLOGICAL DISTRESS AND BARRIERS TO UTILIZATION OF MENTAL-HEALTH SERVICES AMONG COLLECTIVISTIC MINORITIES: THE CASE OF THE BEDOUIN ARAB COMMUNITY IN ISRAEL

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### ABSTRACT

**Objectives:** Previous studies have reported relatively high levels of psychological distress among different ethnic minorities, including the Bedouin Arab community in Israel. Despite the great need for mental-health services, studies have revealed the underuse of mental-health services among this minority group. This research examined barriers to the utilization of mental-health services to cope with psychological distress among this minority group. In this study, we addressed five different barriers: 1) barriers related to stigma, 2) barriers related to people's attitudes, 3) instrumental barriers, 4) exposure to microaggressions in health-care settings, and 5) low mental-health literacy.

**Methods:** The study included 651 male and female participants, aged 18 to 73 years. Women accounted for 60% of the participants. Participants completed a set of questionnaires that included a demographic questionnaire, questions about past experiences of psychological distress, a questionnaire on barriers to accessing care (BACE v3), the General Health Questionnaire (GHQ-12), the Mental Health Literacy Scale (MHLS), and a questionnaire on the use of mental-health services.

**Results:** The results indicate a high prevalence of stigma-related barriers (48.5%), barriers related to attitudes (58%), and instrumental barriers (49%). The vast majority of participants reported a lack of knowledge about mental health (96%), as well as exposure to microaggressions (91%). The statistical analysis revealed the prominent roles of barriers related to attitudes, instrumental barriers, and barriers related to mental-health literacy in predicting the utilization of mental-health services. The higher the levels of attitudinal and instrumental barriers and the greater the lack of knowledge of mental health issues, the less likely individuals were to seek mental-health services.

**Conclusions:** This study underscores the need to tackle barriers to the utilization of mental-health services among the Bedouin Arab community and other collectivistic ethnic minorities. This should be done by increasing awareness and knowledge about mental-health issues and by providing the

required linguistic resources and culturally competent mental-health services within local communities.

**Keywords:** psychological distress, ethnic minority, mental-health services, Bedouin Arabs, barriers

## PARALLEL SESSIONS 15

### 1. ETHNIC IDENTITY AS AN EXPLANATORY FACTOR OF EMOTIONAL DISTRESS SYMPTOMS: VALIDATION OF THE ETHNIC IDENTITY SCALE – ARABIC VERSION (EIS-AR)

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#### ABSTRACT

**Background & Aims:** The present study aimed to (a) validate the structure of the ethnic identity questionnaire in Arabic (EIS-Ar) and (b) trace the predictive role of ethnic identity of minorities to the intensity of emotional distress they experience. **Methods:** Applying the Ethnic Identity Scale (EIS) typology (Umaña-Taylor et al., 2004) on the study sample (N = 570) included participants from two ethnic minority groups in Israel, Muslims-Arabs (N=214) and Muslim Bedouin-Arabs (N=356). **Results:** PCA and CFA analysis results indicate the validity of the Arabic version of the questionnaire (EIS-Ar), which corresponded with the original EIS structure in English. The study model manages to predict up to one-fifth of the emotional distress variance and predicts and explains the intensity of emotional distress among study participants regardless of their ethnic affiliation. **Conclusions:** EIS-Ar was a valid scale for use in Arabic-Speaking samples. The EIS factor of Affirmation was the most dominant factor among others (Exploration and Resolution) and had an intense influence on one's levels of emotional distress. In conclusion, we found that the stronger one's ethnic identity is, the lower the emotional distress levels are.

**Keywords:** ethnic identity, minorities, emotional distress

## 2. ETHNIC IDENTITY & BARRIERS TO USING MENTAL HEALTH SERVICES AMONG ARAB-BEDOUIN WOMEN COPING WITH EMOTIONAL DISTRESS

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### ABSTRACT

**Background:** The study aimed to explore barriers to mental health service attainment among Bedouin women living in different residential environments in southern Israel. The main hypotheses were that (1) residential environments would impact emotional distress and mental health services attainment barriers, (2) ethnic identity would predict emotional distress, and (3) the variables would predict seeking and attaining mental health services. **Methods:** The sample included 376 Arab-Bedouin women from recognized and unrecognized villages and central localities; 126 Arab-Bedouin women from the recognized & unrecognized villages, and 250 Arab-Bedouin women from the central localities. Quantitative methods were used, including emotional distress (GHQ12), ethnic identity (EIS), mental health literacy (MHLS), and barriers to mental health services attainment (BACE). **Results:** Results showed significant differences in mental health service attainment based on residential environment and ethnic identity factors as significant predictors of emotional distress and barriers to mental health services attainment. **Conclusion:** The study highlights the importance of considering the residential environment in addressing mental health services for Arab-Bedouin women, particularly in recognizing and unrecognized villages where barriers and low mental health literacy may be more prevalent due to stress and restrictions

**Keywords:** Arab-Bedouin women, ethnic identity, emotional distress, barriers to mental health services attainment

### 3. DARK CHOCOLATE CONSUMPTION AND WELL-BEING: A PROSPECTIVE STUDY AMONG NURSES

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#### ABSTRACT

Healthcare providers' wellness is fundamental to the delivery of quality care. Fostering a culture of wellness and identifying healthy and cost-effective strategies are essential, particularly for nurses (NRs) who have a physically and emotionally demanding profession. Dark chocolate (DC) reportedly has beneficial effects on health and wellness. Objective: Investigate the nurses' well-being parameters before and after DC intake. Methods: Twenty-four NRs from a Southern California hospital participated in this prospective study. Psychological assessments, such as the General Well-Being Schedule (GWB) and the Fatigue Assessment Scale (FAS) were used, and physical and biochemical measures were obtained before and three weeks after daily consumption of 30g-40g DC. Results: The total GWB score significantly increased post DC consumption from 74.67 $\pm$  11.50 to 82.67 $\pm$  10.64 ( $t = -3.526$ ,  $df = 20$ ,  $p < 0.01$ ). Among the six subcategories of the GWB, there was a significant reduction in anxiety ( $t = -2.371$ ,  $p < 0.05$ ) and depression ( $t = -2.258$ ,  $p < 0.05$ ) and an improvement in positive well-being ( $t = -2.706$ ,  $p < 0.05$ ) and vitality ( $t = -3.465$ ,  $p < 0.01$ ) following DC intake. No significant changes occurred in the general health and self-control scores. Participants reported a significant decrease in FAS score post DC intake compared to baseline ( $t = 2.274$ ,  $p < 0.05$ ). No significant differences were noted with heart rate, blood pressure, or body mass index. However, biochemical measures showed a significant decrease in noontime salivary cortisol levels ( $t = 3.220$ ,  $p < 0.01$ ). Conclusions: In this study, well-being and fatigue scores improved among nurses who consumed DC. Further longitudinal studies are recommended to better understand DC's potential benefits regarding stress and well-being.

**Keywords:** dark chocolate, nursing, stress, fatigue, well-being

## 4. THE MEDIATING ROLE OF EMOTIONAL DISTRESS IN THE RELATIONSHIP BETWEEN DIFFERENTIATION OF SELF AND THE RISK OF EATING DISORDERS

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### ABSTRACT

**Objectives:** The prevalence of eating disorders (EDs) is constantly on the rise. Evidence suggests that the family might be a significant factor increasing emotional distress. An important family pattern found to contribute to mental and physical health is differentiation of self (DoS). The purpose of this study was to map the complex relationships between DoS, emotional distress, and EDs among non-clinical adolescents and young adults. We hypothesized that emotional distress would mediate the relationship between DoS and the risk of EDs.

**Method:** The sample included 194 adolescents (mean age 15.15; mean BMI 21.66) and 421 young adults (mean age 27.32; mean BMI 23.68). Participants filled out DSI-R, DASS-21, and EDI-2 questionnaires.

**Results:** Young adult women reported higher levels of risk of developing EDs than young adult men. Among women, emotional distress mediated the relationship between three metrics of DoS (emotional reactivity, I-position, fusion with others) and three metrics of EDs (drive for thinness, bulimic tendencies, and body dissatisfaction). Among men, similar associations were found, except for fusion with others, which was not associated with emotional distress. For male adolescents, emotional distress mediated the relationships between DoS and EDs, whereas for female adolescents, only the ED metric of perfectionism was associated with DoS through the mediation of emotional distress.

**Conclusions:** It is suggested that DoS dimensions rooted in early family experiences impact adolescents' and young adults' mental and physical health. The results provide an in-depth understanding of specific risk factors of EDs that characterize each gender and age group.

**Keywords:** eating disorders, emotional distress, differentiation of self, young adults, adolescents

## 5. MODELING LINKAGES BETWEEN SELF-EFFICACY, NORMALIZATION, AND WELL-BEING FACTORS AMONG ISRAELI MOTHERS OF CHILDREN WITH NEURODEVELOPMENTAL DISORDERS

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### ABSTRACT

**Background and Objectives:** Parents' well-being may be challenged by the neurodevelopmental disorders (NDs) of their children. This study explored general self-efficacy (personal resource) and normalization (coping strategy) and their possible association with mothers' well-being (satisfaction with life/SWL, positive affect, and presence of meaning in life (P-MIL)).

**Method:** Data were obtained from 127 Israeli mothers, ages 23-63, of children ( $M = 12.08$ ,  $SD = 3.39$ ) with NDs (autism spectrum disorder, intellectual disability, cerebral palsy). All participants completed online self-report questionnaires.

**Results:** After controlling for the effects of group, mother's age, and child's gender, bivariate associations showed that general self-efficacy was positively correlated with SWL, positive affect, and P-MIL. The study's mediation model was partly supported: General self-efficacy was related to normalization, which was related to SWL and positive affect, but not to P-MIL.

**Conclusions:** This study contributes to the empirical knowledge on well-being in mothers raising children with NDs. Findings revealed that mothers' general self-efficacy alongside their strategy to adopt normalcy substantially contributed to their well-being despite the challenges of caring for children with NDs. Mothers with high levels of general efficacy seem to approach difficult tasks with assurance, and view such tasks as challenges to be mastered. Moreover, normalization, as a coping strategy, is beneficial in constructing a story of "life as normal," advancing mothers' ability to carry on with life activities, and in turn contributing to their SWL and positive affect. Hence, psychosocial services should strengthen general self-efficacy in this cohort and support their normalization efforts.

**Keywords:** neurodevelopmental disorders, mothers, well-being, general self-efficacy, normalization



## 6. THE INTRAPERSONAL AND INTERPERSONAL PROCESSES OF FEAR OF RECURRENCE AMONG CERVICAL CANCER SURVIVORS: A QUALITATIVE STUDY

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### ABSTRACT

**Objective:** Cervical cancer's emotional and mental toll often extends beyond the disease's duration. Fear of cancer recurrence has been identified as prominent in patients and survivors, yet there is a paucity of studies regarding this population. The present study sought to explore and expand the understanding of the meaning of fear of cancer recurrence among cervical cancer survivors. **Methods:** In this qualitative study, semi-structured interviews were conducted with 15 cervical cancer survivors. The interviewees' mean age was 41.33 years (range 34-47 years) and the mean time since diagnosis was 3.1 years (ranged from 0.5 -7 years). **Results:** Three central themes emerged that represent intrapersonal and interpersonal processes: The first, "No longer resilient" refers to feelings of uncertainty in the face of the illness experienced on the intrapersonal level, where the interviewee mostly engaged with efforts to return to the "normal" state that existed before the cancer diagnosis. Interviewees described difficulties in performing follow-up medical tests as it increased the tension and stress regarding the possibility of disease recurrence. Some described dependence on the drug and argued that without it getting back to normal life as it was before the cancer diagnosis was quite hard and that fears of the disease would surely have surfaced. The second, "To be afraid in a dyad" relates to the interpersonal level that included mutual fears shared by the interviewee and her partner. Some interviewees described their partner's resources that enabled them to cope with the fear of recurrence, while other described how their partners did not allow communication about the disease and fears that accompanied the possibility of disease recurrence. The third "And what if the disease comes back and I die?" represents a combination of intrapersonal and interpersonal processes manifested by the greatest fear – death – expressed by both the interviewee and her partner. Interviewees described that fear of dying from cancer if the disease will recur was not only in their mind; it also occupied the minds of their partners and intensified their own fears. **Conclusions:** The present findings revealed that the fear of cancer recurrence represents intrapersonal and interpersonal processes encompassing three factors – uncertainty, social-cognitive processing and

death anxiety. Accordingly, potential psycho-social treatment options could be tailored to specifically address the prominence of these factors for cervical cancer survivors.

**Keywords:** cervical cancer, survivors, fear of recurrence, qualitative research

# PARALLEL SESSIONS 16

## 1. THE IMPACT OF HYBRID COMPREHENSIVE TELEREHABILITATION ON ANXIETY IN HEART FAILURE – THE TELEREH-HF RANDOMIZED CLINICAL TRIAL

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### ABSTRACT

**Background:** Heart failure (HF) is a clinical syndrome with high prevalence of psychological problems. Telerehabilitation for HF patients is beneficial for physical functioning, and reducing symptoms of depression and anxiety. The study aimed at evaluating the influence of telerehabilitation program (HCTR) on the level of anxiety in comparison to usual care (UC).

**Methods:** The TELEREH-HF study was a multicenter prospective randomized control trial in 850 clinically stable HF participants. Patients underwent clinical and psychological evaluation, including the assessment of anxiety, at entry and after the 9-week training program (HCTR) or observation (UC). The State-Trait Anxiety Inventory (STAI) was used (X1 for state, X2 for trait).

**Results:** 178 patients reported high level of anxiety as a state – 20.3% HCTR patients and 20,1% UC patients. After the 9-weeks observation – 18,8% HCTR and 21,8% UC patients ( $p=0.924$  for HCTR;  $p=0.133$  for UC). At the baseline, younger participants (<63 y.o.) showed higher levels of state anxiety ( $p=0.048$  for HCTR;  $p=0.026$  for UC). During the 9-weeks observation there were different patterns of change in anxiety level (both trait and state) in younger and older patients. The difference in patterns was significant for both HCTR and UC (X1:  $p=0.310$  for HCTR;  $p=0.029$  for UC; X2:  $p=0.005$  for HCTR;  $p=0.012$  for UC), with the decrease in anxiety level in younger patients, and the increase – in the older group.

**Conclusions:** The change in the level of anxiety during telerehabilitation is dependent on the patient's age, which could be important for understanding patients' emotional adjustment to this treatment.

**Keywords:** heart failure, telerehabilitation, anxiety, psychological assessment

## 2. DEPRESSION AND SUICIDAL IDEATION IN STUDENTS AFTER SOCIAL LOCKDOWN DUE TO COVID-19

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### ABSTRACT

**Background:** During the COVID-19 pandemic, there was a significant increase in the presence of anxiety and depressive disorders. According to the WHO (2021) worldwide, approximately 280 million people have depression, causing alterations in school, work, and family activities. In addition, depression may be associated with the risk of suicide, which is the fourth leading cause of death in the 15-29 age group. Objective: The aim of this research was to analyse the relationship between depression and suicidal ideation in students after social lockdown due to COVID-19.

**Method:** A cross-sectional correlational study was carried out (support DGAPA-PAPIIT-UNAM IT300223) in which 410 students from 17 to 24 years old ( $M= 20.71$ ;  $SD= 1.93$ ) from public schools in the metropolitan area of Mexico City participated. The Beck Depression Inventory and the Positive and Negative Suicidal Ideation Inventory were used.

**Results:** In the results, it was observed that 39.8% of the participants had a moderate level of depression, 22.2% a slight level, and 20.7% a severe level. High and significant values ( $p<.01$ ) were obtained in the correlations between depression and negative ( $r=.686$ ) and positive ideation ( $r=-.578$ ). In the linear regression analysis, depression was included as a predictor of negative suicidal ideation ( $\beta= .686$ ;  $p<.001$ ), which accounted 47% of the variance ( $F= 363.49$ ;  $p<.001$ ), while for positive ideation ( $\beta= -.578$ ;  $p<.001$ ) the explained variance was 33% ( $F=204.30$ ;  $p<.01$ ).

**Conclusions:** These data suggest that positive thoughts, such as perceived control and hope, may have a protective role against depression in the youth population.

**Keywords:** depression, suicidal ideation, late adolescence, post-pandemic, COVID-19

### 3. PARTNER-RELATED FACTORS ASSOCIATED WITH MOTHERS' POSTPARTUM POSTTRAUMATIC STRESS SYMPTOMS: WHAT MATTERS MOST AND HOW?

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#### ABSTRACT

**Objectives:** This study explored the role of mothers' perceptions about their partners' pre- and post-natal depressive and anxiety symptoms, satisfaction with partner's support and the couple's relationship on their own postpartum posttraumatic stress symptoms (PPSS). Mediation effects between study variables were also explored in a second step.

**Methods:** A community sample of 526 European Portuguese mothers who gave birth to a single child in the previous 24 months completed an online survey between February and March of 2020. They answered self-reported questionnaires in a single moment.

**Results:** Results showed that (1) mothers' perceptions of their partners' depressive symptoms during pregnancy ( $p = .06$ ) and (2) mothers' perceptions of their partners' postpartum anxiety symptoms ( $p < .001$ ) contributed positively and independently to greater PPSS, above and beyond mothers' own past and postpartum psychological symptoms; and (2) marital relationship satisfaction mediated the associations between mothers' perceptions of partners' postpartum depressive (0.22; 95% BCaCI lower/upper = 0.36/0.61) and anxiety (0.22; 95% BCaCI lower/upper = 0.03/0.41) symptoms and their own PPSS: mothers' perceptions of their partners' higher levels of postpartum depressive and anxiety symptoms were related to higher levels of PPSS via mothers' lower levels of marital satisfaction.

**Conclusions:** This study highlights the importance of (1) screening mothers' subjective perceptions concerning their partners' depressive and anxiety symptoms during the whole perinatal period; and (2) the couple's relationship as a target to be considered in perinatal interventions. Together, this can maximize at-risk mothers' identification for developing PPSS.

**Keywords:** posttraumatic stress symptoms, postpartum, couple, marital satisfaction, emotional distress

## 4. PSYCHOMETRIC PROPERTIES OF THE EUROPEAN PORTUGUESE VERSION OF THE MODIFIED PERINATAL PTSD QUESTIONNAIRE (PPQ-II)

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### ABSTRACT

**Objectives:** This study aimed to examine the factor structure and psychometric properties of the modified perinatal PTSD questionnaire (PPQ-II) in a sample of European Portuguese mothers.

**Methods:** A total of 451 mothers with infants between 1 and 18 months postpartum completed an online assessment protocol between February and March 2020. The sample was randomly split into two subsamples, in which an Exploratory (EFA;  $n = 229$ ) and Confirmatory factor analysis (CFA;  $n = 222$ ) were conducted. Convergent and known-groups validity and internal consistency of the scale were also computed.

**Results:** The EFA suggested a 2-structure factor (Factor 1, labeled as Arousal; 7 items; and Factor 2, labeled as Avoidance and Intrusion; 4 items), accounting for 48.3% of the total variance of the scale. This factor structure was supported by the CFA, showing an adequate fit to the data ( $\chi^2(43) = 103.53$ ,  $p < .001$ , CFI = .95; TLI = .94; RMSEA = .08, 90% CI [.06, .10],  $p < .01$ ). Convergent validity was shown by positive, strong, and statistically significant associations between the PPQ-II and Depression Anxiety Stress Scales-21 subscales. The scale discriminated between at-risk and low-risk mothers for developing childbirth-related PTSD symptoms, which supports its known-groups validity. The McDonald' omega coefficients attested the high reliability of the PPQ-II (ranging from .78 to .89).

**Conclusion:** Our results suggest that the PPQ-II is a valid and reliable instrument to routinely screen for posttraumatic stress symptoms after childbirth in perinatal health services. It also adds to prior studies demonstrating its cross-cultural validity.

**Keywords:** childbirth, posttraumatic stress symptoms, perinatal mental health, mothers, psychometric properties

## 5. DAILY ASSOCIATIONS BETWEEN MEANING-MAKING AND MEANING MADE IN CANCER PATIENT-CAREGIVER DYADS: INTERACTION AND MEDIATING EFFECTS

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### ABSTRACT

**Objectives:** According to the meaning-making model, meanings made might condition the effectiveness of meaning-making or mediate the association between meaning-making and well-being. However, the mechanism of this intercorrelation has not been settled. The study aimed to examine whether meanings made moderated or mediated the associations between daily meaning-making and next-day well-being in cancer patient-caregiver dyads during the first month after hematopoietic cell transplantation (HCT).

**Methods:** The sample consisted of 200 patient-caregiver dyads following first autologous or allogeneic HCT. Both partners completed measures of daily meaning-making, meanings made, positive affect, and negative affect for 28 consecutive evenings after hospital discharge. Computations were based on the actor-partner interdependence model and its extensions, using multilevel structural equation modeling.

**Results:** Partner-actor indirect effect was found in the caregivers: Fluctuation in patient meaning-making attracted a change in the caregiver meanings made on the next day, which in turn was related to caregiver affect on that day. The remaining indirect effects, as well as interaction effects, were not statistically significant.

**Conclusions:** Meanings made mediated, but not moderated, the association between daily meaning-making and next-day affect in post-HCT patient-caregiver dyads. The effects of meaning-making were mixed, but positive if mediated by meanings made. Further research on the meaning-making process and practical actions will require a greater focus on the transmission of the processes within patient-caregiver dyads.

**Keywords:** meaning-making, meanings made, cancer, daily study, dyadic study

## 6. UNDERSTANDING COLLEGE STUDENTS' KNOWLEDGE OF SERVICES AND SUPPORT SEEKING BEHAVIORS ACCORDING TO RACE, ETHNICITY, AND CITIZENSHIP IN THE US

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### ABSTRACT

**Objective:** College is a time of considerable stress for many students and when mental health issues may become visible. The objective of this study is to analyze mental health service knowledge and use of informal support by students according to race, ethnicity, and citizenship status.

**Methods:** Data from 2016-2019 Health Minds Survey, a population level survey from 450 US universities, is the data source for this study (n=189,069). Logistic regression analyses were performed on mental health service knowledge and use of informal support for mental health needs with a focus on race, ethnicity, and citizenship status using SAS 9.4 while controlling for relevant sociodemographic factors, beliefs, and current mental health.

**Results:** Student knowledge of mental health services varied across race, ethnicity, and citizenship. When compared to Non-Hispanic White citizens, Black, Hispanic, and Middle Eastern citizens as well as Middle Eastern international students had a reduced odds of knowing where to seek on campus professional help for mental health. Conversely, Hispanic international students had an increased odds of knowing where to seek help compared to Non-Hispanic White citizens. Similar relationships were found when looking at informal help seeking.

**Conclusions:** Our results point to differences in knowledge of professional mental health services as well as informal support seeking behaviors according to race, ethnicity, and citizenship. Further research should examine the reasons behind these differences across groups. Findings from this study can also inform efforts to reach all students and reduce the most relevant barriers to promote college student mental health.

**Keywords:** college student mental health, support seeking behaviors, ethnicity, coping



# PARALLEL SESSIONS 17

## 1. DISSOCIATIVE AMNESIA – A STRESS- AND TRAUMA-BASED PSYCHIATRIC DISEASE

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### ABSTRACT

**OBJECTIVES:** Pliny the Elder (23-79 A.D.) already had talked about “fright” as being one of the causes of memory loss.” ‘Dissociative amnesia’ is a rare psychiatric disease, characterized by a sudden inability to retrieve autobiographical memories. This inability can cover a circumscribed period of the personal past, certain personal life events or the entire past. There are principally competing models of the causality of dissociative diseases: The trauma model and the fantasy model, which recently has been expanded as sociocognitive model. The validity of these models was tested and is discussed.

**METHODS:** To find evidence for or against these models, we searched our data base which contains 95 cases diagnosed with dissociative amnesia from the last 25 years (1997-2022).

**RESULTS:** The data coming from the overwhelming majority of our patients supported the stress- or trauma-based model of dissociative amnesia. Evidence for fantasy-proneness was rarely detected and if so, never isolated, but always as a minor concomitant of stress- or trauma-related factors. The same was true for other socio-cognitive factors, of which cognitive failures related to sleep problems, alexithymia, and other emotional processing deficits (“belle indifference”) and culturally- shaped models of illness were most frequent.

**CONCLUSIONS:** Generally, we see the trauma- or stress-model confirmed by our data, and other models as much less important in the pathogenesis of dissociative amnesias. Although our data back up the trauma/stress model, testing empirically alternative models such as the contribution of the socio-cultural-linguistic milieu to the emergence of autobiographical memory blockade is further needed.

**Keywords:** trauma model, fantasy model, sociocognitive model, autobiographical memory, self-consciousness

## 2. THE 'TWO-HIT HYPOTHESIS' OF STRESS-RELATED DISSOCIATIVE AMNESIA

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### ABSTRACT

**OBJECTIVES:** 'Dissociative amnesia' is a rare psychiatric disease, characterized by a sudden inability to retrieve autobiographical memories. Its assumed antecedents are psychological stress or trauma. We proposed in a review on dissociative amnesia (Staniloiu & Markowitsch, *Lancet Psychiatry* 2014, 1: 226-241) the 'Two-hit hypothesis' (THH) which postulates an additive or synergistic interaction between two or more psychological or physical incidents which act as a predisposing factor for the development of dissociative amnesia. That is, it is assumed that especially related or similar stress incidents will likely induce amnesia.

**METHODS:** This hypothesis was tested by using our data base which contains cases from the last 25 years (1997-2022). Nine cases were described in published single case reports and 86 in group studies that contained up to 28 cases.

**RESULTS:** For 68 patients the THH could be confirmed, while for the other 27 there was no respective evidence. Frequent antecedents are repeated accidents, mild head injuries and recurrent stressful life experiences with onset in childhood to young adulthood. Indeed, the more similar the incidents were, the more likely amnesia occurred.

**CONCLUSIONS:** Our data provide robust support for the THH. Considering the specific pathology of our patients, we argue that the absence of evidence in 27 patients is not evidence of absence; especially individuals with an autobiographical memory blockade spanning their entire past are unable to report any antecedents. Some patients drop out of treatment or investigations prematurely, not allowing a proper identification of antecedents of their amnesia.

**Keywords:** two-hit hypothesis, autobiographical memory, self-consciousness

### 3. SCHOOL LEADERSHIP AS A PREDICTOR OF TEACHER STRESS DURING AND COMING OUT OF COVID-19

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#### ABSTRACT

COVID-19 exacerbated teacher stress (Pressley et al., 2021), adding demands such as rapidly changing instructional methods (Alea et al., 2020). Stress affects teacher's well-being and workplace performance (Turner & Theilking, 2019). However, not every teacher is equally vulnerable to stress (Richards et al., 2016). Transactional theory (Lazarus & Folkman, 1984) applied to teacher stress posits that individual differences in appraisals of working conditions affect how one teacher can be vulnerable to stress while another colleague in the same building is not (Chang, 2009; Zysberg et al., 2017). Teachers' overall appraisals that job demands exceed resources can result in the stress response (McCarthy et al., 2021). Principals play a central role in brokering school resources available to teachers. Through qualitative key informant interviews we obtained evaluations of the quality and stability of school leadership in spring 2020 and spring 2022. We were interested in associations between principal quality and stability and teacher ratings of their risk for occupational stress, job satisfaction, and perceived levels of instructional support as reported on a teacher school climate survey in the spring 2020 and spring 2022. Multi-level models with school and principal characteristics at Level 2 and teacher characteristics and perceptions at Level 1 demonstrated that both the quality and stability of school leadership were associated with teacher stress outcomes in the Spring of 2020. Similar multi-level models demonstrated that quality of school leadership, but not stability, was associated with teacher stress outcomes in the Spring of 2022.

**Keywords:** teacher stress, transactional theory, school leadership

## 4. THE EXPERIENCE IN SCHOOL AFTER THE LOSS OF A PARENT: CHILDREN, ADOLESCENTS AND YOUNG ADULTS

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### ABSTRACT

**Objectives:** The death of a parent during childhood is often a traumatic experience. The school environment can be a significant source of support for children and adolescents at such a time. However, there is evidence that teachers have difficulty providing appropriate support, and helping these children, who are at high risk for loneliness, depression, and low academic achievements. There is scarce research on the experience in school of children and adolescents from their own point of view. The current qualitative phenomenological-exploratory study looks to fill this gap by identifying and understanding the subjective experiences in school of children, adolescents and young adults who have lost a parent during their time in school. The main research question was: What is/was their experience in school after the loss of their parent?

**Methods:** The participants were 20 children and adolescents (aged 9–18) and 13 young adults (aged 21 – 32). Participants were interviewed via Zoom; interviews were recorded and transcribed verbatim. A phenomenological data analytic method was used.

**Results:** Findings indicated the importance of the presence of at least one meaningful adult person in school. In addition, participants asked to receive considerate and sensitive responses to their unique needs but not to be pitied. Academically, about half of the participants experienced difficulties; socially, the main experience was one of feeling different than other students.

**Conclusion:** It is recommended that school personnel be more informed about how to deal with loss among students and receive appropriate training to help them in the long term.

**Keywords:** loss of a parent, school support, children and adolescents, young adults, trauma

## 5. THE DIFFERENCES IN SOCIAL ANXIETY LEVELS BETWEEN SYRIAN YOUNG ADULT REFUGEES AND TURKISH YOUNG ADULTS

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### ABSTRACT

Prevalence studies of social anxiety have shown that the rate is higher in Turkey compared to Europe and US. Cultural reasons may account for this difference and the development of culture-specific studies is scarce. It is important to study social anxiety in young adult, as this age group is in a transitional period and may face different challenges. Although anxiety, PTSD or depression are frequently studied with refugees due to the traumas of war and migration, and adaptation problems such as language barrier and discrimination experienced, it is noteworthy that social anxiety is relatively less studied in this population. Measuring the social anxiety levels of Syrian young adult refugees living Turkey is important in terms of both filling the gap and helping these people. This is the first study to compare these two groups of young adults. This study will be carried out in cities with high and low Syrian refugee population and it is aimed to better understand the social anxiety in this group. The participants recruited via convenience sampling compose of 300 Turkish and 300 Syrian youth aged 18–25. The measurements are socio-demographic data form and Liebowitz Social Anxiety Scale which is translated into Arabic. The expected finding is that the social anxiety levels of Syrian young adults will be higher than Turkish. Appropriate psychological intervention is necessary because of the chronic course of social anxiety and the emphasis on social anxiety levels expected to increase awareness and access to psychological support.

**Keywords:** refugees, social anxiety

## 6. EXPERIENCES AND PERCEIVED POST TRAUMATIC GROWTH IN CHILDHOOD CANCER SURVIVORS AND THEIR SIBLINGS

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### ABSTRACT

Childhood cancer can be a long-term traumatizing experience both for the child patient and their family. Recently there has been an increase attention on positive psychological consequences that can co-occur with the negatives after a traumatic event. Post traumatic growth (PTG) has been conceptualized as integrating 5 domains: Self-concept; relating to others; appreciation of life; new possibilities; and spiritual change. Studies on PTG in childhood cancer survivors (CCS) are scarce.

**Objective:** Explore memories of CCS and their siblings about the experience of cancer during diagnose and treatment; their perceptions on the 5 domains of PTG and on the psychosocial factors that influence PTG.

**Methodology:** A semi-structured in-depth interview according to the objectives was used; 36 CCS age 17 to 33 years (M=24 y); and 20 siblings age 17y-34y (M=22,4y) participated.

**Results:** Similarities and differences were found between the reports of survivors and siblings. The vast majority reported very active memories of their experiences with cancer. Both groups reported better results in the domains "appreciation of life" and "self-concept" highlighting psychological strength to solve problems and siblings reporting being more autonomous. However, concomitantly, greater emotional vulnerability, introversion, PTS and symptoms of depression were reported. Empathy but also social distrust was mentioned. Factors perceived as influencing the PTG include age at the time the diagnose; the experience lived at that time; social support; and reports from other family members.

**Conclusion:** Results have potential value for the prevention of emotional disturbance and for the promotion of growth during and after the traumatic experience.

**Keywords:** pediatric oncology, post traumatic growth, survivors, siblings

## PARALLEL SESSIONS 18

### 1. THE RELATIONSHIP BETWEEN SOCIOPOLITICAL STRESS AND INTIMATE PARTNER VIOLENCE AMONG PALESTINIANS IN ISRAEL: EXAMINING COGNITIVE APPRAISALS AND PSYCHOLOGICAL DISTRESS AS SERIAL MEDIATORS

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#### ABSTRACT

**Objective:** The prolonged and continuous conflict of the Palestinian minority in Israel with the Jewish majority and its cumulative sociopolitical stress (e.g., national incongruity, racism, community and political violence) may put this minority at risk for psychological distress. This experience may lead to maladaptive behaviors, such as involvement with violence, including intimate partner violence (IPV). This study examined the relationship between exposure to sociopolitical stressors (i.e., interpersonal racism, collective racism, and national minority stress) and the perpetration of IPV among Palestinians in Israel. It also examined cognitive appraisals of stress and psychological distress as serial mediators in this relationship. **Method:** A self-administered questionnaire was completed by a systematic and almost random sample comprising 770 men and women aged 21 to 66 ( $M = 38.7$ ,  $SD = 7.84$ ). A serial mediation model was conducted using path analysis. **Results:** Interpersonal racism significantly and directly predicts IPV perpetration. Minority stress and interpersonal racism significantly but indirectly predict IPV via psychological distress. Further, each chain of cognitive appraisals of sociopolitical stress (i.e., uncontrollable and challenge) with psychological distress serially mediates the relationship between sociopolitical stress and IPV. **Conclusions:** Exposure to sociopolitical stressors directly impacts the dynamics among Palestinian couples, but also likely indirectly, through psychological distress and serially through cognitive appraisals and psychological distress. Cognitive appraisals of sociopolitical stress may be important psychological resources or risk factors that practitioners can take into account to combat psychological distress and IPV.

**Keywords:** intimate partner violence, ethnonational racism, minority stress, cognitive appraisal, psychological distress

## 2. THE RELATIONSHIP BETWEEN NATIONAL RACISM AND CHILD ABUSE AMONG PALESTINIANS IN ISRAEL: THE MODERATING ROLE OF COPING STRATEGIES

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### ABSTRACT

**Background:** Exposure to ethnic- and race-related stress (e.g., racism, racial discrimination, and micro-aggression) can impair parenting and parent-child relations. **Objective:** This study examines the exposure of Palestinian parents in Israel to two levels of racism, interpersonal racism (IPR) and perceived collective racism (PCR), and the relationship of each to perpetrating child abuse. **Further, the study examines the moderating role of coping strategies on these relationships.** **Participants and Setting:** The study was conducted among a systematic semi-random sample of 770 Palestinian parents in Israel (500 mothers and 270 fathers) aged 21–66 ( $M = 38.7$ ,  $SD = 7.84$ ). **Methods:** Participants filled out a self-administered questionnaire that included items from several instruments. **Results:** Regression analysis revealed that PCR and avoidance coping significantly predict psychological and physical child abuse. Interestingly, the moderating effects of coping strategies varied somewhat. High avoidance-coping (e.g., distraction, denial, withdrawal) worsened PCR's effect on child abuse, while low avoidance-coping mitigated it but augmented IPR's effect on child abuse. Further, frequently using problem-oriented coping (e.g., analyzing the situation) worsened IPR's effect on child abuse. Child abuse risk increased when parents experienced high PCR levels and frequently used avoidance coping. Likewise, it increased when they experienced high IPR levels and used either high problem-oriented coping or low avoidance-coping. **Conclusions:** Understanding when coping strategies buffer the impact of racism on the parent-child relationship and when they exacerbate it can contribute to interventions with parents experiencing IPR and PCR.

**Keywords:** child abuse, interpersonal racism, collective racism, coping strategies, coping styles



### 3. HEALTH-RELATED QUALITY OF LIFE AND MENTAL DISTRESS IN CORTISOL RESPONDERS VS. NON-RESPONDERS TO PSYCHOSOCIAL STRESS IN PATIENTS AFTER ACUTE CORONARY SYNDROMES

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#### ABSTRACT

**Objectives.** Health-related quality of life (HRQoL) of individuals after acute coronary syndromes (ACS) is known to be impaired. Meanwhile, mental distress (i.e., anxiety and depression) remains the key psychosocial risk factor in the development and course of cardiac conditions. The aim of the study was to investigate the associations of cortisol response status (i.e. responders vs. non-responders) to psychosocial stress, HRQoL and subjectively measured mental distress in individuals after ACS.

**Methods.** We studied 94 individuals after ACS (88.3% males, age 53±7) within 3 days of cardiovascular rehabilitation admission. HRQoL was measured with 36-Item Short Form Medical Outcome Questionnaire, while mental distress was evaluated using Hospital Anxiety and Depression Scale. Cortisol responders vs. non-responders to psychosocial stress were differentiated during Trier Social Stress Test based on the established guidelines. In addition, sociodemographic and clinical characteristics were gathered. Binary logistic regression analyses were performed to test associations between the cortisol response status (responders vs. non-responders), HRQoL, and subjectively measured mental distress, while controlling for possible confounders.

**Results.** After adjusting for possible confounds (i.e. age, gender, and education), our results showed that anxiety symptoms (though not depressive symptoms or HRQoL) were higher among cortisol responders in comparison to cortisol non-responders in a study sample (-0.231; 95% CI, 0.666 to 0.946;  $p = 0.01$ ).

**Conclusions.** In individuals after ACS, anxiety symptoms, but not depressive symptoms or HRQoL, were independently associated with higher cortisol response to psychosocial stress. These results suggest cortisol response to psychosocial stress as possibly problematic in those with acute cardiac conditions.

**Keywords:** cortisol response to psychosocial stress, anxiety and depressive symptoms, health related quality of life, acute coronary syndrome, Trier Social Stress Test

## 4. THE RELATIONSHIP OF BEING PERMANENTLY ONLINE, EMOTIONS AND PARENTAL STRESS OF MOTHERS. THE ROLE OF EDUCATIONAL TRAINING

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### ABSTRACT

For the last few years there is a rapid development of new technologies, which has resulted in the use of new media in every aspect of life on a daily basis. In public places, it is common to see young people staring at their phone screens. Nor is it uncommon to see mothers taking care of children and using a mobile phone at the same time. Many studies show that being constantly online has negative effects on many spheres of life. The main goal of the study is twofold. Firstly, it is to show how being permanently online by mothers translates into their parental satisfaction and emotions such as stress and anxiety. Secondly, it is to verify the effectiveness of educational activities to encourage lower time spent in front of the screen and better quality interactions with the child. In the diary study, the sample size was  $N = 70$ . The participants were mothers of children aged 1–2 years. Participants had been instructed to answer the questions that was sent to their mobile phones for 7 consecutive days. In addition, subjects were randomly assigned to two groups: control and experimental. Experimental group took part in 7 day educational intervention. Educational training encouraged more contact with the child and lowered the time spent using screens and parental stress. The effectiveness of the educational intervention has been confirmed. The results might be useful for the trainings and workshop on stress reduction.

**Keywords:** parental stress, parental phubbing, intervention

## 5. SOURCES OF STRESS AND ANXIETY SYMPTOMS IN UNIVERSITY STUDENTS DURING THE PANDEMIC

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### ABSTRACT

**Objectives:** The emerging adults appear to be particularly vulnerable to the negative mental health effects of the pandemic, especially to anxiety and depression. The aim of this study was to determine the sources of stress among university students during the COVID-19 pandemic, as well as their effect on students' anxiety symptoms.

**Methods:** A sample of university students was studied during 4 waves of the pandemic (approximately 1000 students in each wave). The small sample of 139 students was also observed during 2 pandemic waves. We used the DASS and the Pandemic Stress Scale.

**Results:** We identified four different sources of student stress - fear of contagion, family stress, academic stress, and consequences of isolation. Students experienced high levels of stress, particularly stress caused by social isolation, but also high levels of anxiety.

We found a significant increase in anxiety levels in each of the first three waves of the pandemic. The results from the large independent samples were similar as the results from the small sample of students with repeated measures. Higher levels of anxiety were found among women, students who had changed residence, and students whose financial situation worsened during the pandemic.

Different sources of stress predicted anxiety during specific pandemic waves, depending on the anti-pandemic measures that were reflected on students' lives.

**Conclusions:** All the unexpected changes in response to the COVID-19 pandemic increase students' stress levels, which is also reflected in their increased anxiety. Recommendations to assist students in reducing stress and anxiety at various levels-social, institutional, and personal-are suggested.

**Keywords:** sources of stress, anxiety, university students, COVID-19 pandemic

## 6. EXTRINSIC EMOTION REGULATION CHOICE: THE ROLE OF DEPRESSION SYMPTOMS

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### ABSTRACT

Extrinsic emotion regulation (EER) is the provision of emotion regulation support to another person. An important question is what factors influence peoples' choice of EER strategy. The present study examined the role of depression symptoms in EER strategy use. Fifty-one women who reported high levels of depression symptoms measured by the Major Depression Inventory (MDI) and 48 women who reported low levels of depression symptoms participated in the study. The subclinical depression group included individuals who scored above 30 in the MDI, while the control group included individuals who scored less than 20. They were asked to read texts that described negative emotional situations ostensibly written by another participant. They were then asked to help the other participant by writing a supportive letter. They reported the degree to which they believe the other person feels bad, how much they are similar to that person, and the degree to which they used two emotion regulation strategies: distraction and reappraisal, measured by Interpersonal Emotion Management (IEM). They rated their emotions before and after providing support. Results showed that depressed and non-depressed participants reported more positive and less negative mood after providing support. Furthermore, depressed and non-depressed participants reported higher use of reappraisal compared to distraction when providing support. The level of depression symptoms was positively correlated with the perceived negativity of the events and the perceived similarity to the other person. These findings are consistent with previous findings showing that EER benefits support providers. Together, these findings imply that EER may be a good way to improve mood and that people choose to provide support to others using reappraisal more than distraction. These findings have implications for understanding the role of EER in depression and other psychopathologies.

**Keywords:** choice, emotion regulation, extrinsic emotion regulation, depression

# POSTERS

# 1. ACTION CRISIS AND PERSONAL GOALS IN POST-TRAUMA REHABILITATION PROCESS – A PILOT STUDY

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## ABSTRACT

**Objectives:** Previous studies advocate a slower or compromised recovery after an injury (Wolf et al., 2019) when higher action crisis (AC) was present. The aim of the present study is to explore a relatively new concept of AC in the context of the post-trauma rehabilitation process in orthopaedic patients from a goal-processing perspective. The personal goals of trauma patients and their perceived progress before and after the post-trauma rehabilitation were examined. Further, the relationships of AC with goal progress (pre and post-rehabilitation) and time from the traumatic injury were observed.

**Methods:** The study was observational/longitudinal. Participants were asked about the time since the traumatic accident and their personal goals obstructed by their diagnosis. Data were collected with the AC scale - ACRISS and goal progress scale at the beginning and the end of the rehabilitation. The statistical analyses included rho-Spearman correlations and paired samples Wilcoxon tests.

**Results:** Thirty-five participants, early orthopaedic post-trauma rehabilitation patients (22-68 y.o.) were included in the pilot study. There was a decrease in action crisis ( $p=0.033$ ) and an improvement in goal progress ( $p=0.012$ ) during the rehabilitation. The highest ACRISS score was observed in items dealing with rumination, setbacks and implemental disorientation before and after the rehabilitation. Time since the trauma was in a positive relationship with AC before the rehabilitation. AC was not in a relationship with perceived progress before the rehabilitation but was negatively associated with perceived progress after the rehabilitation.

**Conclusions:** This study highlights the importance of goal achievement processes and AC in trauma patients. With a prolonged time after trauma injury, patients might experience AC, however, when patients' personal goals progress, AC decreases.

**Keywords:** action crisis, goals, post-trauma rehabilitation

## 2. THE MODERATING ROLE OF SUBJECTIVE NEARNESS TO DEATH IN THE RELATIONSHIP BETWEEN POSTTRAUMATIC STRESS SYMPTOMS AND FUTURE TIME PERSPECTIVE AMONG MIDDLE-LIFE AND OLD ADULTS

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### ABSTRACT

**Objective:** Future Time Perspective (FTP) relates to the way people refer, evaluates, and organizes the time they left to live. In stressful and life-threatening situations, FTP tends to perceive as limited. This, due to the difficulty in regulating and keeping away the threat associated with death while people organizing their future perspective. The current study examines whether subjective nearness-to-death (SNtD) moderates the relationship between posttraumatic stress symptoms (PTSS) and FTP at middle-life and older adults, at two different time points (wave 1&2).

**Method:** Wave 1 data collected before the administration of the corona vaccine and included 351 participants, age range between 40-90 (M=61.76, SD=11.23), 102 of whom participated again in Wave 2 (M=64.27, SD=10.50) about six months later. Participants in both waves answered a variety of self-report questionnaires, included: demographic questions, SNtD, PTSS and FTP questionnaires.

**Results:** Study's' results indicate that SNtD moderates the relationship between PTSS and FTP. That is, the feeling that death is far along with low levels of PTSS were associated with a high level of an open FTP six months later after the vaccination. So, among participants who reported that they felt close to their personal death, FTP was closed regardless to the level of PTSS. In contrast, among those who reported that they felt far from death, FTP was open, but only at low level of PTSS.

**Conclusions:** The findings points to a compensation system, in which the feeling of nearness-to-death or a high level of PTSS are related to a closed FTP, thus both factors are risk factors.

**Keywords:** SNtD, trauma, time perspective, corona, old adults

### 3. UNDERSTANDING THE ROLE OF THE COACH-ATHLETE RELATIONSHIP IN PROMOTING THRIVING IN GYMNASTICS: AN AUTOETHNOGRAPHY

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#### ABSTRACT

**Objectives:** In this study, our aim was to explore how a gymnast's experience of her coach-athlete relationship influenced her experience of thriving in training and competition.

**Methods:** An autoethnographic approach was used to construct an understanding of the embodied experience of thriving as gymnast in a variety of environments over time. To build an evocative autoethnography, the first author adopted the position of 'storyteller'. Three main strategies were employed by the first author to construct stories presented in this study: memory, memory writing, and emotional recall.

**Results:** The results are presented through a series of four vignettes, relating to: initial coach-athlete interactions, navigating anxiety at training and competition, and potential retirement. By presenting the results as a series of vignettes, the autoethnography depicts examples of potential enablers (e.g., goal setting) and inhibitors (e.g., poor communication) to thriving in an individual sport. Moreover, the vignettes presented here offer readers a unique insight to personal experiences and cultural practices outside of their own familiarity, encouraging empathy, social awareness, and reflection to a sporting phenomenon.

**Conclusions:** Overall, the theoretical and practical implications of this study are reviewed, with particular attention towards the opportunity to highlight the benefits to athlete's performance and wellbeing when immersed in a positive and constructive coach-athlete relationship in gymnastics. Finally, the results could be used to advance pedagogy training and education that encourages awareness, reflection, and change in sporting cultures and practices.

**Keywords:** creative analytic practices, gymnastics, narrative, qualitative inquiry



## 4. IMPACT OF POST-COVID CONDITIONS ON MENTAL HEALTH: A QUALITATIVE STUDY

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### ABSTRACT

Post-COVID-19 syndrome is a condition characterized by long-term symptoms and complications that continue or develop after acute COVID-19 infection. The most frequent mental health symptoms of people suffering from post-COVID-19 syndrome are anxiety (6.5% - 63%), depression (4% - 31%), PTSD (12.1% - 46.9%), and sleep problems (17.7% - 30.8%). Up to 33 and 43% of patients treated in an intensive care unit, respectively, develop PTSD and depression.

The aim of this study was to qualitatively explore the impact of post-COVID conditions on mental health, examining both negative (anxiety, depression, PTSD, sleep problems) and positive (post-traumatic growth) long-term post-COVID effects. This study is part of a larger project which include four Eastern and Central European countries: Bulgaria, Slovakia, Croatia, and Romania. Participants include 24 adult severe or critical COVID-19 survivors of all ages, with a one-year post-acute period.

Data were collected through in-depth semi-structured interviews and analyzed through thematic analysis (Braun & Clarke, 2006).

Our results are in the line with research which shows that mental health was impaired in the presence of post-COVID conditions. Participants experienced mental health symptoms, including symptoms of COVID-19-related anxiety, depression, generalized anxiety, and post-traumatic stress. These symptoms affected their ability to perform daily activities and reduced their overall quality of life.

By understanding the experiences of patients, healthcare providers can better address their support needs. These findings highlight the need to involve psychologists in post-COVID care to support the mental health of patients.

**Keywords:** severe or critical COVID-19 survivors, post-COVID-19, mental health, qualitative research

## 5. LIVING WITH STIGMA AND DISCRIMINATION DURING COVID-19 PANDEMIC: THE ASSOCIATION WITH CONTAMINATION/QUARANTINE, STRESS, ANXIETY, AND COGNITIVE-EMOTIONAL REGULATION STRATEGIES

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### ABSTRACT

**Introduction:** Stigma is a process of devaluation, discrimination, and social exclusion of an individual/group. During the COVID-19 pandemic stigma was more likely to be experienced in individuals or social groups with no history of stigmatization. Objective: To study if “stigmatized” and “non-stigmatized” individuals during the COVID-19 pandemic differed in rates of infection with SARS-COV-2, quarantine, stress, anxiety, and emotional regulation. **Methods:** During the second period of compulsory confinement in Portugal, 705 participants from the general population ( $M \pm SD = 25.3 \pm 9.50$  years, 75.5% females, 595 students) completed an online survey which included the Cognitive Emotion Regulation Questionnaire, Mental Health Inventory-Anxiety subscale, Perceived Stress Scale, and questions about lifetime physical/psychological health. Perceived stigma/ discrimination (because of self-identity, COVID-19 symptoms, or other COVID-related aspects), SARS-COV-2 infection, and quarantine episodes were assessed with three “yes”/“no” questions from the Pandemic Stress Index (PSI). **Results:** In comparison with participants without stigma (answered “no” to the PSI stigma/discrimination question; 83%), the ones with stigma (answered “yes”; 17%) were older, more often females, and ‘other’ gender participants. They had been more often infected with SARS-COV-2 and under quarantine and reported poor lifetime physical/mental health, higher current levels of stress, anxiety, and negative cognitive-emotional regulation strategies. **Conclusion:** In future health crises, stigmatized/discriminated people may need special attention from public health services/professionals and should be a target group for mental health prevention and interventional programs. Anti-stigma psychoeducation and health literacy programs could also be offered to the general population to respond appropriately to pandemic adversity and prevent stigmatization/discrimination.

**Keywords:** COVID-19 pandemic, stigma, emotional regulation, stress, anxiety

## 6. FEAR OF SARS-COV-2 INFECTION AND ITS ASSOCIATION WITH ANXIETY SYMPTOMS IN PORTUGUESE UNIVERSITY STUDENTS: THE MEDIATION ROLE OF STRESS AND SLEEP DIFFICULTIES

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### ABSTRACT

**Introduction:** The COVID-19 pandemic is associated with considerable mortality and psychological distress worldwide. Objectives: To investigate the relationship between fear of being infected with SARS-CoV-2, stress, sleep difficulties and anxiety, and whether the association between fear of infection and anxiety is mediated by stress and sleep difficulties.

**Methods:** 595 university students (mean age $\pm$ SD=23.80 $\pm$ 7.91 years; females 76.3%) completed the Mental Health Inventory, the Perceived Stress Scale, the Pandemic Stress Index (PSI), and three items from the Insomnia Scale, which assessed difficulties in initiating (DIS), maintaining sleep (DMS), and early morning awakenings (EMA). A Sleep Difficulty Index (SDI) was calculated by summing the scores of these three items. Fear of being infected was evaluated using a single item (PSI).

**Results:** Only 1.7% of the students were vaccinated against SARS-CoV-2; 85.5% reported fear of infection; 38.9% mentioned DIS, 26.3% DMS, and 15.5% EMA; 19.7% had a high SDI score and 18.5% anxiety (1SD $\geq$ Mean). Anxiety was associated with younger age, female/"other" gender, fear of infection, stress, and sleep difficulties. Mediation analyses showed an indirect link between fear of infection and anxiety through (1) stress, (2) sleep difficulties, and (3) the effects of stress on sleep difficulties.

**Conclusions:** In future health crises with high risk of contagion, health agencies, and the media should provide timely and accurate information about the disease and risk of contamination by the pathogen and publicize strategies to prevent its spread. Interventions aimed at reducing anxiety should consider fears of infection, stress reduction strategies, and the promotion of healthy sleep habits.

**Keywords:** COVID-19 pandemic, fear of SARS-CoV-2 infection, anxiety, sleep difficulties, stress

## 7. CYBERCHONDRIA AND ITS INSTRUMENTS – A REVIEW

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### ABSTRACT

**Introduction:** Cyberchondria is a clinical phenomenon in which internet searches for medical information result in increased concerns about health problems. This is a relatively recent subject of study and has attracted the attention of researchers as a psychological construct.

**Objectives:** Highlight the clinical phenomenon of cyberchondria and discuss the need for instruments to assess cyberchondria in its domains and provide a reflection on the main instruments used to evaluate the construct. The objective is to systematize and promote a more objective knowledge of each instrument.

**Methods:** A reflective approach is used to discuss the main instruments that are commonly applied to evaluate cyberchondria. The authors analyze the Cyberchondria Severity Scale, Short Cyberchondria Scale, Brief Cyberchondria Scale, and Cyberchondria Tendency Scale regarding their strengths, weaknesses, and indications of applicability.

**Results:** Insights into the phenomenon of cyberchondria and the need for instruments to assess cyberchondria in different domains are explained. Four main instruments are discussed particularly in their strengths, weaknesses, and indications of applicability.

**Conclusions:** Cyberchondria is a clinical phenomenon that has gained attention from numerous researchers. It is necessary to develop instruments to assess it in different domains, and the authors have discussed four main instruments used for this purpose. The reflection on these instruments provides a more objective understanding of cyberchondria that can be useful in future research and clinical practice to manage and mitigate the impact of cyberchondria.

**Keywords:** cyberchondria, health anxiety, assessment

## 8. THE MEDIATOR ROLE OF EXPERIENTIAL AVOIDANCE IN THE RELATIONSHIP BETWEEN MENTAL HEALTH SYMPTOMS AND SEVERITY INDICATORS OF SELF-HARM AMONG ADOLESCENT PSYCHIATRIC PATIENTS

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### ABSTRACT

**Objectives:** In clinical adolescent populations, a particularly high lifetime and point prevalence of non-suicidal self-injury (NSSI) has been detected since the beginning of the measurement of this phenomenon (Hauber et al, 2019). Our study aimed to analyze the association of internalizing and externalizing symptoms and severity indicators of NSSI, while testing the mediating effect of experiential avoidance on this relationship.

**Methods:** In a cross-sectional study, 158 adolescents (83.5% girls; mean age=16.10 ys; SD=1.49), who have received inpatient or outpatient psychiatric treatment, completed the Inventory of Statements About Self-Injury, the Strengths and Difficulties Questionnaire, and the Avoidance and Fusion Questionnaire for Youth. Multiple regression-based mediation models tested the indirect effects of internalizing and externalizing psychological symptoms on NSSI outcomes via experiential avoidance.

**Results:** Slightly more than half (54.6%; n = 65) of the NSSI sample reported engaging in self-harm before the past month (previous NSSI), while 45.4% (n = 54) engaged in NSSI in the previous month (current NSSI). None of the direct effects of internalizing and externalizing symptoms on NSSI severity were significant. However, two significant indirect effects were identified in the tested mediation models. Higher levels of internalizing symptoms predicted elevated rates of experiential avoidance which in turn were positively linked to using multiple forms of NSSI and to repetitive NSSI.

**Conclusions:** All this points to, confirming several theoretical models of NSSI, that avoidance-focused emotion regulation strategies may be one of the mechanisms responsible for that increased internalizing symptoms can lead to more severe NSSI in clinical settings.

**Funding:** This work was supported by the National Research, Development and Innovation Office, Budapest, Hungary under Grant FK138604 to M. Reinhardt and by the ÚNKP-22-4 New National Excellence Program of the Ministry for Culture and Innovation from the source of the National Research, Development and Innovation Fund to Zs. Horváth.

**Keywords:** non-suicidal self-injury, experiential avoidance, internalizing symptoms, externalizing symptoms, clinical adolescents

## **9. ANXIOUSLY OR AVOIDANTLY IN LOVE AND UNDER STRESS – HOW WILL I TREAT YOU? A DYADIC DIARY STUDY**

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### **ABSTRACT**

Stress is related to negative communication patterns, lowered capacities for relationship maintenance and self-regulation (Buck & Neff, 2012), and to a negative overall perception of the partner and the intimate relationship (Neff & Karney, 2009). The aim of this study was to investigate how everyday stress impacts both partners' behavior while taking into account individual differences in attachment styles that moderate these relationships. This dyadic diary survey was conducted using a mobile application for a period of 14 days once a day from 19h to 24h to collect diary data from 140 cohabiting heterosexual couples. Couples were dating for at least two years and cohabiting for at least three months. 38.4% were married and 33.7% had children. All had at least a high school education, and 41.3% had graduated from university. The following questionnaires were used: Modification of Brennan's Inventory of Experiences in Close Relationships (Kamenov & Jelić, 2003), Perceived Stress Scale (PSS-4; Cohen et al., 1983) and Socioemotional climate (Huston et al., 2010). 2-level multilevel regression modelling was used with maximum likelihood estimation. A random intercept and a covariation between partner's level-2 and level-1 error terms were estimated. Our results showed a significant negative association between perceived daily stress and affectionate behavior and a significant positive association with antagonistic behavior. Our results indicated a moderating role of attachment style on the association between daily stress and relational behavior. This study provides a more in-depth understanding of the interaction of daily stress, partners' individual characteristics and relational behavior.

**Keywords:** dyadic diary study, perceived stress, affection, antagonism, partners' behavior

## 10. COPING PROFILE DIFFERENCES ON HIGH-SCHOOL AND COLLEGIATE ACADEMIC ACHIEVEMENT: A PERSON-CENTERED APPROACH

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### ABSTRACT

The impact of student coping strategies on academic achievement is an important area of focus. Prior research has found preliminary indication of a significant relationship (e.g., problem-focused coping associating with greater academic achievement; Gustems-Carnicer et al., 2019; Vizosos et al., 2018); but has primarily utilized variable-centered approaches that fail to account for the simultaneous use of multiple coping strategies (see Fallacy of Uniform Efficacy; Bonnao & Burton, 2013). This study aimed to investigate the relationship between coping strategies and academic achievement using a person-centered approach. Data were collected from undergraduate students ( $n=266$ ) attending a midwestern university (80.5% female, 94% Caucasian). Institutional data of GPA (High-school and Collegiate) and SAT scores were collected; students reported their use of coping strategies (60 items,  $\alpha=.92$ , Carver et al., 1987). K-means clustering revealed three coping profiles, consistent in nature with prior findings (Doran et al., 2014; Freese et al., 2017; Robins & Kliewer, 2019): 1) approach-copers, high use of approach-strategies (e.g., problem-focused, active coping), low use of evasive strategies (e.g., denial, disengagement), 2) low-copers, low use of all strategies and 3) evasive-copers, low approach and high evasive strategy use. Regression analysis showed that evasive-coper membership was negatively associated with overall academic achievement (GPA/SAT). Prior variable-centered findings are supported. Notably, evasive-copers performed worse than low-copers, indicating the overreliance of evasive strategies is particularly harmful as low-copers and approach-copers did not differ in academic achievement outside one exception: SAT verbal scores. Implications and further research are to be discussed.

**Keywords:** coping profiles, academic achievement, stress, cluster analysis

# 11. THE 5CS OF POSITIVE YOUTH DEVELOPMENT AND HEALTHY LIFESTYLES IN A SAMPLE OF SPANISH EMERGING ADULTS

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## ABSTRACT

For a long time, the transition to adulthood was seen as a troubled period where psychological development was synonymous with the absence of problems, but it was discovered that it was not enough. The Positive Youth Development (PYD) emerged as a holistic, positive and preventative perspective that focuses on the fact that young people have the strengths for healthy and successful development through five dimensions (5C's) that empower them: Competence, Confidence, Character, Connection, and Caring. If there is a good development, a sixth arises: Contribution. The aim of this study was to examine the predictive value of the global PYD factor (and 5C's) and healthy lifestyles, in addition to analyzing gender differences. This report shows the empirical data of a cross-sectional study of 1044 emerging adults from 11 Spanish universities in 2021. Data collection was online and self-reported. The results showed that the character was protective against substance abuse in the overall sample, while connection had a significant effect on men. Caring was protective against money bets in men's sample. However, some contradictory findings were observed concerning competence, with a positive association with substance abuse, money bets and drunk driving. These results may suggest the need to foster healthy lifestyles in youth through the 5C's promotion programs within university context, with special attention to promote a positive sense of self-efficacy avoiding risk behaviors.

**Keywords:** youth, PYD, strengths, cross-sectional, healthy lifestyles



## 12. DIFFERENCES BY DEMOGRAPHIC AND SOCIOECONOMIC VARIABLES IN POSITIVE YOUTH DEVELOPMENT IN SPANISH UNDERGRADUATES

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### ABSTRACT

From the Positive Youth Development (PYD) model, youth is considered an important transition stage, in which the relationships that individuals establish with their context are essential. These will allow the young person to acquire a better psychological adjustment and healthy lifestyles. In this process there are four areas to develop: confidence, competence, connection, caring and character. The present investigation studies the differences in PYD and in its four areas in Spanish university students according to their sociodemographic and socioeconomic characteristics. A cross-sectional study with 1044 students between 18 and 28 years from different Spanish universities was conducted. After analysing the results, all the significant differences found were of a small effect size. The students with a better PYD were the ones that lived at the countryside or in big cities, who studied Social Sciences, in small universities, with parents with a high education level, and who belonged to a high socioeconomic level. Women presented a better development in the most social areas, and men in the most individual ones, where gender socialization can be operating during the adolescence. Families with more educated parents and in a higher socioeconomic level can be the ones that can offer more resources to their children, and enable a more positive youth development.

**Keywords:** cross-sectional, positive youth development, sociodemographic, socioeconomic, university

# 13. SELF-ACCEPTANCE AS A PREVENTIVE RESOURCE IN GERMAN SOCIAL WORK STUDENTS LIVING WITH THEIR PARENTS

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## ABSTRACT

**Objectives:** We examined whether Self-Acceptance (SAC) and as well as gender, living situation, and academic program were associated with perceived stress.

**Method:** Data were collected from N = 407 Social Work students at two German universities using a questionnaire. Perceived stress was measured by the two factor scores from the Perceived Stress Scale: Loss of Efficacy and Helplessness, SAC was measured by the Preventive Resources Inventory.

**Results:** For Loss of Efficacy ( $r^2 = .219$ ), students who lived with their parents reported higher scores ( $p=.046$ ) and higher SAC scores were associated with lower levels of perceived stress ( $p<.001$ ). For Helplessness ( $r^2 = .300$ ), students who lived with their parents reported higher scores ( $p=.030$ ), males reported lower average scores ( $p=.048$ ), students in a cooperative program reported lower scores ( $p=.012$ ), and higher SAC scores were associated with lower levels of perceived stress ( $p<.001$ ).

**Conclusion:** These results support a previously proposed function of SAC as a meta-resource, which enhances stress prevention and coping strategies (Lambert et al., 2019). It can therefore be considered as a higher order factor for various capacities responsible for stress prevention.

While periods of students living with parents due to a lack of financial resources are quite common and have lately increased (Courtin & Avendano, 2016), there is a trend towards staying or returning home after a college degree has been obtained. The results of our study support a study by Copp et al. (2017) who found that parental coresidence of emerging adults led to higher levels of depressive symptoms.

**Keywords:** self-acceptance, coping, perceived stress, loss of efficacy, helplessness, living arrangement

## 14. HARMFUL SISU MEDIATES THE RELATIONSHIP BETWEEN STRESS AND THE TENDENCY TO DROP OUT OF STUDIES AMONG UNIVERSITY STUDENTS

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### ABSTRACT

This study utilized the Finnish concept of *sisu*, similar to mental fortitude, which has both beneficial and harmful dimensions. Harmful *sisu*, measured with the recently developed *Sisu Scale*, appears as maladaptive orientation towards challenge, evident as inability to allocate effort in an optimal manner and leading to negative personal and social consequences. It is associated with decreased well-being and increased work stress.

We investigated temporal connections between *sisu* to the ability to withstand stress and the tendency to drop out among university students aiming to become teachers. The tendency to drop out does not only affect students' individual development and career path but presents a global challenge due to teacher shortage. Thus, understanding phenomena underlying the drop out tendency is likely beneficial.

Longitudinal data was collected from 175 teacher students. Perceived stress predicted the tendency to drop out at subsequent time point, mediated via beneficial and harmful *sisu* together and in comparison with academic buoyancy. Tendency to drop out was measured with a proprietary scale developed in University of Greifswald, while published scales were used to assess other variables.

Perceived stress significantly predicted the tendency to drop out ( $\beta=0.16$ ). Harmful *sisu* had a statistically significant average causal mediated effect (ACME=.08), mediating 50% of the variance in the dependent variable, in contrast with beneficial *sisu* (ACME=.03, trend) and academic buoyancy (ACME=.04, not significant).

The results contribute to the evidence of harmful *sisu* as an important modulator of individual behavior under stress, and thus warrant further research towards it as a construct.

**Keywords:** *sisu*, mental fortitude, stress, drop-out

## 15. WOMEN FRIENDLY: THE EFFECTIVENESS OF A WOMAN-CENTERED CHILDBIRTH INTERVENTION

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### ABSTRACT

**Background:** Women with symptoms of post-trauma or tokophobia are vulnerable during childbirth and often lack trust in the medical staff. They are therefore in need of a sensitive intervention to prevent the formation or exacerbation of trauma in the perinatal period.

**Objective:** This study evaluated the efficacy of a “Woman Friendly” (WF) intervention for women with a history of post-trauma or tokophobia. During this intervention, the women were informed about childbirth and prepared for the delivery.

**Method:** Fourteen mothers aged 28-41 with symptoms of post-trauma or tokophobia who had participated in the WF intervention were interviewed about their experience within six months after giving birth. Interviews were transcribed and analyzed using thematic analysis.

**Results:** Thematic analysis yielded seven themes. Two themes were during the pre-delivery period: 1) standard preparation; and 2) preparation of the WF document. Four themes were during the delivery: 1) the WF document as an advocate; 2) security and safety; 3) controlling the situation; and 4) respect and kindness from the medical staff. The final theme was limitations of the WF intervention.

**Conclusion:** Childbirth preparation for these women should focus on their sensitivities rather than trauma-processing.

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**Keywords:** post-trauma, birth-oriented therapy, women friendly, tokophobia

## 16. WHAT FORMS OF ADVERSITY DO THE LAY PUBLIC CLASSIFY AS TRAUMATIC? EXPLORING CONSENSUS AND DISSENSUS IN LAY REPRESENTATIONS OF TRAUMA

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### ABSTRACT

**Objectives:** Clinical definitions of trauma have expanded over recent decades, with even indirect exposure to unpleasant events now potentially classifiable as clinically traumatic. In parallel, social understandings of psychological trauma have evolved since the concept's introduction into the popular lexicon. Trauma is often positioned as a prototypical case of 'concept creep', whereby the boundaries of harm-related phenomena (e.g. bullying, abuse, discrimination) have expanded over time to encompass a greater variety of experiences. This study aims to establish the breadth of current representations of trauma in a lay population.

**Methods:** UK-based adults (n=200) were recruited from Prolific, an online platform for participant recruitment. An online questionnaire presented participants with a list of 80 adverse experiences in randomised order. Participants rated how traumatic each experience is on Likert scales.

**Results:** The analysis identifies the degree of consensus regarding the types of experiences that are classified as traumatic. It also explores individual differentiation, investigating how the breadth of representations of trauma differs along socio-demographic lines (e.g. age, gender, political orientation).

**Conclusion:** Lowering the threshold for defining adversity as traumatic can have both positive and negative consequences. Advantages include heightened attention and justification for action to address phenomena that, while not the most extreme instantiations of adversity, remain problematic (e.g. emotional abuse). In a clinical context, laypeople classifying a wider range of experiences as traumatic may encourage help-seeking and therapeutic engagement. However, concept creep also risks devaluing the concept of trauma as a whole and undermining resilience by cultivating a culture of victimhood.

**Keywords:** trauma, concept creep, lay understandings

## 17. COVID-19 LOCKDOWN: EXPERIENCE, PERCEPTION, AND COPING

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### ABSTRACT

**Objectives:** Meta-analyses have shown that lockdowns have a negative impact on physical as well as mental health. This study examined how individuals experienced, perceived, and coped with this stressful event during the Covid-19 lockdown in Israel.

**Method:** The participants were 811 Israelis (71.3% women; Mean age 44) who completed an online semi-structured questionnaire, consisting of 8 open-ended questions regarding their experience, perception, and coping with the lockdown. The data were subjected to qualitative content analysis.

**Results:** The findings indicated two common emotional experiences: Stress (36%) and uncertainty and loss of control (31%). Two difficulties were frequently reported: Lack of communication with others (24%) and health and emotional concern for oneself or others (22%). Frequent explanations of the emergence of the virus were scientific reasoning (37%), an opportunity for rethinking and a need for change (14%), faith-related explanations (12%), and re-balancing the cosmos (12%). The prevalent coping strategies were focusing on activities or distractions for emotional regulation (42%), acceptance and managing emotional distress while maintaining optimism and calm (34%), and maintaining contact with others (22%). Only 10% of the participants reported seeking help during the lockdown. Coping strategies such as the expression of negative emotions, avoidance, and substance use predicted greater stress.

**Contribution:** The research expands our understanding of individuals' experiences, perceptions, and coping with continuous traumatic events. In particular, reducing the use of maladaptive coping strategies as well as enhancing seeking social support may help to promote mental health in unusual times.

**Keywords:** Covid-19, emotional distress, coping, continuous traumatic event

## 18. THE ROLE OF TEACHERS IN CYBERBULLYING THROUGH EMOTION REGULATION AND SOCIAL SUPPORT TO FOSTER RESILIENT FACTORS

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### ABSTRACT

**Objectives:** Cruel, intentional, and repeated behavior among peers with the intent to hurt others through digital means is considered cyberbullying, which is often related to aggressive behavior at school. Thus, it is important to investigate the role of teachers to promote prosocial behavior in these contexts. Therefore, this study aims to explore teachers' perceptions of cyberbullying, the impact it has on their emotions and emotional regulation, how they morally commit to this type of situation and receive social support to be resilient and intervene adaptively. **Methods:** A total of 63 middle-school teachers ( $M=50,85$ ;  $SD=9,64$ ) participated in semi-structured interviews. We performed content analysis with a mixed approach (deductive and inductive) on the interview transcripts. **Results:** Findings revealed that all participants reported feeling unpleasant emotions regarding cyberbullying among students and difficulties in accepting these emotional responses. Most participants used response modulation strategies, particularly emotional suppression as an emotion regulation strategy. Moreover, social support felt by their peers was important during the most difficult moments to help them overcome adversity and maintain their well-being and resilience. In fact, throughout the interviews the impact that colleagues, family and the board of directors had on their daily lives at work was mentioned endlessly. **Conclusions:** Implications regarding the demands that teachers feel and the resources they lack are discussed so that in-service teacher training can be implemented and intervention strategies can be developed to foster prosocial behavior.

**Keywords:** cyberbullying, emotion, emotion regulation, resilient factors, teachers

## 19. MANAGING DIVERSITY FROM THE EMPLOYERS' PERSPECTIVE AS A RESOURCE FOR INTEGRATING WOMEN FROM MINORITY GROUPS

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### ABSTRACT

Over the past two decades, the labor market participation of women has increased dramatically. This trend has included the increased workforce participation of women from conservative minority groups.

This study examined how women from minority groups are integrated into different organizational frameworks from a managerial perspective.

Two hundred and six women and men who serve as managers in intermediate or senior management, in organizations that employ women from minority groups, participated in the study. The study was conducted by demographic questionnaire and self-report questionnaires to assess the dimensions of a sense of organizational coherence, Diversity Climate and inclusive management.

It was found that the higher the level of management, the higher the sense of organizational coherence, the higher Diversity Climate, and the higher Inclusive Management. Demographic characteristics (Gender, Socioeconomic status, Level of management,

Cultural groups in the organization in addition to the secular), sense of organizational coherence and Diversity Climate explained 61.2% of the variance in Inclusive Management. Furthermore, sense of organizational coherence had the highest contribution. Additionally, it fully mediated the links between level of management and Inclusive Management.

The findings of this study are significant for Managing diverse organizations and may shed light on the issue of recruiting employees from minority groups in non-diverse organizations.

**Keywords:** minorities, inclusive management, Diversity Climate, sense of community coherence, employers



## 20. THE BRIEF COPE: MEASUREMENT INVARIANCE AND PSYCHOMETRIC PROPERTIES AMONG COMMUNITY AND AT-RISK PORTUGUESE PARENTS

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### ABSTRACT

Parenting generally brings about high internal and external demands, which can be perceived as stressful when they exceed families' resources. When faced with such stressors, parents need to deploy several adaptive strategies to successfully overcome these challenges. One of such strategies is coping, an important cognitive and behavioural skill. In this study, we intended to examine the psychometric properties of Carver's (1997) Brief COPE, extending its cross-cultural validity among a Portuguese sample of community and at-risk parents. The sample comprised community (n = 153) and at-risk (n = 116) parents who completed the Brief COPE, the Family Adaptability and Cohesion Scales and the Parenting Stress Index - Short form. Confirmatory factor analysis, internal consistency, cross sample invariance, convergent and discriminant validity were analysed. Data from the confirmatory factor analysis revealed that the 14-factor model obtained the best fit. The results provided evidence that the Brief COPE is a psychometrically sound instrument that shows measurement invariance across samples and good reliability. Our findings demonstrated that the Portuguese version of brief COPE is a useful, time-efficient tool for both practitioners and researchers who need to assess coping strategies, a relevant construct in family context.

**Keywords:** Brief COPE, coping, parenting, psychometry, family assessment

## 21. WHAT FACTORS EXPLAIN ANGER AND MENTAL HEALTH DURING THE COVID-19 PANDEMIC? THE CASE OF ISRAELI SOCIETY

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### ABSTRACT

**Background & Objective:** The aim of this study was to explore whether community resilience, hope, and trust in leaders were associated with lower levels of anger and emotional distress during the COVID-19 pandemic.

**Methods:** Data were gathered in Israel during the second wave of the COVID-19 pandemic, just before the Jewish New Year (mid-September 2020), as a second lockdown was announced, from 636 Israeli adults, who were recruited by the Midgam research panel. The participants filled out self-reported questionnaires including state anger, the Brief Symptom Inventory (somatization, depression, and anxiety), and questionnaires about trust in the state's leaders, community resilience), and hope as measures of coping resources and resiliency.

**Results:** Our results revealed differences between women and men in terms of anger and mental-health problems, but not in terms of coping resources. Women reported higher levels of both anger and mental-health problems. Participants of lower socioeconomic status reported more mental-health problems, more anger, and greater trust in the state's leaders; whereas those of higher socioeconomic status reported greater hope. Furthermore, hierarchical multiple regression analyses revealed that the sociodemographic factors of gender, age, and socioeconomic status, as well as community resilience, trust in the state's leaders, and hope explained mental health with a total of 19% of the variance and anger with a total of 33% of the variance.

**Conclusion:** To conclude, Personal and communal factors affect psychological distress. Personal resilience is an important factor that should be strengthened throughout life. Trust in leadership is important for citizens' mental health.

**Keywords:** COVID-19, anger, trust, resiliency, coping, mental-health

## 22. PSYCHOLOGICAL FUNCTIONING DURING THE COVID-19 LOCKDOWNS: A THREE-WAVE LONGITUDINAL STUDY

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### ABSTRACT

**Objectives:** The COVID-19 lockdowns have been recognized as a collective traumatic stressor. However, there is a lack of comparative research on individuals' functioning during the various lockdowns. The present study is a within-person longitudinal study that examined the relationship between resilience, coping, and emotional state during three COVID-19 lockdowns in Israel.

**Method:** Participants were 369 adults (60.2% women) who completed a three waves survey over three lockdowns in Israel (Data were collected in the midst of the lockdowns: T1 -- 2-13 April 2020; T2 -- 11-17 October 2020, and T3 -- 27 January- 3 February 2021). Participants filled out online questionnaire including DASS-21, COPE, and BRS. First, we investigated the changes in the variables during the three waves. Second, using an autoregressive cross-lagged panel analysis, we assessed the relationships between the variables.

**Results:** After establishing metric invariance across 3 waves, a cross-lagged panel model was tested. The results showed no significant change in an emotional state, support seeking, and disengagement coping between lockdowns. However, there was a decrease in resilience and engagement coping between T1 and T2. Moreover, negative emotional state predicted lower resilience and more frequent use of disengagement coping over time.

**Conclusions:** The longitudinal design of the study allowed a better understanding of the interface between emotional state, resilience, and coping from a time perspective during a continuous traumatic event. Whereas previous studies mainly used mental health as the sole outcome measure, our results emphasize the significance of emotional state as a predictive factor. In light of the important role of emotional state during the pandemic, learning techniques for managing anxiety and stress might be important for promoting resilience and coping during national lockdowns.

**Keywords:** COVID-19 lockdown, coping, resilience, emotional state

## 23. MINDFULNESS AND PERFECTIONISM RELATED DISTRESS: THE MEDIATING ROLE OF MOTIVATION

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### ABSTRACT

Clinical perfectionism is a transdiagnostic process often present in various stress-related disorders. Mindfulness-based interventions (MBIs) are rapidly developing as an alternative to cognitive behavioral therapy for the treatment of maladaptive perfectionism, yet much is still unknown about the interplay between mindfulness and perfectionism. Both these constructs are well understood under the Self-Determination Theory of motivation, but there have been no attempts to use motivation to bridge the two fields of literature.

The present study aims to investigate the mediating role of motivation, as understood in Self-Determination Theory, in the relationship between perfectionism and trait mindfulness.

This is a correlational, crosscut, study. Frost's Multidimensional Perfectionism Scale, Five Facet Mindfulness Questionnaire, and Academic Motivation Scale were distributed online, to be filled by university students (N=80, 75% female), and the subsequent data were subject to statistical analysis, specifically, descriptive statistics and modelling analysis.

Extrinsic motivation was found to be positively correlated with clinical perfectionism, while intrinsic motivation was positively associated with mindfulness. Additionally, perfectionism was negatively correlated with mindfulness. These results are congruent with previous literature. Results from the modelling analysis revealed a mediating effect, with intrinsic motivation mediating the negative relationship between mindfulness and clinical perfectionism.

Findings from this study could expand the current understanding of the processes through which MBIs reduce clinical perfectionism. Integrating these findings into future interventions could also help to differentiate them from the classical cognitive-behavioral approach to perfectionism reduction.

**Keywords:** mindfulness, clinical perfectionism; Self-Determination Theory; university students

## 24. ANXIETY AND EMOTION REGULATION DIFFICULTIES AMONG YOUNG ADULTS WITH SELF- HARMING BEHAVIOR

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### ABSTRACT

Anxiety has been identified as a risk factor for suicidal behavior, self-harm included, particularly present in young adults, due, in part, to its comorbidity with depression. It is also believed that self-harm arises as a maladaptive coping strategy, in the presence of the aforementioned risk factors, as a substitute for healthier emotional regulation strategies.

The present study intends to describe the relationship between anxiety, emotional regulation difficulties, depressive symptoms, and suicidal ideation, among young adults with self-harming behavior.

Participants (N=132) filled out self-report measures of all the pertinent psychological constructs, and of their past and current self-harming behavior. Only participants with an history of self-harm were considered for this study (n=45). The final data were then put through statistical analysis.

Anxiety and depression showed the strongest correlation among all the variables. While anxiety only showed a positive relation with two out of the six emotional regulation factors, depression showed a positive relation with five of them. Suicidal ideation was found to be linked with all other variables, except anxiety and one emotional regulation factor (goal-oriented behaviors).

These results corroborate previous literature on the risk factors for suicidal ideation and behavior. Anxiety's relationship with the remaining variables also raises the possibility that its contribution towards suicidal behavior resides mainly in its comorbidity with depression.

**Keywords:** anxiety; emotional regulation; self-harm; suicidal ideation; young adults

## 25. PROGRESSIVE MUSCLE RELAXATION IN PEOPLE WITH ALCOHOL DEPENDENCE

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### ABSTRACT

**Introduction:** Progressive Muscle Relaxation (PMR) is a technique that allows the person to reduce levels of stress, anxiety, anger and reach an increased state of calm.

**Aims:** Promote anxiety self-management. Prevent relapse. Evaluate the effect of the Therapeutic Relaxation Program (PRT) on the anxiety levels of people undergoing treatment for alcohol dependence.

**Methodology:** PRT was conceived and implemented, based on Jacobson's RMP, 6 sessions, duration of 40 minutes, 21 participants hospitalized for treatment of alcohol dependence. Experimental group (EG) - PRT + institution's protocol treatment; control group (CG) - protocol treatment of the institution.

**Instruments:** State-Trait Anxiety Inventory (STAI-form Y1) - before and after intervention; physiological parameters (heart rate, respiratory rate, blood pressure) - before and after each session; satisfaction questionnaire at the end of the program.

**Results:** Decrease in physiological parameters after each relaxation session. EG found a significant decrease in anxiety scores, a decrease even greater in the male group. CG increased mean values of the anxiety score (STAI-form Y1) in the same timings as the EG. The evaluation of satisfaction revealed an increase in well-being and comfort at the end of the PRT, being greater in the male group.

**Conclusions:** PRT produced positive effects in reducing anxiety levels, reducing physiological parameters, and increasing the person's well-being. PRT was effective in reducing anxiety in people undergoing treatment for alcohol dependence, enabling them to use other coping tools/strategies that will contribute to maintaining alcohol abstinence and preventing relapse.

**Keywords:** anxiety, progressive muscle relaxation, alcohol dependence

## 26. MINDFULNESS: INTERVENTION PROGRAM FOR PEOPLE WITH ALCOHOL DEPENDENCE

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### ABSTRACT

**Introduction:** In recent years, scientific evidence has emerged that justifies the adoption of mindfulness-based protocols as a complement to various treatments, both for the prevention of relapses and as a treatment enhancer (Roemer & Orsillo, 2010).

**Aims:** Train people with alcohol dependence to use the practice of mindfulness. Promote psychological well-being and positive emotions. Reduce anxiety. Evaluate the effectiveness of a Mindfulness-based intervention program.

**Methodology:** The Mindfulness-based intervention program was developed with 2 groups of people hospitalized for the treatment of alcohol dependence. 1st G (pilot) - 6 people; 2ºG - (5 people), 4 sessions, duration 45-60 minutes. Instruments: Psychological General Well-being Scale for the Portuguese population (BEP); Short Version of the Portuguese Positive and Negative Affect Scale (PANAS-VRP) and Zung's Anxiety Self-Assessment Scale (EAAZ) (before and after intervention).

**Results:** As for the general psychological well-being, the BEP, only one participant (pilot group) had a final score lower than the initial one. Regarding the PANAS-VRP, there was an increase in positive affects and a reduction in negative affects at the end of program implementation. About the EAAZ, 7 participants showed a decrease in anxiety after the intervention.

**Conclusions:** After the implementation of the Mindfulness-based intervention program, there was: an increase in well-being; increase in positive affects; decrease in negative affects and decrease in the level of anxiety.

The implementation of this Program allowed people with alcohol dependence to increase their effective adaptation/coping strategies to maintain self-determined alcohol abstinence.

**Keywords:** anxiety, alcohol dependence, mindfulness

## 27. EFFECT OF HEAD-DOWN-TILT (HDT) AS GRAVITATIONAL STRESS MEASURED BY THE VEGETATIVE TONE (KERDO INDEX)

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### ABSTRACT

Exposure to microgravity during space flight or earth-based analogs such as HDT results in cardiovascular deconditioning. HDT is gravitational stress. Military pilots face this challenge. Little is known about the status of such a condition's autonomic nervous system (ANS) background. The status of the ANS tone may have information on the stress tolerance of future pilots and astronauts.

**Objective:** We used the Kerdo index during an HDT to quantify the vegetative balance in future air force pilots.

**Methods:** In this descriptive study, we measured 19 young healthy volunteers (6 females and 13 males; mean age 22.7 y) on the tilting table in the horizontal, supine position and -15° HDT. As a control group, we used the arterial blood pressure and heart rate data of 11 female and 28 male middle-aged subjects.

**Results:** The mean age for females was 53.4 and for males 53.7 y. In the young group, there was no significant difference in the Kerdo index between the male and female groups during the control and HDT. Between the young and middle-aged male groups, the Kerdo index was not significantly different, however, the age, systolic and diastolic blood pressure, heart rate, and P values were  $P < 0.0001$ . Weight P was (0.02) and BMI P was (0.01). Correlation coefficients between the Kerdo index and measured variables were the highest in both groups for heart rate.

**Conclusion:** Our results demonstrated that physical fitness resulted in no significant difference in the Kerdo index between the control and HDT.

**Keywords:** gravitational stress, autonomic nervous system, Kerdo index, sympathetic, parasympathetic



## 28. THE PROMOTION OF WELL-BEING AND HAPPINESS AS COPING STRATEGIES IN TOURISM: AN EXPLORATORY STUDY

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### ABSTRACT

**Introduction:** Well-being is fundamental to improve people's lives, being tourism an activity to increase how people feel good. The most promising theoretical well-being models are the PERMA model (Positive emotions, Engagement, Relationships, Meaning, Accomplishment) and the HOPE model (Human Optimal Psychological Experience), referred to the interconnection of creativity, optimism, and spirituality. Well-being was threatened by COVID-19 and replaced by fear and uncertainty, affecting individuals' mental health. Thus, tourism generate new meanings allied with tourists' preferences.

**Objectives:** This proposal intends to explore the preliminary results on subjective happiness and tourists' well-being in tourism after the Covid-19 lockdown to understand how they act as coping strategies and reflect in theoretical and practical implications.

**Methods:** The sample of this exploratory quantitative study comprises 70 Portuguese participants, mainly female, aged from 20 to 82 years old (M=40). Participants answered the Subjective Happiness Scale and the Tourism Well-being Scale, considering the best tourism experience from the past few months.

**Results:** The mean for happiness was lower than the theoretical mean of the validation study. Women rated higher happiness than men. Well-being dimensions' significant correlations were optimism and meaning; meaning and accomplishment, and spirituality; positive emotions and creativity, and engagement. Results highlighted whose attribute a higher experience meaning rated them as an opportunity to accomplish something meaningful.

**Conclusions:** Results show tourism as a pathway through well-being, considering the impact of a tourism experience on well-being dimensions to fulfil tourists' lives with happier moments and beliefs. Also, this study provides insights into the investment in well-being experiences as coping strategies for tourism assets, allowing individuals to feel happy and well.

**Keywords:** coping strategies, happiness, tourism, well-being

## 29. ANXIETY AND PERCEIVED COGNITIVE FUNCTIONING IN CANCER SURVIVORS: AN EXPLORATORY CORRELATION STUDY

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### ABSTRACT

**Objectives:** We have reached a defining moment in Europe in our efforts to ensure increased survival for cancer patients. There are nearly 20 million cancer survivors in Europe, who live with short- and long-term effects of the disease that can compromise their Quality of Life. Among the most reported effects are anxiety and complaints of cognitive functioning. This exploratory study aims to observe these effects in a sample of Portuguese survivors of cancer, to contribute to understanding these effects and the challenges they pose to better identify areas for future research and practical action.

**Methods:** This study had the participation of 24 cancer survivors (87.5% female and 12.5% male, mean age=58.38; SD= 9.235; age range: Min= 42, Max=78; Type of Cancer: 71% Breast Cancer), who answered the following instruments: sociodemographic and clinical questionnaire, the Hospital Anxiety and Depression Scale (HADS; Pais-Ribeiro, et al. 2006) and the Functional Assessment of Cancer Therapy-Cognitive Function-Version 3 (FACT-COG; Oliveira et al., 2022). The instruments were applied to a convenience sample who participates in a project for cancer survivors, respecting the ethical principles of research. Spearman correlation was used to study anxiety and perceived cognitive functioning. Mann-Whitney test was performed to look for differences between the breast cancer group and the other cancers.

**Results:** A statistically significant negative correlation was found between anxiety and Comments from Others sub-scale of FACT-COG(CogOth) ( $r_s = -0.637$ ,  $p = 0.01$ ). FACT-COG Perceived Cognitive Impairments sub-scale(PCI) presents a significant negative correlation with academic qualifications ( $r_s = -0.425$ ,  $p = 0.048$ ). No significant correlations of these variables with age were observed nor difference between groups of type of cancer.

**Conclusions:** Reflections on research and clinical implications for the future of this study will be presented.

**Keywords:** anxiety, perceived cognitive functioning, cancer survivors

## 30. SELF-EVALUATIVE SALIENCE OF PHYSICAL APPEARANCE AS A COMMON FACTOR FOR SOCIAL ANXIETY AND EATING DISORDERS

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### ABSTRACT

Social anxiety is one of the most frequent and limiting mental disorders among the general population, affecting areas as varied as personal, academic, and professional life. Among its characteristics can be found the fear of negative evaluation and social avoidance as a by-product of experiencing such anxiety. Likewise, regarding eating disorders, there usually is an exaggerated fear of negative evaluation, although mainly limited to physical appearance. Based on this similarity, this study aimed to explore the relationship between the self-evaluative salience of physical appearance, social anxiety traits, and risk behaviors for eating disorders, controlling the effect of body mass index. In this study, 185 university women students (aged between 17 and 26 years old) answered three self-administered questionnaires to evaluate those variables, in addition to self-reporting weight and height. Partial correlations showed that self-evaluative salience of physical appearance is significantly related to fear of negative evaluation and avoidance of new situations (characteristics of social anxiety), motivation to lose weight, restrictive diet, and compensatory eating behaviors, even when the body mass index remained constant. According to the literature, self-evaluative salience of physical appearance usually associates with positive beliefs about certain body stereotypes and negative ones about others, commonly overweight or obese. These results highlight the need to consider such pre-conceptions referring to appearance and its apparent social salience in treating social anxiety, similar to what is commonly done in treating eating disorders, for which the relationship may seem more evident.

**Keywords:** social anxiety, university students, eating disorders, physical appearance

## 31. A TRAUMA-FOCUSED CBT FOR VICTIMS OF DOMESTIC VIOLENCE LIVING IN SHELTERS: A PROTOCOL FOR A RANDOMIZED CONTROLLED PILOT TRIAL

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### ABSTRACT

**Objectives:** This trial will test a trauma-focused CBT group psychological intervention for victims of domestic violence living in shelters in Portugal.

**Methods:** This protocol is a randomized control trial comparing a manualized psychotherapy and a treatment as usual condition. The protocol includes pretreatment and posttreatment measures, and two follow-up sessions (3 and 6 months). We aim to recruit 40 participants who will be randomized to one of the experimental conditions. Outcome measures will include attitudes toward domestic violence, self-esteem, resilience, empowerment strategies, interpersonal relationships, social role function, symptom distress (anxiety and depression), and PTSD symptom severity. Moreover, adherence to and satisfaction with treatment, and the therapeutic alliance will be monitored. An independent evaluator will be responsible for the pre-, post-treatment, and follow-up assessments to ascertain differences in outcomes between groups.

**Conclusion:** This intervention program aims to improve the psychological support offered to victims living in shelters in Portugal by developing an integrated and inclusive treatment program that contributes to the well-being of victims and reduces the risk of further victimization. The main findings will provide orientations to national policies.

**Keywords:** domestic violence, victims, cognitive-behaviour therapy, trauma-focused, randomized controlled trial

## 32. THE ASSOCIATION BETWEEN MINORITY STRESS AND PSYCHOLOGICAL DISTRESS: THE MODERATOR ROLE OF SELF-COMPASSION

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### ABSTRACT

**Objectives:** Sexual and gender minority (SGM) individuals have been reported to suffer from higher rates of mental health problems due to experiencing stressful events more frequently compared to their cisgender and heterosexual peers. While the negative psychological effects of both distal and proximal components of minority stress (MS) on SGM populations have been thoroughly studied, the protective role of resilience factors (such as self-compassion) on these associations remains relatively understudied in the Global South. Recent research on self-compassion highlights the distinction between compassionate self-responding (CSR) and uncompassionate self-responding (USR) with CSR representing the core of self-compassion and USR harboring a more self-critical stance. In this study, we aimed to examine the protective roles of CSR and USR in the relationship between different forms of MS and psychological distress. **Methods:** The data were collected from 141 individuals aged between 16 and 55 ( $M= 23.5$ ,  $SD= 5.69$ ) through scales assessing self-compassion, minority stress, anxiety, and depression. **Results:** The association of proximal MS with both anxiety and depression changed depending on the levels of both compassionate and uncompassionate self-responding dimensions of self-compassion. **Conclusions:** The proximal component of MS is sensitive to the impact of both dimensions of self-compassion with CSR showing the capacity for buffering the negative impact of proximal MS. However, USR augmented the impact of MS. Furthermore, the psychological distress that is associated with the distal component, which is more associated with the actual negative life events related to SGM stigma, is not likely to change depending on self-compassion.

**Keywords:** psychological distress, minority stress, self-compassion

### **33. GROWTH OUT OF A CRISIS: CHARACTERISTICS OF A FAMILY CLIMATE THAT HELP ONE PARENT'S LONG-TERM COPING, DUE TO A LIFE THREATENING DISEASE OF THE OTHER PARENT**

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#### **ABSTRACT**

**Background:** Parents whose spouses have life threatening disease, often experience a crisis, changes in routine, break in daily balance, anxiety, and in general weakness in sense of control in their life. The climate of each family, is relevant to the way the family members cope, based on the interpersonal relationships among them.

**Objectives:** 1. To identify coping strategies of parents, whose spouses have long term threatening disease; 2. To recognize the characteristics of the family climate that enables resilience and strength in such a crisis.

**Methods:** Qualitative research, carried out through semi-structured in-depth interviews using interview protocol. 12 parents (mothers and fathers) of children age 1-10 years old, whose spouses are dealing with a serious illness that requires long-term treatment, were interviewed. The interviews were recorded, transcribed for the purpose of locating and defining common categories and themes using text fragments.

**Results:** Three main themes were identified for coping: 1. Personal hobbies; 2. positive thinking; 3. Religious belief. Four main themes were identified in family climate as especially strengthening: 1. Shared concern; 2. Responsibility for the children; 3. Regular family rituals; 4. Mutual reinforcements.

**Conclusions:** In cases of stress and crisis in the family, it is important to enlighten the family member about their family characteristics that may help them cope. Thus to strengthen their areas of personal growth during the struggle, a strengthening which will also help to strengthen the family climate and to cope within the entire family system.

**Keywords:** life threatening disease, family climate, family resilience, coping strategies

## 34. DOES GENDER INFLUENCE THE ANXIETY LEVELS OF PRE-TRIAL DETAINEES?

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### ABSTRACT

**Objectives:** The present study aimed to analyze if there are differences between male and female pre-trial detainees' anxiety levels, and to understand if gender can predict such levels. **Methods:** A total of 193 pre-trial detainees (both men and women) were included in this study. We used the BSI (Brief Symptom Inventory) and the JSAT (Jail Screening Assessment Tool) to assess levels of anxiety during detention. First, we compared male and female respondents to examine if these groups present statistically significant differences in scores. Besides, we conducted an ordinal logistic regression to understand if we can predict levels of anxiety depending on gender. **Results and conclusions:** Our findings show that women in remand tend to present statistically significant higher levels of anxiety compared to their men counterparts. Besides, a cumulative odds ordinal logistic regression with proportional odds was run and showed that gender had a statistically significant effect on the prediction of anxiety levels. Our results were in line with previous evidence that female detainees tend to report clinically significant symptoms of anxiety. This study represents an important contribution to the practice since it underlines the need to develop special interventions to address the needs of particularly vulnerable groups, such as female jail detainees.

**Keywords:** pre-trial detention, anxiety, assessment, gender

## **35. STRESS, TRAUMA, ANXIETY AND RESILIENCE: DISCRIMINATION, DEPRESSION AND ANXIETY IN THE ISLAMIC COMMUNITY IN PORTUGAL**

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### **ABSTRACT**

Studies show that racial and cultural barriers such as discrimination (perceived and real) are barriers to seeking medical and psychological help and may even lead to the onset or worsening of psychopathology (Ciftci et al, 2012; Ferreira, 2012; Williams et al, 1997). Research also indicates that specific intercultural communication skills should not be overestimated in therapeutic interventions (Ferreira, 2020) but rather the natural support systems, such as the extended family (Moleiro et al, 2009). This reflection is based on the analysis of the results obtained focusing specifically on a system in which one of the members of the Islamic community (Sunni) has a mental illness, based on the semi-structured interview to the identified patient, as well as on the application of the sociodemographic questionnaires and psychometric instruments to him/her and to the members of his/her natural support network. The sample under analysis consists of 10 elements. The results show that, in this Sunni community of Indo-Mozambican origin, no relevant discriminatory phenomena are reported in aspects related to mental health; however, the qualitative data draw attention to the fact that cultural aspects have an impact on the therapeutic approach. These are preliminary results, which require comparison with other elements of the Sunni and Shiite community, as is the scope of this thesis, possibly more subject to discriminatory phenomena.

***Keywords: anxiety, depression, discrimination, Islamic community, stress***



## 36. PARENTAL STRESS, PREMATUREITY AND THE NICU

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### ABSTRACT

Multiple factors contribute to the high levels of stress assigned to the parents of premature NBs hospitalised in NICUs. In this study, the authors aim not only to identify which are the highest risk factors associated with the special characteristics of these units, but also to allow for a better understanding by the professionals and, consequently, a more effective, specialized and differentiated intervention.

The study used the Parental Stressor Scale: Neonatal Intensive Care Unit (PSS:NICU) developed by Miles and Funk (1989). Its clinical interest and wide use in other countries led to its introduction as an instrument for clinical approach and research since the beginning of 2008

The results obtained indicated that the experience of hospitalisation of NBs in the units was stressful for most parents (79%). In the various dimensions of the scale, support for the parental role (integration of parents as active participants in the care and decisions made regarding the baby's treatments) was highlighted as the major stress factor. Other stress factors that stood out were related to the need for more information about the NICU environment (noises, alarms and ventilators) and about the baby's abilities, particularly regarding pain and suffering.

Understanding these specific factors that contribute to a higher perception of parental stress may thus help define intervention plans with more effective strategies.

**Keywords:** parental stress, prematurity, NICU

## 37. COPING ADAPTATIVO E QUALIDADE DE VIDA EM DOENTES COM VIH/SIDA

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### ABSTRACT

**Objective:** With this paper we intend to present the results of a study which aimed to examine the relationship between adaptive coping and Quality of Life in Portuguese adults with HIV/AIDS infection.

**Methodology:** The sample includes 56 adults living in Portugal, 62.5% of which are female, with an average age of 49,8 years old and an average of years living with HIV infection diagnosis of 19,68 years. The results were obtained through an online inquiry spread in cooperation with some associations related to the living with HIV. All subjects of the present study fulfilled the following instruments: a Clinical and Sociodemographic Questionnaire, the World Health Organization Quality of Life-Bref (WHOQOL-HIV-Bref), the European Portuguese Version of the World Health Organization Quality of Life for people with HIV, and the Toulouse Coping Scale (Shortened Version) - ETC-R.

**Results:** Considering the main results, we observed significant moderate correlations between the variables of coping and quality of life, where we highlight the correlation of the Social Support factor with the Psychological, Social Relationships, and Environment domains.

**Conclusions:** The existence of significant correlations, although moderate to weak, of the Social Support factor with the Psychological domain, the Social Relationships domain and the Environment domain suggests that a good social support can help a good psychological, social, and environmental functioning. As most participants were approached by associations for the fight against HIV/AIDS, we can deduce that these associations will be part of their social support.

**Keywords:** HIV/SIDA, coping, qualidade de vida

## 38. RELATIONSHIP BETWEEN MICROAGGRESSION AND PERCEIVED STRESS IN PEOPLE BELONGING TO SEXUAL MINORITIES

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### ABSTRACT

**Objetives:** Literature has proved microaggressions have a negative significant impact in LGBTQIA+ community's mental health. Considering this impact and the lack of investigation on this theme, especially in the Portuguese population, the objective of this study is assessing microaggressions' impact on perceive stress' levels on LGBTQIA+ community.

**Methods:** The sample of this cross-sectional study consist of 133 Portuguese individuals with ages in between 18 and 51. The data collection protocol consisted of a sociodemographic questionnaire and instruments "Gender and Sexual Minorities Microaggression Scale" and "Perceived Stress Scale".

**Results:** The results suggest a positive correlation of microaggressions with perceived stress, only in the gender variable, where there are statistically significant influences regarding microaggressions and perceived stress. Perceived stress is less observed in cis men and cis women in comparison with gender nonconforming people. However, with the sexual orientation variable, the results show that there were no statistically differences between groups. Even if in LGBTQIA+ presents higher averages, they are not statistically significant.

**Conclusions:** With these results, it was possible to conclude that microaggressions can have a significant impact on sexual minorities in the Portuguese population, being necessary to do more research on this theme, to break some myths and stigma about LGBTQIA+ people and to provide better assistance to the community in multiple contexts.

**Keywords:** microaggressions, sexual minorities, stress

## 39. ANXIETY, DEPRESSION AND SUICIDAL IDEATION IN YOUNG-ADULT WOMEN VICTIMS OF DATING VIOLENCE

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### ABSTRACT

Suicide risk in young-adults is often associated with experiencing negative life events. Dating violence is an event that has been widely explored, with multiple psychological consequences identified, including anxiety, depression, and suicidal ideation. However, the study of psychological factors that may influence this relationship is scarce. Accordingly, this study sought to analyze the relationship between dating violence victimization and suicidal ideation in young-adult women, investigating possible mediation and moderation relationships. A total of 136 young-adult women, with a mean age of 24.8 years ( $SD = 3.17$ ), participated in the study. Participants completed measures of anxiety, depression, suicidal ideation, and conflict resolution tactics experienced in dating relationships. A high prevalence of victimization (75.7%) and high levels of suicidal ideation were identified in 15.4% of the sample. Young-adult women with a history of victimization and psychopathology had significantly higher levels of anxiety, depression, and suicidal ideation. Positive and significant correlations were found between dating violence victimization and suicidal ideation, as well as between psychological aggression and suicidal ideation. Moderation analyses revealed that the relationship between victimization and suicidal ideation is moderated by anxiety and depression. These results support the need for continued investment in strategies for the prevention of dating violence and suicide.

**Keywords:** dating violence, suicidal ideation, anxiety, depression, young-adult women

## 40. DOMESTIC VIOLENCE AND POST-TRAUMATIC STRESS DISORDER: A CASE REPORT

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### ABSTRACT

**INTRODUCTION** – post-traumatic stress disorder (PTSD) is a highly incapacitating condition caused by a single or repeated, direct or indirect, exposure to a violent, catastrophic or threatening event. Domestic violence exposes the victim to variable levels of stress and fear, therefore it's considered a risk factor for PTSD.

**OBJECTIVES** - description of a case of PTSD in a domestic violence victim. Understanding the complex pathophysiology of PTSD and first-line treatment options.

**METHODS** – clinical case description and brief literature review on diagnosis and treatment of PTSD, using PubMed data base.

**RESULTS** – female, 53 years old, divorced, sent by her family doctor to a psychiatry consultation for anxiety, panic attacks and insomnia. Describes history of domestic violence and presents with signs and symptoms compatible with PTSD.

**CONCLUSIONS** - domestic violence represents a violent event, potentially life-threatening that can cause PTSD. This case report illustrates how a repeated traumatic experience, in this case, intimate partner violence, causes PTSD that results in significant suffering and impairment in social, occupational, and other areas of functioning. Regarding treatment, by the review of literature we can conclude that medication and cognitive-behavioral therapy are the first-line options.

**Keywords:** domestic violence, intimate partner violence, post-traumatic stress disorder

# 41. FACTORS FOSTERING RESILIENCE AND POST-TRAUMATIC GROWTH DURING THE COVID-19 PANDEMIC: A SYSTEMATIC REVIEW

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## ABSTRACT

Based on research, negative psychological outcomes such as anxiety, uncertainty, and fear of the unknown make people more vulnerable during a pandemic. Thus, to prevent a rise in mental health issues and improve psychological functioning, it is essential to foster individuals' resilience. Despite the detrimental impact of the Coronavirus (Covid-19) pandemic, resilience and post-traumatic growth (PTG) have the potential to promote positive functioning and reduce the negative effects of stress. This study aimed to investigate and uncover elements linked to predicting or encouraging people's resilience and PTG during the Covid-19 pandemic. This systematic review (SR) was guided by the Cochrane Collaboration and followed a 10-step process. A total of four databases were searched with no limiters. Through database and reference list searches, 310 suitable studies were identified, of which 52 were included in the final analysis. Several themes were found, namely social support, emotional support, mindfulness, personal strengths, positive thinking, spiritual growth and meaning; these themes emerged as the strongest predictors of resilience and PTG.

**Keywords:** COVID-19, resilience, post-traumatic growth, positive growth

## 42. GENETIC VS ENVIRONMENTAL FACTORS IN TIME PERSPECTIVE: A TWIN STUDY

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### ABSTRACT

**Objective:** Time perspective is a basic disposition expressing positive or negative attitude towards time. Time perspective is determined by numerous factors, such as culture, education, religion, social class, or family. To some extent, time perspective can change under the influence of professional psychological intervention or as a result of self-improvement efforts. Understanding the genetic and environmental determinants of behavior is an interesting and frequently explored direction of research in the contemporary psychology of personality. **Methods:** In the present study over 800 adults twins aged 30-60 years old took part. The short version of the Zimbardo Time Perspective Inventory was used. It measures five types of time perspective by means of the following scales: (1) Past-Negative, measuring negative attitude towards the past and frequent mental returns to negatively evaluated events; (2) Past-Positive, which measures returning to positively evaluated past events; (3) Present-Hedonistic, which measures concentration on pleasure experienced "here and now" as well as ignoring past experiences and the future consequences of one's actions; (4) Present-Fatalistic, which serves the purpose of measuring concentration on the present, combined with a belief in having no influence on the future; and (5) Future, measuring focus on goals and the formulation of the future plans. **Results:** We assessed the proportions of genetic and environmental components in explaining the variability of temporal perspective. Pearson's  $r$  correlation coefficients was used to assess genetic and environmental influence. The findings confirmed that some types of time perspective is more heritable. **Conclusions:** The results can be useful in the psychotherapy or trainings while changing clients' perceptions of their past, present, and future.

**Keywords:** time perspective, genetic, individual differences

## 43. COMPARISON BETWEEN AN IN-PERSON AND A SYNCHRONOUS ONLINE MINDFULNESS-BASED INTERVENTION: A QUASI-EXPERIMENTAL STUDY

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### ABSTRACT

Online mindfulness-based interventions (MBIs) have become more common in the past years, namely after the COVID-19 pandemic. This study main goal is to compare the efficacy of a face-to-face MBI program with the same program applied online. A total of 114 university students, with a mean age of 25.4 ( $\pm$  7.1) participated in the investigation. This is a quasi-experimental study, with pre-, post-, and 3-month follow-up comparative measurements in two types of group formats: in-person groups (IG;  $n = 70$ ) and synchronous online groups (OG;  $n = 44$ ). Six groups were conducted in the presential format, whereas 4 groups were held online (through video conference). In both formats, each intervention group had a maximum of 22 participants at the beginning. The following MBI outcomes were analyzed: difficulties in emotion regulation, depression, anxiety, and stress. Both intervention formats presented positive results. The interaction effects demonstrated three outcomes that favored OG against no outcomes favoring IG. The OG presented a predominant superiority over the IG in the follow-up results. In addition, throughout the three times, the OG has indicated nine exclusive dimensions with medium or large effect sizes against one from the IG. It is presumed that in comparison with the in-person format, the online format tends to offer more consistent positive effects post intervention. It is suggested that future research utilizes a randomized sample, as well as physiological measures.

**Keywords:** mindfulness-based intervention, face-to-face intervention, in-person intervention, online intervention, synchronous web-based intervention



## 44. CYBERBULLYING E EMPATIA NUMA AMOSTRA DE JOVENS PORTUGUESES

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### ABSTRACT

Technology is increasingly part of everyday life, which can bring risks to young people's mental health. One such risk is exposure to cyberbullying, at a stage of development where social skills are tested in peer groups. The main objective of this study is to understand the empathy profile of cyberbullying aggressors, observers, and victims. A quantitative methodology was used, with data collection for convenience, online. The sample is made up of young Portuguese people between 12 and 30 years old. Cyberbullying was assessed using two questionnaires: the Cyberbullying Questionnaire (CQ\_A) (Pinto & Cunha, 2011) and the Cyberbullying-Victimization Questionnaire (CBQ-V) (Pinto & Cunha, 2011). "Empathy" was measured using the Basic Empathy Scale (BES) (Pechorro, et al., 2018). The results indicate the need to invest in programs to promote the healthy and cybersafe use of technology, in order to reduce the phenomena associated with cyberbullying and promote a change in risky behavior towards healthy development and security in contact with the world. online.

**Keywords:** empathy, cyberbullying, young people, cybersecurity

## 45. THE SEARCH FOR WELL-BEING OF UNIVERSITY PROFESSORS: IS THIS POSSIBLE?

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### ABSTRACT

**Introduction:** Developing skills in university professors can help them to prevent physical and emotional pathologies. Objectives: Therefore, this research has as its main objective to analyze factors that influence the well-being of university professors, and as specific objectives: 1) to carry out a systematic review of the literature on Positive Psychology and teaching skills; 2) analyze the results of the sociodemographic data questionnaire and the scales applied to assess well-being and self-efficacy in the transversal and professional skills of university professors. **Methodology:** invitation to all professors from an institution in Vale do Itajaí to participate in the research. The instruments used were: Sociodemographic Questionnaire, Selfefficacy Scale in Transversal and Professional Skills, Positive Psychotherapy Inventory (PPTI), Life Satisfaction Scale and Intrinsic Motivation Scale. This research is of the descriptive type, being a quantitative study, in which relationships between variables were established, using resources and statistical techniques in order to correlate the data and information obtained. The sample was of the probabilistic type, that is, all teachers have the same possibility of participating. **Results:** it is observed that there are different variables that contribute to the well-being of teachers, and that there is a relationship between competence, intrinsic motivation and well-being. **Final Considerations:** the study took place before and during the Coronavirus pandemic, and the research was adapted to the needs of teachers, but even so, it suffered the impact of a whole moment of uncertainty, fear and excessive workload on teachers on their behalf, who had just started to adapt to working remotely from their homes, with all that that entails.

**Keywords:** well-being, university professors, Positive Psychotherapy

## 46. DIFFERENCE AND INFLUENTIAL ANALYSIS OF IRRATIONAL BELIEFS AND COMPETITIVE ANXIETY AMONG HUNGARIAN ATHLETES

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### ABSTRACT

**Objective:** The aim of our research was to explore differences in Hungarian athletes' competitive anxiety (cognitive and somatic anxiety) and irrational beliefs (demandingness, awfulizing, low-frustration tolerance, depreciation) by gender, sport type and sport level. We also examined the influence of irrational beliefs on cognitive and competitive anxiety.

**Methods:** Competitive anxiety (CSAI-2) and irrational beliefs (iPBI) were measured by questionnaires in 219 Hungarian athletes. We ran the descriptive statistics, Pearson intercorrelations, independent samples T-tests and univariate regression of all the normal distributed variables using IBM SPSS program.

**Results:** Hungarian male athletes have significantly lower ( $p < 0.05$ ) scores than women for all the examined variables. Furthermore, team sports athletes show significantly higher ( $p < 0.05$ ) scores in all four types of irrational beliefs than individual athletes. Professional athletes' scores of demandingness ( $p < 0.02$ ) and depreciation ( $p = 0.01$ ) are significantly higher than amateur athletes. In the linear regression analysis, all 4 categories of irrational beliefs have predictive effect for both cognitive and somatic anxiety ( $p < 0.05$ ).

**Conclusions:** Our results confirm the differences found in the previous studies in competitive anxiety and point to differences in the type of irrational beliefs that have been less explored. Furthermore, we supported the REBT-II model that competitive anxiety is influenced by all four types of irrational beliefs.

**Keywords:** irrational beliefs, competitive anxiety, athletes, REBT

## 47. CHILD'S WELL-BEING AND MOTHER'S LIFE SATISFACTION: EXAMINING THE ROLE OF MOTHER'S SOCIAL SUPPORT IN A TWO-WAVE MULTI-SOURCE STUDY

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### ABSTRACT

**Objectives:** In order to better understand the resilience of children, we need to examine their well-being. In this context, parental well-being has been shown as very important; however, the associations between children's and parental positive well-being indicators have not yet been thoroughly examined in the longer-term. To gain more insight into these matters, building upon the Bronfenbrenner's ecological systems theory, this study aimed to examine the role of maternal social support at Time 1 in the relationship between maternal life satisfaction (at Time 1) and children's well-being indicators (positive and negative emotions, overall happiness) at Time 2 (after one year).

**Methods:** This study is a part of a longitudinal project „Child Well-Being in Family Context (CHILD-WELL)” financed by Croatian Science Foundation. The study involved 673 mother-child pairs. The children in the study are primary school children (54.2 female), aged 9 to 13 years ( $M = 11.43$ ,  $SD = 1.16$ ), who completed the Positive and Negative Affect Schedule for Children, and answered one-item happiness measure at Times 1, and one year after, at Time 2. Mothers reported their life satisfaction, and social support, at both Time 1 and Time 2.

**Results and Conclusions:** Using structural equation modeling, and controlling for relevant factors, the results demonstrated positive direct associations between mother's life satisfaction at Time 1 and children's positive emotions and happiness at Time 2. Moreover, the results showed that maternal social support boosts the positive effects of maternal life satisfaction on children's well-being. In the analysis, we controlled for mothers' education levels, children's age, and fathers' life satisfaction, and children's well-being indicators at Time 1. The current study supports the idea that maternal social support and well-being represent children's context that is highly important for children's well-being and resilience.

**Keywords:** children's well-being, maternal well-being and social support, two-wave study

# PROCEEDINGS

## **A perspetiva dos jovens sobre cidades amigas da idade**

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### **Resumo**

“Aging in place” significa a capacidade de continuar a viver em casa e na comunidade ao longo do tempo, com segurança, empoderamento, resiliência e de forma independente. É importante que seja considerado como primeira opção pelas vantagens de inclusão social e de recompensa emocional que traz associadas. Uma cidade amiga das pessoas mais velhas, é um meio urbano acessível e inclusivo que promove o envelhecimento ativo nos seus três pilares: saúde, participação e segurança. Os cidadãos podem dar o seu contributo, em particular, os mais jovens, muitos deles futuros profissionais de apoio ao envelhecimento com saúde e resiliência. O presente estudo tem como objetivo conhecer a perspetiva dos jovens sobre o seu próprio envelhecimento e o seu entendimento sobre se a cidade onde vivem é amiga dos mais velhos. É um estudo exploratório, transversal, descritivo, de cariz qualitativo. Recorreu-se a um Inquérito a Jovens sobre Perceção de Envelhecimento, e à Checklist de Características Fundamentais das Cidades Amigas das Pessoas Idosas da Organização Mundial de Saúde. Contou com 24 participantes, estudantes do Curso Técnico Superior Profissional em Psicogerontologia entre os 18 e 21 anos, da cidade de Beja. Os participantes consideram que o seu envelhecimento está relacionado com aspetos positivos, como a presença no futuro de mais ajudas tecnológicas para apoiar a sua velhice, e a importância de manter a autonomia. A Checklist evidenciou que Beja precisa de investir mais na mobilidade, serviços de proximidade e gerontotecnologia. Face às evidências consideramos que uma cidade amiga das pessoas mais velhas precisa de ter também em consideração a intergeracionalidade e a literacia do envelhecimento com saúde e bem-estar, capacitando e dando voz ativa às pessoas idosas e indo ao encontro das suas necessidades, resiliência e autonomia.

**Palavras-chaves:** Jovens, “Ageing in place”, Cidades amigas da idade, Resiliência, Promoção da saúde.

### **The perspective of young people on age-friendly cities**

#### **Abstract**

“Aging in place” means the ability to continue to live at home and in the community, safely, empowered, resiliently and independently. It is important that it be considered as the first option due to the advantages of social inclusion and emotional reward that it brings. A city friendly to older people, it is an accessible and inclusive urban environment that promotes active aging in its three pillars: health, participation and security. Citizens can make their contribution, particularly younger people, many of whom are future professionals who support aging with health and resilience. The present study aims to know the perspective of young people about their own aging and their understanding of whether the city where they live is friendly to the elderly. It is an exploratory, cross-sectional, descriptive, qualitative study. A Survey of Young People on Perceptions of Aging was used, and the World Health Organization Checklist of Key Characteristics of Age-Friendly Cities. It had 24 participants, students of the Higher Professional Technical Course in Psychogerontology between 18 and 21 years old, from the city of Beja. Participants consider that their aging is related to positive aspects, such as the presence in the future of more technological aids to support their old age, and the importance of maintaining autonomy. The Checklist showed that Beja needs to invest more in mobility, proximity services and gerontotechnology. In view of the evidence, we believe that a city friendly to older people

needs to also take into account the intergenerationality and literacy of aging with health and well being, empowering and giving an active voice to the elderly and meeting their needs, resilience and autonomy.

**Keywords:** Youth, “Ageing in place”, Age-friendly cities, Resilience, Health promotion

## INTRODUÇÃO

Os recentes estudos demográficos apresentam o envelhecimento da população como um dos fenômenos mais importantes do século XXI, afetando a todos os países de diferentes maneiras, lançando desafios que vão além dos aspetos demográficos e que interferem nas diferentes formas de organização social, cultural, económica e política da sociedade atual. Em Portugal o declínio contínuo das taxas de natalidade e o aumento da expectativa de vida estão transformando a estrutura populacional, aumentando a população idosa comparativamente com a população mais jovem. É inegável que o envelhecimento da população portuguesa está colocando novos problemas e desafios à sociedade deste século XXI, exigindo dos investigadores respostas sólidas e precisas para esses problemas. Esta situação demográfica exige mudanças importantes, não só naquilo que fazemos, mas na forma como investigamos os aspetos relacionados com o envelhecimento, levando em consideração novas variáveis como as cidades como espaços de partilha de convivência intergerações.

As cidades têm um impacto importante na qualidade de vida dos mais velhos, sendo da responsabilidade dos decisores políticos e governança local criar condições para viabilizar o “ageing in place”. Uma cidade amiga das pessoas mais velhas, é um meio urbano acessível e inclusivo que promove o envelhecimento ativo nos seus três pilares: saúde, participação e segurança. Os cidadãos podem dar o seu contributo, em particular, os mais jovens, muitos deles futuros profissionais de apoio ao envelhecimento com saúde.

Diante da problemática apresentada centramo-nos na perspetiva do envelhecimento dos jovens, enquanto pessoas que envelhecem na cidade e futuros profissionais cuidadores. No âmbito da sua formação como Técnicos Superiores em Psicogerontologia, um grupo de jovens, foram desafiados a observar a cidade de Beja como cidade amiga das pessoas idosas, usando parte da Guia Global das Cidades Amigas dos Idosos da Organização Mundial da Saúde. Foram observadas questões relacionadas com a Seção 5. Espaços abertos e prédios, Seção 6. Transporte, Seção 7. Moradia, Seção 12. Apoio comunitário e serviços de saúde.

Assim, surgiram várias questões: “Qual o entendimento dos jovens sobre o conceito de Beja cidade amiga das pessoas mais velhas?”, “Como visualizam o seu envelhecimento no futuro e a sua própria velhice”? Neste sentido, o presente estudo tem como principal objetivo conhecer a perspetiva dos jovens sobre o seu próprio envelhecimento e o seu entendimento sobre se a cidade de Beja é amiga dos mais velhos.

### **Intergeracionalidade**

Os conceitos de longevidade e intergeracionalidade, necessariamente derivam na necessidade de um novo modelo social que permita ajudar, orientar e desenvolver projetos mais equilibrados, abertos e amplos em termos de partilha social. A preocupação com o envelhecimento populacional e sobre como garantir um futuro sustentável para todas as gerações, vem ganhando destaque na área da gerontologia social. Diferentes estudos, investigações, e projetos de intervenção tem como objetivo primordial criar vínculos entre todas as gerações e ajudar a acolher e regenerar as estruturas sociais, demográficas e económicas.

O termo intergeracionalidade vai muito além da simples coincidência ou coabitação, e nos leva à busca de colaboração e influência mútua, no nosso caso em particular, entre jovens e idosos; construir projetos com base em objetivos comuns e alcançar uma mudança que leve a resultados estáveis e duradouros. “Para falar de intergeracionalidade não basta estarmos juntos; o importante é fazer e ser feito juntos, e que essa ação vai além da mera interação e passa para a relação”.

Barone (2021). Intergeracionalidade tem a ver com o conceito de gerações, somos multigeracionais, coexistimos com diferentes pessoas em diferentes momentos de sua jornada de vida, por tanto, somos potenciais gerações sênior ou júnior dependendo do momento de vida. A abordagem intergeracional não diz respeito apenas às pessoas, mas, principalmente, as relações. Por isso, insistentemente, acentua a interdependência e a reciprocidade. Para construir sociedades sustentáveis, é fundamental nos basearmos no pacto social. Como pessoas, somos igualmente essenciais para que o sistema funcione e seja saudável e feliz. Todos somos um. Barone (2021).

## **Inclusão Social**

O interesse em garantir a satisfação das necessidades básicas nas cidades tem especial relevância na população idosa, uma vez que a condição atual do espaço físico das cidades precisa de estratégias de adaptabilidade ou inclusão da capacidade funcional na velhice. Além disso, pela primeira vez desde o início da história registrada, as pessoas mais velhas superarão as crianças (Beard, et al, 2012). Dado o envelhecimento da população urbana total, um quarto dela exigirá ambientes amigáveis e que incluam as necessidades na vida adulta, portanto, são necessárias mudanças na maneira como as cidades são planejadas. Deve ser considerada a implicação social que o projeto e as propostas arquitetônicas urbanas, têm para atender às necessidades, prioridades e oportunidades de resiliência a qualquer vulnerabilidade na velhice. Particularmente importantes são as propostas relacionadas à ocupação equitativa do uso do solo, busca da saúde urbana, opções de mobilidade, equipamentos urbanos amigáveis, acessibilidade, segurança pessoal frente aos riscos climáticos, integração, coesão social, entre outras.

O planejamento da cidade, particularmente dos espaços públicos, deve considerar a acessibilidade para todos, onde os cidadãos possam circular com poucas restrições, onde se entrelaçam as identidades e os interesses dos habitantes e, sobretudo, se constroem os cenários de interação físico-social. É por isso que, dentro dos desafios mais importantes para a criação de lugares amigáveis, a Organização Mundial da Saúde (WHO, 2007) menciona que os espaços públicos são uma forma de responder e desenvolver propostas de inclusão intergeracional, pois são importantes para gerar bem-estar integral dos indivíduos.

## **Comunidades amigas dos mais velhos**

As cidades têm um impacto importante na qualidade de vida dos mais velhos, sendo da responsabilidade dos decisores políticos e governança local criar condições para viabilizar o “ageing in place”. Uma cidade amiga das pessoas mais velhas, é um meio urbano acessível e inclusivo que promove o envelhecimento ativo nos seus três pilares: saúde, participação e segurança. Em uma cidade amiga do idoso, políticas, serviços, ambientes e estruturas dão apoio e capacitam as pessoas a envelhecer ativamente ao: reconhecer a ampla gama de capacidades e recursos entre os idosos; prever e responder, de maneira flexível, às necessidades e preferências relacionadas ao envelhecimento; respeitar as decisões dos idosos e o estilo de vida que escolheram; proteger aqueles que são mais vulneráveis; e promover a sua inclusão e contribuição a todas as áreas da vida comunitária (WHO, 2007). Algumas das iniciativas implementadas em Portugal estão em consonância com as promovidas pela Organização Mundial de Saúde, para as quais o “ageing in place” consiste em ter os apoios sociais necessários, viver de forma segura e independente em casa e na comunidade à medida que a pessoa envelhece (WHO, 2015).

A Guia Cidade Amiga do Idoso da OMS, destaca a importância do “ageing in place” como uma estratégia global para manter os idosos não apenas vivendo em suas casas, mas também participando da vida de suas comunidades, pelo maior tempo possível. O objetivo da Guia Cidade Amiga do Idoso é ajudar as cidades a se avaliarem sob a ótica dos idosos, a fim de identificar onde e como elas podem ser mais amigáveis aos idosos, as seções da guia descrevem mediante um checklist as principais características amigáveis aos idosos, para cada área da vida urbana, e as vantagens e barreiras que os idosos encontram. Esta Guia deve ser utilizada por pessoas ou grupos interessados em fazer sua cidade mais amiga do idoso, como governos, organizações de



voluntários, o setor privado e grupos de cidadãos. Os cidadãos podem dar o seu contributo, em particular, os mais jovens, muitos deles futuros profissionais de apoio ao envelhecimento com saúde (WHO, 2007). É uma ferramenta de auto-avaliação em 8 áreas: Espaços Exteriores e Edifícios; Transportes; Habitação; Participação Social; Respeito e Inclusão Social; Participação Cívica e Emprego; Comunicação e Informação e Serviços Comunitários e Saúde.

### **Novos paradigmas na velhice: envelhecimento bem-sucedido, envelhecimento ativo, “ageing in place”**

O conceito de velhice faz parte da civilização contemporânea, é um conceito social, associado à idade. No entanto, a idade em si não serve como critério para classificar os indivíduos socialmente. Alguns autores definem a velhice como um conceito referente ao modo como cada sociedade define essa fase do ciclo vital. É uma construção social, inscrita em um contexto histórico específico para cada sociedade, assim, os limites de idade para entrar e sair do mercado de trabalho, do sistema educacional ou do direito à reforma por idade, variam de país para país. Segundo a Organização Mundial da Saúde, a velhice inicia-se entre os 60 e os 65 anos. No entanto, esta é uma idade estabelecida para fins organizacionais, uma vez que o processo de envelhecimento depende de três tipos de fatores: biológicos, psicológicos e sociais e que são individuais para cada pessoa.

O envelhecimento no sempre está associado a uma etapa de declínio. Segundo Rowe (1987), o conceito de envelhecimento bem-sucedido ou envelhecimento positivo surgiu na década de 1960 e foi definido como a adaptação do idoso às condições específicas da velhice, ou a busca de um equilíbrio entre as capacidades do idoso e as exigências do ambiente. O envelhecimento bem-sucedido ocorre quando as pessoas estão satisfeitas de que podem se adaptar a situações de mudança em suas vidas. Baltes e Carstensen (1996) referem que o envelhecimento bem-sucedido é um conceito que incorpora dois processos, primeiro, uma capacidade global de adaptação às perdas que normalmente ocorrem na velhice, em segundo lugar, o envelhecimento pode ser alcançado pela escolha de certos estilos de vida que atendam ao objetivo de manter a integridade mental até os últimos momentos da existência. O envelhecimento bem-sucedido está fortemente ligado a variáveis psicológicas e, em particular, à satisfação com a vida. Por tanto, as políticas sociais devem ser formuladas de forma a permitir que o maior número possível de pessoas tenha um envelhecimento bem-sucedido e devem servir para permitir a participação social e permanente dos idosos na sociedade.

O conceito de envelhecimento ativo, aplicável tanto a indivíduos como a populações, foi desenvolvido pela Organização Mundial de Saúde para promover a ideia de que o envelhecimento pode e deve ser uma experiência positiva (WHO, 2002). Consiste em viver e envelhecer com oportunidades que proporcionem saúde, participação social e segurança, para obter qualidade de vida e bem-estar. “Representa a opção por estilos de vida saudáveis, a prática de atividade física, a participação em atividades de carácter social, económico, cultural, espiritual e/ou cívico e, sempre que possível, o prolongamento da vida laboral, de acordo com as suas necessidades, interesses pessoais e habilidades.

O conceito de envelhecimento ativo também nos remete ao conceito de envelhecimento saudável. A WHO (2002) introduziu o quadro de saúde pública para o envelhecimento saudável e identificou um objetivo comum para todas as partes interessadas: otimizar a capacidade funcional. Isto pode ser alcançado em cinco domínios fortemente interconectados da capacidade funcional, essenciais para que os idosos possam realizar as tarefas que valorizam. Estas são as habilidades para: 1) Atender às suas necessidades básicas; 2) Aprender, crescer e tomar decisões; 3) Movimentar-se; 4) Construir e manter relacionamentos; e 5) Contribuir. Em conjunto, essas habilidades permitem envelhecer com segurança em um lugar adequado, a fim de continuar a se desenvolver pessoalmente, contribuir com suas comunidades e manter sua autonomia e saúde.

O “Aging in place” significa a capacidade de continuar a viver em casa e na comunidade ao longo do tempo, com segurança e de forma independente. Este conceito requer uma abordagem interdisciplinar, valorizando intervenções em diferentes escalas: nacional, regional, comunitária e

individual. O nosso ponto de vista é que o aging in place não seja percebido como um recurso, mas antes como a primeira opção, pelas vantagens de inclusão social e de recompensa emocional que, na maior parte das situações, traz associadas. Envelhecer no lugar onde viveu a maior parte de sua vida e onde estão os principais referentes dessa vida é uma vantagem em termos de manter um sentido de vida e preservar sentimentos de segurança e familiaridade. Isso é alcançado tanto mantendo a independência e autonomia, quanto desempenhando papéis na própria comunidade. Assim, o “Aging in Place” funciona de múltiplas maneiras, que devem ser levadas em consideração na definição de ações e políticas voltadas para a terceira idade.” (Fonseca, 2020).

## **MÉTODO**

Trata-se dum estudo exploratório, transversal, descritivo, de cariz misto, quantitativo e qualitativo. Foi utilizada para a análise dos dados a análise de conteúdo mediante o Software AtlasTi.

### **Participantes**

Participaram neste estudo 24 estudantes do primeiro ano do Curso Técnico Superior Profissional em Psicogerontologia, 23 do sexo feminino e 1 do sexo masculino, com idades entre os 18 e 21 anos ( $M=19,3$ ;  $DP=1,12$ ) que se encontravam inscritos na Unidade Curricular de Técnicas de Promoção da Autonomia dos Gerontes.

### **Material**

Para a recolha de dados foram utilizados os seguintes instrumentos:

Questionário de Perspetivas sobre o Envelhecimento dos Jovens estudantes do CTeSP em Psicogerontologia. Foi um questionário desenvolvido especificamente para este estudo e apresenta três questões abertas. Numa primeira parte apresenta um levantamento sociodemográfico (sexo, idade), seguindo-se uma segunda parte com questões sobre as perceções dos jovens sobre: 1) o seu próprio envelhecimento 2) perspectiva do seu próprio envelhecimento com bem-estar e 3) a cidade de Beja amiga dos idosos

### **Procedimento**

Através do método de amostragem por conveniência, contactaram-se 24 participantes, jovens estudantes do ensino superior do 1º ano do Curso Técnico Superior em Psicogerontologia do Instituto Politécnico de Beja. Foi solicitada autorização explicando-se os objetivos do estudo. Os participantes foram informados que a sua participação era voluntária e que o anonimato seria garantido. A colheita dos dados foi realizada em Abril de 2022 e Abril de 2023.

## **RESULTADOS**

A recolha de dados foi possibilitada pela aplicação do Questionário de Perspetivas sobre o Envelhecimento dos Jovens evidenciou-se que:

*Na dimensão 1: perspetiva futura do próprio envelhecimento.* – Analisadas as seguintes sub dimensões:

*Autonomia* (P1) A minha velhice vai ser uma velhice autónoma e feliz; (P3) Se as condições da cidade continuarem assim, será difícil ter um bom envelhecimento e uma boa autonomia; (P12) Calma, viajada, com autonomia e feliz; (P15) Autónoma e a viajar

*Envelhecimento positivo (envelhecimento saudável, esperança, família, felicidade, filhos, mentalidade aberta, saúde)* (P2) Como a sociedade está a evoluir e a tecnologia, acho que vai ser boa, até mesmo saúde já está melhor que antigamente.

*Progresso (perspetiva de progresso, otimismo, netos, divertimento)* (P4) Vai ser razoável, pois há sempre alguém a nos ajudar, sejam amigos ou família; (P5) O meu envelhecimento pode ser bom,

pretendo estar rodeado com a minha família, filhos e possíveis netos; (P10) O nosso próprio envelhecimento vai ser mais evoluído e vão existir melhores meios para nos receber; (P17) Imagino que seja pacífica, que seja passada com os netos, a brincar, que também sai e me divirta com amigos. *Tecnologia (uso de tecnologias)* (P8) Quando eu for idosa já existirão mais ajudas, mesmo em termos tecnológicos. (P9) O meu envelhecimento vai ser moderno, com mais tecnologias, com mais mentalidade aberta, mais saudável.

*Urbanismo (condições da cidade)*. (P6) Se a cidade não vai ser melhorada, o nosso envelhecimento será muito pior. (P7) Bem-sucedido, pois a cidade tem muito para melhorar, no entanto, acredito que será bem melhor que atualmente.

Tabela 1. Dimensão 1: O próprio envelhecimento. Testemunhos dos Participantes (P)

P	Questão 1: Como imagina seu próprio envelhecimento? Testemunhos dos Participantes (P)	Dimensão 1: perspectiva futura do próprio envelhecimento. – Sub dimensões:
1	A minha velhice vai ser uma velhice autónoma e feliz.	Autonomia
2	Como a sociedade está a evoluir e a tecnologia, acho que vai ser boa, até mesmo saúde já está melhor que antigamente.	Envelhecimento positivo (envelhecimento saudável, esperança, família, felicidade, filhos, mentalidade aberta, saúde)
3	Se as condições da cidade continuarem assim, será difícil ter um bom envelhecimento e uma boa autonomia.	Urbanismo (condições da cidade)
4	Vai ser razoável, pois há sempre alguém a nos ajudar, sejam amigos ou família.	Progresso
5	O meu envelhecimento pode ser bom, pretendo estar rodeado com a minha família, filhos e possíveis netos	Envelhecimento positivo (envelhecimento saudável, esperança, família, felicidade, filhos, mentalidade aberta, saúde)
6	Se a cidade não vai ser melhorada, o nosso envelhecimento será muito pior.	Urbanismo (condições da cidade)
7	Bem-sucedido, pois a cidade tem muito para melhorar, no entanto, acredito que será bem melhor que atualmente	Urbanismo (condições da cidade)
8	Quando eu for idosa já existirão mais ajudas, mesmo em termos tecnológicos.	Tecnologia (uso de tecnologias)
9	O meu envelhecimento vai ser moderno, com mais tecnologias, com mais mentalidade aberta, mais saudável.	Tecnologia (uso de tecnologias)
10	O nosso próprio envelhecimento vai ser mais evoluído e vão existir melhores meios para nos receber.	Tecnologia (uso de tecnologias)
11	Ativa	Envelhecimento positivo (envelhecimento saudável, esperança, família, felicidade, filhos, mentalidade aberta, saúde)
12	Calma, viajada, com autonomia e feliz	Envelhecimento positivo (envelhecimento saudável, esperança, família, felicidade, filhos, mentalidade aberta, saúde)
13	Com a família	Envelhecimento positivo (envelhecimento saudável, esperança, família, felicidade, filhos, mentalidade aberta, saúde)
14	Uma velhice boa e animada	Envelhecimento positivo (envelhecimento saudável, esperança, família, felicidade, filhos, mentalidade aberta, saúde)
15	Autónoma e a viajar	Autonomia
16	Envelhecer bem, mas sem muita saúde	Progresso
17	Imagino que seja pacífica, que seja passada com os netos, a brincar, que também sai e me divirta com amigos	Envelhecimento positivo (envelhecimento saudável, esperança, família, felicidade, filhos, mentalidade aberta, saúde)
18	Ativa	Envelhecimento positivo (envelhecimento saudável, esperança, família, felicidade, filhos, mentalidade aberta, saúde)
19	Espero que boa	Progresso
20	Com saúde, feliz e rica	Envelhecimento positivo (envelhecimento saudável, esperança, família, felicidade, filhos, mentalidade aberta, saúde)
21	Não consigo imaginar	Progresso
22	Com um bom nível psicológico, físico e a cuidar dos netos	Envelhecimento positivo (envelhecimento saudável, esperança, família, felicidade, filhos, mentalidade aberta, saúde)
23	Espero ter saúde, para que consiga tratar sempre das minhas coisas e envelhecendo em casa	Envelhecimento positivo (envelhecimento saudável, esperança, família, felicidade, filhos, mentalidade aberta, saúde)
24	Rodeada de amor	Envelhecimento positivo (envelhecimento saudável, esperança, família, felicidade, filhos, mentalidade aberta, saúde)

Na dimensão 2: perspectiva do envelhecimento com bem-estar. Analisadas as seguintes sub dimensões:

*Vida saudável* (P5) Boa alimentação e exercício físico; (P6) Ser saudável, fazer exercício, deve se ter sabedoria; (P8) Exercício físico uma boa alimentação; (P18) Caminhadas, conviver, praticar atividades.

*Participação social* (P3) Participar em atividades; (P14) Nunca se isolar; (P22) Ser ativa na sociedade e ser saudável.

*Atitude positiva (autoconfiança, positivismo e cuidados)* (P2) Autoconfiança; (P6) Ser saudável; fazer exercício, deve se ter sabedoria; (P15) Autoconfiança, positivismo

*Saúde mental* (P11) cuidar de si própria; (P17) Saúde mental e exercício; (P23) Preservar a saúde e a mente principalmente

*Atitude preventiva* (P24) Ter cuidados desde novo, para que tenhamos um melhor envelhecimento

Tabela 2. Dimensão 2- Perspetiva do envelhecimento com bem-estar - Testemunhos dos participantes

P	Questão 2: O que é preciso para ter uma longevidade com bem-estar?	Dimensão 2: perspetiva do envelhecimento com bem-estar – Sub dimensões:
1	Manter uma vida saudável	Vida saudável
2	Autoconfiança	Atitude positiva (autoconfiança, positivismo e cuidados)
3	Participar em atividades	Participação social
4	Cuidar da casa e uma boa saúde	Vida saudável
5	Boa alimentação e exercício físico	Vida saudável
6	Ser saudável, fazer exercício, deve se ter sabedoria	Vida saudável
7	Práticas de exercício físico	Vida saudável
8	Exercício físico uma boa alimentação	Vida saudável
9	A prática de exercício físico, cuidados na alimentação.	Vida saudável
10	Ter saúde	Vida saudável
11	Cuidar de si própria	Atitude positiva (autoconfiança, positivismo e cuidados)
12	Exercício e atividades	Vida saudável
13	Ter uma alimentação saudável, fazer exercício físico, etc.	Vida saudável
14	Nunca se isolar	Participação social
15	Autoconfiança, positivismo	Atitude positiva (autoconfiança, positivismo e cuidados)
16	Bons cuidados físicos	Vida saudável
17	Saúde mental e exercício	Saúde mental
18	Caminhadas, conviver, praticar atividades	Vida saudável
19	Ter uma vida saudável e ativa	Vida saudável
20	Ser saudável	Vida saudável
21	Alimentação saudável, fazer exercício físico com regularidade	Vida saudável
22	Ser ativa na sociedade e ser saudável	Vida saudável, Participação social
23	Preservar a saúde e a mente principalmente	Vida saudável, Saúde mental
24	Ter cuidados desde novo, para que tenhamos um melhor envelhecimento	Atitude preventiva

*Na dimensão 3: aprendizagens realizadas a traves da observação da cidade de Beja como amiga das pessoas idosas –* Analisadas as seguintes Sub-dimensões:

*Envelhecimento ativo (autonomia do idoso, cuidados para idosos, qualidade de vida, respeito, valorização dos idosos)* (P1) Sim, reúne condições para que os idosos possam envelhecer na comunidade; (P2) Tem algumas coisas boas e más, acho que a cidade em alguns aspetos está a melhorar muito e dar ouvidos aos idosos; (P5) sim, a cidade é facilitadora do ageing in place, a cidade ajuda a que os idosos possam viver a sua vida com alegria; (P7) Em alguns aspetos sim, outros não, aspetos positivos são as boas infraestruturas para um envelhecimento bem sucedido,

no entanto é muito dispendioso.

*Inclusão social (acessibilidade, apoio social, bem-estar, desenvolvimento urbano)* (P2) Tem algumas coisas boas e más, acho que a cidade em alguns aspetos está a melhorar muito e dar ouvidos aos idosos; (P5) sim, a cidade é facilitadora do ageing in place, a cidade ajuda a que os idosos possam viver a sua vida com alegria; (P9) Sim, acho que Beja facilita muito o envelhecimento da comunidade; (P18) Percebi que há muitas falhas que poderiam ser melhoradas. No dia a dia dos jovens/adultos, há pormenores que passam despercebidos, pois não nos afetam, já para os idosos não se trata de detalhes, mas sim de algo importante para a sua vida...

*Infraestrutura inadequada (ambiente inadequado, ausência de sinalização, condições precárias, necessidade de melhorias)* (P4) Não e sim, na rodoviária as casas de banho estavam sujas e escorregadias, mas, sim tinham rampas, e horários dos transportes visíveis; (P6) Não, a cidade de Beja não é facilitadora pois tem uma calçada muito má, os prédios estão degradados, a cidade não está devidamente preparada para os idosos; (P7) Em alguns aspetos sim, outros não, aspetos positivos são as boas infraestruturas para um envelhecimento bem sucedido, no entanto é muito dispendioso; (P13) A percepção que fiquei é que beja é uma cidade que não é muito amiga do idoso, porque existem pavimentos perigosos, não existe muita sinalização em alguns sítios; (P16) Sim, mas ainda há muita coisa a melhorar para que se consiga fazer um melhor "ageing in place". Ainda faltam muitas coisas pela cidade para ajudar os idosos ou pessoas portadoras de deficiência, por exemplo o acesso a casas de banho; (P18) Percebi que há muitas falhas que poderiam ser melhoradas. No dia a dia dos jovens/adultos, há pormenores que passam despercebidos, pois não nos afetam, já para os idosos não se trata de detalhes, mas sim de algo importante para a sua vida. Existem muitas barreiras.

*Desorganização e problemas da cidade (ambiente desorganizado, barreiras, falhas, falta de segurança)* (P3) não, isto porque as pessoas não são respeitadas umas com as outras, as calçadas em Beja não ajudam à autonomia do idoso; (P6) Não, a cidade de Beja não é facilitadora pois tem uma calçada muito má, os prédios estão degradados, a cidade não está devidamente preparada para os idosos; (P12) Que beja não tem muitas condições para os idosos andarem em segurança; (P14) Que a cidade de Beja precisa de mudar alguns locais para ser de fácil acesso aos idosos; (P15) Que Beja não tem assim tantas condições para os idosos

Tabela 3. Dimensão 3 – Aprendizagens realizadas a traves da observação da cidade de Beja como amiga das pessoas idosas.

	<b>Questão 3: A cidade de Beja facilita o "ageing in place"? Testemunhos dos Participantes.</b>	<b>Na dimensão 3: aprendizagens realizadas a traves da observação da cidade de Beja como amiga das pessoas idosas – Sub dimensões:</b>
1	Sim, reúne condições para que os idosos possam envelhecer na comunidade.	Envelhecimento ativo (autonomia do idoso, cuidados para idosos, qualidade de vida, respeito, valorização dos idosos)
2	Tem algumas coisas boas e más, acho que a cidade em alguns aspetos está a melhorar muito e dar ouvidos aos idosos.	Envelhecimento ativo (autonomia do idoso, cuidados para idosos, qualidade de vida, respeito, valorização dos idosos) Inclusão social (acessibilidade, apoio social, bem-estar, desenvolvimento urbano)
3	não, isto porque as pessoas não são respeitadas umas com as outras, as calçadas em Beja não ajudam à autonomia do idoso.	Desorganização e problemas da cidade (ambiente desorganizado, barreiras, falhas, falta de segurança)
4	Não e sim, na rodoviária as casas de banho estavam sujas e escorregadias, mas, sim tinham rampas, e horários dos transportes visíveis.	Infraestrutura inadequada (ambiente inadequado, ausência de sinalização, condições precárias, necessidade de melhorias)
5	sim, a cidade é facilitadora do ageing in place, a cidade ajuda a que os idosos possam viver a sua vida com alegria	Envelhecimento ativo (autonomia do idoso, cuidados para idosos, qualidade de vida, respeito, valorização dos idosos) Inclusão social (acessibilidade, apoio social, bem-estar, desenvolvimento urbano)
6	Não, a cidade de Beja não é facilitadora pois tem uma calçada muito má, os prédios estão degradados, a cidade não está devidamente preparada para os idosos.	Infraestrutura inadequada (ambiente inadequado, ausência de sinalização, condições precárias, necessidade de melhorias) Desorganização e problemas da cidade (ambiente desorganizado, barreiras, falhas, falta de segurança)
7	Em alguns aspetos sim, outros não, aspetos positivos são as boas infraestruturas para um envelhecimento bem sucedido, no entanto é muito dispendioso.	Envelhecimento ativo (autonomia do idoso, cuidados para idosos, qualidade de vida, respeito, valorização dos idosos) Infraestrutura inadequada (ambiente inadequado, ausência de

		sinalização, condições precárias, necessidade de melhorias)
8	Beja é uma cidade que facilita a vida dos idosos.	Envelhecimento ativo (autonomia do idoso, cuidados para idosos, qualidade de vida, respeito, valorização dos idosos)
9	Sim, acho que Beja facilita muito o envelhecimento da comunidade.	Inclusão social (acessibilidade, apoio social, bem-estar, desenvolvimento urbano)
10	A cidade de Beja não é muito facilitadora do envelhecer na comunidade.	Infraestrutura inadequada (ambiente inadequado, ausência de sinalização, condições precárias, necessidade de melhorias)
11	Muito interessante perceber a falta de adaptação que existe na cidade de Beja "	Desorganização e problemas da cidade (ambiente desorganizado, barreiras, falhas, falta de segurança)
12	"Que beja nao tem muitas condições para os idosos andarem em segurança"	Desorganização e problemas da cidade (ambiente desorganizado, barreiras, falhas, falta de segurança)
13	"A percepção que fiquei é que beja é uma cidade que não é muito amiga do idoso, porque existem pavimentos perigosos, não existe muita sinalização em alguns sítios "	Infraestrutura inadequada (ambiente inadequado, ausência de sinalização, condições precárias, necessidade de melhorias)
14	"Que a cidade de Beja precisa de mudar alguns locais para ser de fácil acesso aos idosos"	Desorganização e problemas da cidade (ambiente desorganizado, barreiras, falhas, falta de segurança)
15	"Que Beja não tem assim tantas condições para os idosos"	Desorganização e problemas da cidade (ambiente desorganizado, barreiras, falhas, falta de segurança)
16	Sim, mas ainda há muita coisa a melhorar para que se consiga fazer um melhor ageing in place. Ainda faltam muitas coisas pela cidade para ajudar os idosos ou pessoas portadoras de deficiência, por exemplo o acesso a casas de banho. "	Infraestrutura inadequada (ambiente inadequado, ausência de sinalização, condições precárias, necessidade de melhorias)
17	Beja ainda precisa de melhorar em alguns aspectos para ser uma cidade amiga dos idosos	Inclusão social (acessibilidade, apoio social, bem-estar, desenvolvimento urbano)
18	Percebi que há muitas falhas que poderiam ser melhoradas. No dia a dia dos jovens/adultos, há pormenores que passam despercebidos, pois não nos afetam, já para os idosos não se trata de detalhes, mas sim de algo importante para a sua vida. Existem muitas barreiras."	Inclusão social (acessibilidade, apoio social, bem-estar, desenvolvimento urbano) Infraestrutura inadequada (ambiente inadequado, ausência de sinalização, condições precárias, necessidade de melhorias)

## DISCUSSÃO

Os estudantes de psicogerontologia são otimistas em relação à velhice e à importância da cidade como facilitadora da mesma. Referem-se à sua própria velhice como pessoas de pensamento liberal. Observam-se aspectos menos estereotipados negativamente, como a dependência, devido à inclusão na sua cidade e na sua comunidade. Os participantes têm diferentes perspectivas sobre o seu próprio envelhecimento. Alguns acreditam que terão uma velhice autônoma e feliz, enquanto outros têm preocupações com as condições da cidade e a falta de autonomia. Alguns esperam estar rodeados pela família, enquanto outros esperam ter mais ajuda e recursos tecnológicos disponíveis. Consideramos importante salientar o papel fundamental que a formação em gerontologia tem na modificação da imagem negativa que muitos jovens têm dos idosos. Tal facto pode levar a uma mudança de atitudes que viabiliza tornar o conhecimento sobre o envelhecimento em algo positivo, observando sem rejeição esta etapa de vida.

Os resultados deste estudo evidenciam que é possível que os jovens, com formação em áreas da gerontologia, imaginem o seu envelhecimento como uma etapa de possibilidades e oportunidades de crescimento. O que pode levar a uma mudança nos estereótipos atuais em relação à velhice. Para ter uma longevidade com bem-estar, os participantes mencionam a importância de manter uma vida saudável, ter autoconfiança, participar em atividades, ter uma boa alimentação, fazer exercício físico, cuidar da saúde mental e nunca se isolar. Verificaram-se os efeitos positivos da formação em psicogerontologia, como ferramenta para educar em conhecimentos, competências e atitudes positivas perante a velhice e, neste caso, especificamente, sobre a sua própria velhice. Ressaltamos a importância das intervenções educativas com uma componente prática para o desenvolvimento de uma literacia gerontológica. Por outro lado, o trabalho de observação da cidade na visão dos mais velhos aproxima os alunos da realidade da velhice, a possibilitando a compreensão da realidade do contexto de envelhecimento e a promoção das interações entre gerações. A maioria dos testemunhos indica que a cidade de Beja não facilita o "ageing in place". Os participantes mencionam que a cidade não possui boas infraestruturas para os idosos, como

calçadas adequadas, sinalização suficiente e banheiros acessíveis. Alguns também mencionam que os prédios estão degradados e que a cidade não está devidamente preparada para atender às necessidades dos idosos. No entanto, alguns participantes mencionam que a cidade tem melhorado em alguns aspectos e há infraestruturas para um envelhecimento bem-sucedido, embora possam ser dispendiosas. Em geral, parece haver a percepção de que ainda há muito a ser melhorado para que a cidade seja amiga dos idosos.

Face às evidências consideramos que uma cidade amiga das pessoas mais velhas precisa de ter também em consideração a interações entre gerações e a literacia do envelhecimento com saúde e bem-estar, capacitando e dando voz activa às pessoas idosas e indo ao encontro das suas necessidades e autonomia. As cidades são locais onde vivem as pessoas mais velhas, vivenciam o seu processo de envelhecimento. Por tanto, as cidades têm de estar preparadas para acolher seus idosos, utilizando um planeamento que vise a promoção do envelhecimento em casa e na comunidade com saúde e bem-estar.

A intergeracionalidade torna possível a mudança descrita, para iniciar e realizar a ação de transformação das cidades e das pessoas que nela convivem, porque é ela que permite a fusão, a comunicação entre pessoas, e grupos sociais. E faça-o em qualquer um dos ambientes de convivência: família, círculos de amizade, relações profissionais ou sociais. Uma intergeracionalidade bem compreendida, continuamente promovida, mostrar-nos as vantagens da aprendizagem mútua, da convivência construtiva, da ação concertada de pessoas seja qual for a idade de aqueles. Consideramos importante continuar investigando sobre este tema.

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# **Análisis de la estructura conceptual de la relación entre la discapacidad y el estrés percibido**

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## **Resumen**

La presencia de discapacidad conlleva un aumento en los niveles de estrés percibido tanto a nivel individual como grupal, principalmente en indicadores autoinformados. Sin embargo, se precisa de una visión integral de esta relación. El presente estudio analiza la estructura conceptual de la investigación del binomio estrés-discapacidad. Mediante el estudio cuantitativo de la bibliometría, se exploran las palabras clave del autor de los 378 artículos y revisiones, según el topic “estrés percibido y discapacidad”, publicados en los indicadores de impacto SCI y SSCI hasta el año 2022. Utilizando la librería bibliometrix, se analizó la co-ocurrencia de palabras clave de los autores reconociéndose 6 ámbitos de análisis: 1) Estrés, depresión y ansiedad; 2) Discapacidad asociada a la familia y la salud; 3) Estrés percibido, afrontamiento y atención plena; 4) Calidad de vida, salud y bienestar; 5) Apoyo social y cuidadores de discapacidades del desarrollo; 6) Dolor y estrés percibido. Los resultados indican la importancia de los estados psicológicos ante la discapacidad física e intelectual, así como de la importancia de la persona, los grupos y la sociedad en su afrontamiento. Se concluye con la importancia del estudio para orientar las futuras investigaciones y su financiación.

*Palabras clave:* estrés percibido, discapacidad, bibliometría, estructura conceptual, líneas de investigación.

## **Abstract**

The presence of disability has been found to elevate levels of perceived stress both at individual and group levels, primarily through self-reported indicators. However, a comprehensive understanding of this relationship is required. This study seeks to analyze the conceptual structure of the stress-disability binomial research. A quantitative bibliometric analysis was conducted to explore the keywords of the author of 378 articles and reviews on the topic of "perceived stress and disability," published in the SCI and SSCI impact indicators up until 2022. Using the bibliometrix library, co-occurrence of authors' keywords was analyzed, resulting in the identification of six areas of analysis: 1) Stress, depression, and anxiety; 2) Disability associated with family and health; 3) Perceived stress, coping, and mindfulness; 4) Quality of life, health, and well-being; 5) Social support and caregivers for developmental disabilities; 6) Pain and perceived stress. The findings indicate the significance of psychological states in physical and intellectual disabilities, as well as the importance of individual, group, and societal factors in effective coping. The study concludes by emphasizing the value of these insights in guiding future research and funding priorities.

*Keywords:* Perceived stress; disability; bibliometrics; conceptual structure; lines of research



## **Introducción**

La relación entre el estrés percibido y la discapacidad es un tema de estudio que ha generado un interés creciente en los últimos años. Por una parte, el estrés es una respuesta que da el organismo ante una situación que determina como desafiante. Por otra parte, son pocos los estudios realizados sobre el estrés en personas con discapacidad porque, hasta hace poco tiempo, se creía que estas personas no sufrían de estrés.

El estrés es una respuesta natural y adaptativa del organismo ante situaciones que percibimos como desafiantes, amenazantes o demandantes (Seyle, 1956). Es una reacción fisiológica y psicológica que nos prepara para hacer frente a esos desafíos. Puede manifestarse de diferentes formas, tanto a nivel físico como emocional. A nivel físico, puede desencadenar respuestas como la aceleración del ritmo cardíaco, la tensión muscular y la liberación de hormonas del estrés. A nivel emocional, puede generar ansiedad, irritabilidad, dificultades para concentrarse y cambios en el estado de ánimo. Si bien el estrés es una respuesta natural y ocasionalmente necesaria, cuando se vuelve crónico o excesivo, puede tener efectos negativos en nuestra salud física y mental (Lazarus, 1991). El estrés percibido se puede definir como la evaluación subjetiva que una persona hace de las demandas y desafíos presentes en su entorno, y la percepción de su capacidad para hacerles frente. Lazarus & Folkman (1986), enfatizan la relevancia de la evaluación cognitiva en la experiencia del estrés percibido y, además, presentan el modelo transaccional del estrés, donde se destaca la importancia de la interpretación cognitiva en la respuesta de este (Monroe, 2008). Cohen et al. (1993) exploran la relación entre el estrés percibido y la susceptibilidad a diferentes enfermedades. Es importante entender el estrés como la adaptación individual de la persona a su entorno (Paradies, 2011).

### *Discapacidad*

La Convención sobre los Derechos de las Personas con Discapacidad de las Naciones Unidas (2006) establece que la discapacidad es el resultado de la interacción entre las personas con deficiencias y las barreras presentes en su entorno, ya sean físicas, sociales o culturales. La Organización Mundial de la Salud (OMS) define la discapacidad como una dificultad en la función o limitación en la actividad que resulta de una deficiencia, en el contexto de las funciones y estructuras corporales. Barnes (2003) ha explorado el concepto de "modelo social de la discapacidad", que considera que la discapacidad es resultado de las barreras sociales y la falta de accesibilidad en la sociedad, como afirmaba Oliver (1990), argumentando que la discapacidad es un constructo social, enfatizando la importancia de los factores sociales y las barreras en la experiencia de la discapacidad. De hecho, son varios los autores que estudian la discapacidad desde otros campos de conocimiento, como Breivik (2005). Esto es importante porque se entiende la discapacidad, no como una falta o desde las barreras que la sociedad impone, sino como pequeñas minorías que tienen identidades diferentes. Así, la discapacidad no es un impedimento de la persona, sino de las prácticas sociales en las que esta se relaciona, lo que impide su participación (Ravneberg & Soderstrom, 2017). En los últimos años, los estudios científicos se han centrado más en las necesidades individuales, en la equidad y en las barreras sociales

### *Estrés percibido y discapacidad*

La relación entre el estrés percibido y la discapacidad es un campo de estudio en constante desarrollo que ha atraído la atención de varios autores y expertos en el tema. El estrés percibido puede tener un impacto significativo en la experiencia de las personas con discapacidad. Según

Lazarus & Folkman (1984) este puede aumentar debido a las barreras físicas y sociales a las que se enfrentan las personas con discapacidad, así como a la discriminación y el estigma asociados. El estrés crónico percibido puede tener un impacto significativo en la experiencia de las personas con discapacidad, agravando los síntomas asociados y dificultando su manejo efectivo. Este estrés puede exacerbar los síntomas de la discapacidad y contribuir a una mayor carga física y emocional para los individuos afectados (Villacorte et al., 2022). Cuando las personas se enfrentan a un alto nivel de estrés continuo, pueden experimentar dificultades para desarrollar estrategias efectivas de afrontamiento.

El estrés percibido puede influir en la calidad de vida y el bienestar emocional de las personas con discapacidad. El estrés puede generar sentimientos de frustración, impotencia y pérdida de control, lo que impacta directamente en la satisfacción general con la vida. Vash & Masellis (2019), discuten cómo el estrés percibido puede desencadenar emociones negativas como ansiedad y depresión en personas con discapacidad. El estrés crónico asociado con las dificultades físicas, las barreras sociales y los desafíos diarios puede afectar la salud mental y emocional de las personas, disminuyendo su bienestar y su capacidad para disfrutar de una buena calidad de vida. Albrecht et al. (2001) presentan una perspectiva multidisciplinaria sobre la discapacidad y señalan cómo el estrés percibido puede generar una carga adicional en la vida de las personas con discapacidad, afectando sus relaciones interpersonales, su participación en la comunidad y su sentido de pertenencia.

Varios estudios han explorado las estrategias de afrontamiento utilizadas por las personas con discapacidad para hacer frente al estrés percibido y los desafíos que enfrentan (Babamohamedi et al., 2022). Estas estrategias son fundamentales para promover la adaptación y el bienestar en este grupo de individuos. Martz & Livneh (2007), enfatizan la necesidad de identificar y fomentar estrategias de afrontamiento positivas y efectivas, que permitan a las personas manejar el estrés percibido y enfrentar los desafíos diarios de manera adaptativa.

Aún queda camino por recorrer en materia de investigación sobre el estrés percibido y la discapacidad. Por tanto, el presente estudio analiza la estructura conceptual de la investigación del binomino estrés-discapacidad, para lo cual se exponen las características más importantes de la producción científica existente, así como la definición de las líneas de investigación existentes.

## **Método**

### *2.1 Enfoque bibliométrico*

Para alcanzar los objetivos propuestos se propuso el enfoque bibliométrico entendido como el análisis cuantitativo de la producción científica sobre un ámbito o materia (Donthu et al., 2021). Desde la ciencia del comportamiento, algunos estudios bibliométricos han analizado el bienestar desde la perspectiva de la psicología positiva (Hendriks et al., 2019), la economía y el bienestar subjetivo (Domingo & Verbič, 2019) o sobre la evolución de la psicología positiva (Schui & Kramer, 2010). Desde el ámbito de la discapacidad, estudios bibliométricos recientes ponen de manifiesto su relación con el turismo (Singh et al., 2021) o con la tecnología digital (Chiew et al., 2022; Mengual-Andrés et al., 2020). Sin embargo, no se han encontrado investigaciones que analicen la producción científica de la discapacidad asociada con el estrés percibido.

### *2.2 Diseño de la investigación y procedimiento de recolección de datos*

Se seleccionaron los artículos y revisiones de artículos al ser los recursos publicados en revistas que garantizan la estructura del conocimiento (Khaldi & Prado-Gascó, 2021). Se escogieron las revistas incluidas en los indicadores Science Citation Index (SCI) y Social Science Citation Index

(SSCI) de la Colección Principal de la Web of Science al ser el repositorio más sólido y consolidado en el ámbito de la investigación (Fauzi, 2023). Se utilizaron los descriptores de estrés percibido y discapacidad en la búsqueda del tema (título, resumen y palabra clave) publicados hasta el año 2022, para concretar la investigación en un periodo temporal. El estudio bibliométrico se realiza sobre 378 producciones según los criterios establecidos. Tras la selección de los estudios, se descargaron los metadatos para proceder al análisis.

### 2.3 Análisis bibliométrico

El análisis se realiza con la librería Bibliometrix (Aria & Cuccurullo, 2017), de código abierto y desarrollado en el entorno R, que permite el análisis flexible y completo de la producción científica (Aria & Cuccurullo, 2020), y presenta importantes ventajas con respecto a otros programas de apoyo al análisis bibliométrico (Moral-Muñoz et al., 2020).

En primer lugar, se analizó las características generales de la producción científica, incluyendo la producción anual, las fuentes más relevantes por número de publicaciones, así como los autores y sus centros de investigación (afiliación) con mayor producción. Un análisis descriptivo que permite comprender la investigación desarrollada en el ámbito del estrés percibido y la discapacidad.

En segundo lugar, se identificaron las palabras clave del autor (PCA) más relevantes por el número de apariciones. El estudio de las PCA reside en que son términos cuidadosamente elegidos por el investigador para resumir los aspectos más destacados de la contribución (Callon et al., 1986; Feng et al., 2017). Posteriormente se realizó el análisis de co-ocurrencia de estas. Esta técnica permite mapear la estructura conceptual de los estudios sobre estrés y discapacidad. La ocurrencia a la vez de dos o más palabras indica su correlación y permite definir los temas de investigación más destacados del campo o dominio de investigación (Khasseh et al., 2017; Sedighi, 2016). Se presenta el análisis de la estructura conceptual de la investigación sobre estrés percibido y discapacidad y se incluyen los índices de centralidad que permite, en el análisis de la red, comprender el papel de las PCA más destacadas por su co-ocurrencia: centralidad de intermediación (Betweenness Centrality), centralidad de cercanía (Closeness Centrality) y rango de página (Page Rank) (Dehmer & Basak, 2012; Todeschini & Baccini, 2016).

## Resultados

### *Características de la producción científica sobre estrés percibido y discapacidad*

Las 378 producciones seleccionadas en el análisis del estrés percibido y la discapacidad se distribuyen en 30 años, realizada por 1875 autores. Cabe destacar la heterogeneidad de fuentes donde se recogen, así como el alto índice de colaboración en la investigación (ver tabla 1)

**Tabla 1**

### *Características de la producción científica*

Descripción	Resultado
Marco temporal	1992:2022
Número de fuentes	249
Promedio de publicaciones por año	7,94
Número total de referencias	15466
Número de palabras clave del autor	992
Número de autores	1691
Apariciones del autor	1875

Autores con una autoría	13
Autores con varias autorías	1678
Número de documentos por autor	0,224
Número de autores por documento	4,47
Índice de colaboración	4,6

Para el número total de producción n=378

El primer artículo recogido en el análisis es sobre el estrés en padres de familias maltratadoras o no con niños con discapacidades (Benedict et al., 1992). Como se observa en la figura 1, existe una tendencia creciente en el ámbito de investigación por el número de publicaciones. En este periodo se pueden distinguir tres etapas: la primera etapa (1992-2013) con un total de 117 publicaciones en 21 años, lo que supone 5.6 publicaciones por año; en la segunda etapa (2014-2019) se encuentran 131 publicaciones en 6 años, lo que supone una media de 21.8 publicaciones; y una tercera etapa (2020-2022) con 130 investigaciones en tres años, lo que supone una media de 43.3 artículos por año.

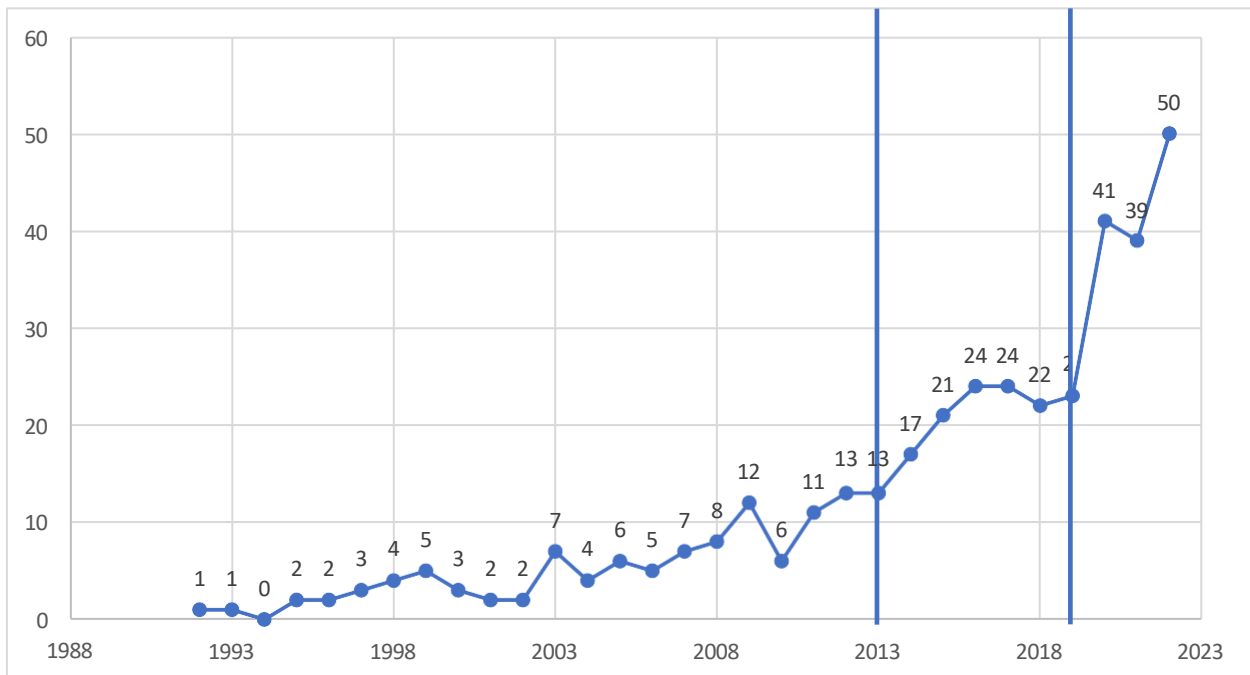


Figura 1. Evolución anual de la producción científica sobre estrés percibido y discapacidad (1992-2022)

Con respecto a las fuentes (n=249) caben destacar por el número de publicaciones la revista International Journal of Environmental Research and Public Health, así como Research in Developmental Disabilities (ver tabla 2).

**Tabla 2***Principales fuentes según número de publicaciones*

<b>Fuentes</b>	<b>Artículos</b>
International Journal of Environmental Research and Public Health	8
Research in Developmental Disabilities	8
Rehabilitation Psychology	7
Inflammatory Bowel Diseases	6
Archives of Physical Medicine and Rehabilitation	5
Bmj Open	5
Headache	5
Journal Of Applied Research In Intellectual Disabilities	5
Journal Of Rehabilitation	5
Mindfulness	5

Si atendemos a la autoría, cabe destacar por el número de publicaciones al profesor de psicología de la salud de la Universidad de Limerick, en Irlanda (ver tabla 3).

**Tabla 3***Principales autores según número de publicaciones*

<b>Autores</b>	<b>Artículos</b>
Stephen Gallagher	5
Charles N. Bernstein	4
Lauren Bishop-Fitzpatrick	4
Paul Bramston	4
Fong Chan	4
Anna C. Phillips	4
Karen J. Sherman	4
Lee Smith	4
Esther Bay	3
Juan A. Bellon	3

En la tabla 4 se muestra la afiliación de los autores, destacando los principales centros de investigación que se encuentran en Estados Unidos e Inglaterra, con especial atención a la Universidad de Washington y a la Universidad de Birmingham.

**Tabla 4***Principales centros de investigación según el número de publicaciones*

<b>Afiliación</b>	<b>Artículos</b>
UNIV. WASHINGTON	23
UNIV. MANITOBA	20
UNIV. BIRMINGHAM	19
UNIV. ALABAMA BIRMINGHAM	17
UNIV. FLORIDA	17
WROCLAW MED UNIV	17
UNIV. MICHIGAN	14
BOSTON UNIV	12
HARVARD UNIV	12
UNIV CALIF IRVINE	11

*Análisis de la estructura conceptual de la investigación sobre estrés percibido y discapacidad*

La tabla 5 muestra las PCA más destacadas por el número de apariciones. Omitiendo los descriptores (estrés percibido y discapacidad), los términos más destacados son depresión (n=33), calidad de vida (n=26) y atención plena (n=16).

**Tabla 5***Palabras clave de los autores más frecuentes*

<b>Words</b>	<b>Occurrences</b>
stress	77
depression	33
disability	31
perceived stress	28
quality of life	26
mindfulness	16
multiple sclerosis	16
coping	15
pain	15
support	13
anxiety	12
chronic pain	11
mental health	11
resilience	11
caregiving	10
parents	10
social	10
social support	10

Al realizar el análisis de co-ocurrencia de PCA, la tabla 6 muestra los términos más destacados según sus medidas de centralidad y su pertenencia a los clúster. Observamos la distinción de 6 clúster o grupos, donde las PCA más relevantes según los índices de centralidad son estrés, calidad de vida, depresión, estrés percibido y discapacidad.

**Tabla 6**

*Clúster de pertenencia y medidas de centralidad de las palabras clave de autor*

<b>Palabra</b>	<b>Cluster</b>	<b>Betweenness</b>	<b>Closeness</b>	<b>PageRank</b>
stress	1	616,58564	0,017857143	0,182300879
depression	1	111,7196265	0,013157895	0,073496596
pain	1	8,069798269	0,011111111	0,020666221
anxiety	1	3,161215183	0,011111111	0,025509861
social support	1	0,445366923	0,010989011	0,015342143
rehabilitation	1	0	0,010204082	0,006013389
burnout	1	0	0,010752688	0,011167569
caregivers	1	0	0,010526316	0,010033129
fibromyalgia	1	0,47384214	0,008928571	0,012259089
spinal cord injury	1	0	0,010752688	0,00986542
cognition	1	0	0,010204082	0,006013389
depressive symptoms	1	0	0,010416667	0,010243253
caregiver	1	0	0,010752688	0,008563271
child	1	0	0,010204082	0,006013389
disability	2	17,98005513	0,012195122	0,041345886
mental health	2	1,824797287	0,009174312	0,015448376
resilience	2	2,994367289	0,011111111	0,023580407
parents	2	2,029569662	0,010869565	0,02757888
covid-19	2	1,850258269	0,010526316	0,011968615
children	2	0,612925697	0,010752688	0,022069791
intervention	2	0	0,010416667	0,012600114
perceived stress	3	86,34479147	0,01369863	0,058927024
mindfulness	3	12,73237414	0,011627907	0,028774493
multiple sclerosis	3	43,55324604	0,011494253	0,02872425
coping	3	5,106885607	0,011363636	0,034399037
autism	3	0	0,010989011	0,015112029
psychological stress	3	0	0,007751938	0,006281516
migraine	3	0,142857143	0,009708738	0,016439266
symptoms	3	0	0,008695652	0,005977705
quality of life	4	128,612266	0,0125	0,045304203
epidemiology	4	0	0,00617284	0,009576342
well-being	4	2,490609146	0,010526316	0,012663565
health	4	42	0,008333333	0,014511118
physical activity	4	0,888888889	0,010869565	0,013865746





que analizaron el papel del estrés en padres con hijos con desarrollo psicosocial tardío y aquellos con hijos con desarrollo neurotípico, o la evaluación de programas como el del afrontamiento del estrés de los padres de niños con discapacidad asociada al aprendizaje y a la atención de Park et al. (2020). En esta línea se incluyen también las investigaciones relacionadas con el COVID-19, como el artículo de Umucu & Lee (2020) sobre la influencia del estrés y del afrontamiento en el bienestar de personas con discapacidad relacionados con la pandemia.

### ***3. Estrés percibido, afrontamiento y atención plena (Color verde)***

Esta línea se caracteriza por el análisis del estrés relacionada con el dolor y la atención plena, principalmente con discapacidad física, así como los estudios del autismo. Cabe destacar como ejemplo la terapia cognitiva basada en la atención plena, y que incluye el afrontamiento al estrés, reduce la discapacidad relacionada con la migraña (Seng et al., 2019), o la importancia del empleo en mujeres con esclerosis múltiple ante el estrés percibido, el afrontamiento adaptativo y el apoyo social en contraposición a la situación de desempleo (Strober & Arnett, 2016). En relación con el autismo, Lovell & Wetherell (2015) aportaron el estudio de cómo los problemas de conducta de niños con autismo media la relación entre el afrontamiento y el estrés en sus cuidadores.

### ***4. Calidad de vida, salud y bienestar (Color violeta)***

Este ámbito de investigación incluye los estudios sobre calidad de vida, analizando el papel del estrés percibido en relación con la salud y el bienestar. En esta línea se sitúa el estudio de Starkweather (2007) que analizó el efecto de la actividad física sobre el estrés percibido, el estado de ánimo y la calidad de vida en adultos mayores. También está el trabajo de Jalayondeja et al. (2016) sobre cómo la actividad física influye en la calidad de vida en personas con discapacidad, influyendo en la actividad de la vida diaria, el estrés o la autoestima, o el ensayo clínico de Gavilán-Carrera et al. (2022) para evaluar el efecto del ejercicio aeróbico en mujeres con lupus eritematoso sistémico, incluyendo los efectos en el estrés percibido.

### ***5. Apoyo social y cuidadores de personas con discapacidad del desarrollo (Color naranja)***

Este es un ámbito más específico de investigación que analiza no solo el apoyo social a los cuidadores, sino también cómo les afecta el cuidado a personas con discapacidad del desarrollo. En esta línea se sitúa el estudio de Gallagher et al. (2009) sobre la disminución de la respuesta de anticuerpos en vacunación de padres de niños con discapacidades del desarrollo, o el de Cantwell et al. (2014) que analizaron el papel del apoyo social y del dominio en la relación entre el estrés y la salud física de padres cuidadores de niños con discapacidades del desarrollo.

### ***6) Dolor y estrés percibido (Color marrón)***

También es un ámbito específico aquellos estudios que analizan la discapacidad funcional y el estrés teniendo como principal factor de estudio el dolor, como el estudio de Lauche et al. (2016) donde analizaba la eficacia del Tai Chi para tratar el dolor crónico de forma directa, así como la calidad de vida o el estrés percibido de forma secundaria. También se incluyen estudios particulares como el dolor cervical discapacitante en estudiantes de odontología, donde se incluyó el estudio del estrés (Kuč & Źendzian-Piotrowska, 2020).

## **Discusión**

Existe una clara evolución creciente en los estudios sobre discapacidad y estrés percibido. A partir del año 2020 ha habido un incremento importante en este tipo de estudios que analizan cómo viven el estrés las personas con alguna discapacidad.

Los resultados indican la importancia que tienen los estados psicológicos ante la discapacidad física e intelectual. De los seis grupos obtenidos en los resultados, se observa como el estrés se relaciona con otros dos conceptos muy claramente; depresión y ansiedad. Esto puede llevar a las personas con discapacidad a sufrir de algún trastorno mental. Holmes & Rahe (1967) han investigado la conexión entre eventos estresantes y la aparición de trastornos mentales para comprender esta asociación. Por otra parte, Brown & Harris (1978) han examinado el estrés percibido y su impacto en la salud mental, proporcionando una base para comprender cómo el estrés puede contribuir al desarrollo de estos trastornos en personas con discapacidad. En el segundo grupo se asocia la discapacidad con la familia y la salud. Barlow & Ellard (2004) han investigado el estrés familiar en el contexto de la discapacidad, destacando cómo los miembros de esta pueden experimentar altos niveles de estrés debido a los desafíos y demandas asociados con la discapacidad. Patterson (2002) a su vez, ha explorado cómo el estrés familiar relacionado con la discapacidad puede afectar la dinámica familiar y la salud de sus miembros. De ahí la importancia de considerar el estrés percibido no solo a nivel individual sino también en el contexto familiar. En el tercer grupo se tratan las estrategias de afrontamiento y de manejo del estrés. En este sentido, como ya se ha comentado, Lazarus & Folkman (1984) han analizado los procesos de afrontamiento y la importancia que tienen las estrategias de afrontamiento adaptativas en la experiencia del estrés. Aparece un tercer concepto: la atención plena, qué, relacionado con el estrés percibido en personas con discapacidad se encuentra aún en desarrollo. Relativo al cuarto grupo, aparecen la calidad de vida, la salud y el bienestar. Estos conceptos se ven mermados cuando aparece el estrés. Ferrans & Powers (1985) han explorado la relación entre el estrés percibido y la calidad de vida en personas con discapacidad, destacando como el manejo del estrés puede influir en el bienestar general. En el quinto grupo destaca la presencia del apoyo social y los cuidadores de personas con discapacidad. El apoyo social desempeña un papel crucial en el manejo del estrés en personas con discapacidad. Estudios como el de Pearlin et al. (1981) han investigado la importancia del apoyo social en el bienestar de estas personas, así como el estrés percibido que experimentan los cuidadores de personas con discapacidad. En el sexto y último grupo se relacionan los conceptos de dolor y estrés percibido. Estos dos conceptos están estrechamente relacionados. Jensen et al. (2009) han examinado cómo el estrés percibido puede influir en la percepción y la gestión del dolor en individuos con discapacidad, resaltando la importancia de abordar ambos aspectos en la atención y el tratamiento.

Tras el análisis realizado a los seis grupos obtenidos en los resultados, se destaca cómo el apoyo personal, familiar y el de la sociedad es crucial para que las personas con discapacidad puedan afrontar su vivencia con garantías. Es importante recordar que se concibe la discapacidad como un constructo social y un fenómeno relacional que tiene lugar en las relaciones interpersonales y en los contextos donde las personas se relacionan (Gustavsson et al., 2005), por ello es fundamental el apoyo que brindan los grupos sociales a estas personas para que puedan desarrollarse plenamente.

Es importante tener en cuenta que la relación entre el estrés percibido y la discapacidad es compleja y multifacética. No todas las personas con discapacidad experimentan niveles elevados de estrés, y la forma en que el estrés afecta a cada individuo puede variar. Sin embargo, reconocer y abordar

el estrés percibido en las personas con discapacidad es fundamental para promover su bienestar y mejorar su calidad de vida.

## Conclusiones

La discapacidad ha sido siempre percibida y experimentada de manera diferente por las personas. Diferentes campos de estudio la han analizado, desde diferentes contextos. Tradicionalmente, se ha tratado la discapacidad desde el campo de la medicina, lo que ha provocado que se la vea como una característica individual centrada en el cuerpo (Ravneberg & Soderstrom, 2017). Como se ha expuesto, los estudios recientes en esta materia afirman que la discapacidad va más allá. Es un constructo social, como bien señala Barnes (2003) que responde a un modelo social donde a la persona con discapacidad “se la permite” participar o no.

Es importante fomentar la resiliencia y promover estrategias de afrontamiento orientadas hacia el fortalecimiento de las fortalezas y habilidades de las personas con discapacidad. En este sentido, Wehmeyer & Shogren (2014) explora la aplicación de la psicología positiva en el contexto de la discapacidad para promover estas habilidades. De esta manera, la persona podrá enfrentar mejor su situación y así evitar los efectos negativos del estrés.

Se concluye este estudio con la importancia que se da a las líneas de intervención ofrecidas que permita dirigir futuras investigaciones en esta materia y evitar el estrés innecesario a la persona solo por su discapacidad. Es importante dotar a estas líneas de intervención de la financiación necesaria que permita ponerlas en marcha.

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## Coping strategies and quality of life in adults with asthma: implications for clinical practice

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### Abstract

The present study aimed to assess the quality of life and coping strategies used to manage asthma in a sample of adult people diagnosed with the disease. A sociodemographic questionnaire, the WHOQOL-Bref and the Brief-COPE were administered. Participated 50 adults with asthma, 33 (66%) were female and 17 (34%) were male, with a mean age of 55.94 ( $DP = 17.18$ ). An association was found between age and quality of life and between age and *coping* strategies. Statistically significant differences in *coping* strategies were found for marital status and age groups. Participants with another chronic health problem, psychological/psychiatric follow-up and diagnosis of asthma in other family members revealed poorer quality of life. The results strengthen the need for further studies to identify coping strategies that lead to better asthma control, in order to provide guidelines for the development of interdisciplinary interventions that are capable of acting on a biopsychological level, to promote patient's quality of life.

*Keywords*: asthma, quality of life, coping strategies.

### Resumo

O presente estudo teve como objetivo principal avaliar a qualidade de vida e as estratégias de gestão da doença numa amostra de pessoas adultas diagnosticadas com asma. Foram administrados um questionário sociodemográfico, o WHOQOL-bref e o *Brief-COPE*. Participaram 50 indivíduos com asma, sendo que 33 (66%) eram do género feminino e 17 (34%) do género masculino e a média de idades foi de 55.94 ( $DP = 17.18$ ).

Foi encontrada uma associação entre a idade e a qualidade de vida e entre a idade e as estratégias de *coping*. Relativamente às estratégias de *coping* foram evidenciadas diferenças estatisticamente significativas para o estado civil e a idade. Os participantes que referiram ter outro problema de saúde crónico, acompanhamento psicológico/psiquiátrico e diagnóstico de asma em familiares apresentaram pior qualidade de vida. Os resultados reforçam a necessidade de desenvolver estudos que identifiquem estratégias de *coping* que contribuam para melhorar o controlo da asma, de forma a fornecer orientações para o desenvolvimento de intervenções interdisciplinares capazes de atuar ao nível biopsicossocial, promovendo uma melhor qualidade de vida.

Palavras-Chave: asma, qualidade de vida, estratégias de *coping*.

## INTRODUÇÃO

As condições de saúde crónicas são resultado de uma combinação de fatores genéticos, fisiológicos, ambientais e comportamentais e, são problemas que persistem, com diversos níveis de gravidade, requerendo tratamento contínuo e cuidados de saúde ao longo do tempo (WHO, 2002). Este tipo de doenças mata 41 milhões de pessoas a cada



ano, o equivalente a 74% de todas as mortes no mundo. De acordo com o Instituto Nacional de Saúde Doutor Ricardo Jorge (INSA), cerca de 57,8% da população portuguesa com idades compreendidas entre os 25 e os 74 anos sofre de, pelo menos, uma doença crónica, sendo a maior prevalência verificada no sexo feminino, nos sujeitos com um menor nível de escolaridade e na faixa etária entre os 65 e os 74 anos (INSA, 2019).

A asma é uma das doenças crónicas com maior prevalência, que varia nos diferentes países, e que ocorre em todos os grupos etários, afetando mais de 300 milhões de pessoas em todo o Mundo (DGS, 2017). Trata-se de uma doença inflamatória crónica caracterizada por uma hiperreatividade das vias respiratórias que provoca pieira, dispneia, sensação de aperto no peito e tosse, e que envolve fases intermitentes e recorrentes de obstrução destas vias, frequentemente em períodos noturnos (DGS, 2017).

Em Portugal, e de acordo com o Programa Nacional para as Doenças Respiratórias (PNDR), a prevalência da asma na população residente é de 6,8% e considera-se que a prevalência média de asma atingirá mais de 5,2% da população do grupo etário dos 20-44 anos (DGS, 2017). Estima-se que apenas 57% dos doentes com asma tenham a sua doença controlada, ou seja, cerca de 300.000 portugueses necessitam de melhor intervenção para o controlo da doença. Relativamente ao controlo da doença, 88% dos asmáticos não controlados consideram erradamente a sua doença como controlada (DGS, 2017).

A asma é uma doença crónica que pode causar limitações aos doentes e traz, também, alguns custos associados, quer com a medicação necessária, quer com os custos hospitalares de internamento, ou atendimento em urgências devido a exacerbações e ainda custos emocionais que, inevitavelmente, irão afetar a pessoa (Lopes et al., 2008; Wood et al., 2015). Estas limitações podem modificar, profundamente, a vida destes sujeitos, interferindo drasticamente ao nível da saúde, ao nível económico, emocional e social, não só pelo consumo em grande quantidade dos recursos de saúde (medicamentos, consultas, recursos aos serviços de urgência e internamentos), como pelas ausências ao trabalho, capacidade e desempenho no trabalho e pode até mesmo prejudicar as suas carreiras, pois afeta pessoas em plena idade ativa (Ford et al., 2004; Ferreira et al., 2010).

De acordo com as diretrizes relativas à asma do *U.S. National Heart, Lung and Blood Institute (NHLBI)*, o objetivo final e principal da intervenção na asma passa por melhorar o controlo da doença, contribuindo para a melhoria da perceção da qualidade de vida destes doentes. Assim, compreender os determinantes da qualidade de vida, especialmente os potencialmente modificáveis, pode ser útil na avaliação e conceção de intervenções mais adequadas e adaptadas que permitam melhorar a qualidade de vida dos doentes (Ford et al., 2004).

O impacto do stress causado por uma doença crónica pode ter consequências a longo prazo sobre o funcionamento diário e a qualidade de vida. A adaptação a uma doença crónica depende, não só da gravidade da doença, mas também pode ser influenciada pela capacidade do indivíduo para avaliar e reagir contra stressores. Estas pessoas têm que mudar os seus padrões comportamentais drasticamente, aprender a lidar com as limitações que a doença envolve e desenvolver estratégias de adaptação exigidas pela vivência da doença. É por isso que uma característica importante do tratamento da asma visa promover a autogestão, tendo os doentes que ser capazes de lidar adequadamente com as condições da sua doença (O'Connor et al., 2016).

Existem, muito provavelmente, diferentes mediadores, tanto comportamentais como biológicos, que possam influenciar o papel do stress na asma, sendo que as estratégias de *coping* podem ser um desses mediadores (Nia et al., 2010). Estas estratégias referem-se a esforços específicos, tanto comportamentais como psicológicos, que pretendem tolerar ou minimizar as situações causadoras de stress, sendo assim distinguidas dois tipos de

estratégias: as centradas no problema e as centradas na emoção. As estratégias de *coping* focalizadas na emoção, conduzem o sujeito para a alteração de pensamentos e emoções relativos ao evento stressor (Kamble, 2017). Para além disso, são direcionadas a nível somático, tendo como principal propósito o desenvolvimento de comportamentos que visem a regulação emocional do indivíduo, diminuindo o sofrimento e sensação física de mal-estar quando se depara com um acontecimento gerador de stress (Folkman & Lazarus, 1980). Por outro lado, as estratégias de *coping* focalizadas no problema, dirigem o sujeito para a definição da problemática e para a resolução da mesma através da procura de outras possibilidades de solução, tendo em conta os custos e benefícios, possibilitando a eleição e execução da alternativa selecionada, que visará a minimização ou extinção do problema (Folkman & Lazarus, 1980). Como estratégia de *coping* centrada no problema é salientada a reestruturação cognitiva, em que o indivíduo, por exemplo, redefina o componente que está na origem da problemática, a procura de ajuda médica, a negociação, a planificação, os pedidos de ajuda externa ou a busca por novas informações (Capelo & Pocinho, 2016).

Várias pesquisas indicam que as pessoas usam ambos os tipos de estratégias para combater a maioria destas situações, sugerindo que as pessoas que sofrem de asma utilizam estratégias diferentes em comparação com as pessoas que não têm asma (Barton et al., 2003). Autores como Hesselink et al. (2004) mostraram que a utilização de estratégias de *coping* centradas na emoção era um fator efetivo na asma e Nia et al. (2010) concluíram que os sujeitos com asma são menos propensos a utilizar estratégias de *coping* centradas no problema, quando confrontados com problemas psicológicos e situações indutoras de stress. Concluíram, assim que as estratégias de *coping* centradas na emoção são um fator determinante na forma como o sujeito com asma lida com as suas dificuldades. O conhecimento e as estratégias de *coping* adotadas são variáveis importantes para manter o comportamento desejado de doentes com asma. Assim, este estudo teve como objetivo avaliar a qualidade de vida e as estratégias de *coping* numa amostra de pessoas diagnosticadas com asma, em seguimento nas consultas da Unidade de Pneumologia do Centro Hospital Universitário da Cova da Beira (CHUCB). Definiram-se ainda os seguintes objetivos específicos: (1) avaliar a associação entre a qualidade de vida e a idade e entre as estratégias de *coping* e a idade (2) analisar se existem diferenças entre grupos em função das características clínicas relacionadas com a asma (diagnósticos de outros problemas de saúde crónicos; acompanhamento psicológico/psiquiátrico; diagnóstico de asma em familiares), tanto para a qualidade de vida como para as estratégias de *coping* e, (3) avaliar a associação entre a qualidade de vida e as estratégias de *coping*.

## METODOLOGIA

O presente estudo classifica-se como uma investigação quantitativa, descritiva e transversal. Os participantes foram adultos com diagnóstico de asma seguidos nas consultas da Unidade de Pneumologia do CHUCB. Os critérios de inclusão na amostra compreenderam: (1) ter idade igual ou superior a 18 anos; (2) ter diagnóstico de asma; (3) inexistência de perturbação do estado de consciência que levasse à falta de entendimento quanto às questões colocadas. Trata-se de uma amostra não probabilística e de conveniência constituída por 50 pessoas adultas com diagnóstico de asma, na sua maioria do género feminino (66%), e com idades compreendidas entre os 20 e 80 anos de idade ( $M = 55.94$ ;  $DP = 17.18$ ). No geral, o nível de escolaridade da amostra era baixo, com mais de metade dos participantes com apenas o 4º ( $n = 25$ ; 50%) ou 6º ano de escolaridade ( $n = 7$ ; 14%). A maioria dos participantes encontrava-se casada ( $n = 33$ ;

66%) e cerca de 50% dos participantes não trabalhava (reformados:  $n = 18$ , 36%; estudantes:  $n = 2$ , 4%; ou estão desempregados:  $n = 3$ , 6%),

No que diz respeito à caracterização clínica da amostra, 32 (64%) dos inquiridos foram diagnosticados com asma no período 1-16 anos e 18 (36%) num período superior a 16 anos. Quanto ao tempo de tratamento, 36 dos inquiridos (72%) referiram estar a ser acompanhados num período de 1-11 anos e 14 (28%) referiram estar a ser acompanhados em consulta num período superior a 11 anos. A maioria dos participantes (56%) não tem diagnosticado outro problema de saúde crónico (físico ou mental), e no que concerne à questão sobre a existência de acompanhamento psicológico/psiquiátrico, apenas 10 sujeitos (20%) responderam positivamente.

A maioria da amostra mencionou ter familiares com asma (64%). No que toca à medicação, 48 sujeitos (96%) referiram tomar medicação para a asma, sendo que 20 (40%) utilizam bomba e 17 (34%) bomba em simultâneo com a ingestão de comprimidos. Atendendo à necessidade de recorrer aos serviços de saúde, 28 (56%) participantes referiram já o terem feito, aquando uma crise de asma, no entanto, 36 (72%) dos sujeitos mencionaram nunca terem sido internados devido à asma. Ao nível da reação relativamente ao diagnóstico, a maioria (60%) relata aceitação, 15 (30%) medo/preocupação e 5 (10%) tristeza/surpresa/choque.

## Material

Foram aplicados um Questionário Sociodemográfico, o *World Health Organization Quality of Life – Bref (WHOQOL-bref)* e o *Brief-COPE*.

O questionário sociodemográfico procurou recolher informações relativas ao género, idade, nacionalidade, habilitações literárias, estado civil, agregado familiar e situação profissional dos sujeitos. Tendo em consideração as especificidades deste estudo, e de forma a possibilitar a caracterização clínica da amostra, foram adicionadas questões que facilitassem a recolha de informações relativamente ao tempo de diagnóstico; tempo de seguimento; existência de algum familiar com asma; diagnóstico de outros problemas de saúde (físicos e/ou mentais); existência de acompanhamento psicológico e/ou psiquiátrico; toma de medicação, entre outras.

O *World Health Organization Quality of Life – Bref* consiste numa versão breve e reduzida do WHOQOL-100 e é composto por 26 itens e está organizado em 4 domínios: Físico, Psicológico, Relações Sociais e Ambiente (Canavarro et al., 2010). Verificou-se que, de um modo geral, os itens apresentam uma consistência boa (0,85), e analisando cada um dos domínios, obteve-se um Alfa de *Cronbach* de 0,33 no domínio Físico, o que corresponde a uma consistência inaceitável, e um Alfa de *Cronbach* de 0,50 no domínio Psicológico, que presume uma consistência fraca. Relativamente aos domínios Relações Sociais e Ambiente, obteve-se uma consistência interna aceitável (0,68 e 0,70, respetivamente), tendo-se obtido uma consistência boa (0,76) no domínio Geral. Os resultados obtidos apontam, de uma forma geral, para a fiabilidade dos dados recolhidos através do instrumento WHOQOL-bref. No entanto, segundo Tavakol e Dennick (2011), a consistência interna dos itens deve ser relativizada visto que estamos perante uma versão breve da escala, que apresenta uma grande redução do número de itens, o que pode reduzir notavelmente o valor do Alfa, sem que tal signifique uma baixa consistência interna. Atendendo a este facto, e considerando os resultados obtidos na análise dos itens, optou-se pela conservação dos mesmos e dos respetivos domínios.

O *Brief-COPE* é uma versão reduzida e adaptada do COPE, desenvolvido por Carver (1989) e tem por objetivo avaliar estilos e estratégias de *coping* (Pais Ribeiro & Rodrigues, 2004). O questionário é constituído por 28 itens que se agrupam nas seguintes

14 dimensões: *Coping* ativo (itens 2 e 7), Planear (itens 14 e 25), Reinterpretação positiva (itens 12 e 17), Aceitação (itens 20 e 24), Humor (itens 18 e 28), Religião (itens 22 e 27), Utilização do suporte emocional (itens 5 e 15), Utilização do suporte instrumental (itens 10 e 23), Autodistração (itens 1 e 19), Negação (itens 3 e 8), Expressão de sentimentos (itens 9 e 21), Uso de substâncias (itens 4 e 11), Desinvestimento comportamental (itens 6 e 16) e Autoculpabilização (itens 13 e 26) (Carver, 1997).

Quanto às características psicométricas da escala, no presente estudo foi calculada a consistência interna dos fatores. Tendo em consideração os intervalos definidos por Pereira e Patrício (2013) para a interpretação da consistência interna, obteve-se uma consistência inaceitável nos domínios *Coping Ativo*, Planear, Aceitação, Utilização do suporte emocional, Utilização do suporte instrumental e Autodistração (0,49, 0,32, 0,44, 0,33, 0,43, 0,49, respetivamente). Relativamente aos domínios Reinterpretação positiva, Negação e Expressão de sentimentos, obteve-se uma consistência interna aceitável (0,62, 0,66 e 0,64, respetivamente). No que concerne aos domínios Humor (0,74), Religião (0,75), Desinvestimento comportamental (0,77) e Autoculpabilização (0,79), verificou-se que estes apresentam uma consistência boa e, para o domínio Uso de substâncias (0,94), obteve-se uma consistência muito boa. No entanto, considerando Streiner (2003), o facto de se obter um valor alto de Alfa de *Cronbach* nem sempre se traduz numa consistência interna muito boa, pois o Alfa é fortemente afetado pela extensão da escala. Visto que estamos perante uma versão breve da escala, com uma redução considerável do número de itens, pode haver uma diminuição do valor de Alfa, havendo sempre a necessidade de relativizar a consistência interna dos itens.

### **Procedimento**

Posteriormente à aprovação do protocolo de investigação pela Comissão de Ética do CHUCB, iniciou-se a recolha de dados nas consultas de pneumologia do CHUCB, seguindo uma técnica de amostragem não probabilística e por conveniência. Foram sempre respeitados todos os princípios éticos, como o consentimento informado, confidencialidade, anonimato e princípio do voluntariado.

### **Análise Estatística**

A análise estatística dos dados foi efetuada através do programa de tratamento estatístico *Statistical Package for the Social Sciences* (SPSS), versão 28. Para a caracterização da amostra, com dados das variáveis clínicas, sociodemográficas e escalas utilizadas neste estudo, foram calculadas várias medidas descritivas como a média (*M*), desvio padrão (*DP*) e mediana (*Md*). Após a realização dos testes que permitiram constatar a normalidade da distribuição e a homogeneidade das variâncias recorreu-se ao teste *t* (Martins, 2011). De forma a averiguar a associação entre as variáveis em estudo, calculou-se o coeficiente de correlação de *Pearson* e de *Spearman*, dependendo de quando eram confirmados os pressupostos da normalidade e da homogeneidade das variâncias.

## **RESULTADOS**

Neste estudo, a média alcançada em vários domínios da Qualidade de vida foi inferior ao encontrado no estudo de validação do instrumento. Valores inferiores aos obtidos por Vaz Serra et al. (2006) foram observáveis no domínio Físico ( $M = 24.28$ ;  $DP = 5.40$ ; inferior à média encontrada no estudo de validação que foi de 54.99), no domínio Psicológico ( $M = 21.52$ ;  $DP = 2.90$ , sendo que no estudo de validação a média foi de 64.41), no domínio Relações Sociais ( $M = 11.20$ ;  $DP = 2.21$ , sendo que no estudo de validação a média foi de 64.47), no domínio do Ambiente ( $M = 28.38$ ;  $DP = 4.02$ , em que a média encontrada no estudo de validação foi de 58.79), e ainda na avaliação da faceta Geral ( $M = 6.90$ ;  $DP = 1.61$ , que no estudo de validação foi de 49.09).

Relativamente à análise das médias alcançadas nos 14 domínios que compõem a escala Brief-Cope foi possível verificar que as estratégias de *coping* mais utilizadas pela população deste estudo foram a Aceitação ( $M = 7.56$ ;  $DP = 1.26$ ) e as menos utilizadas o Uso de substâncias ( $M = 1.20$ ;  $DP = 0.81$ ).

#### QUALIDADE DE VIDA

De forma a avaliar a **associação entre a qualidade de vida e a idade**, recorreu-se ao coeficiente de correlação de *Pearson*. Verificou-se que a idade se correlaciona negativamente com a qualidade de vida ( $r = -.36$ ,  $p < .05$ ).

No que diz respeito à **existência de outro problema de saúde crónico (físico ou mental)** foi possível verificar que existem diferenças estatisticamente significativas entre os dois grupos. Desta forma, verificou-se que as pessoas que não apresentam outro problema de saúde crónico para além da asma relataram melhor qualidade de vida do que pessoas que têm mais problemas de saúde crónicos, para além da asma (Tabela 1).

Tabela 1

*Análise das diferenças no WHOQOL-bref (26 itens) relativamente à existência de outro problema de saúde crónico – teste-t de student para amostras independentes*

	Existência de outro problema de saúde crónico		<i>t</i> (48)	<i>p</i>
	Não ( <i>n</i> = 28)	Sim ( <i>n</i> = 22)		
	Média (DP)	Média (DP)		
WHOQOL-bref (26 itens)	96.39 (13.73)	87.05 (13.99)	-2.37*	.022

\* $p < .05$

No que concerne à existência de algum **tipo de acompanhamento psicológico/psiquiátrico**, é possível constatar que existem diferenças estatisticamente significativas ao nível da qualidade de vida. Desta forma, podemos verificar que as pessoas que não são acompanhadas ao nível psicológico e psiquiátrico apresentavam melhor qualidade de vida do que aquelas que tinham acompanhamento (Tabela 2).

Tabela 2

*Análise das diferenças do WHOQOL-bref (26 itens) relativamente a acompanhamento psicológico/psiquiátrico – teste t de student para amostras independentes*

	Acompanhamento psicológico/psiquiátrico		<i>t</i> (48)	<i>p</i>
	Não ( <i>n</i> = 40)	Sim ( <i>n</i> = 10)		
	Média (DP)	Média (DP)		
WHOQOL-bref (26 itens)	95.00(13.75)	81.40 (12.57)	-2.84*	.007

\* $p < .05$

Relativamente ao **diagnóstico de asma em familiares**, é possível observar diferenças estatisticamente significativas ao nível da qualidade de vida. Desta forma, podemos referir que pessoas que têm familiares diagnosticados com asma relatam pior qualidade de vida do que aquelas que não têm qualquer familiar diagnosticado com esta condição crónica (Tabela 3).

Tabela 3

*Análise das diferenças do WHOQOL-bref (26 itens) relativamente ao diagnóstico de asma em familiares – teste-t de student para amostras independentes*

	Diagnóstico de asma em familiares		<i>t</i> (48)	<i>p</i>
	Não (n = 18)	Sim (n = 32)		
	<i>Média (DP)</i>	<i>Média (DP)</i>		
WHOQOL-bref (26 itens)	98.67(15.99)	88.69(12.43)	-2.46	.018

\**p* < .05

### COPING

No que diz respeito à influência da **idade** nas 14 dimensões do *Brief-COPE*, ou seja, em relação às 14 estratégias de *coping*, recorreu-se ao coeficiente de correlação de *Pearson* para as dimensões que cumprem os pressupostos da normalidade e a correlação de *Spearman* para as dimensões que não cumprem os mesmos pressupostos. Concluiu-se, assim, que a idade se correlaciona positivamente com as dimensões Religião ( $r = .55$ ,  $p < .00$ ) e Negação ( $r = .37$ ,  $p < .00$ ).

Relativamente ao **estado civil**, é possível verificar que existem diferenças estatisticamente significativas para as dimensões Uso de substâncias ( $U = 204.0$ ;  $p < .05$ ) e Planear ( $t(48) = -2.16$ ,  $p < .05$ ). Tendo em conta as médias apresentadas, podemos concluir que as pessoas que se encontram solteiras, divorciadas e viúvas utilizam mais vezes este tipo de estratégias de *coping* do que aquelas que se encontram casadas ou em união de facto.

No que diz respeito à **existência de outro problema de saúde crónico (físico ou mental)**, através das estatísticas de comparação de grupos foi possível constatar que existem diferenças estatisticamente significativas para as dimensões Religião ( $t(48) = -2.55$ ,  $p < .05$ ) e Negação ( $t(48) = -2.97$ ,  $p < .05$ ). Deste modo, analisando os valores das médias pode-se concluir que pessoas que apresentam outra condição crónica, para além da asma, utilizam mais vezes estas estratégias de *coping* do que pessoas que apenas estão diagnosticadas com asma.

No que concerne ao **acompanhamento psicológico/psiquiátrico**, é possível constatar que existem diferenças estatisticamente significativas para as dimensões Autoculpabilização ( $t(10.59) = 2.68$ ,  $p < .05$ ), Religião ( $t(48) = -3.31$ ,  $p < .05$ ) e Negação ( $t(48) = -2.15$ ,  $p < .05$ ). Deste modo, analisando os valores das médias pode-se concluir

que pessoas que têm acompanhamento psicológico/psiquiátrico utilizam mais vezes este tipo de estratégias do que aquelas que não têm qualquer tipo de acompanhamento.

Relativamente ao **diagnóstico de asma em familiares**, foi possível constatar que existem diferenças estatisticamente significativas para a dimensão Negação ( $t(48) = -2.82, p < .05$ ). Deste modo, analisando os valores das médias pode-se concluir que pessoas que têm familiares com asma utilizam mais vezes a estratégia da Negação do que aquelas que não têm familiares diagnosticados com a mesma doença crónica.

De forma a avaliar a existência de algum tipo de **associação entre a qualidade de vida e as estratégias de coping**, procedeu-se ao cálculo do coeficiente de correlação de *Pearson* para as variáveis que cumpriram os pressupostos da normalidade e a correlação de *Spearman* para as variáveis que não cumpriram os mesmos pressupostos. Assim, relativamente ao primeiro item, relativo à estratégia de *coping* ativo, constatou-se que a qualidade de vida está positivamente relacionada com a utilização deste tipo de estratégia ( $r = .55, p < .00$ ). Na mesma linha, as estratégias de *coping* de Reinterpretação positiva e Aceitação também apresentam uma correlação significativa positiva com a qualidade de vida percebida ( $r = .76, p < .00$  e  $r = .60, p < .00$ , respetivamente). Resultados opostos foram revelados para as estratégias de *coping* de Religião, Negação, Desinvestimento comportamental e Autoculpabilização, que estavam negativamente relacionadas com a qualidade de vida ( $r = -.32, p < .20$ ;  $r = -.58, p < .00$ ;  $r = -.41, p < .00$ ;  $r = -.39, p < .00$ , respetivamente). No que diz respeito aos restantes domínios, não se evidenciaram correlações estatisticamente significativas.

## DISCUSSÃO

A literatura, no geral, sugere que a asma tem um impacto negativo na qualidade de vida das pessoas, ou seja, que pessoas com asma têm pior qualidade de vida ou qualidade de vida mais baixa quando comparadas com pessoas sem esta doença (Cui, Zack & Zahran, 2015; Ford et al., 2004), o que foi também encontrado neste estudo. Os participantes nesta investigação revelaram uma perceção de qualidade de vida abaixo da média, quando comparada com os resultados alcançados no estudo oficial de validação da escala de qualidade de vida (Vaz Serra et al., 2006).

Relativamente à idade, foi possível confirmar uma associação entre a qualidade de vida percebida e a idade, com a qualidade de vida a diminuir à medida que a idade aumenta. Este resultado revela-se concordante com a generalidade da literatura, que evidencia que a qualidade de vida tende a diminuir à medida que as pessoas envelhecem (Ferreira et al., 2010; Ferreira et al., 2008; Lobo, 2006; Matos & Machado, 2007). Num estudo realizado por Gonzalez-Barcala et al. (2012) foi possível confirmar que a idade mais avançada tem influência na qualidade de vida dos doentes com asma. Alguns factos associados ao envelhecimento podem explicar estes resultados, tais como as mudanças ao nível da função pulmonar (aumento da hiperresponsividade das vias aéreas, maior prevalência de obstrução irreversível das vias aéreas, redução da complacência da parede torácica, diminuição da pressão elástica estática do pulmão, redução da força muscular respiratória, bem como alterações na configuração torácica que dificultam os movimentos respiratórios) e ao nível do sistema imunitário/imunológico, que fica mais suscetível a infeções (Gonzalez-Barcala et al., 2012). Estes resultados podem advir, também, do facto dos jovens apresentarem menos limitações e maior controlo da sua doença, quando comparados com uma população mais velha.

Relativamente à análise das diferenças nas variáveis clínicas, no que diz respeito ao diagnóstico de asma em familiares, foram encontradas evidências da existência de diferenças estatisticamente significativas ao nível da qualidade de vida, sendo possível verificar que pessoas com familiares com a mesma condição relatam uma pior qualidade de vida. De acordo com uma meta-análise efetuada por Santos e Isoppo (2019) o desenvolvimento da asma poderá ocorrer devido a uma predisposição genética, sendo possível referir que pessoas que tenham familiares com asma, principalmente os pais, têm um maior risco em desenvolver esta doença crónica e, conseqüentemente, apresentar pior qualidade de vida. Também ao nível da qualidade de vida entre pessoas que têm algum tipo de acompanhamento psicológico/psiquiátrico e as que não têm acompanhamento, foram encontradas diferenças estatisticamente significativas, sendo que os sujeitos que não têm acompanhamento relatam ter uma melhor qualidade de vida (Campanha et al., 2008). Os transtornos psiquiátricos, como a depressão e ansiedade, têm sido associados à asma e, conseqüentemente, a uma pior qualidade de vida (Carvalho et al., 2007). Tendo em conta os resultados obtidos, pode-se referir que as pessoas que responderam que tinham acompanhamento ao nível psicológico e psiquiátrico apresentavam algum transtorno psicológico, sendo possível então verificar que os resultados deste estudo estão em consonância com a literatura.

Relativamente às estratégias de *coping*, os doentes deste estudo referem que a estratégia mais utilizada foi a aceitação, o que vai ao encontro da literatura que sugere que a utilização de estratégias de *coping* centradas na emoção são mais frequentes em doentes com asma do que as estratégias focadas no problema, perante problemas psicológicos e situações indutoras de *stress* (Nia et al., 2010).

Reportando-nos à idade dos participantes, foi encontrada uma associação positiva ao nível das estratégias de *coping*, nomeadamente para as dimensões Religião e Negação. Num estudo realizado por Antunes (2011), sujeitos com idades compreendidas entre os 65-75 anos apresentaram valores médios mais altos para a dimensão Autodistração e pessoas inseridas no grupo etário de *mais de 76 anos* apresentaram valores médios mais altos para as dimensões Religião e Negação, sendo que foram encontradas diferenças estatisticamente significativas para a Religião, evidenciando que os indivíduos mais velhos utilizam esta estratégia para enfrentar situações geradoras de *stress*, quando comparados aos outros grupos etários. As pessoas com mais idade tendem a optar por estratégias mais passivas e centradas nas emoções pois, perante um problema, preferem desviar a sua atenção deste, evitando o desconforto emocional que dele advém ou até desistindo de fazer qualquer tipo de esforço para lidar com o problema. Além disso, refugiam-se mais frequentemente na religião e espiritualidade, visto referirem maior crença que as pessoas mais jovens (Veit & Castro, 2013).

No que diz respeito à avaliação do estado civil, os resultados obtidos evidenciaram diferenças estatisticamente significativas para as dimensões Uso de substâncias e Planear. No presente estudo verificou-se que pessoas solteiras, divorciadas e viúvas utilizam mais vezes este tipo de estratégias de *coping* do que aquelas que estão casadas ou em união de facto. Os resultados obtidos para a dimensão Planear não são concordantes com a literatura. Alguns autores apontam para a existência de uma relação ente os aspetos sociais e a adoção de estratégias de *coping* (Antunes, 2011) sugerindo que uma melhoria nos aspetos sociais poderia levar à adoção de estratégias mais eficazes para lidar com a doença. Pode-se constatar que o estado civil influencia a adoção das estratégias Planear, visto se evidenciar uma maior tendência das pessoas com companheiro para a utilização



de estratégias focadas no problema, sendo que estes factos podem estar relacionados com o apoio proveniente da família nuclear, que influencia positivamente a utilização de estratégias mais ativas e efetivas para enfrentar as situações indutoras de stress (Antunes, 2011). No entanto, relativamente à dimensão Utilização de substâncias, alguns autores referem que a perceção de ausência de suporte social vulnerabiliza a pessoa que tem a doença, fator esse que condiciona a maior utilização de estratégias de *coping* mais passivas e centradas nas emoções (Martins et al., 2012), estando assim os resultados deste estudo para esta dimensão consistentes com a literatura.

Relativamente à análise das diferenças nas variáveis clínicas, relativamente ao acompanhamento psicológico/psiquiátrico, foram evidenciadas diferenças estatisticamente significativas, para as dimensões Autoculpabilização, Religião e Negação. Viver com asma pode causar um grau considerável de stress e ter um grande impacto na rede familiar, social e de trabalho. A pessoa com asma vive com um medo persistente de que irá sofrer uma exacerbação severa, o que contribui para aumentar o estado de ansiedade e depressão, ou vice-versa (Greener, 2011). No caso da depressão, esta compromete a capacidade da pessoa em resolver problemas e em vários casos, as estratégias de *coping* que um indivíduo com depressão desenvolve para lidar com asma podem piorar a situação. Por exemplo, se uma pessoa está deprimida, isto pode induzir um estado de letargia profunda que influencia a motivação da pessoa para seguir as ordens do médico sobre quando tomar a medicação, sentir-se culpabilizada por ter este tipo de doença e, podendo até, fazer com que esta recorra a forças superiores, como a religião, esperando que algo externo resolva o seu problema. Em outros casos, a depressão faz com que a pessoa coloque a doença em segundo plano, negando, por vezes, a presença do problema (Greener, 2011). No caso da ansiedade, esta pode comprometer a capacidade do sujeito em tomar decisões racionais sobre a asma, como, por exemplo, na situação de alerta para sinais de agravamento da asma e ataques mais severos. Para além disto, a ansiedade pode fazer com que a pessoa ser torne demasiado cuidadosa, fazendo com que tome medicação sem necessidade (Greener, 2011). Um acompanhamento psicológico com pessoas que sofrem estas perturbações seria uma mais-valia para a gestão e desenvolvimento de estratégias de *coping* corretas para lidar com as mesmas e, consequentemente, lidar com asma.

No que diz respeito ao diagnóstico de asma em familiares, foram encontradas evidências da existência de diferenças estatisticamente significativas ao nível da dimensão Negação, sendo que pessoas com familiares com asma utilizam mais vezes este tipo de estratégia do que pessoas que não têm diagnóstico desta condição na família. Os resultados não vão ao encontro da literatura, visto que a Health Talk (2017) refere que o diagnóstico de asma é algo recorrente nas famílias. Ter um familiar com asma pode significar que, por vezes, os primeiros sinais e sintomas desta condição sejam mais facilmente reconhecidos, visto já terem sido identificados anteriormente, sendo assim mais fácil para a pessoa aprender a lidar e gerir a sua doença e adquirir as melhores e mais indicadas estratégias de *coping* (Health Talk, 2017), ou seja, a utilizar estratégias de *coping* mais focadas no problema e mais ativas, o que não é o caso da Negação.

Relativamente ao diagnóstico de outros problemas de saúde crónicos, os resultados obtidos demonstraram que pessoas que apresentam outro problema de saúde crónico, para além da asma, utilizam mais vezes as estratégias Religião e Negação, comparativamente a pessoas que apenas têm asma. Tendo em conta a falta de literatura consistente com estes resultados, pode-se especular que as especificidades da presente

amostra, que nos mostra que 22 participantes (44%) revelaram ter outro problema crónico de saúde, o que é uma percentagem elevada, pode ter influenciado os resultados obtidos. Para além disto, estas pessoas podem utilizar este tipo de estratégias mais centradas nas emoções pelo simples facto de que, lidar com mais do que uma condição pode ser incapacitante, optando por um carácter mais espiritual e religioso durante períodos de *stress* e crise, de forma a encontrar esperança de que as coisas podem vir a melhorar (Ribeiro, 2008) ou então apenas negando a existência dos seus problemas.

Em relação à existência de uma relação entre a qualidade de vida e as estratégias de *coping*, verificou-se que existem associações significativas para algumas dimensões, sendo elas o *Coping* ativo, Reinterpretação positiva, Aceitação, Religião, Negação, Desinvestimento comportamental e Autoculpabilização. É importante referir que relativamente ao *Coping* ativo, Reinterpretação positiva e Aceitação se verifica uma correlação positiva e para as dimensões Religião, Negação, Desinvestimento comportamental e Autoculpabilização foi verificada uma correlação negativa. Alguns estudos, no contexto da doença crónica, permitiram verificar que estratégias de *coping* focadas na emoção, em comparação com as estratégias de *coping* ativas, são menos adaptativas, refletindo-se numa avaliação da qualidade de vida mais deteriorada. No caso da asma, nos doentes que se sentiram menos capazes de lidar com a doença e tiveram sentimentos mais baixos de mestria, sentimentos de medo, perda de controlo e estilo de *coping* mais emocional, foi associada uma qualidade de vida mais pobre (Hesselink et al., 2004). No mesmo sentido, Van De Ven et al., (2007), referiram que em adultos com asma, o *coping* mais emocional, ou seja, uma reação mais evasiva ao problema, e *coping* evasivo (ignorando, negando ou evitando o problema) estão associados a uma qualidade de vida mais pobre, enquanto o *coping* ativo (abordagem mais ativa do problema) está associado a uma melhor qualidade de vida. O uso de estratégias de *coping* ativas, ao invés das estratégias de evitamento (como a Negação), tem sido referido como algo que reduz a quantidade de ataques graves, contrariamente às estratégias mais evasivas, que se manifestam pelo desejo de retirada das relações sociais e compromissos com o ambiente, tendo efeitos negativos a longo prazo sobre a adesão às recomendações de tratamento em doenças crónicas, como é o caso da asma (Adams et al., 2001). Em suma, pode-se referir que os resultados obtidos para as associações avaliadas são corroborados pela literatura, à exceção da Aceitação, que, segundo Silva (2017) pode estar associada a uma menor qualidade de vida, podendo-se deduzir que pessoas que utilizam esta tipo de estratégia são mais conformistas e demonstram um papel passivo no controlo e gestão da doença, o que pode prejudicar a qualidade de vida percebida.

## IMPLICAÇÕES PARA A PRÁTICA CLÍNICA

Compreender os determinantes da qualidade de vida, especialmente aqueles que são modificáveis, pode ser útil no desenvolvimento de intervenções e programas direcionados para a promoção e melhoria da qualidade de vida nesta doença crónica (Ford et al., 2004). Assim, torna-se essencial o desenvolvimento de intervenções de carácter preventivo tendo em consideração o impacto psicológico, social e emocional da asma. O papel do psicólogo nas equipas de intervenção é fulcral no estudo, avaliação e tratamento psicológico do doente com asma, identificando o processo de *coping* face à doença, de forma a reeducá-lo para uma melhor gestão e adaptação ao problema (Fragoso, 2005). Em cada doente torna-se necessário estudar os aspetos psicológicos envolvidos e tratá-los, tendo sempre em consideração a sintomatologia atual do doente, incluindo os níveis de ansiedade e stress, as perturbações psicológicas, o *coping*, as motivações e a

disponibilidade para iniciar e continuar um tratamento psicológico (Fragoso, 2005). Neste sentido, o psicólogo deve manter uma relação colaborativa, não só com o doente e a família, mas também com os profissionais de saúde que o acompanham, sendo por isso importante a sua integração nas equipas multidisciplinares. Torna-se fundamental que o psicólogo envolva o doente no processo de avaliação, de forma a avaliar as suas próprias expectativas, ajudando-o a aceitar a pertinência dos aspetos psicológicos, nomeadamente cognitivos, na forma como vê e lida com a sua condição (e.g., perceção dos sintomas, adesão à terapêutica, adesão à farmacologia). Por isso é de extrema importância que o psicólogo clarifique as interações recíprocas entre as cognições, afetos, comportamentos, processos biológicos e o ambiente, seguindo sempre um trabalho colaborativo com o doente. Além disso, e por meio da utilização de estratégias cognitivo-comportamentais, deve intervir em vários aspetos, como, por exemplo: explorar e mudar crenças e processos cognitivos (e.g., pensamento catastrófico, atribuições, autoafirmações), promover estratégias de *coping* mais adequadas para lidar com os acontecimentos indutores de stress (e.g., crises de asma), avaliar e trabalhar os fatores ambientais e interpessoais que possam estar a contribuir para a manutenção dos sintomas (e.g. a exploração e análise dos factos de vida causadores de stress ou o modelamento e reforço dos sintomas por outras pessoas que são significativas na vida do sujeito) (Matos & Machado, 2007). Desta forma, torna-se imprescindível, também, que este processo de intervenção inclua os familiares da pessoa, participando e aprendendo a reconhecer e reforçar significados e comportamentos funcionais que ajudem o processo de mudança e na experimentação de formas alternativas de adaptação à doença, que aumentem o bem-estar e qualidade de vida da pessoa com asma (Matos & Machado, 2007).

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## CHAPTER

# COVID-19 ANXIETY, PARENTING AND CHILD EMOTION REGULATION: A CROSS-CULTURAL STUDY WITH BRAZILIAN AND PORTUGUESE PARENTS

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### Abstract

Parental anxiety and parenting styles have been linked with children's emotional adjustment. Overall, the pandemic had relevant psychological impacts, such as anxiety symptoms, particularly on parents who struggled with the added burden on work-family life balance. This cross-cultural study aims to explore how COVID-19 anxiety and parenting styles impact children's emotion regulation in two different Portuguese-speaking countries. It was also ascertained additional validity evidence from the Emotion Regulation Checklist (ERC) in the Portuguese context. Data was collected online from a sample of 109 Portuguese and 190 Brazilian parents (80.9% women), whose children had a diverse age-range ( $M = 8.38$ ;  $SD = 4.30$ ). The applied protocol included the COVID-19 Anxiety Scale (CAS), the Parental Authority Questionnaire for Parents (PAQ-P), the ERC and socio-demographic questions. Hierarchical multiple regression models tested how COVID-19 anxiety and different parenting styles (authoritative, authoritarian or permissive) predict child emotional adjustment (emotion regulation or lability/negativity). In the Brazilian sample, parental COVID-19 anxiety ( $\beta = .16$ ) and a more authoritarian parenting style ( $\beta = .17$ ) predicted higher children's lability/negativity; even controlling the effects of children's age ( $R^2 = .11$ ). In the Portuguese sample, where parental COVID-19 anxiety was quite lower [ $M = 1.55$  versus  $3.13$ ;  $t_{(279,821)} = -3.760$ ,  $p < .001$ ], children's greater negativity was only predicted by a low authoritative parenting style ( $\beta = -.30$ ;  $R^2 = .22$ ). A better understanding of the impact of parents' COVID-related anxiety and parenting styles on children's emotional dysregulation in different cultural contexts stresses the importance of families' interventions in other potential epidemics within a contextual framework.

**Keywords:** COVID-19 Anxiety; Parenting Styles; Child's Emotional Regulation; Portuguese-speaking Parents

## Introduction

### **COVID-19 pandemic among Portuguese and Brazilian families**

In December 2019, a novel coronavirus infection caused by the SARS-CoV-2 agent was discovered in China. In just a few months, this infectious disease spread around the world, becoming a massive global health crisis and being officially declared a pandemic in March 2020 (World Health Organization [WHO], 2020). At the time, the absence of effective evidence-based treatments or vaccinations for the disease led most countries, including Portugal and Brazil, to adopt mitigation strategies to slow down the transmission rates and avoid overloading the local healthcare systems. These measures included quarantine in cases of suspected infection and physical isolation for what concerns infected or symptomatic people, but especially overall physical distancing and mandatory lockdown periods for the population (Hansel et al., 2020). All of these restrictive public health procedures, together with the characteristics of disease in itself (e.g., unpredictability of severity, related stigma), had relevant impacts on individuals' overall psychological well-being and mental health. Accordingly, there were identified higher levels of psychological symptoms in the worldwide general population, including sleep disturbance, post-traumatic stress, depression, and anxiety (Brooks et al., 2020; Luo et al., 2020; Prati & Mancini, 2021; Serafini et al., 2020; Torales et al., 2020; Vindegaard & Benros, 2020). These symptoms of mental anguish from general population were also found in the Portuguese and Brazilian contexts (Frade et al., 2021; Goularte et al., 2021; Paulino et al., 2020; Pires et al., 2021; 2022; Zhang et al., 2021).

In Portugal, COVID-19 ended up killing over 26 885 people and infecting 5 592 410 more until now (WHO, n. d.). In January 2021, the country registered its worst peak of infections, with the world's highest rate of daily new confirmed cases and deaths per million inhabitants. There was also an exponential increase in hospital admissions, almost duplicating in relation to the previous month (National Health Direction [DGS], n.d.). In several 2021 periods, Brazil became the third global country with the most registered cases of COVID-19 (37 639 324 until June 2023) and the second in the total number of deaths by the disease (703 399 up to the same period; WHO, n. d.).

But the pandemic was particularly challenging for families with young children. Some of the public health restrictions resulted in numerous family socioeconomic stressors, such as income reduction due to parental loss of jobs or layoff measures, which in some cases contributed to difficult access to children's essential goods (Calvano et al., 2022; Gassman-Pines et al., 2020). Besides this, the suspension of formal school and childcare activities, the children's confinement at home, and changes in their daily routines contributed to parents had additional struggles to conciliate their parental responsibilities with others, including remote work (Calejar et al., 2022; Dawes et al., 2021; Günther-Bel et al., 2020). In societies such as the Portuguese and Brazilian, with collectivist roots, the parents' social isolation resulting from the pandemic lockdowns may have become particularly hard in terms of children's care since a high level of participation from the extended family is usually a valued reality, namely from the grandparents' part (Bragato et al., 2022; Glaser et al., 2013).

### **COVID-19, parenting distress and child emotional adjustment**

In the COVID-19 lockdown context, children were forced to interrupt social interactions with several significant figures, and so the family environment at home acquired a particular relevance for supporting their emotional needs. Nevertheless, parents were faced with several of the abovementioned stressors, which in some cases contributed to



the high levels of caregiving distress, burnout, and/or anxiety that were particularly identified during the pandemic. Thus, among other difficulties, this may result in less responsivity in child rearing. (Aguiar et al., 2021; Adadms et al., 2021; Johnson et al., 2021). Indeed, the COVID-related deterioration of parents' wellbeing and mental health was associated with the worst indicators of children's emotional and behavioral health throughout the pandemic period (e.g., higher levels of stress, anxiety, and low emotion regulation; Achterberg et al., 2021; Akgül & Ergin, 2021; Kerr et al., 2021; Martins et al., 2021; Spinelli et al., 2020; Spinelli et al., 2021; Toscano et al., 2022). In some cases, positive parenting was identified as a potential protective factor in these processes of parents and children spillover mental anguish (Bate et al., 2021; Cohodes et al., 2021; Zhou et al., 2021).

This chapter aims to provide a deeper understanding how a parental mental health, namely covid-related anxiety, and parenting styles may impact children's emotional adjustment throughout the COVID-19 pandemic. Thus, parental anxiety will be seen not as a trait but rather as particularly triggered by coronavirus-related information and thoughts. This conceptualization gains relevance because families were continuously flooded by overwhelming, contradictory, and sometimes misunderstanding pandemic-related information during the COVID-19 period (Gao et al., 2020; Hansel et al., 2020; Ni et al., 2020). Specifically, the present study seeks to explore how parental COVID-19 anxiety and authoritarian, authoritative or permissive parenting styles predict children's emotional regulation strategies during the pandemic.

Overall, this information will be helpful in managing parents and children's mental health and wellbeing during similar future epidemic events. Recent research underpins an increase like hood of its occurrence over the coming decades, due to the global environmental changes that greatly increase the risk of the virus migration from the typical zoonotic reservoirs to human contexts (Baker et al., 2022; Marani et al., 2021).

## Method

### Participants

This study included a sample of 109 Portuguese and 190 Brazilian parents (80.9% women), with a mean age of 38 years old ( $SD = 7.99$ ). Most parents completed university studies (68.2%), namely a bachelor/graduation degree (53.6%). 64.2% of them were married or living together in a marital union, and 35.8% were separated/divorced. Children were balanced in terms of their sex, with 49.8% of girls and 50.2% of boys. Overall, they had a diverse range of ages ( $M = 8.38$ ;  $SD = 4.30$ ), and attending heterogeneous school years, mostly the nursery or kindergarten (31.7%). The majority had at least one brother/sister (64.2%). The majority of parents (62.5%) did not point up any noteworthy family events in their life cycle, despite the pandemic being crucial for 19.6% of those who did.

Significant differences were found in some of the subgroups' socio-demographic characteristics, namely a highest proportion of Brazilian *versus* Portuguese woman [ $\chi^2(1) = 6.324$ ,  $p = .012$ ], and a more representativeness of separated/divorced parents in the Portuguese *versus* Brazilian sample [ $\chi^2(1) = 81.394$ ,  $p < .001$ ]. The Portuguese children and their parents were on average oldest than Brazilian ( $p < 0.001$ ).

### Procedure

The study was initially approved by the Ethics Commission from the university. Given the COVID-19 restrictions, participants were recruited online, with the support

from virtual platforms and online communities (e.g., parents' blogs) in a snowball strategy. Both Portuguese and Brazilian parents filled out the same online protocol, with respective cultural adaptations/validation measures. All participants gave their informed consent to take part in the study, after receiving information of the research's goals, the voluntarily of participation, the confidentiality, and the anonymity of the data.

## Measures

### *COVID-19 Anxiety Scale (CAS)*

The CAS is a unidimensional brief mental health screener, originally developed by Lee (2020), to assess distinct physiologically-based symptoms of anxiety related to COVID-19 (i.e., dizziness, sleep disturbances, tonic immobility, appetite loss, and abdominal distress). This five-items measure focuses on the anxiety symptoms triggered by coronavirus-related information and thoughts. Using a 5-point Likert scale (0 = not at all to 4 = nearly every day), participants rate how frequently they have experienced the COVID-19 anxiety symptoms over the last two weeks. A CAS summing score equal to higher than the cut-off point of 9 indicates dysfunctional levels of COVID-19 anxiety.

Due to its parsimoniousness and practical/clinical relevance, the measure was adapted and validated cross-culturally in at least 25 different countries, including the US and countries from South America, Asia, Europe, Australia, and South Africa, always with good validity evidence (Lieven, 2021).

In this study, the Portuguese (Magano et al., 2021) and the Brazilian (Padovan-Neto et al., 2023) versions were specifically applied with good reliability indicators, somehow like those presented in the original scale (Table 1).

### *Parental Authority Questionnaire for Parents (PAQ-P)*

The Parental Authority Questionnaire (PAQ)-Pires was modified from the original form (Buri, 1991) in order to assess parents' perceptions of their parental authority and allow comparison with their children's assessments. The measure is composed of a total of 30 items, to access parenting styles according to the tripartite model from Baumrind's (1971) with 10-items each: authoritative (e.g., "I guide my children's activities and decisions through reasoning and discipline"), authoritarian (e.g., "Whenever I tell my children to do something, I expect them to do it immediately without any questions"), and permissive (e.g., "Most of the time I do what my children want when establishing family decisions"). Participants rate their agreement with each item using a 5-point Likert scale (1 = totally disagree to 5 = totally agree). Each dimension score is calculated by summing the corresponding items. High scores indicate high levels of the respective parenting style and when two SD above the mean standardized score imply a dominant parenting style.

As presented in Table 1, satisfactory indicators of the measures' reliability were found in both the Portuguese and the Brazilian parental samples.

Table 1.

*Indicators of internal consistency from CAS and PAQ-P*

Measures and Dimensions	Alpha de Cronbach ( $\alpha$ )		
	Original version	Portuguese sample ( $n = 109$ )	Brazilian sample ( $n = 190$ )
CAS unidimensional	.93	.87	.85
PAQ-P			
Authoritative	.83	.86	.77
Authoritarian	.77	.85	.82
Permissive	.75	.75	.73

### *Emotion Regulation Checklist (ERC)*

The ERC was developed by Shields and Cicchetti (1997) to assess different strategies of child emotion regulation (6 to 12 years old) regarding the perception of their parents or other significant caregivers (e.g., teachers, therapists). The original version composed of 23 items (excluding item 12), distributed in two different dimensions: i) adaptive emotional regulation, with 8 items that describe appropriate affective displays, empathy, and child emotional self-awareness (e.g., "*Is empathic toward others*"; "*Can say when is feeling sad, angry or mad, fearful or afraid*"); ii) lability/negativity, composed of 15 items expressing lack of flexibility, impulsiveness, mood lability, and dysregulated negative affect (e.g., "*Exhibits wide mood swings*"; "*Is prone to angry outbursts*"). Parents rated their perceptions on a Likert-type scale with four answer options (1 = never to 4 = always).

Among several other hetero-report measures of child emotional regulation, the ERC has been one of the most widely used both in empirical research and to evaluate intervention programs with children of diverse ages (Adrian et al., 2011). Accordingly, it was adapted and validated in several European countries (Lucas-Molina et al., 2022; Molina et al., 2014; Nader-Grosbois & Mazzone, 2015; Oseland, 2019), and in Iran and Brazil (Meybodi et al., 2018; Reis et al., 2016). For Portugal in particular, there is a preliminary and non-published version of the measure (Melo, 2005), although with some validity and reliability constraints. Thus, additional evidence of the ERC's validity with Portuguese parents is presented below in this paper, such as the respective reliability indicators.

### **Data analysis**

First, a principal component analysis with *oblimin* rotation was conducted to obtain additional validity evidence from the ERC in the Portuguese context. Then, for each of the parental samples—Portuguese and Brazilian—Pearson correlations between the study's major variables and descriptive statistics were computed. Finally, hierarchical multiple regression analyses were conducted to test the effects of parental COVID-19 anxiety on the children's emotion dysregulation (step 1) by controlling the effects of negative parenting (step 2) and relevant background variables, such as the children's age, parental schooling, and parents' marital status (step 3).

The linear regression assumptions were met, such as the inclusion of a minimum of 77 participants for an acceptable effect size with the four hypothesized predictors (parental COVID-19 anxiety in step 1 and the three parenting styles in step 2, respectively; Sopher, 2023).

## **Results**

### **Emotion Regulation Checklist (ERC) additional validity evidences**

By considering both conceptual and statistical criteria (i.e., eigenvalues, variance, scree plot, reliability indicators; Watkins, 2018), results from Table 2 point to a three-dimensional solution from ERC with our Portuguese parental sample, instead of the alternative and poorly adjusted bidimensional structure.

Table 2.

*Descriptive and Principal Component Analysis from ERC with a Portuguese parental sample (n = 109)*

Items (brief description)	Component Loadings			Descriptive Statistics			
	Negativity	Regulation	Lability	<i>M</i> ( <i>SD</i> )	<i>Sk</i>	<i>Ku</i>	<i>Min-Max</i>
22-Intrusiveness	<b>.84</b>	-.01	.02	1.82 (0.89)	0.93	0.10	1-4
19-Negative response to peers' overtures	<b>.83</b>	-.01	-.03	1.69 (0.95)	1.26	0.54	1-4
24-Negative emotions on play engagement	<b>.77</b>	-.03	-.09	1.88 (0.83)	0.73	0.08	1-4
16-Sadness/listless	<b>.73</b>	-.10	.23	1.49 (0.88)	1.88	2.62	1-4
12-Whiny or clingy with adults	<b>.73</b>	.08	.02	1.84 (0.93)	0.89	-0.09	1-4
10-Pleasure with others' distress	<b>.72</b>	-.04	.11	1.59 (0.91)	1.53	1.41	1-4
13-Disruptive energy/exuberance	<b>.71</b>	.03	.25	1.75 (0.88)	1.00	0.19	1-4
18-Flat affect	<b>.70</b>	-.18	.21	1.80 (1.03)	0.99	-0.31	1-4
21-Empathic	-.05	<b>.76</b>	-.12	3.49 (0.77)	-1.47	1.62	1-4
7-Positive response to peers' overtures	-.42	<b>.68</b>	.35	3.49 (0.68)	-1.33	1.97	1-4
1-Cheerful	.10	<b>.67</b>	-.43	3.45 (0.67)	-1.39	2.82	1-4
3-Positive response to adults' overtures	-.21	<b>.63</b>	.03	3.43 (0.71)	-1.32	2.00	1-4
15-Able to express negative feelings	.00	<b>.63</b>	-.33	3.20 (0.92)	-0.78	-0.56	1-4
9-Able to delay gratification	-.04	<b>.47</b>	.02	2.92 (0.88)	-0.49	-0.42	1-4
23-Negative emotions appropriate	.22	<b>.45</b>	.11	2.66 (0.88)	-0.17	-0.65	1-4
4-Easily transitions between activities	.04	<b>.40</b>	.26	2.66 (0.93)	-0.34	-0.67	1-4
6-Easily frustrated	.13	.04	<b>.72</b>	2.35 (0.87)	0.13	-0.62	1-4
14-Angry about limit-setting	.22	.04	<b>.63</b>	2.43 (0.83)	0.03	-0.53	1-4
8-Outburst angry/tantrums	.42	-.04	<b>.61</b>	1.86 (0.96)	0.73	-0.62	1-4
2-Wide mood swings	.31	-.08	<b>.61</b>	2.08 (1.04)	0.44	-1.07	1-4
20-Impulsiveness	.15	.14	<b>.53</b>	2.33 (0.90)	-0.09	-0.93	1-4
5-Quick recover from distress/upset	<u>.34</u>	<u>.36</u>	<b>-.48</b>	2.65 (0.87)	-0.04	-0.68	1-4
11-Able to modulate high excitement				2.71 (0.83)	-0.19	-0.48	1-4
17-Overly exuberant				2.38 (0.93)	0.02	-0.88	1-4
Explained variance (%)	31.5	13.6	8.7				
Cronbach's $\alpha$	.91	.73	.77				

Note. Bartlett's Test:  $\chi^2_{(231)} = 1225.235, p < .001$ ; KMO = .804

Somehow corresponding to the original ERC's version, the emotional regulation dimension, with adequate internal consistency, is composed of eight items that broadly represent children's empathy, and their adaptive modulation and expression of emotions. The items originally included in the overall dimension of lability/negativity are now included in two different and more parsimonious subscales. The negativity component, with eight items and very good internal consistency, reports an unadjusted affective display. The six items that compose the lability factor, with adequate reliability, are particularly associated with the children's impulsiveness and the most extreme emotional dysregulation.

In light of these results, in the analyses that follow and regarding the Portuguese parental sample, the proposed ERC's tridimensional solution was used. For the Brazilian sample, the ERC's bidimensional structure was applied, already validated in the country (Reis et al., 2016) and whose reliability indicators in our parental sample were also quite acceptable ( $\alpha = .73$  and  $.78$ , respectively, for regulation and lability/negativity factors). For both parental samples, the total scale score was also calculated, with good internal consistency, both for the Portuguese ( $\alpha = .87$ ) and the Brazilian ( $\alpha = .81$ ) parents.

## Descriptive and relationships between COVID-19 anxiety, parenting styles and child emotion regulation

As presented in Table 3, Brazilian parents had, on average, higher levels of COVID-19 anxiety and tended to be more authoritarian. In clinical terms, they also had a higher percentage of representatives with dysfunctional COVID-19 anxiety (81.5%) when compared with Portuguese parents, who represent only 18.5% of the total from this group. Portuguese parents were, on average, more permissive with lower scores regarding their children's emotional regulation. As detailed above and briefly indicated in Table 3, Portuguese children tend to be older, and their parents are more frequently separated/divorced, although there are no significant differences in the Portuguese parents' educational level when compared with Brazilians.

Table 3.

*Descriptive statistics and correlations between the study key variables, in the Portuguese (n = 109) and in the Brazilian (n = 190) parental samples*

		CAS		Parenting Styles (PAQ-P)				Child Emotion Regulation (ERC)				Background variables	
Portugal	Brazil	1	2	3	4	5	6	7	8	9	10	11	12
	<i>M</i>	3.13***	44.57	27.31*	19.81***	34.12***	68.66	28.59	----	----	7.18***	Coded as dummy	
<i>SD</i>	4.17	4.36	7.31	5.53	4.17	8.30	6.37	----	----	3.47			
1.Anxiety	-	-.05	-.12	.24**	-.12	-.15*	.15*	----	----	.08	-.05	-.08	
2.Authoritative	.08	-	-.08	-.22**	.19**	.16*	-.08	----	----	.12	-.04	.08	
3.Authoritarian	.16	.16	-	-.12	-.17*	-.17*	.16*	----	----	.00	-.22**	-.08	
4.Permissive	.15	-.05	.03	-	-.14	-.15*	.11	----	----	-.09	-.07	.01	
5.Regulation	-.05	.55**	-.14	.03	-	.74**	-.36**	----	----	-.23**	.10	.02	
6.TRegulation	.01	.43**	-.05	.00	.54**	-	-.88**	----	----	.05	.14	.07	
7.Lab/Neg (Br)	----	----	----	----	----	----	-	----	----	-.21**	-.13	-.09	
8.Lability (Pt)	-.15	-.16	-.02	.11	-.19	-.78**	----	-	----	----	----	----	
9.Negativity (Pt)	.05	-.27**	.00	-.05	-.14	-.85**	----	.55**	-	----	----	----	
10.CAge	.03	-.02	-.10	.10	-.20*	-.01	----	.14	-.20*	-	----	----	
11.PSchool level	-.13	.03	-.27**	-.25**	.08	-.08	----	.15	.09	-.02	-	-	
12.PMarital status	-.04	.00	.16	.09	-.04	.17	----	-.06	-.28**	-.09	-.20*	-	
<i>M</i>	1.55***	43.83	25.81*	23.62***	25.26***	68.04	----	13.40	13.85	10.49***	Coded as dummy		
<i>SD</i>	3.05	5.17	7.02	5.63	3.76	9.86	----	3.73	5.77	4.78			

*Note.* \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ . Values above the diagonal respect to the Brazilian sample and below to the Portuguese sample. Parental School level coded as dummy variable, where 0 = 12 years of school (less or equal) and 1 = university studies. Parental Marital status coded as dummy variable, where 0 = married/in a marital union and 1 = separated/divorced.

As expected, in the Brazilian sample, the children's emotional regulation was correlated with more positive parenting and, in the case of the ERC's total scale, also with less parental COVID-19 anxiety. Following this tendency, children's higher lability/negativity were both associated with more authoritarian parenting and higher parental COVID-19 anxiety. In the Portuguese sample, children's higher emotional regulation was correlated with more authoritative parenting, and their negativity with less parental authoritarianism. In contrast to Brazil, there were no significant correlations between children's emotional regulation (adjusted or unadjusted) and parental COVID-19 anxiety regarding Portugal. Even so, results from the two models testing how parental COVID-19 anxiety and their parenting styles may impact children's emotion regulation are presented below for Brazilian and Portuguese parents, respectively.

Children's age was overall correlated with their emotional regulation and dysregulation in both samples. Similar to parental school level, but in this case regarding specific parenting styles. Accordingly, these background variables were considered covariates in the models that follow. In the specific case of the Portuguese sample, the

parent's marital status was also considered a covariate due to its association with the children's negativity.

### COVID-19 anxiety and parenting styles as predictors of child emotional regulation

Table 4 presents the results from the overall hierarchical linear regression models conducted with the Portuguese sample. Accordingly, there was no effect of parental COVID-19 anxiety on children's emotional regulation. Instead, emotional regulation was explained in 41% by more authoritativeness and less authoritarianism, controlling the effects of children's age (less regulation for younger children). In the same direction, children's higher negativity was predicted by less parental authoritativeness, even controlling the effects of parents' marital status (higher negativity in separated/divorced). This model explains 22% of variations in this child's unadjusted emotional regulation strategy.

Table 4.

*Parental COVID-19 anxiety and parenting styles as predictors of child emotional regulation: hierarchical linear regression models from the Portuguese sample (n = 109)*

Predictors	ERC Total Scale		Negativity		Lability		Emotion Regulation	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
Step 1	.00		.00		.02		.00	
COVID-19 Anxiety		.01		.05		-.15		-.05
Step 2	.20***		.08*		.04		.36***	
COVID-19 Anxiety		-.01		.08		-.16		-.07
Authoritative Parenting		.45***		-.29**		-.14		.59***
Authoritarian Parenting		-.12		.03		.02		-.23**
Permissive Parenting		.03		-.08		.13		.08
Step 3	.05		.13**		.05		.05	
COVID-19 Anxiety		-.01		.07		-.16		-.06
Authoritative Parenting		.46***		-.30**		-.14		.59***
Authoritarian Parenting		-.18		.08		.02		-.25**
Permissive Parenting		-.01		-.02		.13		.10
Children's Age		-.01		-.22*		-.16		-.22**
Parental School Level		-.11		.06		-.14		.00
Parent's Marital Status		.18		-.30**		.02		-.03
Overall F	4.62***		3.96***		1.82		9.93***	
Total R <sup>2</sup>	.24		.22		.05		.41	

*Note.* \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ . Parental School Level coded as dummy variable, where 0 = 12 years of school (less or equal) and 1 = university studies. Parental Marital Status coded as dummy variable, where 0 = married/in a marital union and 1 = separated/divorced.

As indicated in Table 5, in the Brazilian sample, parental COVID-19 anxiety and more authoritarian parenting predicted children's higher lability/negativity, even controlling the effects of children's age and explaining 11% of the variations in this child's unadjusted emotional regulation strategy. There was no effect of parental COVID-19 anxiety on children's adaptive emotional regulation, and so this variable was predicted by higher authoritative parenting.

Table 5.

*Parental COVID-19 anxiety and parenting styles as predictors of child emotional regulation: hierarchical linear regression models from the Brazilian sample (n = 190)*

Predictors	ERC Total Scale		Lability/Negativity		Emotion Regulation	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
Step 1	.02		.02		.01	
COVID-19 Anxiety		-.13		.14		-.09
Step 2	.06**		.04*		.06*	
COVID-19 Anxiety		-.13		.15		-.09
Authoritative Parenting		.10		-.03		.14
Authoritarian Parenting		-.19		.19*		-.15*
Permissive Parenting		-.14		.11		-.11
Step 3	.01		.05*		.07**	
COVID-19 Anxiety		-.13		.16*		-.05
Authoritative Parenting		.11		-.01		.17*
Authoritarian Parenting		-.16*		.17*		-.13
Permissive Parenting		-.12		.08		-.13
Children's Age		.03		-.21**		-.26***
Parental School Level		.09		-.06		.09
Overall $F$	2.80*		3.53**		4.49***	
Total $R^2$	.09		.11		.13	

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < 0.001$ . Parental School Level coded as dummy variable, where 0 = 12 years of school (less or equal) and 1 = university studies

## Discussion

Few previous studies point to a relationship between parents' higher distress during COVID-19 and their children's low emotional and behavioral health (e.g., Aguiar et al., 2021; Adadms et al., 2021; Johnson et al., 2021). However, despite the fact that parental mental health anguish was demonstrably linked with info-whelming, overexposure to fake news/data or coronavirus-misleading information disseminated by different social media platforms, the indicators employed in previous studies were not pandemic-specific (Dubey et al., 2020; Gao et al., 2020; Hansel et al., 2020; Ni et al., 2020). Accordingly, this chapter is intended to amplify the scarce piece of evidence about the impact of parental anguish on children's emotional adjustment during the pandemic while contributing theoretically on parental anxiety triggered by repeated and disruptive thoughts concerning the pandemic (i.e., COVID-19 anxiety). Including additional background-family variables enabled it to better understand and recognize cultural differences from a contextual and ecological perspective. Given that the current study was conducted in two distinct Portuguese-speaking countries, namely Brazil and Portugal, the specific cultural context and government policies may have impacted the family way of life throughout the outbreak and how lockdowns were handled. Indeed, Brazilian parents reported much higher levels of COVID-19 anxiety than Portuguese parents, consistent with previous data of the general population in both countries, where Brazil occupied the second place in a total of 25 analysed countries and Portugal was in the last four positions. Furthermore, Brazil's CAS scores were nearly twice as high as Portugal's (Lieven, 2021). Additionally, and in contrast to Portuguese parents' findings, Brazilian parents' COVID-19 anxiety combined with stricter-authoritarian parenting predicted the children's emotional dysregulation during the pandemic, namely their higher levels of lability or negativity. Since the younger child's age also predicts higher lability or

negativity, it is noteworthy that this effect is maintained even when the children's ages are taken into account. According to an intra-individual lifespan perspective, it is expected that older children are better able to reflect on and control their emotional states and acquire effective self-regulation strategies due to their increasing neurobiological maturation and overall development (physiological, cognitive, and behavioral) (Sanchis-Sanchis et al., 2020), useful to better deal with the high stressors imposed by the pandemic. Moreover, a pandemic scenario that is perceived as a serious threat may trigger the individual's preexisting vulnerabilities, leading to the emergence of psychopathological symptoms or an anxiety disorder. Our results particularly point to the interpersonal and environmental context in which the pandemic may have modulated the Brazilian (*versus* Portuguese) parents' anxiety and the subsequent children's emotional dysregulation. First, as briefly mentioned in the Introduction, Brazil was one of the most severely impacted countries by the pandemic, which raises the possibility that a person will become infected. Still, knowing several sick relatives and/or having COVID-related deaths in the family are also relevant contextual risk factors that have historically hindered people's psychological wellbeing during the pandemic period (Luo et al., 2020; Torales et al., 2020; Vindegaard & Benros, 2020). Political denials regarding COVID-19 in Brazil and a consequent lack of funding for research and public health initiatives to fight the virus have worsened the country's fatality rates and may also intensify people's concerns about the illness over time. (de Almeida et al., 2022; Sott et al., 2022). A huge amount of misleading information was soon disseminated on this topic due to negationist beliefs and a socially polarizing climate in aftermath of the outbreak. It was mainly spread on social media platforms like Facebook and WhatsApp, in which Brazilian families rank among the top users worldwide. (Gramacho et al., 2021). In the end, the flood of these inaccurate, incorrect, or misleading infodemic contents might have negative impact on individual mental and general health (Biancovilli et al., 2021), which may help explain the greater levels of COVID-19 anxiety from Brazilian parents in our sample. Portuguese parents, on the other hand, were less exposed to the aforementioned political and social backdrop, which in and of itself may have contributed to their lowest levels of parental COVID-19 anxiety and to the lack of effects on their children's emotional dysregulation. Despite being rated moderate to high levels of distress and anxiety in the Portuguese general population, especially from those with caring responsibilities and/or living with children and adolescents (Frade et al., 2021; Morgado et al., 2021), there were also found international evidence that point to improvements on the quality of parents-child relationships during and after the lockdown periods (Vian et al., 2022), which may help to explain part of our results. The pandemic outbreaks provided some families with an opportunity for reconnection and appreciation. Recognizing an unusual opportunity to spend more time together and support one another closely as a means to overcome the COVID-19 concerns, they were able to cope with the situation in a positive way. (Günther-Bel et al., 2020; Pires, et al, 2022).

Despite the abovementioned empirical contributions, this study also had an important methodological relevance as it ascertained additional ERC validity evidence (Shields & Cicchetti, 1997) in a sample of Portuguese parents. This measure is one of the multi-informant scales widely used in international research about parenting and child regulation (Adrian et al., 2011; Borelli et al., 2010; Kim-Spoon et al., 2013), being validated for several European and other worldwide countries, including Italy, Belgium, Brazil, Iran, Norway and Spain (Meybodi et al., 2018; Molina et al., 2014; Nader-Grosbois & Mazzone, 2015; Oseland, 2019; Reis et al., 2016; Lucas-Molina et al., 2022). In Portugal it was translated and preliminary validated with a parental sample from the



north region of the country (Alves & Cruz, 2015; Melo, 2005), although with some discriminatory issues in several items and a low adjustment to the proposed bidimensional structure, like other mentioned international validation studies. Thus, in this chapter is proposed an alternative ERC's tridimensional arrangement, in which the broad lability/negativity dimension is subdivided in two more parsimonious subscales. This finding supports the cultural-contextual perspective by showing that the cultural contexts in which families live have an impact on how children's emotional regulation is measured. These settings shape how youngsters express their emotions in ways that are more socially acceptable (Ford & Mauss, 2015; Southam-Gerow & Kendall, 2002). Thus, more robust evidence from ERC's tridimensional *versus* bidimensional structure are in need, especially in the Portuguese context and this chapter constitutes a relevant starting point on this work.

In terms of limitations, aside from the ERC's unique adjustment structure for Portugal and Brazil, respectively, it is important to note that the other measures are self-reported and therefore more vulnerable to some degree of social desirability and memory recall bias. In addition, the Portuguese and Brazilian groups were not completely equivalent regarding their socio-demographic characteristics. To reduce the inconsistencies between these groups, background variables that were indicated to have an impact on the study's key variables were statistically controlled in the models provided.

According to our understanding, the results are a novel demonstration of how negative parenting and parental anxiety, particularly triggered by disruptive thoughts related to COVID-19, predict poor child emotional adjustment during the pandemic. This is especially true in countries like Brazil, where there was a weak investment in public health to fight the virus and a rapid spread of misinformation and infodemic content. If we trust that some of the emotional negative impacts of the pandemic may endure over time, as they did in other comparable prior incidents, such as the Ebola and the 2003 SARS-CoV outbreaks, then all of this empirical reflection is critical (Brooks et al., 2020; Hansel et al., 2020; Torales et al., 2020). Therefore, even after the official pandemic has ended, the knowledge provided is still relevant for researchers and clinicians that want to improve on the therapeutic interventions for children and their families who have been greatly affected by the COVID-19 mental health repercussions. Finally, and contrary to what happened with the unexpected reality from COVID-19, the shared insights may be useful to plan and adjust different family psychological interventions to future epidemic events, particularly since it is undeniably demonstrated that there is a high probability of its occurrence in the next few decades.

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**Effect of Head-Down-Tilt (HDT) as Gravitational Stress Measured by The Vegetive Tone  
(Kerdo Index)**

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**Effect of Head-Down-Tilt (HDT) as Gravitational Stress Measured by The Vegetive Tone (Kerdo Index)**

**Abstract**

Exposure to microgravity during space flight or earth-based analogs such as HDT results in cardiovascular deconditioning. HDT is gravitational stress. Military pilots face this challenge. Little is known about the status of such a condition's autonomic nervous system (ANS) background. The status of the ANS tone may have information on the stress tolerance of future pilots and astronauts. We used the Kerdo index during an HDT to quantify the vegetative balance in future air force pilots. In this descriptive study, we measured 19 young healthy volunteers (6 females and 13 males; mean age 22.7 y) on the tilting table in the horizontal, supine position and -15° HDT. As a control group, we used the arterial blood pressure and heart rate data of 11 female and 28 male middle-aged subjects. The mean age for females was 53.4 and for males 53.7 y. In the young group, there was no significant difference in the Kerdo index between the male and female groups during the control and HDT. Between the young and older male groups, the Kerdo index was not significantly different, however, the age, systolic and diastolic blood pressure, heart rate, and P values were  $P < 0.0001$ . Weight P was (0.02) and BMI P was (0.01). Correlation coefficients between the Kerdo index and measured variables were the highest in both groups for heart rate. Our results demonstrated that physical fitness resulted in no significant difference in the Kerdo index between the control and HDT.

Keywords: gravitational stress, autonomic nervous system, Kerdo index, sympathetic, parasympathetic

Running heads: Gravitational Stress and Vegetative Tone

Page number: 18

## Introduction

The central nervous system controls many fundamental systems including whole-body metabolism, body temperature, and blood pressure. Autonomic reflexes are mediated by neural pathways in the brainstem and spinal cord and generally rapidly regulate organ and system performance (msec). Autonomic control is also mediated by specific brain regions, such as the hypothalamus, which is responsible for mid-term (min) and long-term (hours/days) regulation of internal organ systems. Importantly, autonomic reflexes are dynamic, where adaptations can alter rapid homeostatic control over longer time scales (McDougall et al., 2015). Stress is regulated by the autonomous nervous system (ANS), increasing sympathetic modulation when a threat is perceived. A multifactorial response usually leads to significant behavioral modifications and alterations in homeostasis and physical and psychological status. Moreover, stress is an emotional response that can lead to psychosocial and psychophysiological adversity. Military population, military operations, and combat exposure are important stressors that influence soldiers' acute and chronic stress responses, affecting their performance and health (Bustamante-Sanchez et al., 2020).

Heart rate variability (HRV) is primarily used to assess the function of the ANS, it consists of the sympathetic nervous system and the parasympathetic nervous system which coordinates the activities of the body's unconscious actions as a part of the peripheral nervous system. HRV is the rate of variability between each heartbeat with respect to time. It is used to analyze the ANS, a control system used to modulate the body's unconscious actions such as cardiac function, respiration, digestion, blood pressure, urination, and dilation/constriction of the pupil. Reduced HRV was generally associated with increased morbidity and stress. High HRV normally indicated good health, and in some instances, it could signify clinical events of interest such as drowsiness (Ishaque et al., 2021). Its standard of measurement, physiological interpretation, and clinical use was established previously (HRV, 1996). HRV analysis in sports also was described (Apor et al, 2009). In middle-aged Marathon runners' parasympathetic tone decreased (Brown & Brown, 2007)

The vegetative tone, a balance of sympathetic and parasympathetic activity can be measured by HRV. However, the measurement requires a heart pulsation measurement (ECG, pulse oximeter, bioimpedance, ultrasound, etc.) and computation (Ishaque et al, 2021). Another possibility is to use the Kerdo index (KI - Kerdo, 1961). We used the modified formula of the KI calculation:  $(1 - \text{diastolic blood pressure} / \text{heart rate} \times 100) + 100$ . It is modified by Sipos (Rokusfalvy et al., 1971; Bodo et al., 1995). In this descriptive study, we compared KI between young males and females during control and HDT position as well as middle-aged males and females without HDT.

The increase in pulse pressure (PP; systolic-diastolic) that occurs with advancing age is predominantly due to reduced arterial distensibility leading to decreased aortic compliance, particularly in the elderly, in whom high blood pressure mainly manifests as isolated systolic hypertension. Since age-related changes in stroke volume are minimal compared with changes in PP, PP is often considered a surrogate measure of arterial stiffness (Avolio et al., 2018). Because we have middle-aged groups, we compared PP to young groups.

Aging causes a decrease in the elasticity of arteries. It can be measured noninvasively with rheoencephalogram (REG) anacrotic (ascending portion) time. A standard for arteriosclerosis can be used based on Jenkner's data (Jenkner, 1970). Health is <180 msec (Bodo et al., 1995).

## Space and vegetive tone

Many of the physiological consequences of weightlessness and the cardiovascular abnormalities on return from space could be due, at least in part, to alterations in the regulation of the ANS (Robertson et al., 1994). Gravitational stress and volume regulation were detailed previously (Norsk, 1992). Thus, 6° HDT appears to be a valid model to induce psychological stress changes in the immune system, changes that might also be encountered by astronauts and cosmonauts during both a short stay in space, such as that required while orbiting a space station and in longer spaceflights (Rai et al., 2011).

The NASA NEUROLAB mission was the most comprehensive assessment of autonomic function in microgravity. It was demonstrated that the effectual autonomic challenge of spaceflight is small (Mandsager et al., 2015). It was concluded that baseline sympathetic outflow, however, measured, is higher in space than on earth, and that augmented sympathetic nerve responses to Valsalva straining, lower body suction, and post-flight upright tilt represent normal adjustments to greater hemodynamic stresses associated with hypovolemia (Eckberg et al., 2003). Despite decades of study, a clear understanding of ANS activity in space remains elusive (Mandsager et al., 2015).

## Methods

The site of the study was the Hungarian Armed Forces Aeromedical, Military Screening, and Healthcare Institute in Kecskemét, Hungary. The test procedure was by the Declaration of Helsinki and was approved by the Medical Research Ethics Review Board of the Ministry of Defense, Budapest, Hungary on September 16, 2020. The participant population was 19 young healthy volunteers (6 females (age  $23.0 \pm 1.79$  y) and 13 males (age  $22.54 \pm 1.39$  y) on the tilting table in the horizontal, supine position and -15° HDT. They were two to four-year pilot cadets (participating in Undergraduate Training at the National University for Public Servants Faculty of Military Sciences and Officer Training). Cadets were involved in physical fitness training (3.2 km running push up, sitting). Their mean height was  $173.67 \pm 5.5$  for females and  $179.46 \pm 5.77$  cm for males, and their body mass index (BMI) was  $21.10 \pm 2.45$  for females and  $23.79 \pm 1.98$  for males. There was no significant difference in these variables between the male and female groups. There was a significant group difference in weight (male  $76.62 \pm 7.16$  kg and female groups  $63.33 \pm 3.98$  kg;  $p=0.0001$ ). Abdominal circumference was significantly different ( $p=0.03$ ) for the male ( $84.31 \pm 5.41$  cm) and female ( $75.17 \pm 7.81$  cm) groups. In the middle-aged control groups, we used the arterial blood pressure (ABP) and heart rate (HR) data of 11 female and 28 male subjects without HDT. Males were fully trained and combat-ready pilots on fixed and rotary-wing aircraft. The women's control group involved high-rank officials from the annual medical evaluation. The mean age for females was 53.4 For control groups, we used the ABP and heart rate data of 11 female and 28 male middle-aged subjects without HDT. The mean age for females was  $53.45 \pm 5.16$  y and for males  $53.75 \pm 3.04$  y. BMI was  $23.55 \pm 3.72$  for females and  $25.47 \pm 2.49$  for males. The difference was significant:  $p=0.03$ .

A bedside monitor (BeneVision N15, Mindray North America, Mahwah, NJ) was used to record CO<sub>2</sub>, O<sub>2</sub>, peripheral (SpO<sub>2</sub>), and brain O<sub>2</sub> saturation by near-infrared spectroscopy (NIRS) with a 1/sec sampling rate. ABP was measured by the arm cuff on the left arm on the tilting table 6 times: 3 times during the control period and 3 times during the HDT position, in both cases before 30-second breath-holding. The analog REG pulse waves were generated by a bioimpedance amplifier (ReoRON-61, Medicor, Esztergom, Hungary). The sampling rate of the analog signal was 200 Hz with DataLyser (DL) software (Walter Reed Army Institute of

Research, Silver Spring, MD) which was used for data processing as well, and an analog-digital converter (USB 6211, National Instruments, Austin, TX). Data collection was performed with a laptop (Alienware, Dell, Round Rock, TX).

Text notes (ABP & HR) were entered during the recording as events with time stamps, which helped identify the challenges' start and stop and actual ABP & HR numbers during data processing. The measuring program (DataLyser) creates deidentified files by automatically generating both waveform and note file names. ABP & HR data were copied into an Excel spreadsheet (Microsoft, Redmond, WA) to calculate the mean + SD, and a t-test was used to compare groups. For additional calculation, we used (Prism, GraphPad Software, San Diego, CA). The balance of the ANS (KI) was calculated as described previously. Results were considered significant for P values <0.05.

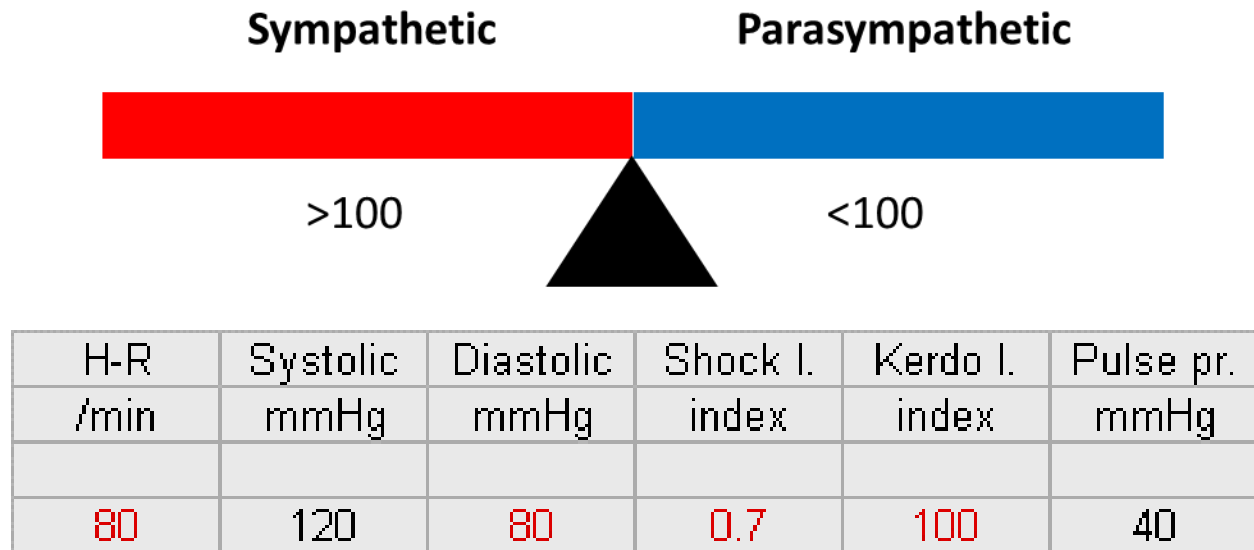


Figure 1. Illustration of the ANS balance with a sample KI number. H-R: heart rate; Shock I: shock index; Pulse pr: pulse pressure (systolic-diastolic).

HRV exists during resting conditions, called physiological arrhythmia. It is clear by the recorded arm bioimpedance signal: heart-related pulse waves are super-positioned on respiratory subharmonic. In the case of one measured subject (4/26/2), the peak-to-peak distance of the pulse wave was 845 and 755 msec depending on inhalation and exhalation. It is 71 and 79.5 beats per minute HR. HRV is clearly observable on the frequency spectrum of an arm bioimpedance signal.

### Results

There were significant group differences for both male and female groups, but the KI difference was not significant in either comparison (Fig. 2, 4). The highest correlation was between KI and HR in the young male group (Fig. 3). The KI difference was significant (p=0.04) between the young and middle-aged male groups (Fig. 6). Identical high correlation was between KI and HR in young and middle-aged female groups (Fig. 5). The female group's difference was not significant (p=0.37) (Fig. 7). In the middle-aged female group, the HR correlation to KI was the highest (0.74) (Table 3). REG anacrotic time and age showed parallel trend lines (Fig. 8). The

young male and female groups' physical fitness score correlation to KI was -0.058. The KI difference between the control and HDT was  $p=0.7$ ; the correlation coefficient was 0.66.

### **Result by groups**

#### *Young male and female groups*

The physical fitness score correlation coefficient to KI was -0.058. REG anaerobic time correlation coefficient to running score was 0.099. The difference in REG anaerobic time between males ( $87.15 \pm 10.54$ ) and females ( $86.03 \pm 25.05$ ) was not significant ( $p=0.43$ ). The trendlines for the hole group were: 1) age:  $y = 0.2544x + 20.14$ ,  $R^2 = 0.9197$ ; 2) REG anaerobic time:  $y = 0.0778x + 87.678$ ,  $R^2 = 0.0018$ .

#### *Young male and female groups in control*

There was no significant difference in these variables: age, height, BMI, systolic and diastolic blood pressure, HR, and KI. There was a significant group difference in weight (male mean:  $76.62 \pm 7.16$  kg) and (female mean:  $63.33 \pm 3.98$  kg;  $p=0.0001$ ). Abdominal circumference was significantly different ( $p=0.03$ ) for the male ( $84.31 \pm 5.41$  cm) and female ( $75.17 \pm 7.81$  cm) groups. The KI difference between the control and HDT was  $p=0.7$ ; the correlation coefficient was 0.66.

#### *Young male and female groups during HTD*

The difference between horizontal position (control) and HTD in systolic ( $p=0.47$ ), diastolic ( $p=0.35$ ) blood pressure, and heart rate ( $p=0.70$ ), KI (male:  $p=0.20$ ) and female ( $p=0.44$ ) were not significant.

#### *Young and middle-aged male groups*

The age, systolic and diastolic blood pressure, heart rate, and p values were  $< 0.0001$ . The weight was  $p=0.02$  and the BMI was  $p=0.01$ . The height ( $p=0.93$ ); KI (0.11) and PP difference ( $p=0.17$ ) were not significant. Significant differences were as follows: Weight ( $p=0.02$ ); BMI: ( $p=0.01$ ); Systolic, diastolic ABP and HR: ( $p<0.001$ ).

#### *Young and middle-aged female groups*

The age ( $p<0.001$ ), height ( $p=0.02$ ), and systolic ( $p=0.04$ ) diastolic ( $p=0.02$ ) blood pressures were significantly different. PP was not ( $p=0.75$ ).

### Gravitational Stress and Vegetative

Date	Age	Weight	Height	BMI	Abd circ	Systolic	Diastolic	PP	Heart R	Kerdo x
	years	kg	cm	kg/m <sup>2</sup>	cm	mmHg	mmHg	mmHg	/min	
<b>young male group</b>										
4/5/2022	22	73	178	23.0	81	126	67	59	47	99.6
4/5/2022	22	74	174	24.4	80	123	71	52	73	100.0
4/6/2022	22	65	168	23.0	82	120	63	57	56	99.9
4/8/2022	24	81	184	23.9	87	127	58	69	63	100.1
4/12/2022	21	75	175	24.5	83	115	53	62	44	99.8
4/19/2022	25	83	184	24.5	94	123	73	50	75	100.0
4/20/2022	23	90	182	27.2	91	130	72	58	67	99.9
4/20/2022	24	73	182	22.0	78	99	64	35	72	100.1
4/21/2022	20	80	183	23.9	86	115	67	48	61	99.9
4/21/2022	21	65	176	21.0	74	122	75	47	69	99.9
4/22/2022	23	74	190	20.5	86	115	60	55	73	100.2
4/26/2022	23	83	175	27.1	88	110	65	45	74	100.1
4/26/2022	23	80	182	24.2	86	111	50	61	67	100.3
mean	22.54	76.62	179.46	23.79	84.31	118	64	54	65	99.98
SD	1.39	7.16	5.77	1.98	5.41	8	8	9	10	0.18
R2	0.514	0.272	0.427	0.003	0.259	-0.458	-0.293	-0.185	0.774	
<b>young female group</b>										
4/6/2022	24	65	175	21.2	72	113	59	54	48	99.8
4/11/2022	26	68	170	23.5	80	115	69	46	65	99.9
4/14/2022	22	60	181	18.3	70	108	59	49	48	99.8
4/19/2022	22	62	169	21.7	80	101	49	52	54	100.1
4/25/2022	23	58	179	18.1	64	106	76	30	82	100.1
4/25/2022	21	67	168	23.7	85	119	73	46	78	100.1
mean	23.00	63.33	173.67	21.10	75.17	110	64	46	63	99.95
SD	1.79	3.98	5.50	2.45	7.81	7	10	9	15	0.15
P	0.59	0.0001	0.06	0.05	0.03	0.05	0.95	0.11	0.75	0.70
R2	-0.302	-0.061	-0.524	0.254	0.319	-0.201	0.273	-0.481	0.723	

Table 1. Data of young male (upper) and female (lower) groups. Mean and SD values are under each variable. **Significance (P)** indicates the level of significance between male and female young groups. Young male: n=13; young female: n=6. Abd circ: abdominal circumference. BMI: body mass index. PP: pulse pressure. Kerdo x: Kerdo index. R2: correlation coefficient of KI and a variable.

Gravitational Stress and Vegetative

	Age	Weight	Height	BMI	Systolic	Diastolic	PP	Heart R	Kerdo x
	years	kg	cm	kg/m <sup>2</sup>	mmHg	mmHg	mmHg	/min	
	60	75	180	23	144	94	50	89	100.0
	51	80	174	26	149	90	59	90	99.8
	59	88	183	26	145	94	51	78	100.0
	52	70	176	23	135	94	41	96	99.9
	52	90	175	29	139	89	50	80	99.8
	51	79	181	24	111	91	20	79	99.7
	51	82	180	25	133	97	36	72	99.9
	51	80	168	28	142	93	49	84	100.1
	57	89	180	27	140	92	48	101	99.5
	54	100	189	28	150	90	60	59	100.0
	55	70	170	24	150	90	60	87	100.1
	55	88	187	25	131	79	52	87	100.0
	51	92	182	28	140	90	50	89	100.0
	53	78	177	25	133	91	42	89	100.2
	56	90	184	27	145	77	68	91	99.9
	53	100	186	29	139	88	51	81	100.2
	51	80	190	22	142	89	53	106	100.1
	53	68	180	21	106	75	31	86	99.8
	54	73	172	25	134	88	46	75	99.7
	59	78	179	24	158	96	62	75	99.6
	50	100	182	30	134	93	41	68	99.6
	53	82	180	25	152	95	57	67	99.7
	51	63	168	22	156	109	47	84	100.0
	61	92	176	30	152	93	59	93	99.7
	51	83	186	24	155	101	54	79	100.1
	54	90	177	29	120	85	35	97	99.67
	53	80	183	24	136	92	44	69	99.24
	54	79	175	26	141	104	37	59	99.94
mean	53.75	82.82	179.29	25.74	139.71	91.39	48.32	82.50	99.86
SD	3.04	9.64	5.84	2.49	12.38	7.12	10.50	11.74	0.22
P	0.000	0.028	0.929	0.011	0.000	0.000		0.000	0.079
R2	-0.12	-0.08	0.03	-0.12	0.22	0.05	0.22	0.17	

Table 2. Data of middle-aged male group. Mean and SD values are under each variable. **Significance (P)** indicates the level of significance between young (n=13) and middle-aged male (n=28) groups. BMI: body mass index. PP: pulse pressure. Kerdo x: Kerdo index. R2: correlation coefficient of KI and a variable.

### Gravitational Stress and Vegetative

	Age	Weight	Height	BMI	Systolic	Diastolic	PP	HR	Kerdo x
	years	kg	cm	kg/m <sup>2</sup>	mmHg	mmHg	mmHg	/min	
	53	76	174	25.1	103	68	35	78	100.1
	53	68	163	25.60	109	75	34	57	99.7
	52	97	176	31.30	132	89	43	77	99.8
	51	75	164	27.80	122	68	54	59	99.8
	49	63	168	22.30	110	69	41	61	99.9
	49	53	160	20.70	158	92	66	107	100.1
	54	58	168	20.60	104	56	48	87	100.4
	68	64	161	24.70	132	84	48	68	99.8
	55	60	170	20.76	130	90	40	71	99.7
	52	57	164	21.20	115	77	38	62	99.8
	52	52	163	19.00	140	95	45	56	99.3
mean	53.45	65.73	166.45	23.55	123.18	78.45	44.73	71.18	99.86
SD	5.16	13.05	5.22	3.72	17.08	12.48	9.24	15.46	0.28
R2	-0.11	0.10	0.26	0.06	-0.28	-0.60	0.29	0.74	

Table 3. Data of middle-aged female group. Mean and SD values are under each variable. R2: correlation coefficient to KI. BMI: body mass index. PP: pulse pressure. Kerdo x: Kerdo index. R2: correlation coefficient of KI and a variable.

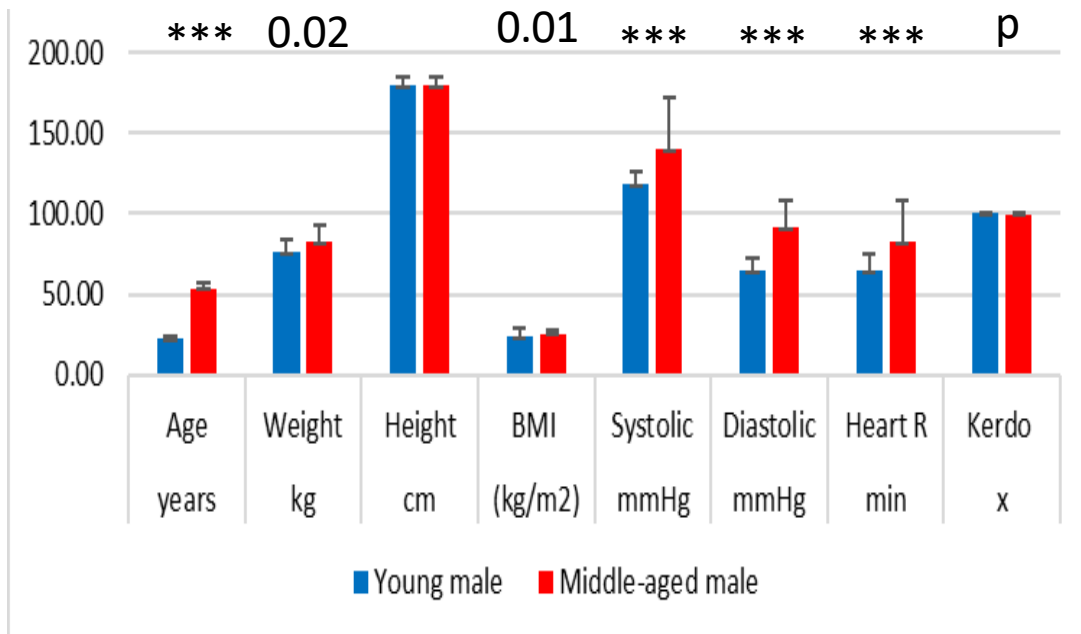


Figure 2. Mean values (+SD) of variables in young and middle-aged male groups. Significance is indicated with numbers and \*s and **colorized**. \*\*\*=P<0.001.



### Gravitational Stress and Vegetative

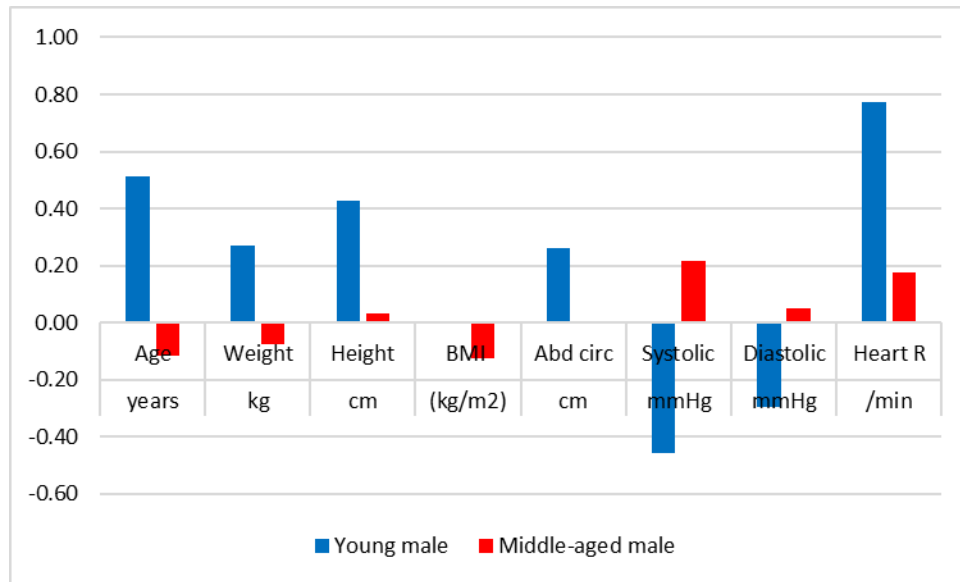


Figure 3. Correlation coefficients between variables and KI for young and middle-aged males.

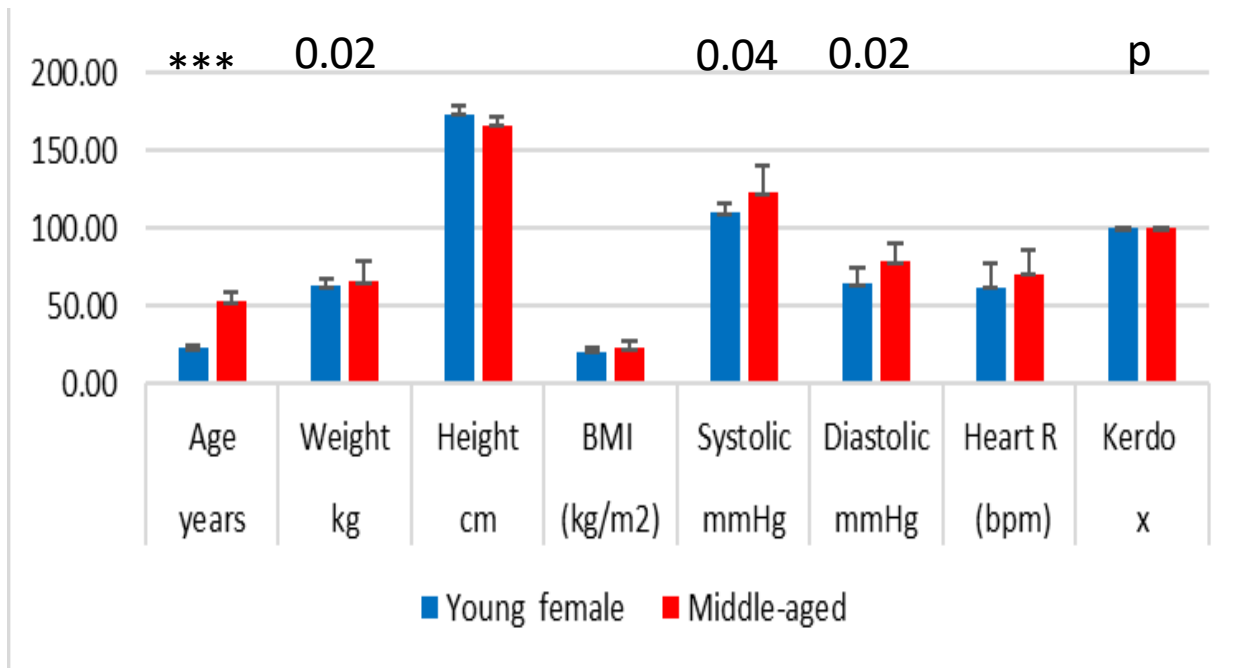


Figure 4. Mean values (+SD) of variables in young and middle-aged female groups. Significance is indicated with numbers and \*s and **colorized**. \*\*\*=P<0.001.

### Gravitational Stress and Vegetative

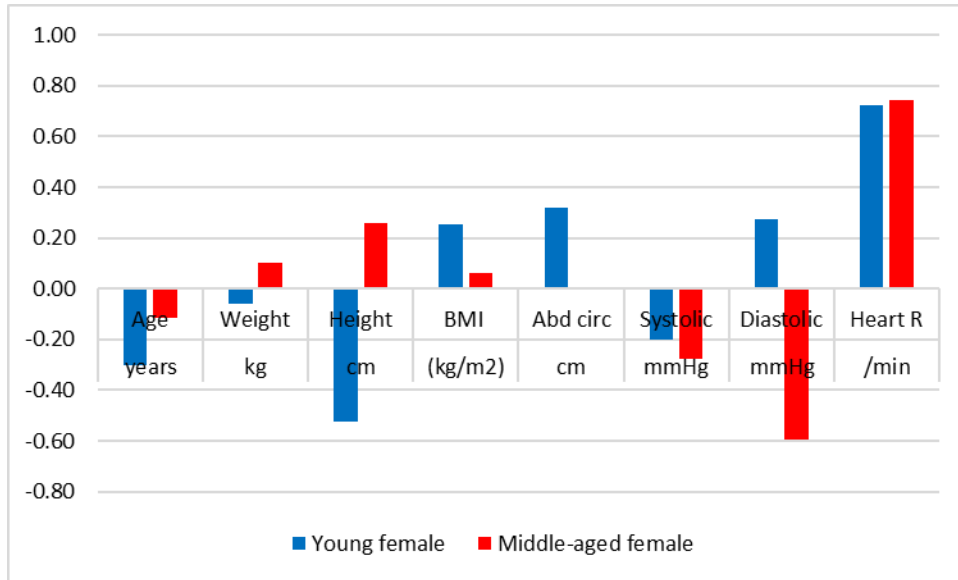


Figure 5. Correlation coefficients between variables and KI for young and middle-aged females.

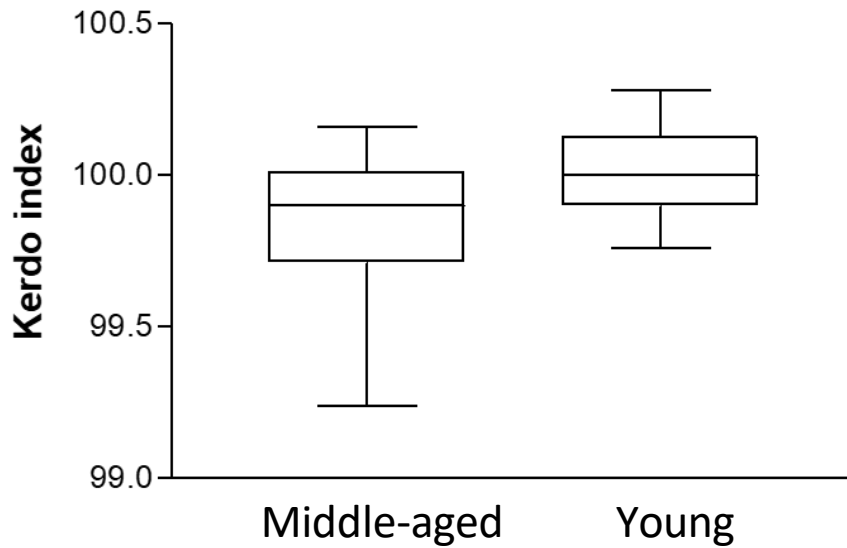


Figure 6. Kerdo index comparison in young and middle-aged male groups. Result of the Wilcoxon signed rank test: P value = 0.0418.

### Gravitational Stress and Vegetative

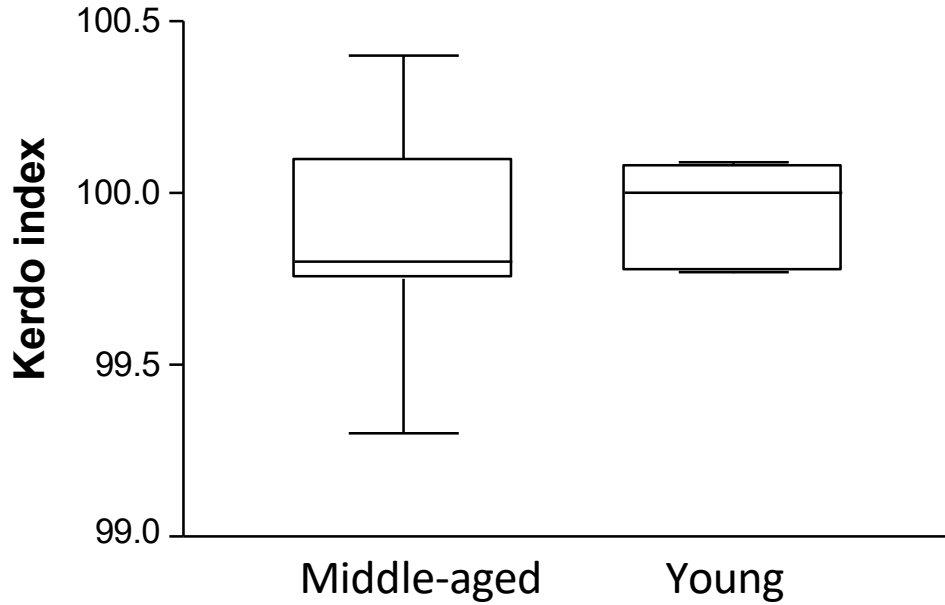


Figure 7. Kerdo index comparison in young and middle-aged female groups. Result of the Wilcoxon signed rank test: P value = 0.3752.

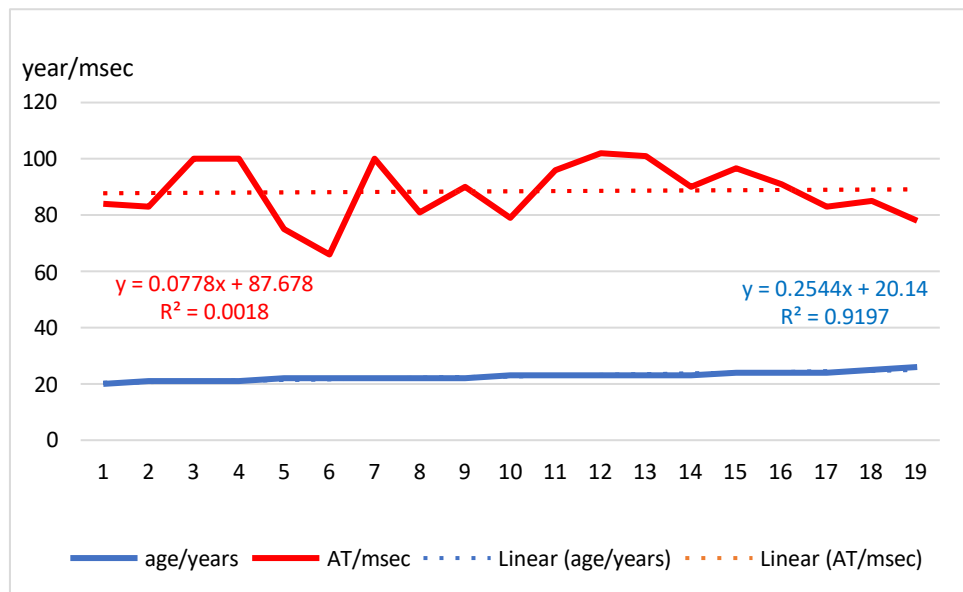


Figure 8. Age (blue) and REG anacrotic time (AT; red) values and their linear regression after sorting by age in young groups. See the equation of the regression lines and correlation coefficients in the figure.

## Discussion

In this descriptive study, we compared biometric data and physiological variables of 1) young female and male groups in the control and during the HDT test; 2) middle-aged female to the middle-aged male group; 3) young groups to middle-aged groups. As part of these comparisons, we calculated a less-known index of vegetative tone (KI).

A PubMed search with these keywords: “vegetative state and gravitational stress”, “space flight and vegetive tone” and “vegetive tone and pilots” resulted in no hits in PubMed. Below we offer an overview of related aspects and note our experiences with KI and used variables.

The typical measure of ANS activity is HRV. HRV can be used to provide specific, quantitative information about the balance between parasympathetic and sympathetic nervous system influences on heart rate control mechanisms (Butler et al, 1994; Yamamoto et al., 1992). It requires hardware and software. Since the ABP measurement is part of a routine test for pilots and on ISS, it is possible to calculate the Kerdo index from diastolic blood pressure and heart rate numbers to characterize the status of the tone of ANS.

HRV analysis was used for fighter pilots during a proficiency test (Mansikka et al, 2016). The methods description details the software used to calculate HRV. These programs are not available in every testing facility, and they are expensive, compared to the blood pressure measurement and KI calculation, which can be done in an Excel spreadsheet (Microsoft, Redmond, WA).

The cardiac pacemaker ignites and coordinates the contraction of the whole heart, uninterruptedly, throughout our entire life. The pacemaker rate is constantly tuned by the ANS to maintain body homeostasis. Sympathetic and parasympathetic terminals act over the pacemaker cells as the accelerator and the brake pedals, increasing or reducing the firing rate of pacemaker cells to match physiological demands. Despite the remarkable reliability of this tissue, the pacemaker is not exempt from the detrimental effects of aging (Choi et al., 2022). It was described in a rat study that in old age, due to an increase in the tone of vegetative centers, herewith the parasympathetic effects on the myocardium prevailed sympathetic (Kulik et al., 2020). Our data showed sympathicotonia in young and parasympathicotonia in middle-aged groups (Fig 6).

The KI was sensitive to the prognosis of meteorological changes (Kerdo, 1961); to circulatory stress (Bodo et al., 2010). Also, it was able to quantify cardiovascular and autonomic stress responses before vital signs are abnormal in a rat study (Sharma et al., 2015). Regarding the vegetative tone, it was established: “Nordic walking is a wellness technology available to people of all ages with varying fitness levels and health conditions. When planning a course of Nordic walking in adolescents it is necessary to consider the type of initial vegetative tone and choose the right time for classes: with vagotonia, they should be carried out in the evening, with sympathicotonia - in the morning” (Nezhkina et al., 2021).

Everybody in the young groups has healthy, elastic, non-sclerotic arteries (Fig. 8). This result is like the result of another healthy group, where the graph of the sorted age and the REG anacrotic time were about parallel (Szalay et al., 2006).

Pulse pressure reflects the stiffening of large arteries and is associated with several cardiovascular risk factors. Pulse pressure also predicts events in epidemiologic studies, but the elucidation of an independent role is hampered by the close correlation between pulse pressure and systolic blood pressure (Strandberg & Pitkala, 2003). Because our control groups were middle-aged, we calculated the PP as well. The non-significant difference in PP can be

interpreted as middle-aged military personnel requiring physical fitness training and not representing the average (less physically active) population.

*Space and vegetive tone*

The basic circulation physiology of early spaceflight was summarized previously (Yegorov, 1979; Avolio et al., 2018). “During the 63-day flight showed functional changes were found: general asthenization and signs of vegetative-vascular intolerance” (Beregovkin et al., 1977). Unfortunately, it is impossible to calculate KI from these publications. Hopefully in the future input data will be available from ISS to calculate KI.

*Many effects of weightlessness on nervous functions require monitoring of the ANS (NASA 1965).*

Countermeasures will be beneficial to prevent autonomic dysfunctions related to gravitational stress such as those encountered in bedridden subjects such as orthostatic hypotension, and atrophy of antigravity muscles. The knowledge accumulated from studies on autonomic neural functions in space should be very useful to establish effective countermeasures and preventive methods for gravity-dependent autonomic dysfunctions (Mano, 2005).

*Long-Covid Syndrome (LCS) – the unexpected actuality*

Long-Covid is a newly described illness involving dysautonomia and orthostatic tachycardia syndrome (Davis et al., 2023), hemodynamic cardiovascular autonomic abnormalities (Hira et al., 2022), and cardiovascular autonomic dysfunction and postural orthostatic tachycardia syndrome (Fedorowski & Sutton, 2023). LCS is a problem for aviation medicine as well as for space flight.

The coronavirus disease 2019 (COVID-19) pandemic was declared a global health emergency in early 2020 and has since affected globally, as of 9:19 am CEST, 29 March 2023, there have been 761,402,282 confirmed cases of COVID-19, including 6,887,000 deaths, reported to WHO. As of 28 March 2023 (WHO). The SARS-CoV-2 (COVID-19) pandemic has caused unprecedented morbidity, mortality, and global disruption. It encompasses a plethora of debilitating symptoms (including breathlessness, chest pain, palpitations, and orthostatic intolerance) which can last for weeks or more following mild illness (Dani et al., 2021). Because of its importance, we must mention an unexpected aspect of our study. It is the post-Covid or long syndrome, also called long-Covid. Here we refer only to the ANS aspect of it since such a condition has vital importance for both pilots and astronauts. A significant proportion of patients infected with SARS-CoV-2 experience new, recurring, or ongoing symptoms. Most frequent neurological symptoms include fatigue, memory/attention deficits, sleep disorders, myalgias, and hyposmia usually 3 months after infection that may last for weeks or months and comprise the so-called Long-COVID Syndrome. ANS maladaptation has been proposed as a possible pathogenetic underlying mechanism. A case-control study was conducted to investigate if ANS dysfunction may contribute to LCS (Papadopoulou et al, 2022). Quantification of ANS status was used in another study (Kemp et al., 2019). The condition may be related to a virus- or immune-mediated disruption of the ANS resulting in orthostatic intolerance syndrome (Dani et al., 2021). The possible mechanisms underpinning the *dysregulation of the ANS* were detailed elsewhere (Bisaccia et al., 2021). A publication raised awareness of Postural Orthostatic Tachycardia Syndrome (POTS) as a possible long-term complication following COVID-19

infection. Presented diagnostic principles for an accurate POTS diagnosis. Proposed treatment regimens in patients with persistent POTS symptoms (Johansson et al., 2021). A study revealed parasympathetic overtone and increased HRV in patients with a history of COVID-19. This may explain the unresolved orthostatic symptoms occurring which may be associated with autonomic imbalance (Asarcikli et al., 2022). It was stated that patients with post-acute sequelae of COVID-19 have evidence of cardiovascular autonomic abnormalities (Hira et al., 2022). POTS is a common *cardiovascular autonomic dysfunction* characterized by an excessive heart rate (HR) increase on standing and symptoms of orthostatic intolerance, posing significant limitations on functional capacity. An objective tool was created to classify symptom burdens in POTS by (Spahic et al., 2022). The head-up tilt test is commonly used for the evaluation of orthostatic syndromes and dysautonomia (Aponte-Becerra & Novak, 2021). These facts point out the measurement of autonomic balance (measured maybe with KI) since measuring ADBP and HR – can be done at home until computational HRV monitoring will be available in a wristwatch or similar small, cheap device.

### Conclusion

- Kerdo index can be used to quantify the balance of ANS (sympathetic–parasympathetic tone) during HDT position.
- During HDT position did not change the tone of ANS compared to the control in the young group.
- The level of physical fitness in the young group helped maintain the balance of the ANS during HDT.
- It is suggested to introduce ANS testing in military personnel, pilots, astronauts, and space travel tourists.
- The function of baroreflex and vascular response decreases with age; therefore, age must be considered for military pilots, astronauts, and space travel tourists.
- Unexpected actuality: Long-Covid
- Long-Covid causing cardiovascular autonomic dysfunction and postural orthostatic tachycardia syndrome (Fedorowski & Sutton, 2023).
- Long-Covid requires special attention for pilots and astronauts as well as a space tourist.
- We plan to compare HRV and KI in future studies.

### Limitations of the study

- We were unable to compare the young group's KI to the middle-aged in HDT position since they were not measured in HDT.
- We don't have REG anacrotic time in middle-aged groups.
- We have no data on middle-aged groups' physical fitness status.
- KI has no age-related standard.
- We were unable to compare KI to HRV since we don't have a program to calculate HRV.
- We were unable to compare KI in healthy and long-Covid groups.
- We did not measure long-Covid persons.

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## FEAR OF SARS-COV-2 INFECTION AND ANXIETY SYMPTOMS

### **Fear of SARS-CoV-2 infection and its association with anxiety symptoms in Portuguese university students: the mediation role of stress and sleep difficulties**

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## FEAR OF SARS-COV-2 INFECTION AND ANXIETY SYMPTOMS

### Abstract

**Introduction:** The COVID-19 pandemic is associated with considerable mortality and psychological distress worldwide. **Objectives:** To investigate the relationship between fear of being infected with SARS-CoV-2, stress, sleep difficulties and anxiety, and whether the association between fear of infection and anxiety is mediated by stress and sleep difficulties. **Methods:** 595 university students (mean age $\pm$ SD=23.80 $\pm$ 7.91 years; females 76.3%) completed the Mental Health Inventory, the Perceived Stress Scale, the Pandemic Stress Index (PSI), and three items from the Insomnia Scale, which assessed difficulties in initiating (DIS), maintaining sleep (DMS), and early morning awakenings (EMA). A Sleep Difficulty Index (SDI) was calculated by summing the scores of these three items. Fear of being infected was evaluated using a single item (PSI). **Results:** Only 1.7% of the students were vaccinated against SARS-CoV-2; 85.5% reported fear of infection; 38.9% mentioned DIS, 26.3% DMS, and 15.5% EMA; 19.7% had a high SDI score and 18.5% anxiety (1SD $\geq$ Mean). Anxiety was associated with younger age, female/“other” gender, fear of infection, stress, and sleep difficulties. Mediation analyses showed an indirect link between fear of infection and anxiety through (1) stress, (2) sleep difficulties, and (3) the effects of stress on sleep difficulties. **Conclusions:** In future health crises with high risk of contagion, health agencies, and the media should provide timely and accurate information about the disease and risk of contamination by the pathogen and publicize strategies to prevent its spread. Interventions aimed at reducing anxiety should consider fears of infection, stress reduction strategies, and the promotion of healthy sleep habits.

**Keywords:** COVID-19 Pandemic; Fear of SARS-CoV-2 Infection; Anxiety; Sleep Difficulties; Stress

# FEAR OF SARS-COV-2 INFECTION AND ANXIETY SYMPTOMS

## Introduction

The COVID-19 pandemic is associated with considerable mortality and psychological distress worldwide, including anxiety symptoms and anxiety disorders.

Fear is an adaptive response to situations of threat and danger. However, if fear is excessive, it can be maladaptive and have negative effects on mental / psychological health (Mertens et al., 2020). The possible threat to life and uncertainty are aspects that characterize the pandemic situation and that can contribute to an increase in the fear of contracting the virus (Rodriguez-Hidalgo et al., 2020). In this regard, it is worth mentioning its rapid expansion worldwide, the high increase in the incidence of cases with SARS-CoV-2, with daily rates of new cases being described daily in the media, the uncertainty about its evolution and the immunity of patients who have been infected, the high risk of death, the mortality rates reported daily by health entities, the initial absence of a vaccine, the uncertainty and questions regarding the side effects of the vaccine when it appeared, with the description in the media of cases of death after its administration. To attest to the dangerousness of the virus we can mention hygiene measures implemented, such as hand disinfection and wearing masks, social distancing to minimize close contact and prevent transmission, the need for confinement and social isolation to prevent the spread of the disease, ban on entering and leaving high-risk geographical areas. These drastic measures have brought about significant changes in lifestyles, but have been adopted by governments worldwide, despite the associated personal, economic, and social detriments, as they are crucial in mitigating the impact of the pandemic and protecting health.

All these aspects contributed to a widespread awareness that the pandemic posed a real threat to all people on a global scale. Within this context, fear of being infected with SARS-CoV-2 can also reach a high prevalence in the general population.

The COVID-19 pandemic has undoubtedly affected people's mental health and social life. The increase in psychological distress during the COVID-19 pandemic, including in the Portuguese population (Maia & Dias, 2020; Pereira et al., 2022a) is well supported in the literature. The increase in anxiety, stress, sleep difficulties and fear of getting the virus during the COVID-19 pandemic has been described since the first studies carried out on the consequences of the pandemic on mental health (Gritsenko et al., 2020; Huang & Zhao, 2020; Sandín et al., 2020; Savitsky et al., 2020)

Therefore, it is relevant to know the factors associated and that may contribute to the increase of psychological disturbance, including anxiety, in situations of public health crisis, such as the COVID-19 pandemic. One of the objectives of this study was to explore some of the correlates of anxiety during the COVID-19 pandemic.

Findings from the literature show that fear of being infected with the SARS-CoV-2 virus is a correlate of psychological distress (Pereira et al., 2022b), anxiety, stress (e.g., Bitan et al., 2020; Çürük et al., 2023; Rodriguez-Hidalgo et al., 2020), and sleep quality/insomnia (De Los Santos et al., 2022; Çürük et al., 2023; Siddique et al., 2021). For example, a study of nursing students found that fear of COVID-19 predicted anxiety, and that both fear of COVID-19 and anxiety were predictors of insomnia. Siddique et al. (2021) also found that stress mediated the association between fear of COVID-19 and poor sleep quality for both men and women.

Another correlate of anxiety in the COVID-19 pandemic is stress (e.g., Rodriguez-Hidalgo et al., 2020). Another correlate and also risk factor of anxiety symptoms/disorder is insomnia/sleep difficulties, and there is also empirical evidence that the relationship may be bidirectional (Winokur, 2015). The relationship of stress with sleep difficulties and psychological distress has been described in several studies, conducted before the pandemic and during the pandemic, including those using samples of Portuguese students (Amaral et al., 2018; Sousa, 2023).

## FEAR OF SARS-COV-2 INFECTION AND ANXIETY SYMPTOMS

Although the association of these variables with anxiety is well supported by the literature, to our knowledge, no study has analyzed the processes linking fear of being infected with SARS-CoV-2 to anxiety, considering stress and sleep as mediators.

The aims of the present study were to analyze the relationship between fear of being infected with SARS-CoV-2, stress, sleep difficulties, and anxiety, and whether the association between fear of infection and anxiety is mediated by stress and sleep difficulties.

### Methods

#### Procedures and Sample

The present study is part of the research project titled “*Impacto psicossocial da pandemia COVID-19*”/ “Psychosocial impact of COVID-19 pandemic” (Soares et al., 2020), which was approved by the Ethics Committee and the Scientific Council of the Faculty of Medicine of the University of Coimbra (Ref. CE-156/2020).

Data were collected through an online survey using a Google form. Students aged 18 years or older were invited to participate and were informed, prior to their participation, of the research objectives. The confidentiality of the information collected was also guaranteed. Participants gave their informed consent on the first page of the online questionnaire by clicking “yes” if they agreed to participate. The online questionnaire was then distributed by the relevant entities of the higher education institutions and through social media. The period of completion of the questionnaire was between 28 January and 23 April 2021, corresponding to a phase of mandatory confinement decreed by the Portuguese government.

The sample consisted of 595 university students (mean age $\pm$ SD= 23.80 $\pm$ 7.91 years) from several Universities in mainland and Madeira and Azores Islands. They were mostly female (76.3%, n= 454) and participants of other gender represented .8% (n= 4). They were also mostly single (89.7%, n= 534) and attending the first three years of their courses (58.8%, n= 350).

#### Instruments

The online survey included the Portuguese versions of the following measures:

##### **Mental Health Inventory (MHI, Pais-Ribeiro, 2001).**

The MHI consists of 38 items, which assess psychological well-being and psychological distress. Answers to the items are measured on a scale between 1 (*Never/almost never*) and 5 (*Always/almost always*). In this study, the Anxiety subscale of the MHI was used to assess anxiety symptoms. The higher the score of the Anxiety subscale, the lower the severity of anxiety symptoms.

##### **Perceived Stress Scale (PSS, Amaral et al., 2014, Cohen et al., 1983)**

The Perceived Stress Scale assesses perceived stress over the past month, namely the unpredictability, uncontrollability, and overload associated with daily living situations. It consists of 10 items, scored on a five-point scale, ranging from 0 (*Never*) to 4 (*Always*). Higher scores correspond to higher levels of perceived stress.

##### **Insomnia Scale (IS, Azevedo & Bos, 2006)**

Three items of the Insomnia Scale were used to evaluate difficulties in initiating (DIS: Did you have difficulty falling asleep?), maintaining (DMS: Did you wake up several times during the night or did you have difficulty falling back asleep after waking up?) and early morning awakenings (EMA: Did you wake up too early in the morning and could not fall back asleep?). The items were answered on a 5-point scale, from 1 (*Never/almost never*) to 5 (*Almost always/always*). By summing the scores of these three items, the Sleep Difficulty

## FEAR OF SARS-COV-2 INFECTION AND ANXIETY SYMPTOMS

Index (SDI) was also calculated. The higher the DIS, DMS, EMA, and SDI scores, the more severe the sleep difficulties are.

### **Pandemic Stress Index (PSI, Harkness et al. 2020)**

The Pandemic Stress Index (PSI) assesses three dimensions of pandemic stress: *Behaviour Changes* (BC, assesses changes in behaviour in response to COVID-19), *Impact of COVID-19 on daily life* (I, a single item that assesses the overall impact of COVID-19 on the individual's daily life) and the *psychosocial impact* of COVID-19 (PI, refers to emotional distress, substance use, sexual behaviour, financial stress, stigma and support).

The PSI has been translated and adapted into several languages, including Brazilian Portuguese, and was translated and adapted into European Portuguese by our research group, following the usual translation and back-translation procedures: the original English version was translated into European Portuguese by two independent and bilingual health professionals; these two translations of the PSI into Portuguese were compared and the divergences overcome, resulting in a synthesized version, which was subsequently back-translated into English by a translator who did not have access to the original version. Finally, the back-translation into English was compared with the original version and there was great parallelism between the formulations of the items of both. The response options to some questions were slightly changed (e.g., the "check of all items that apply" to "No"/ "Yes" response options) to be incorporated into the online questionnaire. In addition to the original ISP items, additional items were included to cover their manifestation in the last month. PSI as concurrent validity with Perceived Stress Scale in the sample of university students of the present study: BC,  $r = .225$  ( $p < .01$ ), I,  $r = .086$  ( $p < .05$ ), PS,  $r = .490$  ( $p < .01$ ), PSI total score,  $r = .489$ .  $p < .01$ ).

Three *No* (0)/*Yes* (1) questions from the PSI (PI dimension) were selected to assess fear of contracting SARS-CoV-2, participants who have been diagnosed with the disease, and those who experience heightened anxiety during the COVID-19 pandemic [3. *Which of the following are you experiencing (or did you experience) during COVID-19 (coronavirus)?* 3.1 *Being diagnosed with COVID-19*, 3.2. *Fear of getting COVID-19*, 3.8. *More anxiety*]

### **Statistical analysis**

The data were analyzed with SPSS, 27<sup>th</sup> version (IBM Corporation 1989, 2020) and PROCESS macro 3.5.3. (Hayes, 2013). Descriptive statistics were performed and the normality of the distribution of continuous variables was assessed based on their skewness and flatness values. When the distribution of the variables was close to normality (asymmetry (Sk) and kurtosis (Ku) indices close to 0 ( $-1 < Sk$  and/or  $Ku < 1$ ), parametric inferential tests were used, otherwise non-parametric tests were applied. To study the relationship between the variables and anxiety, we used Pearson's, Biserial's and Spearman's correlation coefficients, as appropriate, and applied Cohen's (1988) criteria to determine their magnitude: low - from  $r = .10$  to  $.29$ ; moderate - from  $r = .30$  to  $.49$ ; high - from  $r = .50$  to  $1.0$ . To assess differences in anxiety levels by gender, we also applied the Kruskal-Wallis H-test and the Mann-Whitney U-test.

To explore the relationship between fear of getting SARS-CoV-2 (variable X) and Anxiety (variable Y), using Stress (Mediator 1, M1) and Sleep (M2) as mediators, serial multiple mediator mediation analysis - model 6 (Hayes, 2013) was employed using PROCESS macro for SPSS (version 3.5.3, 2017-2022). Confidence intervals (CIs) from bootstrap analysis for indirect effects were calculated repeatedly on 5000 samples, thus estimating the model on each sample and calculating the indirect effects, and deriving the final confidence intervals. The confidence level for the CIs is 95%. An indirect effect is

## FEAR OF SARS-COV-2 INFECTION AND ANXIETY SYMPTOMS

different from zero with a 95% CI if the zero value is not contained in the CI. Otherwise, if it is contained in the 95% CI, then the indirect effect is not statistically different from zero.

### Results

#### Descriptive statistics

At the time of the assessment, only 1.7% of students were vaccinated against SARS-CoV-2 and 6.7% (n= 47) of participants had already been diagnosed with COVID-19. Fear of SARS-CoV-2 infection was described by 85.5% (n= 509) of participants. Severe anxiety symptoms (scores  $1SD \geq \text{Mean}$ ) were reported by 18.5% of participants and 83.5% (n= 243) of the students described a worsening of anxiety during the pandemic.

Global sleep difficulties with severity (SDI scores  $1SD \geq \text{Mean}$ ) was reported by 19.7% (n= 117) of students; 38.9% (n= 231) described DIS with severity (*Often/Almost always, always*), 26.3% (n= 156) DMS and 15.5% (n= 92) EMA.

The descriptive statistics of numeric continuous variables are described in Table 2.

#### Variables associations with anxiety symptoms

Anxiety was modestly associated with younger age. Compared to males ( $M \pm SD = 39.45 \pm 10.11$ ) females ( $33.78 \pm 9.55$ ) and “other” gender participants ( $23.75 \pm 8.30$ ) described higher levels of anxiety, as well as females compared to “other” gender students ( $H = 38.82, p < .01$ ). (Table 1)

Table 1: Correlations between anxiety symptoms§ and gender N= 595

Variables	Anxiety symptoms Mean (SD)	Test	Multiple Comparisons Mann-Whitney U
Gender			
Male (1)	39.45 (10.11)	H= 38.82**	1>2**, 3** 2>3*
Female (2)	33.78 (9.55)		
“Other” (3)	23.75 (8.30)		

\* $p < .05$ ; \*\* $p < .01$ ; § MHI- Anxiety: an higher score corresponds to lower anxiety levels; H= Kruskal-Wallis test

Anxiety was also associated with perceived worsening of anxiety symptoms during the pandemic ( $r_s = -.43, p < .01$ ), higher levels of fear of being infected by SARS-CoV-2, perceived stress, and sleep difficulties. The fear of SARS-CoV-2 Infection was associated with the same variables (Table 2).

## FEAR OF SARS-COV-2 INFECTION AND ANXIETY SYMPTOMS

Table 2: Correlations between anxiety symptoms§ and age, fear of infection, stress and sleep (N= 595)

Variables	Anxiety symptoms§ Test	Mean±SD N (%)
Age (years)	rs= .232**	23.80±7.91
Fear of SARS-CoV-2 Infection	rs= -.154**	.86 (.35)
Perceived Stress	r= -.833**	23.25 (7.71)
Difficulties Initiating Sleep	rs= -.447**	3.05 (1.30)
Difficulties Maintaining Sleep	rs= -.434**	2.49 (1.28)
Early Morning Awakenings	r= -.380**	2.16 (1.78)
Sleep Difficulties Index	r= -.542**	7.70 (2.99)
Pandemic worsening of anxiety	rs= -.433**	--

\*p<.05; \*\*p<.01; ‡Multiple Comparisons were performed with Mann-Whitney U test; §MHI-Anxiety scores: a higher score corresponds to lower anxiety levels; rs= biserial correlations/Spearman's correlation coefficients, r= Pearson's correlation coefficients; Pandemic worsening of anxiety: worsening of anxiety symptoms during COVID-19 pandemic (No/Yes).

### Mediation analysis

Regression Coefficients, Standard Errors, and model summary information for anxiety serial multiple mediator model are described in Table 3, and depicted in Figure 1.

The variables explained 71.6% of the variability of anxiety. Although no direct effect of fear of SARS-CoV-2 infection on anxiety was observed ( $c' = -.8986$ ;  $t = -1.5486$ ;  $p = .1219$ ; 95% CI= .2407 to -.0907), the total effect ( $c = -4.3971$ ;  $t = 4.1416$ ;  $p < .001$ ; 95% CI= -2.3127 to -.4439) and the total indirect effect ( $c-c' = -3.4985$ ; 95% CI= -5.2975 to -1.6362) were statistically significant.

The serial multiple mediator mediation analysis showed an indirect link between fear of SARS-CoV-2 infection and anxiety (1) through stress ( $X \rightarrow M1 \rightarrow Y$ , effect= -2.7878; IC95%= -4.3739 to -1.1328), (2) through sleep difficulties ( $X \rightarrow M2 \rightarrow Y$ : effect= -3.3985; IC95%= -.8109 to -.0103), and (3) through the effect of stress on sleep difficulties ( $X \rightarrow M1 \rightarrow M2 \rightarrow Y$ : effect= -.3122, IC95%= -.5198 to -.1246).



## FEAR OF SARS-COV-2 INFECTION AND ANXIETY SYMPTOMS

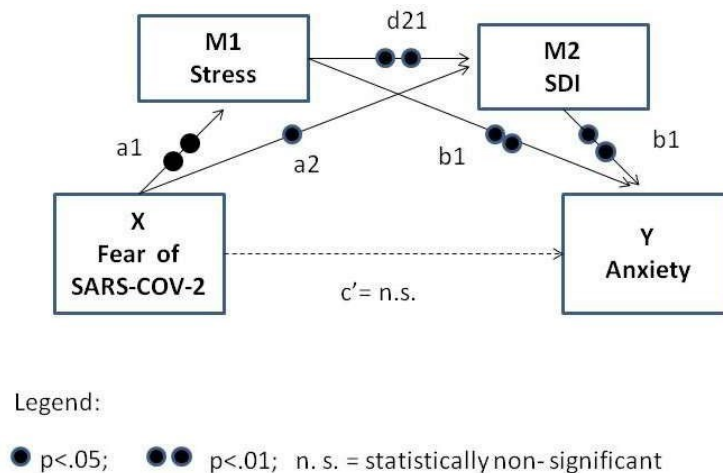
Table 3: Regression Coefficients, Standard Errors, and model summary information for anxiety serial multiple mediator model, depicted in Figure 1

Variables	PSS (M1)				SDI (M2)				Anxiety (Y)			
		coeff	SE	p		coeff	SE	p		Coeff	SE	p
Fear of SARS-CoV-2 (X)	a1	2.9416	.7667	<.001	a2	.5865	.2962	.0481*	c'	-.8986	.5803	.1219
PSS (M1)		--	--	--	d21	.1562	.0134	<.001	b1	-.9477	.0286	<.001
SDI (M2)		--	--	--		--	--	--	b2	-.6794	.0737	<.001
Constant	iM1	20.3636	.7667	<.001	iM2	3.5763	.3852	<.001	iY	61.1124	.7975	<.001
Model statistics	R <sup>2</sup> = .0177				R <sup>2</sup> = .1750				R <sup>2</sup> = .7159			
	F(1, 703)= 12.6541 , p<.001				F(2,702)= 74.4333, p< .001				F(3;701)= 588.9420 , p< ,001			

PSS- Perceived Stress Scale Total Score; SDI: Sleep Difficulties Index; M1, M2 = Mediators 1 and 2

## FEAR OF SARS-COV-2 INFECTION AND ANXIETY SYMPTOMS

Figure 1: The serial multiple mediator model linking the Fear of SARS-CoV-2 Infection to Anxiety, with stress and SDI as mediators



### Discussion

At the time of the participants' assessment, it was already known that the vaccine exists, which was a reason for hope. However, few people in Portugal were vaccinated at that time. In the present sample, only 1.7% of the students were vaccinated against SARS-CoV-2 and 6.7% of the participants had already been diagnosed with COVID-19. The fear of SARS-CoV-2 infection was described by about 86% of the participants.

About 84% of Portuguese students experienced an intensification of anxiety in the pandemic period, which confirms the results of other studies, showing an increase of psychological distress in higher education students in Portugal (Maia & Dias, 2020; Pereira et al., 2022a). Severe anxiety symptoms were reported by 18.5% of the participants. The prevalence of anxiety in university students of the present study is within the range described by Liyanage et al. (2022) in the systematic review on the estimation of the global prevalence of anxiety among university students during the COVID-19 pandemic (range from 11% to 89%; summary prevalence 41%), but was lower than that found for Europe (51%).

Global sleep difficulties (SDI) with severity (the SDI score is of  $1SD \geq \text{Mean}$ ) were reported by 19.7% of students; 38.9% described severe DIS (*Often/Almost always, always*), 26.3% DMS and 15.5% EMA.

These percentages are higher than those found in the pre-pandemic period by Azevedo et al. (2009) (DIS and SMD were described as "Frequently, Very frequently and/or Always" by 19.0% and 6.1% of students, respectively), than those reported by Azevedo et al (2010) in a 2-year longitudinal study (DIS were described as "Frequently, Very frequently and/or Always" by between 16.8% and 18.9% of the students; DMS by between 5.2% and 6.9%), and than the ones observed by Amaral et al (2018) (29.8% reported DIS; 27.9% DMS, and 30.9% EMA). This comparison of sleep difficulty rates before and after the pandemic is suggestive of a consistent increase in difficulties in initiating sleep during the pandemic.

One aim of the present study was to analyze the correlates of anxiety during the COVID-19 pandemic. Particularly vulnerable to anxiety during this period are young students, females and other gender participants. The finding that women and younger people show higher levels of anxiety confirms the results of other studies (Huang & Zhao, 2020; Liyanage et al, 2022; Sandín et al., 2020). The number of cases with "other" gender is low, so studies with this population, in Portugal, are needed to confirm their high propensity for

## FEAR OF SARS-COV-2 INFECTION AND ANXIETY SYMPTOMS

anxiety, psychological distress described in the research in gender and sexual minorities (e.g., Chakraborty et al, 2011; Datta & Mukherjee,2023).

Anxiety is also related to fear of being infected with SARS-CoV-2, higher levels of stress and sleep difficulties, which is in line with findings from other studies.

Another aim of the present study was to analyze the relationship of fear of being infected with anxiety and the mediating role of stress and sleep difficulties in this link. Fear of being infected with SARS-CoV-2 increases anxiety levels indirectly, through its impact on stress, through its impact on sleep difficulties, and through the direct impact of stress on sleep difficulties.

These findings are novel, so they contribute to knowledge about the processes linking fear of being infected by the SARS-CoV-2 virus with anxiety in the pandemic period.

One of the strengths of the present study is the large sample of university students from various universities, not only from mainland Portugal but also from the islands. However, its findings cannot be generalized to other populations, which is one of the limitations. Another limitation of the study is its cross-sectional design, which does not allow true causal relationships to be drawn. Another limitation is the fact that a single item was used to assess fear of the COVID-19 pandemic. Finally, data were collected through an online survey using self-report scales. Data collected through a self-reported questionnaire can generate high rates of anxiety. The complementarity of the questionnaire to assess anxiety with the administration of a diagnostic interview can be useful and can be used in future studies

The results of this study may have practical implications. In future health crises with high risk of contagion, health agencies, and the media should provide timely and accurate information about the disease and risk of contamination by the pathogen and publicize strategies to prevent its spread. Interventions aimed at reducing anxiety should consider fears of infection, stress reduction strategies, and the promotion of healthy sleep habits.

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Is cognitive behavioral therapy effective in anxiety disorders when there is comorbidity with autism spectrum disorders?

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**Objectives:** The aim of this study is to determine the effectiveness of cognitive behavioral therapy (CBT) in treating anxiety disorders when there is comorbidity with autism spectrum disorder (ASD).

**Methods:** A PubMed search was performed with the MeSH terms "cognitive behavioral therapy in anxiety AND autism spectrum disorder".

**Results:** The literature showed that CBT is superior to waitlist in terms of response rate (76.5% versus 8.7%) and remission rate (52.9% versus 8.7%). Additionally, a 2018 study showed significant reductions on clinician and parent reports of anxiety, as well as in anxiety disorder severity.

The literature showed that more severe internalizing problems predicted poorer treatment outcomes especially in standard CBT. On the other hand, findings from several studies indicate that externalizing symptoms were associated with poorer treatment outcomes in CBT. However, the results of a 2020 study suggest that a CBT approach yields positive impact for treatment outcomes in young people with ASD and comorbid externalizing problems, particularly among those with comorbid ADHD.

Parent involvement can be particularly beneficial for children with ASD, as their participation enhances the generalizability of skills across different settings.

Certain ASD features, such as elevated repetitive behaviors and restricted interests predict poorer treatment outcomes in standard CBT but have less impact in personalized CBT.

**Conclusions:** Although, randomized controlled trial showed that both standard and personalized CBT are effective in youth with ASD, a parent-involved and adapted version appears to perform slightly better.

**Keywords:** Anxiety Disorders, Autism Spectrum Disorder, Cognitive behavioral therapy.

## **Introduction:**

Autism Spectrum Disorders (ASD) encompass deficits in social interaction and communication, as well as repetitive behaviors and restricted interests (Szatmari, 2003). ASD affects approximately 1 in 68 individuals in the United States (Wise, et al., 2018).

Children and adolescents with ASD are at a higher risk of developing comorbid disorders (Ghaziuddin, 2005). Several studies have shown that around 70-90% of children with ASD meet diagnostic criteria for at least one psychiatric disorder, with 41% meeting criteria for two or more disorders (Simonoff, et al., 2008). The most common comorbid disorders in children with ASD include Anxiety Disorders, Attention Deficit Hyperactivity Disorder (ADHD), Oppositional Defiant Disorder, and obsessive-compulsive disorders (OCD) (Leyfer, et al., 2006).

The literature indicates that certain anxiety disorders are particularly prevalent among children with ASD, such as specific phobia (8.5%-44.3%), social phobia (7.4%-29.2%), OCD (6.4%-37%), agoraphobia (6.4-7.9%), generalized anxiety disorder (2.4%-13.4%), panic disorder (1.1%-10.1%) and separation anxiety disorder (0.5%-12%) (Leyfer, et al., 2006). Anxiety disorders are significantly more frequent among children with ASD (40-60%) (Leyfer, et al., 2006) compared to neurotypical children (3-5%) (Ford, Goodman, & Meltzer, 2003).

Children with ASD are more likely to experience anxiety symptoms due to their significant communication and social deficits (including difficulties understanding social cues), heightened sensory sensitivity, and difficulties in regulating emotions (Wood & Gadow, 2010).

Addressing anxiety-related symptoms in children with ASD is crucial due to the frequency of anxiety disorders and their potential to exacerbate repetitive behaviors and social communication deficits. Moreover, high levels of anxiety, when combined with ASD, can have negative impact on academic performance and social interactions (Wise, et al., 2018). Increased anxiety severity among children with ASD is associated with increased levels of aggressive and oppositional behavior, limited social engagement, poorer social relationships, sleep disturbances, increased non-psychiatric hospitalizations, and occurrences of medical illness (Gadow, Devincent, & Schneider, 2008).

Cognitive behavioral therapy (CBT) for anxiety disorders focuses on cognitive and behavioral factors (such as avoidance, rituals) that contribute to maintaining anxiety symptoms (McKay & Storch, 2009).

CBT has been shown to be effective in the treatment of anxiety disorders in children without neurodevelopmental disorders (Reynolds, Wilson, Austin, & Hooper, 2012). However, it remains uncertain whether children with ASD and comorbid anxiety disorders will respond to standard CBT, as clinical judgement has often assumed a poor response due to the core difficulties associated with ASD (Lickel, MacLean Jr, Blakeley-Smith, & Hepburn, 2012). Nonetheless, the limited studies on CBT in children with ASD suggest that programs specifically designed for this population are highly effective in treating anxiety (Ung, Selles, Small, & Storch, 2014).

The characteristics of children with ASD can present challenges in applying some therapeutic interventions. Difficulties with social understanding and imagination, atypical ways of demonstrating or reporting anxiety, self-regulation problems, the characteristic rigid thought and poor generalization abilities can all difficult therapeutic success (Ozsivadjian & Knott, 2011). To address these challenges, modifications can be made to treatment protocols for children with ASD, such as incorporating concrete and visual teaching strategies, multiple choice lists, drawing, creative outlets for expression, and video modeling for hard-to-teach concepts (Moree & Davis, 2010). Additionally,

incorporating children's interests and emphasizing parent participation have been suggested as important to include in treatment protocols for children and adolescents with ASD (Moree & Davis, 2010). In fact, parent involvement can be particularly beneficial for children with ASD, as it enhances the generalizability of skills across different settings (Reaven, 2011).

Furthermore, children with ASD often struggle with understanding and recognizing their own and others' thoughts and feelings. Therefore, CBT protocols need to include social stories that explain the thoughts and feelings of others, social coaching to develop social skills, as well as visual aids and structured worksheets to implement CBT components (Wood, et al., 2009).

The aim of this study is to determine the effectiveness of cognitive behavioral therapy (CBT) in treating anxiety disorders in the presence of comorbidity with autism spectrum disorder (ASD).

### **Methods:**

A PubMed search was performed with the MeSH terms "cognitive behavioral therapy in anxiety AND autism spectrum disorder".

### **Results/Discussion:**

A small study conducted in 2018 with 7 children with ASD found significant reductions in anxiety levels from baseline to post-treatment. Furthermore, four out of the seven participants (57%) were treatment responders. However, while there were significant reductions in anxiety based on clinician-rated measures, self-report measures did not show significant reductions. This difference may be partly due to limited insight commonly observed in individuals with ASD, which may result in lower self-reported anxiety levels (Wise, et al., 2018). Ung et al. concluded that CBT had significant treatment effects for children with ASD, with clinician and parent reports being more sensitive to treatment changes than child reports (Ung, Selles, Small, & Storch, 2014). This difference may be attributed to the limited insight of children into their anxiety symptoms or comorbid conditions such as attention difficulties and oppositional behaviors (van Steensel, Bögels, & Perrin, 2011).

In a previous study from 2014, 53% (17/32) of the participants were considered treatment responders at follow-up. Additionally, 25% (8/32) showed minimal improvement, 19% (6/32) demonstrated no change from baseline, and 3% (1/32) reported slightly worse symptoms at follow-up. Moreover, around 47% (15/32) of the total sample achieved remission of their primary anxiety disorder (Selles, et al., 2014). Although the number of individuals in remission of their primary anxiety diagnosis did not differ from post-treatment to follow-up (47% vs. 47%), some participants showed changes in their status between this period. About 22% (7/32) experienced a recurrence of their anxiety disorder symptoms, while 22% (7/32) achieved remission of their primary anxiety diagnosis during the follow-up period. The percentage of individuals classified as treatment responders significantly decreased at follow-up compared to post-treatment (84% vs. 53%). Overall, 44% (14/32) of participants experienced a reduction in treatment gains, 38% (12/32) maintained their treatment gains, and 19% (6/32) continued to show improvement (Selles, et al., 2014). This study indicated that treatment improvement in individuals with ASD and anxiety disorder using CBT was relatively well-maintained over time but to a lesser extent than what was observed in follow-up data of CBT in neurotypical populations (Spence, Holmes, March, & Lipp, 2006). Despite the promising overall results, data from this study suggested that a slightly larger portion of the ASD sample did not fully maintain treatment gains compared to neurotypical follow-up studies.



Moreover, individual changes in response and remission statuses, in both positive and negative directions, were common. Several factors could account for the variability in maintaining treatment gains. First, the primary anxiety diagnosis, anxiety severity, and the number of anxiety disorders in comorbidity might influence the likelihood of maintaining symptoms. For example, individuals with multiple diagnoses may have more target symptoms and, therefore, despite improvements, still exhibit more residual symptoms at post-treatment compared to those with a single diagnosis. Additionally, individuals who experience clear neurotypical-like anxiety symptoms may demonstrate better treatment maintenance than those with overlapping anxiety and autism symptoms (e.g., anxiety due to rigidity, sensory sensitivity, social deficits) (Green, Ben-Sasson, Soto, & Carter, 2012). Similarly, the presence of social, communication, and cognitive deficits in individuals with ASD, as well as the severity of attention deficits, may affect the maintenance of treatment gains (Selles, et al., 2014). Finally, factors such as family accommodation of anxiety, level of insight, and treatment dose/adherence (Glenn, et al., 2013) could also play a role in the maintenance of treatment gains in youth with ASD, as these variables have been associated with treatment outcome of CBT for neurotypical youth.

In another study from 2020, approximately 57% of the sample responded positively to the treatment (72.8% for post-treatment completers). Furthermore, the rate of remission for the primary anxiety disorder was 30.8% (39.5% for post-treatment completers) (McBride, et al., 2020).

An earlier study from 2012 demonstrated that 50% (10/20) of children in the CBT group had a clinically significant positive treatment response, compared to only 8.7% (2/23) in the treatment as usual (TAU) group (Reaven, Blakeley-Smith, Culhane-Shelburne, & Hepburn, 2012).

A study from 2013 showed that 75% (18/24) of children who received CBT were considered treatment responders, while only 3 of 21 children (14%) in the treatment as usual (TAU) group responded positively to the treatment. Moreover, 38% (9/24) of children in the CBT group achieved clinical remission for their primary anxiety diagnosis at post-treatment, compared to only 5% (1/21) of those in the TAU group. CBT demonstrated superiority over the waitlist condition in terms of response rate (76.5% versus 8.7%) and remission rate (52.9% versus 8.7%) (Storch, et al., 2013). Regarding follow-up, 73% (11/15) of CBT responders maintained their overall treatment gains at 3 months post-treatment, providing preliminary evidence that CBT effects are durable. However, these results should be considered in light of the fact that the majority (75%) of children in the CBT group, regardless of their response status, still had their primary anxiety diagnosis at follow-up (Storch, et al., 2013). This may suggest difficulties with generalizing the learned strategies or a reduced use of treatment skills over time that are necessary to maintain the gains (Rao, Beidel, & Murray, 2008). Other factors such as cognitive abilities, comorbidities, and parent characteristics (e.g., stress) may also be associated with sustained anxiety in children by affecting their or parent's consistent use of treatment strategies (Storch, et al., 2013). Given the documented relations between anxiety and impaired social and daily life skills, it is worth noting that the CBT treatment was associated with improved ASD characteristics and reduced functional impairment (Storch, et al., 2013). These improvements may be attributed to the emphasis on training in social interaction and managing ASD-related behaviors (e.g., stereotyped interests) in the personalized CBT protocol (Storch, et al., 2013).

In a randomized clinical trial conducted in 2020, an adapted CBT program called BIACA (behavioral interventions for anxiety in children with autism) outperformed standard-of-care CBT (Coping Cat), although both CBT approaches had positive effects.

BIACA showed superior results to Coping Cat and treatment as usual (TAU) in terms of the primary outcome measure (anxiety) and parent reports of associated emotion dysregulation symptoms, social-communication symptoms, and adaptive functioning (Wood, et al., 2020). Both CBT approaches achieved higher rates of positive treatment response on the Clinical Global Impression–Improvement (each greater than 80%) compared to TAU (11%). Therefore, CBT was found to be beneficial for youth with ASD and anxiety, with an adapted CBT approach (BIACA) providing additional advantages. The BIACA intervention focuses on social-communication skills through evidence-based practices targeting peer engagement, friendship, and perspective taking. Improving social functioning may serve as a pathway to anxiety reduction as well as a goal in itself. However, it is important to note that reducing anxiety alone may not necessarily result in comparable improvements in social functioning in children with ASD. The BIACA program is tailored specifically to children with ASD, integrating social communication and incorporating children’s special interests. Additionally, BIACA treatment sessions were 50% longer than Coping Cat sessions (90 minutes compared to 60 minutes). These findings support the benefits of the additional time spent in treatment, as it allows for increased parent involvement and an expanded scope of treatment targets, which may contribute to improved outcomes (Wood, et al., 2020).

Including social skills training (e.g., maintaining eye contact, initiating and maintaining conversations, awareness of social boundaries) in CBT protocols for anxiety in youth with ASD can address the social impairments commonly observed in individuals with ASD (Ung, Selles, Small, & Storch, 2014). Moreover, social skills training can be particularly beneficial at building self-confidence and social competence (Wood, et al., 2009) and alleviating social anxiety symptoms, which are common in youth with ASD.

Kilburn et al. showed that training anxiety reduction skills and, thus, reducing anxiety in children with ASD using CBT programs have the potential to prevent relapse and promote better psychosocial development overall (Kilburn, et al., 2018).

Among a sample of children and adolescents between 7-14 years of age with anxiety, both family-based and individual CBT resulted in significant treatment response. However, children without elevated ASD features showed more improvement in individual CBT compared to children with more ASD symptoms (Storch, et al., 2021). Additionally, elevated repetitive behaviors and restricted interests predicted poorer treatment outcomes in standard and personalized CBT, whereas children with “moderate” repetitive behaviors and restricted interests experienced poorer outcomes only in standard CBT but not in personalized CBT (Storch, et al., 2021). This may be due to the fact that, in the personalized CBT, restricted interests were seen as strengths that could be leveraged to enhance engagement in therapy. Consequently, youth with high levels of repetitive behaviors may experience worse outcomes regardless of CBT modality, while a personalized CBT version for children with ASD may be more suitable for those with low-to-moderate levels of repetitive behaviors, as the protocol more explicitly address restricted interests and other ASD-related behaviors (Storch, et al., 2021).

Regarding comorbidities, more severe internalizing problems predicted poorer treatment outcomes, especially in standard CBT compared to personalized CBT. Higher scores on the Child Behavior Checklist (CBCL) for internalizing, externalizing and total problems were associated with less improvement over time across treatment conditions. However, the negative impact of higher baseline scores on these measures was attenuated in the personalized CBT relative to standard CBT (Storch, et al., 2021). Increased internalizing symptoms were associated with poorer outcomes in both CBT conditions, although this effect was particularly pronounced in standard CBT. The increased parental involvement, the expanded focus on ASD-specific issues, and the increased treatment

duration (90 minutes vs. 60 minutes per session) in personalized CBT may have contributed to a reduced impact of pretreatment internalizing symptoms on overall treatment outcomes (Storch, et al., 2021).

Externalizing symptoms were associated with poorer treatment outcomes across CBT conditions, highlighting the need for CBT interventions that include a more substantial dose of parent management training for children with ASD, anxiety, and disruptive behaviors, potentially beyond what was offered in the adapted CBT used in this 2021 study (Storch, et al., 2021).

A 2020 study suggested that a modular CBT approach has a positive impact on treatment outcomes in youth with comorbid externalizing problems, particularly among those with comorbid ADHD (McBride, et al., 2020). Surprisingly, ADHD was associated with better odds of treatment response relative to those with only ASD and anxiety disorders. Furthermore, children with anxiety and comorbid externalizing disorders experienced greater reductions in global clinical anxiety severity compared to youth with anxiety disorders alone. These findings may be interpreted in various ways. It is possible that the modular treatment used in this study sample effectively addressed multiple problem areas, including externalizing manifestations and attention difficulties. The BIACA program, for instance, includes modules that target social and behavioral difficulties that may be particularly present in youth with externalizing disorders. Additionally, greater parental involvement in treatment, motivation to change problematic behaviors, and addressing symptom accommodation may be more pronounced in the externalizing group due to higher impairment and family burden (Lickel, MacLean Jr, Blakeley-Smith, & Hepburn, 2012).

Finally, older age was found to be a predictor of improved treatment outcomes in personalized CBT but not in standard CBT (Storch, et al., 2021). On average, older youth with ASD who underwent personalized CBT completed treatment below the clinical cutoff. This suggests that the relative benefits of personalized CBT over standard CBT for children and adolescents with ASD and anxiety are particularly pronounced for emerging adolescents compared to younger children. Older youth with ASD and anxiety may have particularly benefited from the modifications in the BIACA program, such as increased social skills training, as social demands and complexities tend to increase during this developmental stage, necessitating more targeted interventions. Alternatively, it could be that older youth have more entrenched patterns of thinking and avoidance behaviors that require a greater quantity of treatment, which was provided in the personalized protocol with longer sessions (90 minutes compared to 60 minutes sessions) (Storch, et al., 2021).

Group administration of CBT, with or without parents, yielded a large treatment effect, while individual administration of CBT, with or without parents, resulted in a moderate effect size but the differences were not statistically significant. These findings suggest that both individual and group administration of CBT for anxiety in high-functioning youth with ASD are equally effective (Ung, Selles, Small, & Storch, 2014). However, group administration of CBT offers several benefits, including improved treatment access, normalization of anxiety symptoms, peer and social support, and increased motivation, acceptability, accountability, and self-efficacy (Ishikawa, Okajima, Matsuoka, & Sakano, 2007). On the other hand, individual administration of CBT also has its advantages, such as tailoring the treatment to the specific needs of the youth and their family members (e.g., modifying treatment protocol to incorporate comorbid symptoms), ensuring confidentiality and likelihood of patient disclosure, and providing personalized exposures and feedback, which can contribute to increased acceptability (Ung, Selles, Small, & Storch, 2014).

## Conclusions:

Indeed, CBT is recognized as one of the most effective treatments for childhood anxiety disorders. However, when it comes to children and adolescents with ASD, specific modifications to this type of psychotherapy may be necessary due to unique challenges they present. Previous studies have indicated that personalized CBT tends to be more effective for this population, with a greater emphasis on parent involvement and longer treatment duration yielding slightly better outcomes.

Further research should focus on investigating factors associated with poor maintenance of treatment gains and exploring modifications to CBT that could help sustain these gains over time. Additionally, it would be valuable to examine potential moderators of treatment effectiveness, such as the level of motivation in both child and parents, the insight of child and parents and comorbid symptoms in the child.

In conclusion, CBT appears to be a primary treatment option for verbal children with ASD who experience maladaptive and interfering anxiety. Furthermore, personalized CBT tailored to anxious children with ASD has demonstrated greater effectiveness in reducing anxiety symptoms compared to standard care.

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## **Resiliência e Empoderamento para um Envelhecimento Saudável**

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### **Resumo**

Vidas mais longas são evidências de uma das conquistas mais notáveis da humanidade. Eles refletem avanços no desenvolvimento económico, social, pessoal e de saúde. Diante dessa realidade, é importante repensar o que é ser idoso e o que é florescer e chegar a essa fase da vida com saúde e bem-estar. A Década do Envelhecimento Saudável (2020-2030) é um momento de oportunidade para adaptações e investimentos para promover o envelhecimento saudável. No Relatório Mundial sobre Envelhecimento e Saúde (OMS, 2015) Envelhecimento Saudável significa desenvolver e manter a capacidade funcional que permite o bem-estar na velhice. Essa capacidade funcional é determinada pela capacidade intrínseca de um indivíduo (conjunto de todas as capacidades físicas e mentais do indivíduo), pelo ambiente em que vive (entendido no sentido mais amplo possível e incluindo os ambientes físico, social e político) e pelo as interações entre eles. As escolhas de vida e as circunstâncias ambientais determinam a trajetória. Este estudo enfoca as habilidades psicológicas de adultos mais velhos. Tem como principal objetivo mostrar como o empoderamento psicológico e a resiliência contribuem para o percurso de saúde de cada indivíduo. Foi realizada uma revisão sistemática da literatura para integrar as informações existentes, que seguiram os princípios do PRISMA, gerando dados que auxiliam a tomada de decisões e estratégias que conduzem a boas práticas. Os resultados permitiram delinear estratégias de formação de cariz psicológico para implementar o “Ageing in place” numa comunidade amiga do idoso, onde a promoção da resiliência e o empoderamento dos idosos estão presentes.

**Palavras-chave:** Adultos mais velhos, Aging in place, Envelhecimento Saudável, Resiliência, Empoderamento

## **Resilience and Empowerment for Healthy Ageing**

### **Abstract**

Longer lives are evidence of one of humanity's most remarkable achievements. They reflect advances in economic, social, personal and health development. Faced with this reality, it is important to rethink what it is to be an elderly person and what it is like to flourish and reach this stage of life with health and well-being. The Decade of Healthy Aging (2020-2030) is a time of opportunity for adaptations and investments to promote healthy aging. In the World Report on Aging and Health (WHO, 2015) Healthy Aging means developing and maintaining the functional ability that allows well-being in old age. This functional ability is determined by an individual's intrinsic capacity (combination of all of the individual's physical and mental capacities), the environment in which he or she lives (understood in the broadest possible sense and including the physical, social and political environments) and by the interactions between them. Life choices and environmental circumstances determine the trajectory. This study focuses on the psychological skills of older adults. Its main objective is to show how psychological empowerment and resilience contribute to the health path of each individual. A systematic review of the literature was carried out to integrate the existing information, which followed the PRISMA principles, generating data that help decision-making and strategies that lead to good practices. The results made it possible to outline training strategies of a psychological nature to implement “Ageing in place” in an age-friendly community, where the promotion of resilience and empowerment of older adults are present.

**Keywords:** Older adults, Ageing in place, Healthy Aging, Resilience, Empowerment

## Introdução

A realidade contemporânea mostra uma população crescente em processo de envelhecimento longo contextualizado em ambientes de desafios globais, nacionais e locais. Neste clima, logo no início do século XXI a Organização Mundial de Saúde (WHO, 2002) destacou sete desafios organizados pela seguinte ordem: 1º) carga dupla da doença (mudança no padrão das doenças transmissíveis para as não transmissíveis, sendo que se espera em 2020 um aumento de 78% da carga global de doença em doenças não transmissíveis, doenças crônicas (cardiopatia, cancro e depressão) causa de morte e invalidez, doenças mentais e lesões; 2º) maior risco de deficiência; 3º) provisão de cuidado para populações em processo de envelhecimento; 4º) feminização do envelhecimento; 5º) ética e iniquidades; 6º) economia de uma população em processo de envelhecimento; e 7º) criação de um novo paradigma que perceba os idosos como participantes ativos de uma sociedade com integração de idade, contribuintes ativos, e beneficiários do desenvolvimento.

Existe consenso que o estilo de vida saudável para idosos inclui: alimentação saudável, atividade física regular, manter um peso saudável, manter a mente ativa, fazer da saúde uma prioridade, participar em atividades de que se gosta, desempenhar um papel ativo nos cuidados de saúde, não fumar. A adoção consciente de estilos de vida saudáveis ao longo da vida contribui para uma vida mais saudável na velhice e proporciona um benefício potencial para a preservação da saúde e da autonomia dos mais velhos, viabilizando um envelhecimento saudável e gratificante. Os estudos têm mostrado como a qualidade de vida, o bem-estar, a manutenção das qualidades mentais, físicas e sociais estão diretamente relacionados com o desempenho de ocupações significativas e gratificantes (Carvalho & Dias, 2011). De acordo com *European Union e Committee of the Regions* (Andor, Bresso, & Sedmak, 2011), é preciso saber como tornar os cidadãos sêniores mais participativos na sociedade, enquanto atores do seu próprio desenvolvimento. Tendo consciência que o envelhecimento saudável é um processo complexo e multifatorial, o presente estudo tem como principal objetivo compreender de que forma o envelhecimento saudável se encontra relacionado com a resiliência e *empowerment* psicológico em adultos com mais de 65 anos.

## Envelhecimento Saudável

A Organização Mundial de Saúde (World Health Organization [WHO], 2002) foi inovadora ao apresentar o conceito de envelhecimento ativo e o divulgar como o “processo de otimização de oportunidades para a saúde, participação e segurança, no sentido de aumentar a qualidade de vida durante o envelhecimento”. Nesta perspectiva de que o envelhecimento pode ser uma experiência positiva, sinónimo de uma vida mais longa e acompanhada de oportunidades contínuas de saúde, participação e segurança, a Organização Mundial da Saúde (WHO, 2002) apresentou uma visão diferente do envelhecimento e marcou a mudança de paradigma. O envelhecimento assim exposto implica uma participação e envolvimento das pessoas mais velhas nas várias questões sociais, culturais, económicas, civis e espirituais, e não apenas à capacidade de estar fisicamente ativo ou fazer parte da força de trabalho. Esta nova forma de entender e perspetivar o envelhecimento enfatiza a importância das pessoas perceberem o seu potencial para a promoção do seu próprio bem-estar e, sobretudo, da sua qualidade de vida (Ribeiro & Paúl, 2011). Os estudos mostram que a qualidade de vida, o bem-estar, a manutenção das qualidades mentais encontram-se diretamente relacionados com a atividade social, o convívio, o sentir-se integrado e útil na família e na comunidade (Carvalho & Dias, 2011). Segundo o Relatório Mundial de Envelhecimento e Saúde realizado pela Organização Mundial de Saúde (WHO, 2015) no futuro envelheceremos de maneira diferente de hoje e as pessoas



maiores poderão viver as suas vidas com maior liberdade. Para isso acontecer é preciso ultrapassar os modelos curativos e económicos e avançar para abordagens inovadoras das vivências saudáveis e positivas no envelhecimento. De acordo com o Relatório (WHO, 2015) podemos observar alguma mudança que vai ocorrendo e que tem as suas implicações a vários níveis: (1) a urbanização e a globalização foram acompanhadas pelo aumento da migração e desregulamentação dos mercados de trabalho, o que pode ser uma oportunidade para os mais velhos; (2) as normas de género e o papel das mulheres tem-se alterado; deixaram de ser cuidadoras desempenhando funções de maior segurança em idades avançadas; (3) os modelos antigos de cuidados à família não são sustentáveis, e obrigam a novas abordagens; (4) a mudança tecnológica ao nível da comunicação e informação proporciona oportunidades de acesso à família e de orientação do autocuidado; e (5) o surgimento de novos recursos de apoio que são mais funcionais e acessíveis possibilitando oportunidades para o monitoramento e cuidados de saúde personalizados.

Na nossa era, é cada vez mais comum observar que muitos indivíduos com 70 anos aparentam ter 60 e assim por diante. Falamos até que são detentores de um “bom envelhecimento” ou de uma “sabedoria no envelhecer”. Mas, ninguém escapa à idade que tem e isso quer dizer que embora não haja um “idoso típico”, pois cada um tem a sua forma especial de envelhecer, não podemos esquecer o apoio especializado ao envelhecimento que deve ser disponibilizado pelos serviços da comunidade e a implementação das políticas sociais promotoras de um envelhecimento saudável para todos.

Em 2002, a Assembleia Geral da ONU adotou o Plano de Ação Internacional de Madrid sobre o Envelhecimento, assente na promoção de uma sociedade mais justa e inclusiva para todas as faixas etárias, em particular, ao nível do trabalho, da economia, da saúde e nos processos decisivos. Neste seguimento, surge a Década do Envelhecimento Saudável 2020-2030 que tem como suporte a Estratégia Global sobre Envelhecimento e Saúde da OMS que foi construída com base no Plano de Ação Internacional sobre o Envelhecimento das Nações Unidas para o Envelhecimento de Madrid e alinhado com o cronograma da Agenda 2030 das Nações Unidas sobre Desenvolvimento Sustentável e com os Objetivos de Desenvolvimento Sustentável (OMS, 2022). Uma iniciativa de valor da Organização Mundial da Saúde e da Organização Pan Americana de Saúde. Para promover o envelhecimento saudável e melhorar a vida das pessoas mais velhas da sociedade, das suas famílias e comunidades, é preciso envolvimento e sinergias efetivas de mudanças fundamentais não apenas nas ações que tomamos, mas na forma como pensamos a idade e o envelhecimento.

Nesta Década pretende-se investir em quatro áreas de ação: 1) mudar a forma como pensamos, sentimos e agimos com relação à idade e ao envelhecimento; 2) garantir que comunidades promovam as capacidades das pessoas idosas; 3) entregar serviços de cuidados integrados e de atenção primária à saúde centrados na pessoa e adequados à pessoa idosa; e 4) propiciar o acesso a cuidados de longo prazo às pessoas idosas que necessitem (OMS, 2022). É preciso passar à ação global e local, delinear estratégias promotoras de um envelhecimento saudável para todos e implementá-las na comunidade envelhecida.

A abordagem do envelhecimento saudável tem sido alvo de opiniões críticas que consideram que esta perspetiva acaba por homogeneizar, oprimir e negligenciar as realidades físicas da velhice. Contudo, é preciso compreender que discurso atual sobre o envelhecimento saudável atribui aos indivíduos a responsabilidade de alcançar uma boa saúde física e ignora as suas circunstâncias mais amplas. A abordagem de capacidade de Sen (1997) fornece uma base para incluir as mudanças físicas do envelhecimento e do ambiente social, concentrando-se no que os próprios idosos valorizam em relação ao envelhecimento saudável. Num estudo realizado na Nova Zelândia sobre padrões de vida desejados os 145 entrevistados com idade de 63 a 93 anos observaram-se seis 'funcionamentos' comumente valorizados: conforto físico, integração social, contribuição, segurança, autonomia e diversão (Stephens, Breheny & Mansvelt, 2015). A

capacidade de alcançar as funcionalidades valorizadas era de grande importância, independentemente do estado de saúde física, embora essa capacidade fosse frequentemente limitada por circunstâncias sociais e materiais. Paralelamente, o estudo destaca a importância de um ambiente favorável aos funcionamentos valorizados e fornece uma estrutura para a compreensão da saúde dos idosos, quaisquer que sejam suas habilidades físicas atuais. Por conseguinte, faz sentido que os modelos de envelhecimento saudável sejam mais amplos e incluam entendimentos de resiliência e capacidades de *empowerment*.

### **Florescimento, empoderamento psicológico e resiliência em pessoas mais velhas**

As pessoas mais velhas independentemente da sua idade cronológica podem continuar a apresentar traços positivos de desenvolvimento psicológico. A sua visibilidade é possível nos indivíduos cujo processo de envelhecimento corresponde a um “envelhecimento bem-sucedido” (Baltes & Carstensen, 1996). Aqui, surgem implicações teóricas e metodológicas que evidenciam como a ciência desenvolvimental pode contribuir para melhorar a vida dos idosos (Fonseca, 2010), em particular, através da implementação de políticas e programas favoráveis ao desenvolvimento positivo das pessoas mais velhas que viabilizem as relações adaptativas entre os indivíduos e os seus contextos e o seu florescimento.

Partindo do pressuposto de que durante a vida humana os indivíduos têm uma necessidade intrínseca de controlar as suas vidas e de que se presumem alterações regulares ao nível dos objetivos e do sentido da própria vida, exigindo tais alterações a realização de mudanças sistemáticas na distribuição de recursos, Baltes e colaboradores apresentaram o modelo SOC – Seleção, Otimização, Compensação (Baltes & Freund, 2003, cit. por Fonseca, 2010). De acordo com os autores, se dividirmos a vida em duas partes, na primeira o investimento primário de recursos é dirigido a processos que configuram ganhos desenvolvimentais e na segunda os recursos são investidos no sentido da manutenção desses ganhos e da compensação das perdas, de forma a limitar as suas consequências. Contudo, é relevante que neste processo as pessoas mais velhas estejam conscientes das perdas e dos ganhos do envelhecimento, de forma a a diminuir o impacto das perdas e a aumentar o investimento das suas capacidades, possibilitando delinear estratégias de prevenção de riscos, de proteção, cuidado e segurança do self e de promoção da saúde e do bem-estar.

A teoria da continuidade também enfatizou que os valores das pessoas idosas são desenvolvidos ao longo da vida, e o ajustamento e a adaptação aos desafios do envelhecimento ocorrem gradualmente para a maioria das pessoas. Partindo dessas noções de continuidade e adaptação contextual, Scharlach (2012) forneceu uma estrutura conceitual socialmente situada mais ampla, sintetizada a partir da literatura da psicologia do desenvolvimento ao longo da vida. Ele sugere um modelo de "envelhecimento ótimo" capturado em cinco conceitos centrais: continuidade (a capacidade de manter preferências estabelecidas), compensação (apoio do ambiente físico), conexão (interações sociais significativas), contribuição (uma necessidade ao longo da vida de ter um impacto positivo no ambiente) e desafio (oportunidades de estimulação). Por definição o campo da psicologia positiva investiga como as experiências subjetivas positivas, os traços individuais positivos e as instituições positivas podem melhorar a qualidade de vida e prevenir patologias (Seligman & Csikszentmihalyi, 2000; Seligman, 2002). Martin Seligman (2012) no seu livro “Flourish” (2011), traduzido para português “A vida que floresce”, surge com uma nova compreensão visionária da felicidade e do bem-estar e apresenta-nos como objetivo da psicologia positiva aumentar a quantidade de florescimento na vida dos humanos e do planeta.

Na teoria sobre o bem-estar (The PERMA Model) Seligman (2012) apresenta-nos cinco elementos (emoção positiva, envolvimento, significado, relações positivas e realização pessoal)

e cada um deles possui três propriedades: contribuir para o bem-estar; ser desejado por muitas pessoas pelo seu valor intrínseco; e ser definido e medido de forma independente dos outros elementos (exclusividade). Para florescer o indivíduo tem de possuir todas as características nucleares (emoções positivas; envolvimento, interesse; significado, propósito) e três das seis características adicionais (auto-estima; otimismo; resiliência; vitalidade; autodeterminação; relações positivas). O florescimento ao longo da vida passa por considerar ações e percepções como sentir-se bem, encontrar o fluxo/absorvido em atividades, ter conexões autênticas/ estar significativamente ligado a outros, apresentar um sentido/propósito de vida e ter um sentimento de realização/sucesso.

A teoria Broaden & Build de Barbara Fredrickson (Fredrickson, 2001, 2013) confirma que emoções positivas ajudam a ampliar e construir um repertório de pensamentos e ações para responder as situações que se apresentam, contribuindo também para construir resiliência em momentos adversos. Descreve como fatores psicossociais positivos podem influenciar a saúde acima e além dos negativos fatores psicossociais.

A literatura mostra como os estados emocionais positivos permitem pensamentos e comportamentos a serem guiados não por respostas automáticas, que predominam durante estados e períodos emocionais negativos de ansiedade e stresse, mas sim por respostas mais novas, criativas e flexíveis. Agir dessas novas maneiras desenvolve habilidades cognitivas relevantes, recursos psicológicos e sociais que podem beneficiar a saúde, incluindo a saúde das pessoas mais velhas. Outros mecanismos que podem vincular fatores psicossociais positivos a um melhor envelhecimento cognitivo incluem a redução do impacto fisiológico de stressores. A literatura evidencia três fatores psicossociais positivos relevantes para o envelhecimento cognitivo: percepção de controle, envolvimento religioso e relações sociais (Zahodne, 2021). Esses fatores abrangem os níveis individual, interpessoal e comunitário e representam múltiplos pontos de intervenção para otimizar o envelhecimento cognitivo e reduzir as disparidades cognitivas. Considerando que a falta de agentes farmacológicos modificadores da doença para demência destaca-se a importância crítica da prevenção, estranhamente os fatores modificáveis conhecidos (educação, saúde física e comportamentos de saúde, depressão, solidão indesejada e isolamento social) não representam totalmente alvos potenciais de intervenção. Nesta perspectiva, os fatores psicossociais positivos constituem recursos culturalmente relevantes que podem promover um melhor envelhecimento cognitivo para uma população crescente e cada vez mais diversificada de idosos. Considera-se que as diferenças de grupo na cognição refletem a soma dos caminhos de risco e de resiliência. O "efeito total" de pertencer a um determinado grupo social na cognição é a soma de todos os "efeitos indiretos" por meio de fatores de risco e resiliência, bem como quaisquer "efeitos diretos" residuais que não podem ser explicados com as variáveis disponíveis no momento (Zahodne, 2021).

Dar mais vida a cada ano a partir dos 65 anos implica criar estruturas de apoio e empoderamento aos mais velhos da sociedade e preparar os mais novos e os técnicos para saberem lidar de forma assertiva com o envelhecimento da sua comunidade. Estamos na linha de Seligman (2011), o objetivo de gerar riqueza só tem sentido se gerar florescimento humano e felicidade para todos. No processo desenvolvimental do envelhecimento é preciso abraçar o desafio da psicologia positiva, o de medir e desenvolver o florescimento humano, promovendo a emoção positiva, o envolvimento, o significado, as relações positivas e a realização pessoal dos mais velhos da sociedade através de ações planejadas de florescimento sênior e de empoderamento das pessoas no caminho da longevidade.

De uma maneira geral podemos definir o empoderamento como o processo pelo qual os indivíduos ganham mestria ou controlo sobre as suas próprias vidas, autonomamente acedem aos recursos da comunidade e participam democrática e ativamente na vida da sua comunidade (Zimmerman, 1990). De acordo com Zimmerman (1995) podemos encontrar três tipos de empoderamento: Comunitário, Organizacional e Psicológico.

O Empoderamento comunitário envolve todo o comportamento coletivo desenvolvido no sentido de favorecer uma maior qualidade de vida dos membros da comunidade. O Empoderamento organizacional refere-se à forma como as instituições e organizações das comunidades tendem a proporcionar aos seus membros recursos e bens de qualidade e a promover uma participação ativa de todos os elementos nas tomadas de decisão e na definição das políticas da organização. O Empoderamento psicológico é o nível de análise individual e remete para o domínio percepção de controlo da vida, para uma atitude pró-ativa na vida e uma compreensão crítica do ambiente sociopolítico.

De acordo com a literatura a análise psicológica do empoderamento pode ser perspectivada em quatro componentes: intrapessoal (inclui variáveis de personalidade (locus de controlo), cognitivas (autoeficácia) e motivacionais); interacional, (integra a forma como as pessoas utilizam as suas competências para influenciar os seus ambientes e aceder aos recursos); e ainda uma componente comportamental (ação de exercer controlo na participação ativa das atividades na comunidade) (Jesus e Menezes, 2010).

O empoderamento pode também ser entendido numa perspetiva de desenvolvimento do tempo de vida (Lerner, 1997). O desenvolvimento do tempo de vida é uma orientação para o estudo de seres humanos. As pessoas são compreendidas como continuamente inovadores, inseridas num ambiente dinâmico e equipadas com potencial inerente. A mudança deriva de influências mútuas nos contextos pessoal e ambiental e as interações pessoa-ambiente, particularmente as relações humanas, são centrais para o progresso do desenvolvimento e o bem-estar (Shearer & Reed, 2004, cit. Shearer, Fleury & O'Brien, 2012).

O conceito de empoderamento ao se referir aos sentimentos psicológicos de poder, controle e auto-estima pode ser relevante para o investimento de uma pessoa em educação e literacia de saúde. O empoderamento psicológico no campo da saúde leva o paciente a valorizar a autonomia surgindo o interesse e desejo de participar das decisões em saúde (Sak, Rothenfluh & Schulz, 2017). O empoderamento do paciente é volitivo e deixando de ser um recetor passivo de informações, cuja tarefa é a compreensão e aceitação da informação. Nesta perspetiva, o profissional de saúde reconhece o paciente como um sujeito ativo processador de informações. Surge uma conexão entre *empoderamento psicológico-literacia de saúde-envolvimento na tomada de decisão em saúde*.

No que diz respeito ao empoderamento psicológico, o nível de análise psicológico implica três componentes: uma componente intrapessoal, que inclui variáveis de personalidade (locus de controlo), cognitivas (autoeficácia) e motivacionais; uma componente internacional, que integra a forma como as pessoas utilizam as suas competências para influenciar os seus ambientes e aceder aos recursos; e uma componente comportamental, ou seja, à ação de exercer controlo na participação ativa das atividades das suas comunidades.

O desenvolvimento do empoderamento ao longo do ciclo de vida é uma questão de sobrevivência humana e de envelhecimento saudável, pois permite que indivíduo seja capaz de desenvolver um sentido de controlo e mestria na sua vida, aprenda a utilizar competências para influenciar os acontecimentos da sua vida, e no final, o indivíduo é capaz de se tornar empoderado mesmo nos ambientes que parecem menos favoráveis. (Rappaport, 1981, cit. Jesus & Menezes, 2010, 529).

Os estudos sobre empoderamento de pessoas mais velhas evidencia a sua relevância para melhorar a sua saúde (Tsubouchi, Yorozyua, Tainosyo, et al, 2021). A pesquisa confirmou uma ligação positiva entre o envolvimento do paciente na tomada de decisões e melhorias nos resultados de saúde, e ainda que, a literacia em saúde medeia a relação entre o empoderamento psicológico e o envolvimento real na última decisão de tratamento que tinha que ser feito pelo participante idoso (Sak, Rothenfluh & Schulz, 2017). Tem sido sugerido que uma abordagem de empoderamento pode motivar a participação de um idoso nas decisões de cuidados de saúde

e o seu envolvimento pode promover resultados positivos de saúde (Shearer, Fleury, Ward & O'Brien, 2010).

O termo resiliência vem da física e diz respeito à “propriedade pela qual a energia armazenada em um corpo deformado é devolvida quando cessa a tensão causadora da deformação elástica” (Ferreira, 1975, p.1223). Para explicar este conceito costuma-se apresentar uma metáfora de um elástico que, após uma tensão inicial, volta ao mesmo estado. Transpondo este conceito para os seres humanos a resiliência não significa um retorno a um estado anterior, mas a superação (ou adaptação) diante de uma dificuldade considerada um risco. Enfatiza-se a possibilidade de construção de novos caminhos de vida e de um processo de subjetivação a partir da ação de enfrentar situações stressantes e/ou traumáticas (Fortes, Portuguez, & Argimon, 2009). Considerando que a resiliência como a capacidade que tem um ser humano de se recuperar psicologicamente, quando é submetido às adversidades, violências e catástrofes na vida, o estudo de Pinheiro (2004) evidencia que esta advém do sentido que é atribuído à existência humana, em concreto, da capacidade de fazer laços afetivos e profissionais e ainda da presença de um projeto de vida.

De acordo com Tavares (2018) na sociedade emergente a “resiliência” é e será “uma espécie de modo de ser e de estar do ser humano na sua grande aventura consciente e livre de se tornar mais humano e de ser feliz” (Tavares, 2018, 13). De acordo com o autor a resiliência humana descrita e apresentada nas últimas décadas integra um conjunto de marcadores que se completam entre si, tais como: flexibilidade, reflexibilidade, fiabilidade, adaptabilidade, sabedoria, espiritualidade, elementos que equipam o ser humano ao nível da sua realidade física, química, biológica, psicológica, social e cultural. Estes marcadores constantemente dinâmicos se equilibram de um modo ativo e proativo e sempre que este equilíbrio é posto à prova em situações de adversidade, risco, desequilíbrio, stress, ansiedade, rotura biológica, psicológica, social, cultural ou axiológica. Fala-se de um reequilíbrio permanente, dinâmico e dialético, diante do mundo das coisas, das pessoas, das organizações e dos acontecimentos. Uma modalidade de equilíbrio homeostático a caminho da saúde e do bem-estar que tem em consideração os processos de ação contextual.

Explicar o que se entende por “ser resiliente” não é uma tarefa fácil. De acordo com Ralha-Simões (2017, 2018) uma vez que “Está ainda por esclarecer quem são essas pessoas capazes de proezas onde todas as outras parecem estar destinadas ao fracasso, a fim de podermos realmente identificar os motivos que levam alguns de nós, colocados perante circunstâncias de risco iminente, a ser negativamente afetados pela adversidade, enquanto outros não só permanecem imunes aos seus efeitos nefastos, como parecem até beneficiar de ter passado por essas experiências” (Ralha-Simões, 2018, p.135-136).

Uma pessoa resiliente é alguém flexível, criativo, equilibrado, livre, comunicativo, tem a capacidade de resistir às situações sem perder o equilíbrio e a reagir de uma forma saudável, tem a capacidade de valorizar os aspetos positivos (Vieira, 2016). Uma pessoa resiliente apresenta uma capacidade humana que fortalece o auto-conceito e a auto-estima e permite manter uma saúde equilibrada, que lhe permite conseguir superar a anomia e a doença mental (Simões, 2018). A interface entre a velhice e a educação para a resiliência das pessoas mais velhas descobre uma área do conhecimento que possibilita implementar e consolidar capacidades intrínsecas ao sujeito que poderão contribuir para a superação de dificuldades inerentes ao ato educativo, pontuado pelo irrepitível e pelo imprevisível (Sousa & Rodríguez-Miranda, 2015).

Num estudo realizado sobre a resiliência em idosos verificou-se que um número mais elevado de queixas subjetivas de memória correspondia a baixos índices de resiliência. Na aplicação da Escala de Resiliência e do Miniexame do Estado Mental conclui-se que quanto mais altos os escores de resiliência, maiores os escores no desempenho cognitivo entre os idosos (Fortes, Portuguez & Argimon, 2009). Por conseguinte, é preciso prestar atenção ao facto de que o

envelhecimento estar associado a inúmeros stressores que impactam negativamente o bem-estar dos idosos. Considerando que a resiliência melhora a capacidade de lidar com stressores e pode ser até ser aumentada há muito trabalho psicológico de capacitação de idosos a realizar e intervenções diretamente na comunidade, em particular, nas comunidades habitacionais de idosos (Treichler, et al., 2020). As estruturas residenciais de idosos, centros de dia e universidades seniores são ambientes promissores para desenvolver a resiliência e para oferecer intervenções psiquiátricas positivas.

A centralidade do lugar no envelhecimento bem-sucedido evidencia como as pessoas idosas entendem subjetivamente a definição do bem que é o envelhecimento no lugar (Grove, 2021). O conceito "envelhecimento no lugar" é habitualmente definido como uma oportunidade para ficar a viver na sua própria casa ou na comunidade à medida que se envelhece. Observa-se que o benefício depende de quão apegado e envolvido um indivíduo está ao seu local de origem e quão bem esse ambiente se adapta às suas necessidades e habilidades em mudança (Lawton e Nahemow, 1973; Paz et al., 2011, cit. Grove, 2021).

Os estudos têm mostrado que o conceito tem evoluído e alargado a sua margem de compreensão do conceito de "lugar" indo para além de proporcionar adaptações dentro de casa para incorporar características além do lar, como o ambiente local e a comunidade (Phillips et al., 2010; Wiles et al., 2012, cit Grove, 2021). Chama-se à atenção para que nem todos os ambientes são favoráveis ao envelhecimento saudável, uma vez que é preciso ter em consideração a variedade das experiências subjetivas das pessoas mais velhas. A capacidade de viver de forma independente na sua própria casa e na comunidade é um desafio que se torna cada vez maior à medida que a idade avança, que só pode ser viável se houver ambientes de confiança e segurança, serviços especializados e diversificados de apoio ao envelhecimento na comunidade.

## **Método**

Trata-se de um estudo descritivo e teórico, com abordagem qualitativa, que utilizou técnicas de análise conceitual e modelagem para alcançar o seu propósito. Este estudo foca-se nas competências psicológicas de adultos mais velhos relativamente à sua resiliência e empoderamento psicológico para atingir a meta da saúde. Com o intuito de fornecer os elementos para a modelagem de um modelo de promoção do envelhecimento saudável resiliente e empoderado procurou-se responder à questão: "De que forma o empoderamento psicológico e a resiliência contribuem para o percurso de saúde de cada indivíduo?"

Achámos relevante conhecer o interesse dos investigadores por esta temática e o seu estado de arte. Para o efeito foi realizada uma revisão sistemática que foi orientada pelos princípios do Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Page et al., 2021). As buscas foram realizadas em abril e maio de 2023. Foram considerados os seguintes Banco de dados/Plataforma: APA PsycNET, Science Direct, PubMed, Scopus e LILACS.

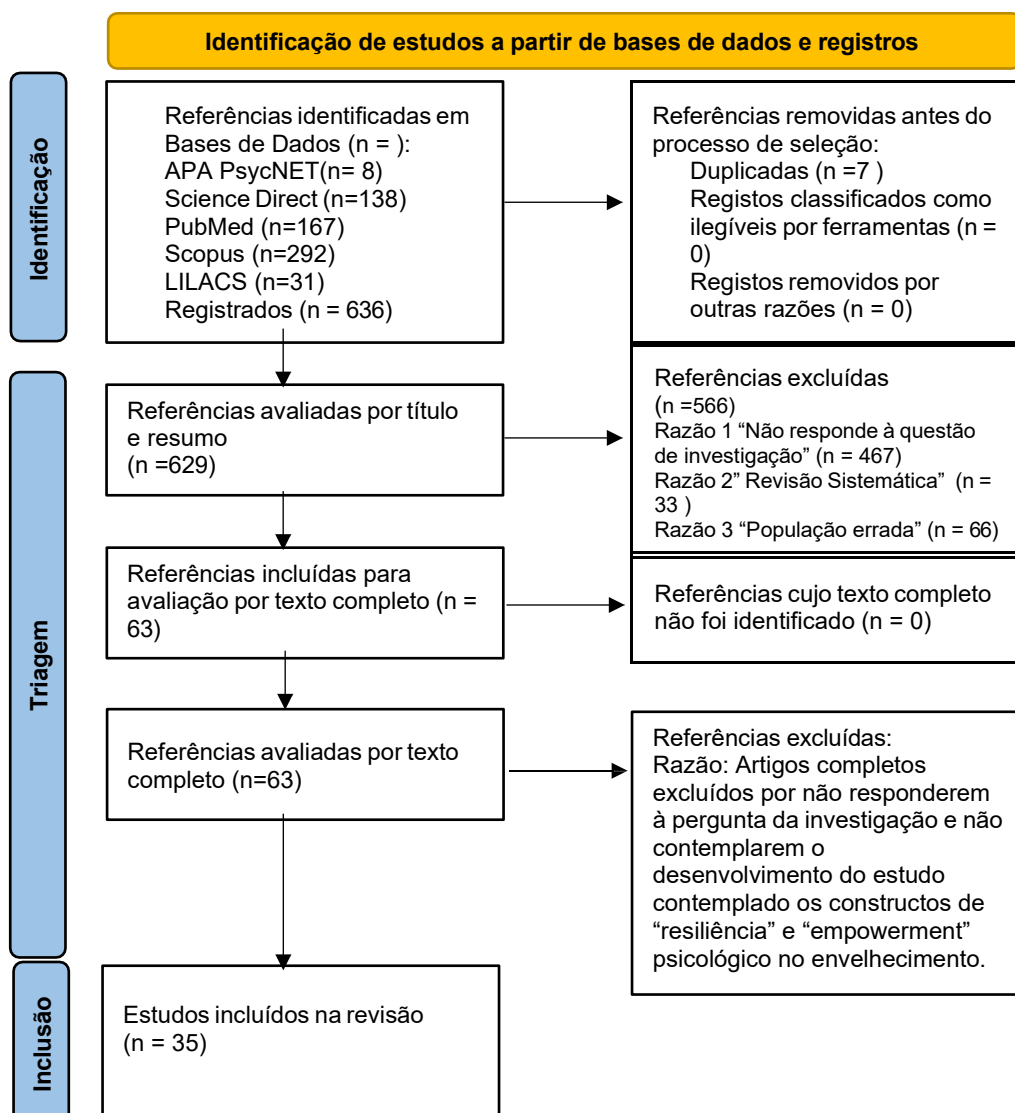
Os Recursos on-line e Navegação foram do tipo de pesquisa de literatura cinzenta, anais on-line e periódicos específicos. Foram considerados limites e restrições tais como os documentos pesquisados tinham de ser em inglês e dos últimos três anos, na área da Psicologia e Gerontologia. Quanto aos filtros de pesquisa foram definidos os seguintes termos de pesquisa/descriptores: "Psychological empowerment in the elderly" (PEE) and "Resilience in the elderly" (RE). Foram excluídas revisões narrativas, sistemáticas e metanálises. Foram incluídos estudos empíricos que tenham realizado algum tipo de pesquisa ou apresentado algum relato de experiência na área visada. Após esta fase inicial, os resumos foram lidos e os artigos que atenderam aos critérios de inclusão foram avaliados. O processo de busca, seleção e análise dos trabalhos foi realizado tendo como orientação o PRISMA e recorrendo ao Ryyan para

tratamento dos dados. Considerando a natureza da pesquisa teórica e a não incorporação de seres humanos, a submissão à Comissão de Ética foi dispensada.

## Resultados

A pesquisa eletrônica nos bancos de dados resultou em 636 referências. As plataformas que mais contribuíram para a investigação foi a Scopus (179 de *Elderly Psychological Empowerment* e 113 de *Elderly Resilience*), a PubMed (51 de *Elderly Psychological Empowerment* e 116 de *Elderly Resilience*) e a Science Direct (50 de *Elderly Psychological Empowerment* e 88 de *Elderly Resilience*). Segui-se depois a LILACS (2 de *Elderly Psychological Empowerment* e 29 de *Elderly Resilience*) e a APA PsycNET (0 de *Elderly Psychological Empowerment* e 8 de *Elderly Resilience*).

**Figura 1** - Diagrama de identificação, seleção e inclusão dos estudos, com base no Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA). Resultados da Pesquisa de estudos na área da Psicologia e Gerontologia, artigos dos últimos cinco anos, em inglês, recolhidos de base de dados a partir de palavras-chave Empoderamento Psicológico no Envelhecimento (*Elderly Psychological Empowerment*) e Resiliência Psicológica no Envelhecimento (*Elderly Resilience*). (abril e maio de 2023).



Após a exclusão dos artigos duplicados e a leitura dos títulos e resumos obtiveram-se 63 artigos (44 quantitativos, 9 qualitativos e 10 misto). Todos os textos foram lidos integralmente e excluíram-se mais 29, que não obedeciam aos critérios de inclusão, (artigos completos excluídos por não responderem à pergunta da investigação e não contemplarem o desenvolvimento do estudo contemplado os constructos de “resiliência” e “empowerment” psicológico no envelhecimento), resultando um total de artigos elegíveis para a revisão de 35. A condução da pesquisa encontra-se descrita na Figura 1.

Dos estudos observados, realizados com idosos da comunidade saudáveis ou doentes, emergiram múltiplos fatores a considerar e insights importantes para levar por diante o envelhecimento saudável dos adultos a partir dos 65 anos visionado pelas dimensões da resiliência psicológica e do *empowerment* psicológico.

No que diz respeito ao valor da resiliência psicológica destacam-se:

- APOIO SOCIAL E SATISFAÇÃO COM A VIDA- A resiliência encontra-se relacionada com o apoio social e a satisfação com a vida dos idosos.
- PREVENÇÃO DO SOFRIMENTO PSÍQUICO- A resiliência e a saúde física são importantes na prevenção do sofrimento psíquico em idosos.
- SAÚDE E BEM-ESTAR PSICOLÓGICO- O significado da vida e a resiliência em idosos ajuda a melhorar a saúde psicológica e o bem-estar e a criar uma capacidade potencial única para enfrentar as armadilhas da velhice, que resultam em melhor saúde física, mental, social e espiritual nos idosos.
- DOMÍNIO DAS TECNOLOGIAS DA INFORMAÇÃO E COMUNICAÇÃO- Usar a tecnologia para aumenta a resiliência entre os idosos.
- DIFERENÇAS DE GÊNERO NA PREVENÇÃO- Os esforços de prevenção do suicídio na redução dos fatores de risco têm se mostrado mais benéficos para as mulheres idosas do que para os homens, sugerindo potenciais diferenças de gênero na prevenção efetiva.
- COPING NA ADVERSIDADE DA DOENÇA- A resiliência pode proteger contra o sofrimento emocional em pacientes com câncer. Sugere-se que a resiliência possa ser um traço relativamente estável que não é afetado pela adversidade.
- LONGEVIDADE POSITIVA- A longevidade foi caracterizada por um equilíbrio entre aceitação e garra para superar as adversidades, juntamente com uma atitude positiva e laços estreitos com a família, religião e terra, proporcionando propósito na vida. Os longevos incluem nas suas vidas a positividade (resiliência e otimismo), o trabalho duro, o vínculo com a família e a religião, a necessidade de controle e amor à terra.
- INTERVENÇÃO NA SAÚDE- A melhoria da resiliência está associada a uma abordagem orientada ao paciente. Os provedores de serviços de saúde podem fazer intervenções adequadas com base nas necessidades únicas dos pacientes para melhorar a sua resiliência e capacidade de superar problemas de saúde. Esta ação também pode ser realizada por familiares, equipe de saúde e organizações e órgãos relacionados.
- EDUCAÇÃO PARA A REFORMA- Sugere-se que o bem-estar na reforma está relacionado com a satisfação socioeconômica e resiliência. Atitudes de resiliência devem ser promovidas nos Programas de Educação para a reforma.
- PREVENÇÃO DO SUICÍDIO - Parece existir uma diferença de gênero na resiliência contra o comportamento suicida na população idosa o que implica delinear estratégias de intervenção preventiva do suicídio de idosos específicas de gênero. Estas ações são realizadas na comunidade e o processamento atencional flexível de informações emocionais pode servir como um fator de resiliência para manter o bem-estar durante fases posteriores da vida.



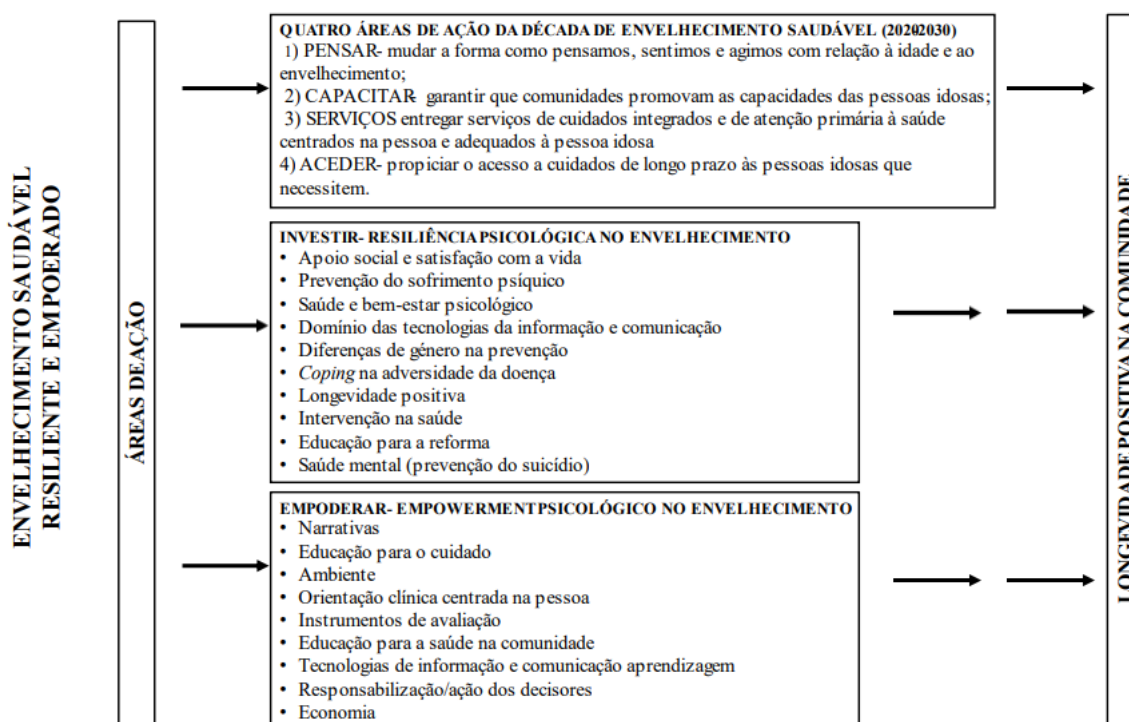
Quanto ao *empowerment* psicológico os estudos evidenciaram os seguintes fatores:

- INTERVERSÕES NARRATIVAS- Intervenções narrativas breves implementando técnicas de desconstrução-reconstrução são viáveis para iniciar o empoderamento da comunidade dentro do contexto de melhoria da vizinhança participativa.
- EDUCAÇÃO PARA O CUIDADO- Relevância do desenvolvimento de programas educativos para o aprimoramento psicológico positivo de cuidadores de idosos. A necessidade de educação continuada e estratégias para aumentar os níveis de empoderamento.
- AMBIENTE- Parece ser determinante o papel do ambiente estrutural e social na implantação do empoderamento individual na idade avançada.
- ORIENTAÇÃO CLÍNICA CENTRADA NA PESSOA- Os indicadores clínicos centrados na pessoa podem ser úteis para empoderar e orientar as melhorias adicionais na educação em diabetes e programas de apoio à saúde.
- INSTRUMENTOS DE AVALIAÇÃO-Desenvolvimento de instrumentos para avaliação do empoderamento de pessoas idosas e sua relação com as atividades, construção de uma medida que avalia três fatores de empoderamento em idosos (senso de significado, competência/autodeterminação e empoderamento coletivo).
- EDUCAÇÃO PARA A SAÚDE NA COMUNIDADE- A educação é um dos elementos-chave na promoção de um paradigma completo para o envelhecimento ativo e são vários os fatores que contribuem para o empoderamento de idosos de uma comunidade. Foram identificadas quatro áreas fundamentais que abrangem os principais aspectos de interesse relacionados à gestão de saúde dos usuários em suas próprias casas: personalização do prontuário eletrônico, monitoramento remoto da saúde, educação e treino e assistência de alerta.
- TECNOLOGIAS DE INFORMAÇÃO E COMUNICAÇÃO- O uso do computador e da Internet parecem contribuir para o bem-estar e o sentimento de empoderamento dos idosos, afetando as suas interações interpessoais, promovendo o seu funcionamento cognitivo e contribuindo para sua experiência de controle e independência. Permite identificar ambientes que colocam o paciente em risco de se tornar dependente ou facilitam o aumento da independência.
- APRENDIZAGEM- Considerando que o empoderamento está ligado ao Domínio Aprendido (Peterson, Maier & Seligman 1993, cit. Faulkner, 2001) e ao aumento da independência do paciente, enquanto o desempoderamento está ligado ao Desamparo Aprendido (Seligman 1975, cit. Faulkner, 2001) e ao aumento da dependência do paciente, desenvolver uma medida válida e confiável de empoderamento e desempoderamento do paciente em ambientes hospitalares que atendem pessoas idosas constitui uma mais valia para a intervenção na aprendizagem de autonomia.
- RESPONSABILIZAÇÃO/AÇÃO DOS DECISORES - Relevância da aplicação de estratégias de envelhecimento saudável a programas e planos em diversos setores, a serem implementadas pelos governos municipais que podem potencialmente comprimir a quarta idade mais ligada à fragilidade e dependência e expandir a terceira idade de realização e independência, resultando mais idosos contribuindo para a vida social e econômica de uma cidade.
- ECONOMIA- A disponibilidade de um conforto econômico empodera os idosos.

## Discussão

Partir do Relatório Mundial de Envelhecimento e Saúde da OMS (2015) e procurar as conceções sobre resiliência psicológica e empoderamento psicológico na ancianidade para melhor compreender os seus contributos para o envelhecimento saudável e assim poder empreender os desafios em relação à promoção da saúde de pessoas mais velhas, conforme preconizado para a década do envelhecimento saudável (2020-2030), foi uma tarefa que conduziu a várias dimensões mais especializadas a considerar para promover um envelhecimento saudável na comunidade. Para a resiliência psicológica no envelhecimento destacaram-se as seguintes áreas a investir: apoio social e satisfação com a vida; prevenção do sofrimento psíquico; saúde e bem-estar psicológico; domínio das tecnologias da informação e comunicação, atenção às diferenças de género na prevenção, *coping* na adversidade da doença; longevidade positiva; intervenção na saúde; educação para a reforma; e prevenção do suicídio. Para o *empowerment* psicológico evidenciaram-se as seguintes áreas a promover: narrativas; educação para o cuidado, ambiente; orientação clínica centrada na pessoa; instrumentos de avaliação; educação para a saúde na comunidade; tecnologias de informação; aprendizagem; responsabilização/ação dos decisores e economia.

**Figura 2** - Modelo Racional Teórico de Promoção do Envelhecimento Saudável Resiliente e Empoderado para uma Longevidade Positiva na Comunidade.



Podemos dizer que os estudos encontrados estão de acordo com os modelos multidimensionais de envelhecimento bem-sucedido que levam em consideração os fatores físicos e psicológicos (Silva-Sauer, 2021). Para promover a saúde no envelhecimento surge a necessidade de capacitar os idosos para tomar decisões de saúde informadas e testar intervenções direcionadas ao empoderamento para promover a sua saúde. Sugere-se uma abordagem de empoderamento no sentido de incentivar o envolvimento e a participação de um idoso nas decisões de cuidados de

saúde e promover resultados positivos de saúde. A presente investigação permitiu conhecer mais áreas de intervenção e reafirmar as áreas propostas para a década do Envelhecimento Saudável (2020-2030). A partir dos resultados obtidos foi possível desenhar um Modelo Racional Teórico de Promoção do Envelhecimento Saudável Resiliente e Empoderado para uma Longevidade Positiva na Comunidade (Figura 2).

Alerta também para uma maior atenção para prevenir ou mitigar comportamentos de risco em saúde mental em pessoas mais velhas. Observou-se ainda que os estudos encontrados não tinham como investimento objetivo e especializado a investigação sobre a forma como se pensa, sente e age em relação à idade e ao envelhecimento. Tudo indica que a resiliência psicológica e o empoderamento psicológico nas pessoas idosas podem traduzir-se numa boa saúde mental, na ausência de doença, numa velhice bem-sucedida, implicar a inclusão social, a melhoria da autoestima, das relações interpessoais, entre outros aspetos relevantes e promotores da saúde em cidades e comunidades pró-envelhecimento. Os resultados evidenciam pistas para a planificação da intervenção.

## Conclusão

O envelhecimento surge associado a determinadas fragilidades físicas, mentais e sociais que é preciso prevenir ou saber identificar para poder aprender a lidar com elas e alcançar bem-estar e qualidade de vida (Faria, 2018). As evidências mostram que as doenças e as incapacidades, em particular, as doenças crónicas degenerativas surgem por vezes nesta faixa etária e afetam a capacidade funcional. Como é compreensível, quanto maior for a fragilidade maior é o risco de incapacidade, institucionalização, hospitalização e morte (Strandberg, Pitkälä, & Tilvis, 2011), por isso, é importante estar atento aos sinais e investir na prevenção dos riscos e promoção de uma longevidade saudável.

Uma vida mais longa é um recurso valioso não só para o(a) próprio(a) e para a sua família, mas também para a sociedade. Os “anos extra” depois da reforma (mais ou menos depois dos 65 anos) não podem constituir-se como uma operação de adição de longevidade (Faria, 2018). A meta para promover envelhecimento implica diligenciar ações planificadas consertadas e solidificação de sinergias e *mindset* positivas e criativas em prol da construção de iniciativas de pró-envelhecimento comunitário e do florescimento de um envelhecimento saudável ao longo do ciclo de vida, construindo e disponibilizando serviços de proximidade e indo ao encontro das reais necessidades das pessoas maiores.

A partir do registo do número de estudos levantado para cada termo/palavra-chave podemos observar a relevância dada pelos investigadores às respetivas problemáticas e a abrangência e especificidade dos resultados levantados em cada base de dados. Consideramos que é preciso investigar mais sobre resiliência psicológica e empoderamento psicológico no envelhecimento, pelo que os investigadores deveriam estar mais atentos a este contributo científico que tem implicações interventivas. Em particular, ao nível do investimento no “Ageing in Place” de qualidade, isto é, “(...) da permanência de uma pessoa mais velha na sua residência privada (e respetiva comunidade envolvente) durante a fase mais avançada da vida, em alternativa à institucionalização, assumindo a gestão do quotidiano com a autonomia possível” (Fonseca, 2021, 38) preservando a sua saúde mental e bem-estar.

Uma limitação identificada neste estudo é relativa ao levantamento de dados, o que sugere a realização de uma nova pesquisa, mais alargada em outras bases de dados sobre estes assuntos. Por outro lado, a partir da análise das referências registadas podemos adiantar a importância de continuar a pesquisar no domínio do envelhecimento concebido numa perspetiva individual, comunitária e de abordagem multidisciplinar. Inferimos que é relevante um maior investimento na gerontologia. Saliente-se ainda que a presente investigação através das suas diretrizes pode constituir um referencial teórico (Modelo de Promoção do Envelhecimento Saudável Resiliente

e Empoderado para uma Longevidade Positiva na Comunidade) para poder avançar de forma sólida e fundamentada com projetos de intervenção que contribuam para a promoção de um envelhecimento saudável que considere ações de resiliência psicológica e empoderamento psicológico que consolide uma longevidade positiva na comunidade.

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## **Sentimento de comunidade, temperamento e participação comunitária em idosos institucionalizados**

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### **Resumo**

A institucionalização é um cenário que poderá ser encarado de uma forma positiva ou negativa, consoante o temperamento do idoso. A referência à cidadania ativa dos idosos na sociedade implica falar da sua participação comunitária e do seu sentimento de comunidade. É precisamente nesta linha de pensamento de três eixos (sentimento de comunidade, temperamento e participação comunitária em idosos institucionalizados) que surge o objetivo desta investigação, o de saber de que forma o temperamento das pessoas mais velhas institucionalizadas, o seu sentimento de comunidade e o seu nível de participação comunitária tem implicações para um envelhecimento saudável na comunidade. Foram realizados três Estudos: Estudo I- conhecer a perspetiva das pessoas mais velhas institucionalizados; Estudo II -compreender a perceção que os profissionais e pessoas da comunidade apresentam sobre as pessoas mais velhas institucionalizados da nossa investigação nos domínios temperamento, sentimento de comunidade e participação comunitária; Estudo III- compreender a perspetiva dos especialistas sobre o temperamento das pessoas mais velhas institucionalizadas, o seu sentimento de comunidade e o seu nível de participação comunitária tem implicações para um envelhecimento saudável na comunidade. Para esse efeito foram administrados, no estudo I, três instrumentos de avaliação psicológica (Índice de Sentimento de Comunidade II, Questionário de Participação Comunitária, e Escala de EAS de Temperamento para Adultos) a 17 idosos institucionalizados.

Os resultados evidenciaram que o temperamento apresenta índices elevados de sociabilidade. A participação comunitária é baixa e existe alguma insatisfação por parte dos idosos devido ao facto de considerarem que estão poucas vezes com a sua família, amigos, vizinhos, a participar em serviços religiosos e em atividades organizadas da comunidade. Quanto ao sentimento de comunidade, os resultados obtidos levaram a constatar que a perceção deste sentimento é reduzida. De acordo com as opiniões dos profissionais o temperamento dos idosos tende a variar em função da própria personalidade ou da idade que o idoso apresenta e a sociabilidade, existência de hábitos saudáveis e um maior acompanhamento, por parte quer da instituição quer da família, são considerandos fatores promotores do bem-estar associados ao temperamento; a participação comunitária é importante e os idosos tendem a gostar e a querer participar.

**Palavras-chave:** Idosos institucionalizados, Gerontologia, Respostas Sociais, Participação Comunitária, Sentimento de Comunidade, Temperamento

## **Sense of community, temperament and community participation in institutionalized elderly**

### **Abstract**

Institutionalization is a scenario that can be viewed positively or negatively, depending on the temperament of the elderly person. The reference to the active citizenship of the elderly in society implies talking about their community participation and their sense of community. It is precisely in this line of thought with three axes (sense of community, temperament and community participation in institutionalized elderly) that the objective of this investigation arises, to know how the temperament of institutionalized older people, their sense of community and their level of community participation has implications for healthy aging in the community. Three Studies were carried out: Study I- knowing the perspective of institutionalized older people; Study II - to understand the perception that professionals and people from the community have about institutionalized older people in our research in the domains of temperament, sense of community and community participation; Study III- understanding the experts' perspective on the temperament of institutionalized older people, their sense of community and their level of community participation has implications for healthy aging in the community. For this purpose, in study I, three psychological assessment instruments (Community Feeling Index II, Community Participation Questionnaire, and EAS Temperament Scale for Adults) were administered to 17 institutionalized elderly people.

The results showed that temperament has high levels of sociability. Community participation is low and there is some dissatisfaction on the part of the elderly due to the fact that they consider that they are rarely with their family, friends, neighbors, participating in religious services and in organized community activities. As for the feeling of community, the results obtained led to the conclusion that the perception of this feeling is reduced. According to the professionals' opinions, the temperament of the elderly tends to vary depending on their own personality or age and sociability, the existence of healthy habits and greater monitoring, by both the institution and the family, are considerations factors promoting well-being associated with temperament; Community participation is important and older people tend to like and want to participate.

**Keywords:** Institutionalized elderly, Gerontology, Social Responses, Community Participation, Sense of Community, Temperament

## **INTRODUÇÃO**

Envelhecer é um processo de elevada complexidade que implica um conjunto de modificações que simultaneamente integram o mesmo e nele também impactam (Kirkwood, 2008). A nível biológico algumas alterações ocorrem, estando o envelhecimento relacionado com um conjunto diverso de «prejuízos» a nível molecular e celular. Com o tempo estes prejuízos acarretam uma perda do nível de reservas fisiológicas, assim como um maior risco de contração de inúmeras patologias e uma perda global das capacidades próprias da pessoa, da qual resultará a morte ao fim deste processo. Porém, tais alterações não acontecem de maneira linear e são somente de modo vago em função da idade cronológica de um indivíduo. Além disso, o avançar da idade



com frequência engloba alterações importantes além de prejuízos a nível biológico (OMS, 2015).

De acordo com a OMS (2005) o envelhecimento ativo é definido como o processo de promoção de oportunidades para a saúde, participação e segurança, de modo a melhorar a qualidade de vida das pessoas que envelhecem. Assim este envelhecimento encontra-se dependente de uma série de condicionantes entre os quais se englobam pessoas, famílias e países, que influenciam de forma direta ou indireta o bem-estar, o começo e a evolução de patologias e como os indivíduos vão lidar com a patologia e as deficiências.

A institucionalização não é algo simples de aceitar, representando para as pessoas de idade avançada uma forte modificação nas suas vidas, que engloba diversas questões, como a separação do seu lar, do seu local confortável, um rompimento no que respeita à vida e aos costumes que tinham e um ajustamento a um outro meio físico e social, o que conduz, grande parte das vezes, a fortes consequências a nível emocional (Ibidem).

O temperamento é considerado a matéria-prima, que conjuntamente com a inteligência e a parte física, cria a personalidade. Este está ainda associado às disposições intimamente associadas a determinantes de nível biológico ou fisiológico, que se alteram em pequena escala com o desenvolvimento. É então comum no caso do temperamento que se evidencie mais a função da hereditariedade, do que noutros traços da personalidade (Hall, Lindzey & Campbell, 2000).

Ornelas (2008) afirma que o sentimento de comunidade é um dos pontos de abordagem essencial no âmbito da Psicologia Comunitária. Este conceito foi introduzido por outro importante autor Seymour Sarason (cit. Ornelas, 2008), que mencionam que os indivíduos podem viver, ter trabalho, pagar impostos e exercer o direito de voto e, ainda assim, não se identificarem com as suas comunidades, sendo que o facto de participarem e contribuírem para resolver problemas comunitários, não é algo indispensável ou que não há oportunidade para que tal contributo aconteça. Este autor enfatiza ainda o facto de o sentimento de comunidade poder facilitar a participação dos cidadãos e ser um remédio/solução para o sentimento que os leva a se alienarem, isolarem-se e se sentirem sós, o que intensifica a dinâmica destrutiva da vida dos indivíduos e o aumento da pobreza social.

Neste sentido é crucial que existam serviços de maneira a tornar as pessoas, em especial os mais idosos, capazes de ter o controlo sobre a sua própria vida, continuando a produzir e a permanecer a maior parte do tempo ativos na comunidade. Este processo pode-se definir de empoderamento do cidadão, ou seja, de estimulação do indivíduo idoso para que assuma o controlo da sua vida e faça parte do processo de escolha no interior da sua família e meio social, de modo a construir uma comunidade com mais saúde e preparação para os desafios no futuro. Então um maior compromisso e existência de mais recursos, contribui para aumentar as possibilidades de que esta população tenha mais capacidade e autonomia (Chora, Faria & Fernandes, 2020).

Na década de 90, Florin e Wandersman (1990) afirmou que a participação na comunidade está associada a melhorias na comunicação estabelecida com a vizinhança e comunidade, mediante a observação de relacionamentos mais intensos entre as pessoas, e também ao facto de existir um corpo social em atividade e sentimentos claros de eficácia a níveis pessoal e político. Por fim, a participação a nível da comunidade é uma prática que aplica uma diversidade de táticas e métodos, usando as competências e a força cidadã para o alcance de metas coletivas.

Considerando a anterior apresentação dos principais conceitos teóricos que servem de base para a presente investigação, levantamos a seguinte questão de investigação “De que forma o temperamento das pessoas mais velhas institucionalizadas,

o seu sentimento de comunidade e o seu nível de participação comunitária tem implicações para um envelhecimento saudável na comunidade?” Neste sentido foram estabelecidos diferentes objetivos para cada estudo. O Estudo I pretende conhecer o temperamento dos gerontes institucionalizados, assim como estudar o seu sentimento de comunidade e o seu nível de participação comunitária, averiguando, também, que atividades seriam promotoras de um envelhecimento saudável na comunidade. O Estudo II, pretende conhecer as percepções dos profissionais e pessoas da comunidade ligadas diretamente a estes idosos institucionalizados sobre a problemática do envelhecimento, da institucionalização, do temperamento destes idosos, assim como também, a percepção sobre o sentimento de comunidade destes gerontes e da sua participação comunitária e por fim, averiguar que atividades são consideradas promotoras de um envelhecimento saudável na comunidade. Também no estudo III se pretende conhecer a percepção que profissionais da área da saúde mental e gerontologia tem sobre o temperamento, sentimento de comunidade e participação comunitária dos idosos institucionalizados

## TEMPERAMENTO DOS IDOSOS

As teorias recentes da personalidade compreendem o desenvolvimento do homem como um processo de múltiplas dimensões, que é integrado por factos de vida onde acontecem ganhos, prejuízos e estabilidade, tendo em conta que os indivíduos apresentam potencial para a mudança frente a circunstâncias de vida mais complicadas, especialmente porque é nesta etapa da vida que os indivíduos apresentam uma chance maior de se confrontarem com factos de vida que demandam uma maior integração (Zamarrón & Fernández-Ballesteros, 2002).

Estes autores também evidenciaram que os indivíduos demonstram maneiras heterogêneas de envelhecer, e que a personalidade é influenciada por fatores que se associam com o que sempre foram as reações e os comportamentos de cada um no decorrer da vida. Ou seja, os autores afirmam que a personalidade, na idade avançada, continua relativamente da mesma maneira que sempre foi durante a idade adulta e discordam da noção de que a personalidade se mostra mais rígida.

Anteriormente, em 1968, Havighurst, Neugarten e Tobin publicaram os primeiros dados relacionados à personalidade em pessoas em pessoas entre 50 e 90 anos, tendo estruturado a personalidade baseada em funções sociais, níveis de atividade e bem-estar com a vida. A *teoria da seletividade socioemocional* afirmou que, com o avanço da idade, os objetivos se modificam de tal modo que a ênfase motivacional é colocada cada vez mais no controlo das emoções. Alguns autores destacam que há, na realidade, diferenciações de idade nas metas, e tais diferenciações são consistentes com as determinadas pela teoria (Lang & Carstensen, 2002; Staudinger, Freund, Linden, & Maas, 1999). Bem menos destaque tem sido dado, entretanto, aos impactos das modificações de metas para o processar das faculdades cognitivas (Charles, Mather & Carstensen, 2003).

Assim de acordo com esta teoria é possível prever um aumento da regulação emocional de acordo com a idade. Os humanos têm noção consciente e também inconsciente do seu tempo de vida. Por exemplo quando o tempo de vida é percebido como elevado, como no caso de jovens adultos saudáveis, os objetivos a atingir e as motivações relacionadas prendem-se essencialmente como uma aquisição de mais informação possível. De acordo com a presente teoria a regulação emocional é uma característica mais específica da idade mais avançada. Este tipo de regulação caracterizada pela manutenção de afectos positivos e diminuição dos afetos negativos tende a aumentar com a idade (Carstensen & Fredrickson, 1998; Carstensen, 2006; Charles, Mather & Carstensen, 2003). Ainda referindo a pesquisa levada a cabo por

Charles, Mather e Carstensen (2003) que investigou diferenças de idade nas recordações abertas e na memória para reconhecimento de imagens de natureza positiva, negativa e neutra, foi possível concluir que com a maior idade se verificam diminuições seguras na memória de imagens negativas em contraste com as neutras e positivas que tendem a aumentar, o que pode estar relacionado a uma maior regulação emocional, tal como já foi referido na teoria de seletividade emocional.

## **SENTIMENTO DE COMUNIDADE**

A ideia de Sentimento de Comunidade foi a princípio utilizada em 1974 com Seymour Sarason que a descreveu como sendo uma ideia central e predominante da área da Psicologia Comunitária. Para McMillan e Chavis (1986), o sentimento de comunidade está baseado em 4 constituintes fundamentais que estabelecem as características específicas da ideia. Estes são: 1) integrar algo, 2) influenciar, 3) integrações e 4) satisfação das exigências e compartilhamento de vínculos de natureza emocional, que são estabelecidos como sendo o sentimento que os membros possuem de pertença, o sentimento de que são importantes para outros membros e para o grupo e a certeza de que as demandas dos membros serão atingidas através de um sentido de união.

A Teoria de Sentido de Comunidade de McMillan e Chavis (1986) é a primeira tentativa de teorização largamente usada e aceite a nível comunitário e científico. Tais autores estabelecem o Sentido de Comunidade como o sentimento de pertença que os membros apresentam, que se preocupam entre si e com o grupo e uma crença compartilhada de que as exigências dos integrantes serão satisfeitas através do comprometimento com a união (McMillan & Chavis, 1986). Tal teoria ambiciona relatar o funcionamento do sentido de comunidade levando à deteção dos diversos aspetos implicados e o processo através do qual os mesmos contribuem para promover a vivência de sentido de comunidade, sendo que foram detetadas 4 dimensões: Pertença, Influência, Integração e Satisfação de Necessidades e Ligações Emocionais Partilhadas.

O sentimento de comunidade é, de acordo com Ornelas (2008), uma conceptualização essencial da psicologia comunitária. Tal ideia foi introduzida por Seymour Sarason (1974, cit. por Ornelas, 2008), autor de acordo com o qual os indivíduos podem viver, ter trabalho, pagar impostos e exercer o direito de voto e, no entanto, não se identificarem com as suas comunidades, experimentando que o facto de participarem e contribuírem para resolver problemas comunitários, não é algo indispensável ou que não há oportunidade para que tal contributo aconteça. Na perspetiva do autor, o sentimento de comunidade pode facilitar a participação dos cidadãos e ser um remédio para o sentimento que os leva a se alienarem, isolarem-se e se sentirem sós, o que intensifica a dinâmica destrutiva da vida dos indivíduos e o aumento da pobreza social. Além disso para Rappaport (1994, cit. por Ornelas, 2008) o pertencimento a um grupo, entidade ou comunidade, em que o indivíduo possa ao mesmo tempo receber e oferecer suporte, é uma maneira de fazer crescer o controlo a nível pessoal, o que significa elevar a confiança e as crenças de cada um sobre o potencial de intervenção e impacto nas diversas áreas da sua vida.

## **PARTICIPAÇÃO COMUNITÁRIA**

Florin e Wandersman (1990) revela que a participação na comunidade está associada com certos aperfeiçoamentos comunicacionais a nível da vizinhança e da comunidade em si mediante a observação de relacionamentos mais intensos entre as pessoas, do facto de existir um corpo social em atividade e sentimentos claros de eficácia

a níveis pessoal e político. Por fim, a participação a nível da comunidade é uma prática que aplica uma diversidade de táticas e métodos, usando as competências e a força cidadã para o alcance de metas coletivas.

Desta maneira, as Organizações de natureza comunitária abrangem estruturalmente, associações de vizinhos, inquilinos ou negociantes, pessoal da igreja ou clubes da juventude, as quais possuem traços comuns (Florin & Wandersman, 1990), tendendo a ser geograficamente situadas, uma vez que nascem em localidades específicas e englobam o compromisso das pessoas na sua própria região. Um outro traço destas entidades é a sua natureza voluntária, que envolve que prioritariamente possuem como recursos de natureza primária e prioritária a participação ativa sem remuneração.

Para Ornelas (2003), a participação comunitária não é apenas o oferecimento de livre vontade de tempo e recursos a favor de uma comunidade, mas também o resultado da participação dos cidadãos nas tomadas de decisões em prol da comunidade, abrangendo a implicação efetiva nas tomadas de decisões dentro dos grupos, entidades e comunidade. Assim, um dos estudos mais mencionados na literatura sobre a participação comunitária, que impactou inúmeras teorias e a maneira como as estruturas de poder impactam no meio social, foi o de Sherry Arnstein (1969, cit Kenny, Hyett, Sawtell, Dickson-Swift, Farmer e O'meara, 2013), que percebe a participação comunitária como uma série de níveis de implicação, que vão crescendo no que respeita ao poder dos cidadãos, demonstrados comparativamente a uma escada.

Berry, Rodgers e Dear (2007), qualificaram as distintas maneiras de participação comunitária em 3 modalidades: 1) conexões sociais informais, 2) envolvimentos cívicos e 3) participação a nível político. Nessas 3 modalidades estão incluídos 14 modalidades de participação comunitária, conforme segue: a conexão social informal abrange o contacto com os indivíduos da família, o contacto com a extensão familiar, amizades, vizinhança e colegas de profissão; o envolvimento cívico abrange a educação do adulto, práticas de natureza religiosa, atividades desenvolvidas comunitariamente, atividades de natureza voluntariada, doações; e as participações a nível político incluem o interesse ativo nos temas atuais, as expressões públicas de opiniões, o ativismo na comunidade e os protestos políticos.

## **MÉTODO**

### ***Desenho do Estudo***

Essencialmente, neste presente estudo pretende-se analisar o temperamento dos idosos institucionalizados considerando as suas várias dimensões, estudar o sentimento de comunidade destes gerontes, assim como também, aferir sobre o nível de participação comunitária dos mesmos e averiguar, junto destes idosos, que atividades são consideradas promotoras de um envelhecimento saudável na comunidade. Para além disso, o presente estudo, pretende junto dos profissionais e pessoas da comunidade ligadas diretamente à vida destes idosos institucionalizados e especialistas na área da Gerontologia conhecer as perceções destes sobre a problemática do envelhecimento, da institucionalização, do temperamento destes idosos, assim como, analisar a perceção destes profissionais e especialistas sobre o sentimento de comunidade, participação comunitária dos idosos institucionalizados e averiguar, também, que que atividades são consideradas promotoras de um envelhecimento saudável na comunidade.

Para este efeito e no sentido de melhor responder a esta questão, foram levantados alguns objetivos, cuja concretização permitirá dar resposta mais clara e adequada à questão levantada. Assim sendo, delineou-se como **objetivo geral** da investigação: identificar a viabilidade da participação comunitária dos idosos institucionalizados. Como

**objetivos específicos** definiu-se: caracterizar o idoso institucionalizado; identificar de que forma os idosos institucionalizados podem participar mais ativamente na comunidade; identificar os interesses dos idosos institucionalizados.

Assim sendo, para a compreensão desta problemática foram desenhados três estudos: Estudo I, Estudo II e Estudo III, respetivamente. O Estudo I, aplicado a uma amostra de 20 idosos institucionalizados, é relativo ao conhecimento destes gerontes e que procura indagar, avaliar e perceber qual a opinião destes gerontes sobre as seguintes dimensões: sentimento de comunidade, temperamento e participação comunitária em idosos institucionalizados. Já o Estudo II visa compreender a perspectiva, a opinião dos profissionais ligados à organização e ao desenvolvimento da vida diária destas pessoas mais velhas institucionalizadas, assim como também, são auscultadas a opinião de pessoas da comunidade ligadas, também elas, a estes idosos. Por fim, o Estudo III procura o conhecimento da abordagem dos especialistas em psicologia e gerontologia à problemática em questão.

### ***Participantes***

A presente investigação foi realizada com vinte e oito participantes no total, sendo que vinte foram idosos institucionalizados na Estrutura residencial para pessoas idosas da ERPI em questão. Como já foi mencionado, foram realizados três estudos. No Estudo I realizaram-se questionários e aplicaram-se escalas a dezassete idosos. Posteriormente fez-se uma entrevista semiestruturada a três idosos. O critério de seleção destes idosos participantes neste estudo, foi assegurado pela Diretora técnica de que estes se encontravam bem, e com uma certa autonomia. No Estudo II participaram três profissionais, desta ERPI ligadas diretamente à vida diária destes gerontes, tais como: a Diretora Técnica, a Terapeuta ocupacional e a Auxiliar de ação direta. Também participaram mais duas pessoas da comunidade ligadas à ERPI: o presidente de direção da Casa do Povo e a presidente da Junta de Freguesia da aldeia onde se insere esta ERPI. Por fim, no Estudo III participaram três especialistas da área de gerontologia, uma professora de Gerontologia e duas psicólogas clínicas, também ligadas à área de gerontologia.

### ***Material/Instrumentos***

Nesta presente investigação, primeiramente no Estudo I, foi aplicado um questionário sociodemográfico aos 17 idosos e depois utilizadas três escalas: 1- índice de sentimento de comunidade II – uma adaptação feita por Mendes (2014) da escala do Sense of Community Index – CCI-2 (Chavis, Lee e Acosta, 2008); 2- Questionário de participação comunitária Adaptação do Australian Community participation Questionnaire, Barry et al. 2007; 3- Escala de EAS de Temperamento para Adultos, A. Buss & R. Plomim, 1984, uma adaptação feita por Faria (2012) e Faria (2003, cit. Faria, 2012) . Construimos, também, três guiões de entrevista semiestruturada: um guião de entrevista para idosos institucionalizados, a ser aplicado no Estudo I; um guião de entrevista para profissionais e pessoas ligadas diretamente aos idosos institucionalizados, aplicado no Estudo II e por fim, no Estudo III também elaborado um guião de entrevista para especialistas na área da Gerontologia).

### ***Procedimento***

No Estudo I tanto os questionários como as entrevistas foram aplicados individualmente, assegurando cautelosamente de que estes se encontravam bem, que apresentavam uma certa autonomia e que estariam disponíveis a participar tanto nos questionários, como para responder às entrevistas.

Antes de cada aplicação foi pedido o consentimento informado de cada participante, e procedeu-se à apresentação do problema em estudo. Todos os idosos participantes foram informados de que as suas respostas seriam anotadas pelo investigador. Desta forma evitou-se suscetibilizar os idosos que não sabiam ler nem escrever ou que apresentavam dificuldades na leitura e escrita.

No Estudo I, no que diz respeito à análise quantitativa, os dados obtidos foram recolhidos no ano de 2015, foi realizada uma análise descritiva tendo em conta as frequências e percentagens das respostas obtidas, assim como a análise das suas respetivas médias, recorrendo-se para o efeito ao programa de análise estatística de dados IBM SPSS Statistiscs vs 28. No caso da entrevista aos idosos, esta seguiu um guião cujas respostas foram transcritas na íntegra e foi aplicada em novembro de 2021 aos idosos institucionalizados.

Já nos Estudo II e III, somente foi possível entrevistar pessoalmente a Presidente da Junta de Freguesia e uma das Psicólogas. Os restantes intervenientes foram entrevistados por videochamada e por resposta a e-mail. Para a aplicação destas entrevistas foi elaborado um Guião de entrevista e todas as respostas foram tratadas e transcritas, na íntegra. Esta recolha de dados foi realizada durante o mês de novembro de 2021 até janeiro de 2022.

## RESULTADOS

**No Estudo I**, no que respeita aos resultados obtidos no estudo quantitativo, foi possível verificar que no que se refere à primeira dimensão analisada (temperamento) o mesmo é considerado elevado na opinião dos idosos, sendo mais elevados os índices de sociabilidade, que estão relacionados com o gosto em estar com os outros e/ou trabalhar com os mesmos. Já no que se refere à perceção que têm de dimensões mais emotivas, nota-se que os idosos sentem um pouco de medo em geral, identificando-se bastante com este tipo de sentimento.

No que respeita aos resultados obtidos no estudo qualitativo os idosos quando questionados sobre o que é para si o temperamento tendem a dar opiniões muito diversas, embora com alguma tendência para um tipo de temperamento mais defensivo combativo, com algumas expressões de desinteresse, incapacidade decisão e alguma instabilidade emocional

Em relação à participação comunitária, foi possível, com o estudo quantitativo realizado, concluir, conforme os resultados da escala de avaliação da participação comunitária, que no geral a mesma é baixa, apesar de os idosos referirem que por vezes participam em alguns aspetos, como no contacto com os vizinhos, e em atividades de doação de dinheiro para caridade.

Os resultados de outro conjunto de questões também relacionadas com as perceções de participação comunitária, parecem revelar alguma insatisfação por parte dos idosos devido a considerarem que estão poucas vezes com a sua família, amigos, vizinhos e a participar em serviços religiosos e em atividades organizadas da comunidade, apesar de referirem noutro conjunto de questões, gostar de ser mais participativos e passar mais tempo com a sua família, amigos e vizinhos, assim como participar em atividades da comunidade. Também na análise das questões sobre a participação comunitária foi possível verificar que mais idosos afirmam que a tendência do idoso é a de gostar de participar em atividades comunitárias e especialmente em atividades que considerem que podem ser significativas para eles, embora refiram mais que não têm possibilidades, nem solicitações para tal participação

Relativamente ao sentimento de comunidade, os resultados do estudo quantitativo realizado, alusivos às escalas de sentimento de comunidade, levaram a concluir que a percepção deste sentimento, no geral, é reduzida no grupo de idosos inquirido. Neste sentido, relativamente às várias dimensões analisadas, conforme a teoria do sentido de comunidade de McMillan e Chavis (1986), que são: o modo como os idosos sentem que as suas necessidades foram satisfeitas devido à pertença de um grupo, à forma como sentem que pertencem a um grupo e que consideram que o grupo faz parte da sua identidade, o modo como acham que influenciam a comunidade e são influenciados pela mesma, assim como o vínculo emocional partilhado com o grupo, foi possível verificar que os resultados se apresentam igualmente baixos

Por último, os resultados das entrevistas realizadas no estudo qualitativo também comprovam esta sensação baixa de sentimento de comunidade, uma vez que todos os idosos consideram que o mesmo é fraco.

No **Estudo II**, de carácter qualitativo, realizado junto de um grupo de diferentes entidades como representantes das ERPI diretamente com idosos institucionalizados, foi possível retirar algumas evidências. No que respeita ao temperamento dos idosos os entrevistados encaram o temperamento dos idosos de diferentes formas, sendo que uns consideram que o mesmo é complicado e um pouco difícil ou com algumas descompensações, o que está mais relacionado com um tipo de temperamento mais combativo defensivo e também um pouco passivo. Ainda, na opinião de dois entrevistados o mesmo tende a variar em função ou da própria personalidade ou da idade que o idoso apresenta.

Relativamente a fatores que o grupo de entrevistados considera que podem predispor os idosos a situações de vulnerabilidade, salientam-se percepções relacionadas com a resistência que alguns idosos apresentam assim como associados as suas limitações e dependência físicas. Quanto a fatores promotores do bem-estar associados ao temperamento, existem opiniões diversas, mas em geral associados a fatores importantes do temperamento como a sociabilidade e existência de hábitos saudáveis (opinião da terapeuta ocupacional) e também a um maior acompanhamento por parte quer da instituição quer da família, que foi uma opinião já defendidas pelo presidente, tanto da junta de Freguesia como da própria ERPI dos idosos.

No que concerne à participação dos idosos na comunidade a maioria dos entrevistados considera que a mesma é importante e que os idosos tendem a gostar e a querer participar. Para além disso, referem na sua maioria que existem possibilidade ou solicitações para os idosos participarem na comunidade e que acreditam ser possível a inclusão social dos mesmos.

Ao nível da percepção sobre o sentimento de comunidade dos idosos, as respostas dos entrevistados apontam para que este tipo de sentimento esteja presente, opinião esta expressa por grande parte dos entrevistados. Realça-se, ainda a família como a grande referência para o desenvolvimento de um sentimento de comunidade por parte dos idosos.

Das respostas dadas pelos entrevistados do **Estudo III** (psicólogos e profissional de gerontologia) foi possível constatar que relativamente ao temperamento dos idosos estes especialistas consideram, de acordo com as respostas dadas nas entrevistas a eles realizadas, que existe uma variabilidade de temperamentos diferentes e que estes variam de idoso para idoso e em função da sua experiência de vida e idade. Também se verifica que um destes profissionais (Psicólogo) salienta o facto de os idosos apresentarem algum declínio a nível da sua condição física e emocional e também alguma instabilidade/labilidade emocional.

Sobre a participação comunitária foi possível concluir que os entrevistados referem ser importante a participação dos idosos na comunidade e que os mesmos tendem

a gostar de participar, embora também considerem por outro lado que a sua participação nem sempre é fácil uma vez que ainda não estão reunidas condições para uma melhor participação e integração social, e também devido a alguma falta de aceitação do papel social do idosos e também da existência de alguns sentimento de inutilidade nos mesmos.

Por último o sentimento de comunidade foi outra das dimensões analisadas pelos especialistas entrevistados, sendo que no que diz respeito à percepção que possuem sobre sentimento de comunidade, a maior parte considera que o mesmo não existe ou se encontra num nível muito fraco, existindo como tal uma forte necessidade de o trabalhar, até mesmo porque, a institucionalização compromete o mesmo, tal como afirma a própria professora de gerontologia entrevistada.

## DISCUSSÃO

### Estudo I (EI)

#### *Temperamento dos idosos (EI)*

Relativamente aos resultados obtidos no estudo quantitativo, foi possível verificar que no que se refere à primeira dimensão analisada (temperamento) o mesmo é considerado elevado na opinião dos idosos, sendo mais elevados os índices de sociabilidade, que estão relacionados com o gosto em estar com os outros e/ou trabalhar com os mesmos. Estes resultados são assim muito característicos ou próprios dos idosos, na sua opinião. Também se nota que os idosos se percebem como razoavelmente ativos, sendo que, consideram que o facto de estarem ativos bastante próprio de si.

Estes resultados de maior sociabilidade e atividade são característicos dos idosos, uma vez que é comum em idades mais avançadas uma tendência para uma chamada velhice ótima ou um envelhecimento ativo e saudável em que de acordo com autores como Novo (2003), Baltes e Baltes (1990) se verifica alguma plasticidade mental para uma melhor adaptação a uma nova condição, associada a boas capacidades psicológicas e biológicas que permitem que os idosos consigam lidar com mais prontidão com as várias exigências do dia a dia. Também estas características verificadas nos idosos da nossa amostra parecem reforçar a noção de envelhecimento ativo segundo a OMS (2005) em que os idosos conseguem aperceber do potencial que ainda podem apresentar para melhorar o seu bem-estar físico, psicológico e social e participar ativamente na sociedade.

Por outro lado, quanto à percepção que têm de dimensões mais emotivas, nota-se que os idosos sentem um pouco de medo em geral, identificando-se bastante com este tipo de sentimento, o que acaba por ser comum dadas as alterações próprios do envelhecimento, como a diminuição de capacidades físicas e psicológicas e aparecimento de algumas patologias, conforme nos referem autores como Simões (1982) e Neri (1993). Já no que respeita a estados emocionais mais negativos como a angústia e cólera, os autores adiantam que por vezes são muito comuns de se observar em idosos, numa perspectiva de um envelhecimento mais patológico e menos saudável, comumente associados a dificuldades de adaptação, improdutividade e diminuição de faculdades mentais, os resultados obtidos apresentam-se bastante satisfatórios uma vez que os idosos inquiridos revelam que estes estados emocionais são muito pouco característicos de si próprios.

A análise dos resultados em cada uma das dimensões que definem o temperamento parece levar-nos a constatar que estamos perante um tipo de temperamento mais integrado considerando a classificação de tipologias de temperamento estabelecida por Havingurst, Neurgaten e Tobin, (1968) em função de funções sociais, níveis de atividade e bem-estar com a vida. Ainda em relação ao temperamento é também interessante ressaltar que, o



controlo de algumas emoções como a cólera e a angústia, parece comprovar os pressupostos da teoria de seletividade socio emocional que nos diz que com o avanço da idade, a ênfase motivacional é colocada mais no controlo das emoções, conforme a opinião de diversos autores (Charles et al., 2003; Castersen & Frederickson, 1998; Castersen et al., 2000).

Já no estudo qualitativo quando questionados sobre o que é para si o temperamento, os idosos entrevistados tendem a dar opiniões muito diversas, embora com alguma tendência para um tipo de temperamento mais defensivo combativo, com algumas expressões de desinteresse, incapacidade de decisão e alguma instabilidade emocional. Estas opiniões são algo contraditórias ao que se verificou nas respostas à escala de temperamento, o que pode, contudo, ser explicado, pelo facto de cada idoso ser um caso e existir bastante diferenciação entre os mesmos, conforme já nos referiram anteriormente autores como Simões (1982, 1990), Alarcão (2000) e Rowe e Kahn (1998). Também é importante ter em conta que as entrevistas realizadas foram junto de idosos que se encontram institucionalizados e também durante a pandemia por Covid, numa altura em que estavam presentes muitas restrições à sua autonomia e independência na ERPI a que pertencem. Tal facto, quando associado à doença em questão e ao possível medo das consequências da mesma, pode ter levado a que estes idosos se sintam, emocionalmente, um pouco tristes, frustrados e combativos, contrariamente aos idosos que responderam em 2015, ao questionário e que se encontravam perante um tipo de institucionalização menos rigorosa e mais aberta à comunidade e promotora de uma maior autonomia e independência.

### ***Participação comunitária de idosos (EI)***

Em relação à participação comunitária, o estudo quantitativo realizado permitiu constatar conforme os resultados da escala de avaliação da participação comunitária, que no geral a mesma é baixa, apesar de os idosos referirem que por vezes participam em alguns aspetos, como no contacto com os vizinhos, e em atividades de doação de dinheiro para caridade. Resultados semelhantes também já foram encontrados no estudo anterior de Mendes (2014) tanto no que se refere à participação comunitária como nas suas várias dimensões mais específicas. Esta baixa participação acaba por não ser muito boa dada a importância da mesma para a melhor integração social e aumento da proximidade entre indivíduos e mais facilidade de obtenção de resultados mais positivos, conforme nos referem autores como Florin e Wandersman (1990) e Ornelas (1997). Muito possivelmente, tal facto ocorre devido destes idosos se encontrarem numa situação de institucionalização, levando-os a não realizarem certas atividades relacionadas com as questões a que responderam, logo no geral considerarem que participam pouco na comunidade. Também, a maior idade dos idosos pode levar os mesmos a não participar tanto na comunidade, o que por vezes é comum, tal como já verificado num estudo mais recente realizado por Mendes e Faria (2020).

Contudo é interessante verificar que a dimensão. Contacto com os vizinhos é algo mais saliente, o que também é bastante identificativo da participação comunitária de acordo com alguns autores (Florin, & Wandersman, 1990; Ornelas, 2003). É curioso, também, salientar que o contacto com os vizinhos apresenta um valor muito semelhante ao verificado no estudo anterior de Mendes (2014) cuja amostra não era de idosos institucionalizados, mas apenas de reformados e não reformados, o que pode levar a crer que a instituição em que os idosos estão inseridos incentiva de algum modo a relação entre vizinhos.

Os resultados de outro conjunto de questões também relacionadas com as perceções de participação comunitária, parecem revelar alguma insatisfação por parte dos

idosos devido a considerarem que estão poucas vezes com a sua família, amigos, vizinhos e a participar em serviços religiosos e em atividades organizadas da comunidade, apesar de referirem noutro conjunto de questões, gostar de ser mais participativos e passar mais tempo com a sua família, amigos e vizinhos, assim como participar em atividades da comunidade. Também na análise das questões sobre a participação comunitária foi possível verificar que mais idosos afirmam que a tendência do idoso é a de gostar de participar em atividades comunitárias e especialmente em atividades que considerem que podem ser significativas para eles, embora refiram mais que não têm possibilidades, nem solicitações para tal participação. Tal fato, deve-se mais uma vez às restrições verificadas na instituição devido à pandemia. É importante salientar que os resultados relativos à percepção do tempo gasto em atividades comunitárias são bem mais elevados que os verificados no estudo anterior de Mendes (2014) com idosos reformados e reformados não institucionalizados, o que significa que os idosos se encontram bem mais insatisfeitos com esta questão, o que pode ter a ver com os efeitos da própria institucionalização.

A mesma conclusão se pode retirar ao facto de os idosos da nossa amostra apresentarem valores mais elevados das respostas a quem gostariam de passar mais tempo que os verificados em Mendes (2014), uma vez que o facto de estarem institucionalizados os pode levar a ter mais dificuldades em estar com a sua família, amigos, vizinhos e em participar em varias atividades da comunidade, o que naturalmente os leva a desejar passar mais tempo com estas pessoas e a fazer determinadas atividades. Neste sentido estes últimos resultados podem ser um pouco «preocupantes» uma vez que reforçam alguns dos pressupostos de alguns autores (Saúde, Fernandes, Balancho, Raposo & Parranço, 2020; Fernandes, 2010), que veem a institucionalização como algo negativo e de difícil aceitação por parte dos idosos devido às modificações que implementam na sua vida e também ao nível da sua participação na comunidade que tende a ficar mais reduzida.

### ***Sentimento de comunidade dos idosos (EI)***

Com relação ao sentimento de comunidade, os resultados do estudo quantitativo alusivos às escalas de sentimento de comunidade levaram a constatar que a percepção deste sentimento, no geral, é reduzida no grupo de idosos inquirido. Neste sentido, relativamente às várias dimensões analisadas, conforme a teoria do sentido de comunidade de McMillan e Chavis (1986), que são: o modo como os idosos sentem que as suas necessidades foram satisfeitas devido à pertença de um grupo, à forma como sentem que pertencem a um grupo e que consideram que o grupo faz parte da sua identidade, o modo como acham que influenciam a comunidade e são influenciados pela mesma, assim como o vínculo emocional partilhado com o grupo, foi possível verificar que os resultados se apresentam igualmente baixos. Os presentes resultados encontram-se em linha com o estudo anterior de Mendes (2014), com idosos reformados e não reformados, em que também se verificou um sentimento de comunidade em geral baixo e também em cada uma das suas dimensões satisfação de necessidades, pertença, influencia e vínculo emocional partilhado.

Tal facto não é positivo na medida que o sentimento de comunidade é bastante relevante para uma melhor participação dos cidadãos e é uma solução para a diminuição da alienação, isolamento e solidão e para a melhoria do bem-estar psicológico, tal como refere Ornelas (2008). Possivelmente, o facto dos idosos se encontrarem institucionalizados pode levar a que a sua participação e seu envolvimento nas atividades comunitárias, seja mais reduzido, o que os leva a sentir que se encontram menos identificados e integrados com a comunidade a que pertencem.

Os resultados das entrevistas realizadas no estudo qualitativo também comprovam esta sensação baixa de sentimento de comunidade, uma vez que todos os idosos consideram que o mesmo é fraco. Também na altura em que foram entrevistados, os idosos estavam numa situação de institucionalização e em tempos de pandemia, em que são maiores as restrições em relação ao seu envolvimento e participação comunitária, o que fez com que, naturalmente, os mesmos desenvolvessem alguns sentimentos de frustração, desinteresse e pouca vontade em relação à comunidade envolvente. Porém, é também relevante o fato de quando questionados sobre que tipo de atividades consideram ser úteis para melhorar a sua participação e promover o sentimento de pertença à comunidade, todos os idosos dão respostas relacionadas com a necessidade de realizarem atividades fora da instituição em que se encontram, como ir a casa e fazer trabalhos rurais, atividades de lazer e convívio e também atividades extramuros.

## **Estudo II (EII)**

### ***Temperamento dos idosos (EII)***

Ao observar as respostas dadas ao conjunto de questões sobre esta dimensão, foi possível constatar que os entrevistados consideram o temperamento dos idosos de diferentes formas, sendo que uns consideram que o mesmo é complicado e um pouco difícil ou com algumas descompensações, o que está mais relacionado com um tipo de temperamento mais combativo defensivo e também um pouco passivo. Também se nota que na opinião de dois entrevistados o mesmo tende a variar em função ou da própria personalidade ou da idade que o idoso apresente. Estas perceções variadas em relação ao temperamento do idoso parecem ir ao encontro das afirmações de alguns autores como Zamarrón e Fernández-Ballesteros (2002) que consideram que os idosos são um grupo muito heterogêneo e como tal com um temperamento por vezes bastante variado. No que respeita aos fatores que o grupo de entrevistados considera que podem predispor os idosos a situações de vulnerabilidade, salientam-se perceções relacionadas com a resistência que alguns idosos apresentam assim como associados as suas limitações e dependência físicas. Tal fato acaba por ser um pouco esperado uma vez que é muito comum nestas idades a existência de alterações e limitações físicas que conduzem a dependência (Fonseca, 2005; Neri, 1993; Simões, 1982) e de uma maior resistência a essas mesmas alterações e como tal uma menor capacidade de adaptação e produtividade e irritabilidade no temperamento (Simões, 1985).

Relativamente a fatores promotores do bem-estar associados ao temperamento, também se verificam algumas opiniões diversas, mas em geral associados a fatores importantes do temperamento como a sociabilidade e existência de hábitos saudáveis (opinião da terapeuta ocupacional) e também a um maior acompanhamento por parte quer da instituição quer da família, que foi uma opinião já defendidas pelo presidente, tanto da junta de Freguesia como da própria ERPI dos idosos. É interessante verificar que na opinião destas entidades é importante a existência de fatores protetores que, de alguma forma, estão associados a uma noção de envelhecimento ativo e à função do mesmo para a melhoria da saúde e qualidade de vida dos idosos, função esta já referenciada e defendida por diversos autores e entidade (OMS, 2005, 2015; SNS, 2017; Paschoal, 2011; Mallman et al., 2015).

### ***Participação comunitária dos idosos (EII)***

A perceção da participação comunitária dos idosos foi outras das dimensões analisadas nas entrevistas realizadas com o presente grupo de entidade que acompanham os idosos. Questões como a importância da participação do idoso na comunidade e os fatores que motivam a sua participação foram colocadas. Assim, no que concerne à

participação dos idosos na comunidade a maioria dos entrevistados considera que a mesma é importante e que os idosos tendem a gostar e a querer participar. Para além disso, referem na sua maioria que existem possibilidades ou solicitações para os idosos participarem na comunidade e que acreditam ser possível a inclusão social dos mesmos. Tal opinião leva a crer que os entrevistados em questão consideram que os idosos que tem a seu cargo tem uma forte predisposição para um envelhecimento mais ativo e saudável e que a instituição em que se encontram procura, com diversos tipos de atividades e intervenções, promover o melhor possível este tipo de envelhecimento.

### ***Sentimento de comunidade dos idosos (EII)***

Ao nível da perceção sobre o sentimento de comunidade dos idosos, as respostas dos entrevistados apontam para que este tipo de sentimento esteja presente, opinião esta expressa por grande parte dos entrevistados. Também a família é referida como a grande referência para o desenvolvimento de um sentimento de comunidade por parte dos idosos. Tais perceções parecem reforçar a importância da família para a participação e envolvimento dos idosos na comunidade e também para o trabalho desenvolvido pela ERPI dos idosos, assim como, das entidades políticas locais para contribuir para o melhor desenvolvimento de sentimento de comunidade nos idosos.

Também a importância de promover diferentes tipos de atividades de lazer e convívio e que contribuam para a melhoria do estado de saúde, qualidade de vida, referenciadas por grande parte das entidades entrevistadas especialmente a terapeuta ocupacional e o presidente da junta de freguesia, parecem pressupor que a ERPI e as instituições estão a procurar cumprir o seu papel de contribuir para promover o envelhecimento saudável e ativo dos idosos e a cumprir metas que de acordo com as diretrizes da DGS (2014) devem ser a oferta de serviços continuados e apropriados ao correto desenvolvimento biológico e psicossocial dos idosos; o auxílio para a motivação para o envelhecimento ativo; estabelecimento de condições para possibilitar a preservação e a melhoria das relações com a família; e também a potenciação da integração na sociedade.

### **Estudo III (EIII)**

#### ***Temperamento dos idosos (EIII)***

No que diz respeito ao temperamento dos idosos estes especialistas consideram, de acordo com as respostas dadas nas entrevistas a eles realizadas, que existe uma variabilidade de temperamentos diferentes e que estes variam de idoso para idoso e em função da sua experiência de vida e idade. Também se verifica que um destes profissionais (Psicólogo) salienta o facto de os idosos apresentarem algum declínio a nível da sua condição física e emocional e também alguma instabilidade/labilidade emocional. Este tipo de respostas acaba por ser comum, tendo em conta que na idade mais avançada ou velhice há uma maior variabilidade ao nível do temperamento, conforme nos referem autores como Zamarron e Fernández-Ballesteros (2002) e também algum declínio a nível físico e das faculdades mentais (Fonseca, 2005; Fonseca, 2010; Simões, 1982, 1985, 1990). Também é normal que estes profissionais tenham esta perceção de maior variabilidade do temperamento e também de algum declínio a nível mais mental, dada a sua profissão mais relacionada com a saúde mental e a uma maior proximidade com os idosos no que se refere ao trabalho mais psicológico com os mesmos.

Esta questão de uma maior consciência por parte destes profissionais da existência de alguns problemas do foro mental nos idosos próprios da sua idade avançada, também é um pouco reforçada quando referem (especialmente os dois psicólogos) que os principais fatores de risco para uma maior vulnerabilidade associada ao temperamento

são os aspetos mais relacionados com a resistência que os idosos apresentam (tendência a ser mais depressivos, mais fechados, introvertidos, desmotivados e com mais dificuldades em lidar com as adversidade da vida) ou mais propriamente, tendo em conta o seu temperamento do tipo desintegrado, se formos ter em conta a tipologia de temperamento apresentada anteriormente por Havingurst, Neurgaten e Tobin (1968).

Também as características da sua profissão, associada à saúde mental, parece influenciar a perceção que têm dos principais fatores promotores de bem-estar que referem ser a necessidade de os idosos serem mais sociáveis, e com um temperamento mais otimista e mais direcionada para lidar melhor com as várias situações da vida, próprias da sua idade (respostas dadas pelos psicólogos). Também aspetos mais relacionados com a Psicologia Positiva como uma maior empatia e altruísmo assim como a promoção de relações mais positivas foram enfatizados pela professora de gerontologia entrevistada.

### ***Participação comunitária (EIII)***

Quanto à perceção sobre a participação comunitária nota-se que os entrevistados referem ser importante a participação dos idosos na comunidade e que os mesmos tendem a gostar de participar, embora também considerem por outro lado que a sua participação nem sempre é fácil uma vez que ainda não estão reunidas condições para uma melhor participação e integração social, e também devido a alguma inaceitação do papel social do idosos e também da existência de alguns sentimento de inutilidade nos mesmos.

Mais uma vez estas opiniões poderão ter alguma relação com as características próprias da profissão dos inquiridos (especialmente psicólogos) que podem apresentar uma maior tendência para ter mais consciência destas limitações que existem a nível da saúde mental e que podem afetar a maior participação comunitária dos idosos.

Também o facto de estes profissionais considerarem ser importante o convívio e a criação de condições para a participação, como fatores motivacionais para a participação comunitária, parece reforçar esta maior consciência da importância da participação comunitária para promover o bem-estar e a saúde mental dos idosos, ou seja, para que os mesmos tenham um envelhecimento mais saudável e ativo. Ainda acresce o fato dos mesmos referirem que existem possibilidades ou solicitações para uma maior integração e inclusão social dos idosos. Esta questão de acreditarem ser possível a inclusão social é mesmo uma opinião defendida por todos os entrevistados.

### ***Sentimento de comunidade (EIII)***

Por último o sentimento de comunidade foi outra das dimensões analisadas pelos especialistas entrevistados, sendo que no que diz respeito à perceção que possuem sobre sentimento de comunidade, a maior parte considera que o mesmo não existe ou se encontra num nível muito fraco, existindo como tal uma forte necessidade de o trabalhar, até mesmo porque, a institucionalização compromete o mesmo, tal como afirma a própria professora de gerontologia entrevistada.

Mais uma vez o trabalho que estes profissionais têm, frequentemente, com os idosos leva a que possam desenvolver uma perceção de um menor sentimento de comunidade e também da necessidade de envolver mais os idosos e reunir mais condições para a promoção desse mesmo sentimento de comunidade. Também é importante ressaltar o fato de considerarem fundamental o apoio da família e também da instituição em que os idosos se encontram para melhorar estas condições, dado serem as principais referencias dos idosos, na opinião destes profissionais. Já anteriormente Ornelas (2008) tinha referido a importância destas referências para o desenvolvimento do sentimento de

comunidade ao referir mesmo que é maior o sentimento psicológico de comunidade em ambientes onde os idosos se sentem mais ouvidos e com maior poder de influência.

## CONCLUSÃO

Para além do sentimento de comunidade é também importante estudar e analisar a participação comunitária dos idosos, que por vezes se verifica de forma mais precária e dificultada, especialmente em casos de idosos mais dependentes, solitários e em situação de institucionalização, sendo como tal fundamental promover esta participação, especialmente no que refere a relação com a vizinhança e família, conforme já referiram diversos autores (Florin & Wandersman, 1990; Ornelas, 1997; Ornelas, 2003).

Assim é importante desmistificar a noção de institucionalização como algo negativo e «pesado» e «incapacitante» para os idosos, procurando a melhoria das condições das instituições de acolhimento de idosos, para a melhoria do seu bem-estar, qualidade de vida e integração social.

Deste modo, com o principal objetivo de analisar o temperamento, sentimento de comunidade e participação comunitária de idosos institucionalizados, foram realizados três diferentes estudos em dois diferentes momentos com um grupo de idosos em situação de institucionalização. Durante a realização deste estudo empírico foi possível denotar a existência de algumas limitações como o reduzido número de elementos entrevistados e também o facto do estudo se ter circunscrito a uma amostra de uma instituição em específico e não de um conjunto mais alargado de instituições que permitissem uma melhor análise e compreensão do temperamento, sentimento de comunidade e participação comunitária dos idosos institucionalizados.

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## Sisu and perceived equality modulate well-being in workplace

### Sisu and perceived equality modulate well-being in workplace

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Beneficial and harmful sisu (i.e. fortitude) diametrically affect well-being and work stress. To unveil the linkage, candidates for mediating factors include general stressors, e.g. social environment, and stressful life events. We investigated how the two dimensions of sisu are contingent on acute stressors and emerge in relation with perceptions of organizational justice by analyzing worries concerning life and work.

As part of labor union survey, 1618 participants answered 18-item Sisu Scale operationalizing fortitude, WHO-5 well-being index, and questions on equality and preceding and present challenges and worries. Classified into 10 categories, most prevalent worries regarded health (44.6%), work demands (27.4%) and work status (24.0%). Linear and logistic regression were used to determine the effects of equality together with beneficial and harmful sisu on well-being and the probability of reporting different worries, in conjunction with age and gender.

As expected, sisu and equality predicted well-being individually and in interaction: the effects were more prominent in low-equality workplaces. Harmful sisu was associated with increase in health worries, whereas beneficial sisu diminished them, in turn increasing work demands worries. Women reported more worries. Work-related worries lessened and well-being increased with age.

The Sisu Scale demonstrated invariance in item loadings (full) and intercepts (partial) regarding gender and age, thus proving psychometrically solid in a blue-collar sample, thus supplementing previous student samples. Low equality in workplace identifies as stress context, where the previous findings on the role of sisu to well-being become pronounced. The significant connection between harmful sisu and health-related worries warrants for further research.

**KEYWORDS(4):** Sisu, Fortitude, Stress, Well-being, Workplace Equality

# Sisu and perceived equality modulate well-being in workplace

## 1. Introduction

The COVID-19 pandemic and the uncertain times that followed have, in part, raised the question of what kind of individuals are best equipped to thrive in challenging and changing environments. One way to understand the individual differences that affect well-being and the ability to function in challenging conditions is to examine the traits associated under the concept of mental fortitude. Previous research on mental fortitude has primarily relied on the English language, but in our study, we utilize the Finnish word *sisu* and the Sisu Scale questionnaire we have recently developed to measure it. Mental fortitude traits, and therefore *sisu*, can be seen as part of the ability to cope with challenges brought upon by different life situations, also conceptualized as resilience. It is known that experiencing challenges and difficulties strengthen, at least in certain circumstances, the enhancing effects of resilience on well-being (Hu, Zhang & Wang, 2015). Therefore, it may be useful to examine the impact of environmental factors and life events on an individual's well-being and related issues. In addition to past difficulties, it is justified to explore descriptions of challenges that are more abstractly intertwined with the future and the present. The purpose of this study was, therefore, to understand well-being from the perspective of both individual traits and the influence of the surrounding conditions. For this purpose, we examined self-reported concerns of individuals and their experience of equality in the work environment, alongside *sisu*.

### 1.1. Worrying as behavior

Adults typically experience and report multiple concerns related to environmental factors (work, studies, social relationships) in a day when asked. Worrying is a common thinking process, although excessive or heightened worrying is characteristic of all anxiety disorders (ICD-10) and therefore a factor that reduces well-being (Olatunji, Broman-Fulks, Bergman, Green & Zlomke, 2010). Research on worries and concerns has largely focused on pathological features, where worrying is seen as factor underlying negative affective states (Newman & Llera, 2011) or as avoidance behavior, where worrying about small things keeps more serious unpleasant thoughts at bay (Borkovec & Roemer, 1995). However, caring has also been proposed as a manifestation of a problem-focused approach, with adaptive consequences (Davey, 1994).

Women tend to worry more than men (Brosschot & Van Der Doef, 2006), and in some studies, they have been found to report more and larger daily worries (Robichaud, Dugas & Conway, 2003). The number of worries decreases and their content changes with age, reflecting life situations (Gonçalves & Byrne, 2013). Health concerns increase over time, and in older adults, worries are more strongly related to well-being. Regardless of the category, worries are more common among individuals with mental health problems (Lindesay et al., 2006).

### 1.2. Factors affecting well-being at work

The majority of adults spend a significant portion of their waking hours at work, so one of the most important factors determining the life events to which individuals are exposed is their work environment. Several factors influencing well-being in workplace have been identified, including good leadership, employees' expertise, and the atmosphere within the community (Puttonen, Hasu & Pahkin, 2016), which is in turn significantly influenced by the perceived fairness and equality in the workplace. Well-being at work has been recently found to be declining in Finland, especially among non-university-educated and young workers (Kaltiainen & Hakanen, 2023).

Equality in the workplace can be divided into three different categories, all of which are related to well-being: distributive justice (fairness in the distribution of wages and resources),

## **Sisu and perceived equality modulate well-being in workplace**

procedural justice (fairness in procedures and practices), and relational justice (fairness between supervisors and subordinates) (Elovainio, Heponiemi, Sinervo & Magnavita, 2010). Injustice and inequality act indirectly and directly as additional sources of stress to which individuals react and respond in different ways. Injustice increases mental health problems both directly and through increased work demands (Magnavita et al., 2022).

Personality traits (Törnroos et al., 2012) and certain non-cognitive characteristics, such as *sisu* (Henttonen et al., 2022), influence perceived work stress, which can be expressed as a discrepancy between efforts and rewards (Siegrist, 1996). It is reasonable to assume that these factors, individually and in combination with perceived fairness and equality, also affect the well-being of individuals in the workplace as reflected in reported concerns and attitudes towards them.

### **1.3 Sisu and its consequences**

*Sisu* is a Finnish cultural concept, denoting an individual's inner quality and style of behavior. In written historical sources before year 1880, *sisu* was predominantly described as a negative character trait, depicting a mean-spirited or stubborn disposition. However, its meaning has since expanded to include positive and neutral connotations. Especially with the success in sports and the wartime experiences of the early 1900s, *sisu* became increasingly associated with perseverance, courage, and determination, and it has been claimed as a distinctive Finnish characteristic (Helminen, 2021).

#### **1.3.1. The Sisu Scale**

In addition to qualitative and literary research (see Lahti, 2022), the empirical studies of *sisu* as a characteristic has been rare until recently. The questionnaire used in this study (the *Sisu Scale*, Henttonen et al., 2022) was developed based on categories identified through previous thematic analysis, using extensive data from descriptions of *sisu* and the drawbacks resulting from possessing too much of it, provided by Finnish and Finnish-American respondents (Lahti, 2019). In the underlying model for the questionnaire, *sisu* consists of a beneficial and harmful aspect, each composed of three sub-factors. The sub-factors of beneficial *sisu* are action mindset, extraordinary perseverance, and latent power. On the other hand, the sub-traits of harmful *sisu* are harm to self, harm to others, and harm to reasoning.

#### **1.3.2. Sisu as an unique trait**

Beneficial *sisu* shares some content and psychometric characteristics with other concepts related to mental toughness, perseverance, and resilience (Määttänen & Henttonen, 2021). These traits often appear as positive factors, helping to achieve goals regarding e.g. academic success (Tang, Wang, Guo, & Salmela-Aro, 2019), and are associated with better mental health and well-being (Hu et al., 2015). However, excessive perseverance has been found to have maladaptive effects in situations that require efforts under time pressure (Lucas, Gratch, Cheng & Marsella, 2015). Harmful *sisu*, which is assumed to underlie these negative consequences, stands out as a distinct trait with only a weak correlations with beneficial *sisu* and similar traits, resilience and Five-Factor Model personality (Henttonen et al., 2022).

#### **1.3.3. Sisu traits and well-being**

Both components of *sisu* are strongly associated with well-being and related variables such as stress, work stress, and depressive symptoms. Beneficial *sisu* is linked to better well-being and lower levels of stress, while harmful *sisu* is associated with poorer well-being and higher levels of

## **Sisu and perceived equality modulate well-being in workplace**

stress (Henttonen et al., 2022). Beneficial and harmful sisu are structurally connected through the sub-factor "harm to reasoning" which can be interpreted as reflecting the role of cognitive control in directing effort. The closely related concept of inflexible thinking has been shown to mediate the relationship between perseverance and suboptimal performance (Kalia, Fuesting & Cody, 2019).

### **1.4 Research questions**

To examine the fit structure of the Sisu Scale questionnaire applied to a broader dataset, we compared the loadings and internal reliability indicators of both main scales and the six sub-factor measurement models with each other and with the results obtained from previous datasets (Henttonen et al., 2022). Additionally, we investigated whether all the items and factors were invariant in terms of respondents' age and gender, making them suitable for between-group comparisons in the general population. In case of established invariance, we examined group differences in relation to the main and sub-traits of sisu, with respect to previous findings indicating that women tend to exhibit more beneficial sisu. Furthermore, we assumed that harmful sisu decreases with age. Based on the literature review presented above, we formulated two broader research questions regarding sisu, well-being, worries and concerns.

#### **1.4.1 First research question: Sisu and an equality of workplace underlying well-being**

To replicate previous findings on the strong association between the positive and negative aspects of sisu and perceived equality in the work environment with well-being, we compared their main and interaction effects, as well as the overall explanatory power, using regression analysis. Based on previous research, we hypothesized that beneficial sisu could protect individuals from the detrimental effects of perceived unfairness on work well-being, while harmful sisu could amplify the relationship between perceived unfairness and work well-being.

#### **1.4.2 Second research question: Factors influencing perceived worries**

To examine how individual life events as environmental factors impact individuals' well-being, we assessed respondents' reported worries and concerns using open-ended questions. By partially guided (health, work situation) and data-driven categorization of concerns into different thematic areas, we aimed to provide a complementary and more detailed description of factors that affect well-being and to which respondents have been exposed. In addition to examining the classification and prevalence of worries, we predicted the likelihood of their occurrence using logistic regression analysis based on background factors (age, gender, sisu) and perceived equality. Building on previous research, we anticipated that women would report more concerns, and the number of concerns would decrease with age for both genders. Given the observed associations between both aspects of sisu and work stress, as well as the health component of the well-being variable (Henttonen et al., 2022), we expected this pattern to extend to the reporting of work-related and health-related concerns. The examination of connections between worries and perceptions of equity and fairness was exploratory in nature.

## **2. Methods**

The data for the study was collected through an online member survey conducted by a research unit of a Finnish trade union in 2021. Respondents were recruited as part of the union's biannual member panel, to which some members have voluntarily joined. Participation was voluntary and anonymous. Participants were encouraged not to mention names or any other identifying information in their responses. The collected data was reviewed by the data collection

## Sisu and perceived equality modulate well-being in workplace

administrator for any potentially identifying comments, and if found, those comments were removed.

### 2.1. Participants

The survey was completed by 1618 respondents (1184 men, 408 women, 26 other/prefer not to say). The average age of the respondents was 49.41 years (standard deviation 9.19, median 51 years, and range 20-65 years). Female respondents had higher education levels; a proportionately larger percentage had completed a higher education degree ( $\chi^2(1)=4.60$ ,  $p<.05$ ). The sample differs as a whole in terms of lesser education level from the overall population of Finland and OECD countries.

### 2.2. Measures

#### 2.2.1. Questionnaires

The respondents completed an 18-item questionnaire measuring sisu traits (the Sisu Scale), which includes scales for both beneficial and harmful sisu. The questions (e.g., "I often surprise myself by finding inner strength that lies beyond my perceived limitations") were rated on a five-point scale (1: "Strongly disagree," 5: "Strongly agree"). Both scales consist of three sub-factors (Beneficial sisu: "latent power," "action mindset," and "perseverance"; Harmful sisu: "reasoning" "harm to self", "harm to others"). Both aspects of sisu predict well-being and work stress in opposite directions (Henttonen et al., 2022).

Well-being was measured using the The World Health Organisation Five Well-Being Index (WHO-5). It was introduced in its current form in 1998 and has since been widely used as a measure of mental well-being. The questionnaire has been found to work well in detecting symptoms of depression, as individuals with depressive symptoms are highly likely to score low on the WHO-5 questionnaire (Topp, Østergaard, Søndergaard & Bech, 2015). In the questionnaire, respondents rate to what extent they have experienced various positive feelings (e.g., "I have felt cheerful and in good spirits") over the past two weeks on a six-point scale (0: "At no time," 5: "All the time"). The responses are summed to obtain a multiplied total score (0-100).

Perceived experience of equality and fairness was measured by respondents' answer to the statement: "Equality among employees is realized in my current workplace," rated on a five-point scale (1: "Completely disagree," 5: "Completely agree")

#### 2.2.2. Open questions

In addition to the mentioned scales, respondents had the option to write in two separate text fields: "Describe any challenges you have experienced and associated emotions in your own words over the past two weeks, if you wish" and "Are you worried about your health or work situation? What concerns you at the moment?" A response was considered when the respondent answered either or both of these questions.

The worries reported by participants were classified into the ten most common categories, which were formed by two research assistants following the principles of thematic analysis (Braun & Clarke, 2006). Each response was categorized based on whether it belonged to one or more of these categories. For example, the response "I am busy at work, and I can't relax at home because I have young children to take care of. I am tired all the time" would be classified into the categories of "work tasks," "health," and "family life."

## Sisu and perceived equality modulate well-being in workplace

The category "health" included worries related to health status, illnesses, insomnia, fatigue, and overall well-being. "Work tasks" covered concerns about busyness, pressure, responsibility, and other work-related worries, while "work situation" encompassed unemployment or the threat of it, job seeking, and problems related to employment conditions. The remaining categories emerged as "other people", "COVID-19 pandemic", "financial matters", "family and close ones" "aging" and "family life." Worries that did not fit into the aforementioned categories or were less common were classified under the category "Other."

Furthermore, the positive, accepting, or solution-oriented attitudes of participants towards the mentioned challenges or concerns were examined. The criteria for the "Solution-oriented" category were met if the respondent mentioned positive challenges or expressed accepting attitudes towards worries/challenges, for example, using phrases such as "it can't be helped, that's how it is" or "there's no point in worrying."

Half of the original observations were independently coded by a third researcher (PH). The agreement between the original and repeated observations was assessed by calculating the reliability coefficient  $\kappa$  for each category separately ( $\kappa > 0.60$ , sufficient reliability;  $\kappa > 0.80$ , good reliability; Landis & Koch, 1977).

### 2.3. Statistical analysis

The analyses were conducted using the R programming language (version 4.1.0). The structural equation models were fitted using the lavaan package (version 0.6.12; Rosseel, 2012). Careless and stereotypical responses (3.5%, 56) were removed from data using criteria such as low or high IRV values ( $\pm 3$  SD; Dunn, Heggstad, Shanock & Theilgard, 2018) and/or a series of eight or more repeated responses. There were missing observations in one or more items of the beneficial sisu scale (46) or the harmful sisu scale (30) for 72 respondents. Additionally, 59 respondents had missing responses in the WHO-5 questionnaire, and 153 respondents had missing responses in the question regarding equality.

#### 2.3.1. Model fit

The structural equation models were fitted using the MLR estimator, which is suitable for modeling variables measured on a five-point ordinal scale (Beauducel & Herzberg, 2006). Robust versions of the test statistics (CFI, TLI, RMSEA, SRMR) were used. The criteria for a well-fitting model in the data were set as follows: TLI and CFI  $> .90$ , RMSEA  $< .06$ , SRMR  $< .08$  (Hu & Bentler, 1999). A factor loading of 0.5 was set as the acceptable threshold. To assess internal consistency, reliability coefficient ( $\alpha$ ) was computed for the scales and sub-factors, with the acceptable threshold set at 0.60 (Cho & Kim, 2015).

The measurement model containing six freely correlated sub-factors (three items each) exhibited good overall fit to the data for two measures (RMSEA = 0.058, SRMR = 0.065) and suboptimal fit for two measures (CFI = 0.884, TLI = 0.853). The factor loadings for two items in the "action mindset" sub-factor (AM1:  $\lambda = 0.48$ , AM2:  $\lambda = 0.48$ ) and one item in the "harm to others" sub-factor (HO3:  $\lambda = 0.44$ ) were low. The reliabilities of the factors were acceptable ("latent power":  $\alpha = 0.71$ , "extraordinary perseverance":  $\alpha = 0.66$ , "harm to reasoning":  $\alpha = 0.61$ , "harm to self":  $\alpha = 0.73$ , "harm to others":  $\alpha = 0.60$ ) except for the "action mindset" sub-factor ( $\alpha = 0.49$ ). The measurement model, excluding the entire "action mindset" sub-factor and the low-loading item in the "harm to others" sub-factor, demonstrated a moderately good fit to the data on all measures (CFI = 0.921, TLI = 0.899, RMSEA = 0.062, SRMR = 0.054).

## Sisu and perceived equality modulate well-being in workplace

Separate models that included all items for each of the two main factors (nine items each) fit the data well for the beneficial sisu items (CFI = 0.930, TLI = 0.906, RMSEA = 0.074, SRMR = 0.042) but poorly for the harmful sisu items (CFI = 0.673, TLI = 0.565, RMSEA = 0.148, SRMR = 0.096). The internal consistency of the composite variables for both main factors was sufficiently high (beneficial sisu:  $\alpha = 0.80$ , harmful sisu:  $\alpha = 0.74$ ). Removing the problematic factor and item did not affect the reliability values ( $\Delta\alpha < 0.01$ ). The reliability of the WHO-5 questionnaire used as the well-being variable was good ( $\alpha = 0.84$ ).

The high level structural equation model, which included the main factors, their sub-factors, cross-loadings of the "harm to reasoning" factor on both the beneficial and harmful sisu factors (see Henttonen et al., 2022), and the well-being variable contingent on the main factors, did not fit the data optimally (CFI = 0.807, TLI = 0.771, RMSEA = 0.077, SRMR = 0.113). However, when excluding the "action mindset" sub-factor and the problematic item in the "harm to others" sub-factor, the model fit improved to good level (CFI = 0.926, TLI = 0.905, RMSEA = 0.057, SRMR = 0.057).

### 2.3.2. Invariance analysis

The invariance of the measurement model was examined across different genders (male or female) and age groups (categorized based on the 33rd and 66th percentiles and divided into 20-45, 46-55, and 56-65 years old). The configural model, which included different groups, was compared to the metric model, where factor loadings were constrained to be equal across groups. This model was further compared to the scalar model, where in addition to loadings, intercepts of the items were constrained. If the fit of the model with the data does not change significantly with these constraints, it can be concluded that the factor loadings and/or intercepts do not differ across groups (Putnick & Bornstein, 2016). If significant differences between models were observed, constraints were released one at a time, based on the modification indices of the parameters. If partial invariance can be demonstrated in this way, latent factor scores can be compared, but for comparing sum scores, full invariance is required (Steinmetz, 2013)

### 2.3.3. Regression analysis

The relationship between beneficial and harmful sisu and perceived equality with well-being measured by the WHO-5 questionnaire was examined using a regression model. The model included main effects of age, gender, sum scores of beneficial and harmful sisu items, and perceived equality along with the interactions effects of sisu scores and equality. Finally, the effects of these variables on reported worries and concerns were examined using logistic regression models, where odds ratio (OR) was reported as the likelihood ratio of occurrence relative to a one-standard-deviation change in the predictor variable. A significance level of  $p < 0.05$  was used as the threshold for statistical significance. P-values between 0.05 and 0.10 were reported as trends.

## 3. Results

### 3.1. Invariance due to gender and age

With regards to gender, the configurational model ( $\chi^2(240) = 904.61$ ) and the metric model ( $\chi^2(252) = 905.87$ ) did not significantly differ from each other ( $\Delta\chi^2(12) = 6.58$ ), indicating measurement invariance in factor loadings. However, the metric model ( $\chi^2(252) = 905.87$ ) and the scalar model ( $\chi^2(264) = 971.10$ ) significantly differed from each other ( $\Delta\chi^2(12) = 69.13$ ,  $p < 0.001$ ). By releasing the intercepts of four items (LP1, LP3, HR1, HR2), partial invariance was achieved ( $\Delta\chi^2(8) = 15.36$ ,  $p > 0.05$ ). Men had lower latent means in the sub-factors of "latent power" ( $\Delta = -$

## Sisu and perceived equality modulate well-being in workplace

0.19,  $z = -2.99$ ,  $p < 0.01$ ) and "extraordinary perseverance" ( $\Delta = -0.07$ ,  $z = -1.76$ ,  $p = 0.08$ , trend), and higher latent means in the sub-factor of "harm to others" ( $\Delta = 0.12$ ,  $z = 2.29$ ,  $p < 0.05$ ). The latent scores of the overall factor of beneficial sisu were higher for women ( $\Delta = 0.13$ ,  $z = 2.88$ ,  $p < 0.01$ ). In sum, the factor loadings did not significantly differ between genders.

As for age groups, the configurational model ( $\chi^2(360) = 1001.79$ ) and the metric model ( $\chi^2(384) = 1002.38$ ) did not significantly differ from each other ( $\Delta\chi^2(24) = 31.80$ ), indicating measurement invariance in factor loadings. However, the scalar model ( $\chi^2(408) = 1125.59$ ) significantly differed from the metric model ( $\Delta\chi^2(24) = 105.18$ ,  $p < 0.001$ ). By releasing the intercepts of four variables (AM1, AM2, EP2, HS1), partial invariance was achieved ( $\Delta\chi^2(16) = 22.86$ ,  $p > 0.05$ ). In the youngest age group (20-45 years old), the latent scores were lower compared to the reference group (46-54) in the sub-factor of "latent power" ( $\Delta = -0.10$ ,  $z = -2.19$ ,  $p < 0.05$ ), and higher in the sub-factors of "harm to reasoning" ( $\Delta = 0.15$ ,  $z = 2.94$ ,  $p < 0.01$ ), "harm to self" ( $\Delta = 0.14$ ,  $z = 2.27$ ,  $p < 0.05$ ), and "harm to others" ( $\Delta = 0.20$ ,  $z = 3.47$ ,  $p < 0.001$ ). In the oldest age group (55-65 years old), the latent scores were lower compared to the reference group (46-54) in the sub-factors of "extraordinary perseverance" ( $\Delta = -0.14$ ,  $z = 2.93$ ,  $p < 0.01$ ) and "harm to self" ( $\Delta = -0.11$ ,  $z = -1.68$ ,  $p = 0.09$ , trend). The latent scores of the overall factor of harmful sisu were higher in the youngest age group ( $\Delta = 0.12$ ,  $z = 2.85$ ,  $p < 0.01$ ) and lower in the oldest age group ( $\Delta = -0.06$ ,  $z = -1.68$ ,  $p = 0.09$ , trend). In sum, the factor loadings varied only slightly with age.

### 3.2. First research question: Personality traits and perceived equality in the work environment predict well-being

The regression model, which included the main effects and interactions of sisu components and perceived equality along with age and gender, explained 22% of the variation in WHO-5 well-being scores (Adj.  $R^2 = 0.21$ ,  $F(8, 1268) = 43.68$ ,  $p < 0.001$ ). The main effects of age ( $b(SE) = 0.20(0.05)$ ,  $p < 0.001$ ), beneficial sisu ( $b(SE) = 0.73(0.37)$ ,  $p < 0.05$ ), and negative sisu ( $b(SE) = -2.19(0.50)$ ,  $p < 0.001$ ) were significant. The experience of equality exhibited a trending positive effect on well-being ( $b(SE) = 2.36(1.70)$ ,  $p = 0.09$ ).

The interactions between beneficial and harmful sisu ( $F(1, 286) = 5.05$ ,  $p < 0.05$ ), beneficial sisu and perceived equality ( $F(1, 1286) = 4.37$ ,  $p < 0.05$ ), and harmful sisu and perceived equality ( $F(1, 286) = 3.18$ ,  $p = 0.07$ ) were statistically significant. When harmful sisu scores were high, the association between beneficial sisu and well-being was stronger. When equality was perceived as low, the effects of harmful sisu on well-being were more pronounced. When scores of beneficial sisu were low, the impact of equality on well-being was stronger. The regression model was also tested by including the three-way interaction between main predictors, but it was not statistically significant and did not differ regarding significances observed in the simpler model.

### 3.3. Second research questions: Prevalences of worries and concerns and factors affecting them

64.8 percent (1048) of respondents reported worries and concerns. A higher proportion of women (72.8%, 297) reported worries compared to men (62.1%, 735,  $\chi^2(1) = 14.82$ ,  $p < 0.001$ ). The observations were reliable except for one category ("family life",  $\kappa = 0.49$ ). The largest category was "health", with almost half of the respondents reporting health-related concerns (44.7%, 468), which was not surprising as health concerns were assessed with a separate question. The following categories, reported by over 10 percent of the respondents, were "work concerns" (27.4%, 287), "work situation" (24.0%, 252), "other people" (14.6%, 153), and "COVID-19 pandemic" (13.3%, 139). Less common (below 10%) categories, in descending order, were "financial matters", "family



## Sisu and perceived equality modulate well-being in workplace

and close ones", "aging", and "family life". One-fifth of the responses (20.7%, 217) fell into the uncategorized category. A solution-focused approach was observed in every sixth response (16.1%, 169).

**Table 1. The prevalence rates of three largest classes of reported worry contents and solution-orientation accounted by the predictors (n=1000).**

Worry content	Predictor	OR	2.5%	97.5%	z	p
Health	Age	1.01	0.99	1.03	1.30	0.19
	Gender (female)	1.45	1.07	1.97	2.42	0.02 *
	Beneficial sisu	0.80	0.70	0.92	-3.09	<0.01 **
	Harmful sisu	1.31	1.14	1.51	3.75	<0.001 ***
	Perceived equality	1.03	0.89	1.18	0.36	0.72
Work tasks	Age	0.98	0.96	1.00	-2.44	0.01 *
	Gender (female)	1.52	1.10	2.09	2.55	0.01 *
	Beneficial sisu	1.15	0.99	1.34	1.85	0.06 †
	Harmful sisu	1.08	0.93	1.25	0.97	0.33
	Perceived equality	0.97	0.83	1.13	-0.42	0.67
Work situation	Age	0.99	0.97	1.00	-1.50	0.13
	Gender (female)	0.81	0.55	1.18	-1.11	0.27
	Beneficial sisu	1.02	0.86	1.21	0.25	0.80
	Harmful sisu	1.09	0.92	1.30	1.02	0.31
	Perceived equality	0.70	0.59	0.84	-3.87	<0.001 ***
Solution orientedness	Age	0.99	0.97	1.01	-0.73	0.47
	Gender (female)	1.92	1.30	2.82	3.29	<0.01 **
	Beneficial sisu	1.30	1.07	1.58	2.66	<0.01 **
	Harmful sisu	0.96	0.79	1.16	-0.40	0.69
	Perceived equality	1.33	1.11	1.60	3.03	<0.01 **

Variables excl. age and gender standardized. \*\*\*p<.001, \*\*<.01, \*p<.05, †)p<.10

The results of logistic regression analysis are presented in Table 1. Except for the "work situation" category, women reported proportionally more worries than men: "health" (OR=1.45, p<0.05) and "work tasks" (OR=1.52, p<0.05). Additionally, women's concerns were evaluated as having a more solution-focused approach (OR=1.79, p<0.01). Age reduced work task concerns (OR=0.98, p<0.05).

Beneficial sisu was associated with fewer health concerns (OR=0.80, p<0.01), but more common work task concerns (OR=1.15, p=0.06, trend) and a solution-oriented approach (OR=1.32, p<0.01). Harmful sisu was associated with health concerns (OR=1.31, p<0.001). The experience of equality was significantly negatively associated with concerns in the "work situation" (OR=0.70, p<0.001) category, as well as with a solution-focused approach (OR=1.33, p<0.01).

### 4. Discussion

#### 4.1. Sisu and an equal working environment behind well-being

The associations between beneficial and harmful sisu, age, and perceived equality and well-being were in line with expectations: age, beneficial sisu, and equality were associated with better well-being, while harmful sisu reduced it. The interaction effects indicate that well-being is particularly low when harmful sisu is present, but the protective effect of beneficial sisu is absent. A similar interaction effect was also found with sisu traits and perceived equality. The results suggest that the lack of equality manifests as a stressor that decreases well-being, and this effect is reinforced by the beneficial and harmful aspects of sisu. The impact of age as a factor increasing well-being aligns with findings from previous and current studies: younger employees report lower work well-being and poorer work conditions (Kaltainen & Hakanen, 2023). The overall explanatory power of the model was slightly smaller than previously observed but still significant – one-fifth of the overall well-being measured with the WHO-5 instrument was accounted for by sisu and perceived equality.

The link between perceptions of equality and well-being has been studied from the level of countries to individuals, and it has been found to affect individuals' health and happiness (Wienk, Buttrick, & Oishi, 2022). Equality and justice have been associated with higher societal trust, which may be reflected in negative health outcomes related to inequality (Kawachi & Kennedy, 1999). For example, in China, provinces with higher economic inequality have lower youth happiness and higher prevalence of mental distress (Du, Chi & King, 2019). In global comparisons, equality measured as income inequality has been found to influence well-being mainly through individuals' perceptions of income distribution fairness (Ugur, 2021).

##### 4.2.1. Work-related worries and concerns

Work concerns were divided into two categories: concerns related to work situation and those related to work tasks, with both beneficial and harmful sisu contributing to the latter. This observation highlights the relevance and applicability of sisu to challenges in the workplace. While beneficial sisu increases concern about work tasks, it is also associated with a more positive attitude toward these concerns; individuals with high beneficial sisu view work as important and see the associated worries as temporary or solvable problems. This thinking pattern is particularly evident in women's responses. On the other hand, women reported significantly more concerns related to health, which is in line with previous research findings (Barber & Kim, 2021; Lindsay et al., 2016). The previously unreported gender effect on work task concerns can be interpreted through the lens of the sample: all respondents were either employed or seeking employment

##### 4.2.2. Health concerns

Beneficial sisu reduced health concerns, while harmful sisu increased them. This finding was in line with expectations, but the effect of harmful sisu was noticeably stronger: when harmful sisu scores were one standard deviation higher, the likelihood of reporting health concerns increased by 30 percent. Age did not increase health concerns, contrary to expectations, but its influence was seen in a reduction in concerns explained by work tasks. However, it should be noted that the sample consisted only of working-age individuals. The association between health concerns and age has been observed in previous studies with samples covering all age groups (Cunningham et al., 2021).

## **Sisu and perceived equality modulate well-being in workplace**

The more frequent reporting of health concerns can be interpreted in several ways. For example, individuals who are stressed or mentally burdened may be more likely to report their health concerns. Previous research has found several links between personality and health, although the specific associations have varied across studies. The most consistent connections have been found between the personality trait of conscientiousness according to the Five-Factor Model and better health (Jokela, 2018). The reasons behind these associations are partially unclear. It is possible that personality influences health through health behaviors, but it has been observed that the influence of conscientiousness on health behaviors, for example, is only partly explained (Jokela, 2018). Additionally, chronic illnesses can also affect personality. Studies on personality have found that extraversion, emotional stability, conscientiousness, and openness decrease with the presence of chronic diseases (Jokela, Hakulinen, Singh-Manoux, & Kivimäki, 2014). There are also personality links to specific diseases. In some cases, such as the rare long QT syndrome, the link between personality and temperament remains similar regardless of the actual symptoms. The heightened avoidance of harm and behavioral inhibition have been observed to be higher in all carriers of the syndrome mutation compared to the general population (Määttä et al., 2011; Määttä et al., 2013). In addition to these reasons, underlying factors can explain both personality and health disparities without a direct causal link in either direction (Jokela, 2018). At this stage, we do not yet know the specific reasons for the strong associations between harmful sisu and higher health concerns, as well as between beneficial sisu and lower health concerns. It could be related to one of the mentioned alternatives.

### **4.2.3. Perceived equality and other worries**

The experience of equality reduced concerns related to work situation and was associated with a more solution-focused approach. The connection between these themes is clear, but the orientation of the effect may be bidirectional; when an individual's work situation is stable, their job description is satisfactory, and there are no interpersonal problems at the workplace, the work environment is more likely to be perceived as fair.

## **4.3. The performance of the Sisu Scale in an employee sample**

The items of the Sisu Scale and the underlying model performed reasonably similarly in this employee sample as they did in the student sample on which the instrument was developed (Henttonen et al., 2022).

### **4.3.1. Suboptimal items**

An exception was made by the internal reliability of the "action mindset" sub-factor of beneficial sisu and the effectiveness of two questions it contained (AM1, "I face my fears rather than avoid them"; AM2, "I am willing to take risks to achieve important goals"). This change can be interpreted in terms of the higher average age (49.41 vs. 25.88) and wider age range (9.19 vs. 5.86) of the respondents in the current sample compared to previous student sample. Although these questions constituted a separate factor when developing the scale, they are related to traits that do not appear to be age-neutral. It is known that risk-taking tendency decreases with age, especially in the domains of work and leisure (Josef et al., 2016). Extraversion and openness increase with adulthood but then decrease with aging (Roberts, Walton & Viechtbauer, 2006). This interpretation is supported by the observation in the invariance analysis that the intercepts (and thus the means) of these two items did not remain the same across age. One question (HO3, "I often have difficulties taking others' opinions into account") from the harmful sisu "harm to others" sub-factor had a low loading ( $\lambda < 0.5$ ), but its loading or standardized term did not vary by age or gender

## **Sisu and perceived equality modulate well-being in workplace**

### **4.3.2. Full and partial invariance**

The factor loadings did not vary by age or gender, providing further support for the utility of the Sisu scale in the entire working-age adult population. However, the intercepts could only be partially demonstrated as invariant across age and gender. Establishing invariance with respect to age required releasing the intercepts for the two aforementioned questions (AM1, AM2) as well as two additional questions (EP2, "I often manage difficulties with sheer determination alone"; HS1, "I often find myself in a situation where I take on a challenge that clearly exceeds my abilities"). For gender, four intercepts were released (LP1, "I often surprise myself by finding new, previously unnoticed strengths"; LP3, "In the face of a challenge, I often feel that I find a new gear"; HR1, "I often spend too much time pursuing unnecessary things"; HR2, "I often get stuck in problems"). In both cases, the number of released parameters (4/18) was sufficiently low (Putnick & Bornstein, 2016). Based on the results, it is recommended to use latent scores of factors and main scales instead of sum scores when using the instrument, if possible.

### **4.3.3. Gender and age differences in sisu**

Women reported more beneficial sisu. The difference was particularly evident in the "latent power" and "extraordinary perseverance" sub-factors. This observation is in line with previous findings (Henttonen et al., 2022; Lahti, 2013). Men scored higher in the harmful sisu "harm to others" sub-factor. It is known that women tend to be more agreeable than men (Costa, Terracciano & McCrae, 2001). Low agreeableness as a trait can lead to increased negative affect (Gottman, Coan, Carrere & Swanson, 1998) and difficulties in regulating emotions during conflict (Jensen-Campbell & Graziano, 2001).

The latent scores of the overall harmful sisu factor were highest in the youngest age group and lower in the oldest age group. Thus, harmful sisu, on average, decreases with age. Respondents under the age of 45 recognized the most harmful sisu traits in themselves. The scores for the "latent power" sub-factor increased in the reference group, indicating that respondents in the middle of their careers have learned to recognize their resources. The scores of the oldest age group (55–65 years) decreased compared to the middle group (46–54) in both the "extraordinary perseverance" and "harm to self" sub-factors. It can be proposed that with aging, the ability to exert effort but also the harms of excessive effort decrease.

## **4.4. Limitations of the study**

The collected data is comprehensive, but the number of female respondents was significantly smaller than males, and the educational level of all respondents is lower than the overall population, and it does not cover individuals beyond working age. Therefore, the results are not fully generalizable to the entire population, especially young people, retirees, or highly educated individuals. Due to technical limitations related to the length of the survey, socio-economic factors known to affect well-being were not controlled for in the analyses. Fairness and workplace equality were measured with only one question. Despite its limitations, the study provides a description of the challenges faced by the Finnish adult population during the COVID-19 pandemic, their ability to cope with them, and introduces factors that affect well-being, which can potentially be addressed through interventions in the future.

## **4.5. Conclusions**

The findings collectively support the utility of beneficial and harmful sisu as explanatory factors for the well-being of working-age individuals. Along with sisu, the influence of perceived equality

## Sisu and perceived equality modulate well-being in workplace

emerges as a significant source of well-being, gaining further support from the results. One essential question for future research would be to investigate the reasons behind the strong health-related associations of beneficial and especially harmful sisu. It would be relevant, for example, to understand how sisu may influence health behaviors and whether there are objective connections between health and sisu. The results also provide insights into the distribution of worries and concerns in the Finnish working-age population, which align with findings from similar datasets, providing a clearer picture of the development and challenges of occupational well-being. In future research, the categories of worries can be expanded or analyzed using machine learning methods.

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**Living with Stigma and Discrimination during COVID-19 pandemic: The association with contamination/quarantine, stress, anxiety, and cognitive-emotional regulation strategies.**

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## STIGMA AND DISCRIMINATION DURING COVID-19 PANDEMIC

### Abstract

**Introduction:** Stigma is a process of devaluation, discrimination, and social exclusion of an individual/group. During the COVID-19 pandemic stigma was more likely to be experienced in individuals or social groups with no history of stigmatization. **Objective:** To study if “stigmatized” and “non-stigmatized” individuals during the COVID-19 pandemic differed in rates of infection with SARS-CoV-2, quarantine, stress, anxiety, and emotional regulation. **Methods:** During the second period of compulsory confinement in Portugal, 705 participants from the general population ( $M \pm SD = 25.3 \pm 9.50$  years, 75.5% females, 595 students) completed an online survey which included the Cognitive Emotion Regulation Questionnaire, Mental Health Inventory-Anxiety subscale, Perceived Stress Scale, and questions about lifetime physical/psychological health. Perceived stigma/ discrimination (because of self-identity, COVID-19 symptoms, or other COVID-related aspects), SARS-CoV-2 infection, and quarantine episodes were assessed with three “yes”/“no” questions from the Pandemic Stress Index (PSI). **Results:** In comparison with participants without stigma (answered “No” to the PSI stigma/discrimination question; 83%), the ones with stigma (answered “yes”; 17%) were older, more often females and ‘other’ gender participants. They had been more often infected with SARS-CoV-2 and under quarantine, and reported poor lifetime physical/mental health, higher current levels of stress, anxiety, and negative cognitive-emotional regulation strategies. **Conclusions:** In future health crises, stigmatized/discriminated people may need special attention from public health services/professionals and should be a target group for mental health prevention and interventional programs. Anti-stigma psychoeducation and health literacy programs could also be offered to the general population to respond appropriately to pandemic adversity and prevent stigmatization/discrimination.

**Keywords:** COVID-19 pandemic, Stigma, Emotional Regulation, Stress, Anxiety

## STIGMA AND DISCRIMINATION DURING COVID-19 PANDEMIC

### Introduction

Stigma is a process of devaluation, discrimination, and social exclusion of an individual/group (Dovidio et al., 2000; Major et al., 2018).

Stigma/discrimination can involve, for example, mental illness, sexually transmitted diseases (e.g., HIV/AIDS), disability, physical deformities, and limitations, overweight and obesity, homosexuality, imprisonment, prostitution, ethnicity, nationality, and religion.

The social stigma, the experience of discrimination, the stigma internalization, and the need to not disclose the problem have an intrapersonal impact (e.g., low self-esteem), generate psychological distress, and can negatively influence the individual's interpersonal relationships, as well as help-seeking behaviors (Clement et al., 2015; Livingston & Boyd, 2010; Eisenberg et al., 2009; Van Daalen et al., 2021; Zhou et al., 2022). Reluctance to seek help from others and health professionals can in turn have a negative effect on the mental/psychological health of stigmatized people (CDC, 2020; Clement et al., 2015; Van Daalen et al., 2021; Zhou et al., 2022). Moreover, social stigma may persist even after the end of the epidemic/pandemic situations (Van Daalen et al., 2021).

The occurrence of stigma/discrimination in epidemic situations, such as typhus fever, Ebola, Middle East Respiratory Syndrome (MERS), Human Immunodeficiency Virus (HIV/AIDS) and Hansen's disease, has been a common feature (Adom et al., 2021; Van Daalen et al., 2021; Yuan et al., 2022).

The COVID-19 pandemic, its rapid spread, the uncertainty related to the disease, the absence of a vaccine, and the high risk of death, gave rise to a wave of concern and fear of contamination in society, not only of being infected but also of infecting others, especially loved ones.

During the COVID-19 pandemic, stigma is more likely to be experienced by individuals or social groups with no previous history of stigmatization. People with recent travel history, those living in geographical areas/countries with high incidence of cases (particularly Asian countries) experienced stigma and discrimination and were even victims of xenophobic acts (particularly Asiatic people, Asian descendants, and immigrants) (Coste, 2020, Haynes, 2020, Li, 2020, Liu, 2020, Ren et al., 2020, Van Daalen et al., 2021; Zhou et al., 2022). Healthcare workers, particularly those with high contact with people infected with the SARS-CoV-2 virus, those involved on the frontline in controlling and dealing with the pandemic (Bagcchi, 2020), people who have been infected and those in quarantine may also be at risk of discrimination and social stigmatization (Bagcchi, 2020, Van Daalen et al., 2021; Yuan et al., 2022, Zhou et al., 2022).

The aim of the present study is to analyze whether "stigmatized" and "non-stigmatized" individuals during the COVID-19 pandemic differed in rates of infection with SARS-CoV-2, quarantine, stress, anxiety, and cognitive emotional regulation.

## Methods

### Procedures and Sample

The present study is part of the research project titled “*Impacto psicossocial da pandemia COVID-19*”/ "Psychosocial impact of COVID-19 pandemic" (Soares et al., 2020), which was approved by the Ethics Committee and the Scientific Council of the Faculty of Medicine of the University of Coimbra (Ref. CE-156/2020).

Data were collected through an online survey using a Google form. Students aged 18 years or older were invited to participate and were informed, prior to their participation, of the research objectives. The confidentiality of the information collected was also guaranteed. Participants gave their informed consent on the first page of the online questionnaire by clicking "yes" if they agreed to participate. The online questionnaire was then distributed by the relevant entities of the higher education institutions and through social media. The period of completion of the questionnaire was between 15 January and 13 April 2021, which was a phase of mandatory confinement decreed by the Portuguese government.

The sample consisted of 705 participants from the general population ( $M \pm SD = 25.34 \pm 9.50$  years), of which 595 (84.4%) were university students. Mostly of them were females (75.5%) and single (86.8%).

### Instruments

The online questionnaire included the Portuguese versions of the following measures:

*Cognitive Emotion Regulation Questionnaire (CERQ, Castro et al., 2013<sup>a,b</sup>; Garnefski et al., 2001)*

Cognitive Emotion Regulation Questionnaire (CERQ) was administered to assess positive and negative dimensions of cognitive emotion regulation strategies used during and after the experience of threatening or stressful events. The Portuguese version consists of 36 items, which evaluate eight cognitive emotion regulation strategies: (1) Self-blame (refers to thoughts of putting the blame for what have experienced); (2) Other-blame (refers to thoughts of blaming the environment or another person for what is experienced); (3) Rumination (refers to thinking about the feelings and thoughts associated with the negative event); (4) Catastrophizing (refers to thoughts that emphasize the terror of the adverse experience); (5) Positive reappraisal and planning (refers to thoughts of bringing positive meaning to the event in terms of personal growth and to thoughts about how to deal with the negative event and the action steps to be taken), (6) Positive refocusing (refers to thinking about joyful and pleasant events instead of thinking about actual negative event), (7) Putting into perspective (refers to thoughts related to setting aside the seriousness of the adverse event, and emphasizing its relativity when compared to other life events), and (8) acceptance refers to thoughts of accepting what you have experienced and resigning yourself to what has happened. The negative dimension of the CERQ (CERQ-N) was obtained by adding the scores of the first four of these dimensions. The positive dimension of the CERQ (CERQ-P) resulted from adding the scores of the last four dimensions. Each item is measured on a 5-points *Likert*-type scale

## STIGMA AND DISCRIMINATION DURING COVID-19 PANDEMIC

from 1 (*Almost never*) to 5 (*Almost always*). A higher score corresponds to higher levels of the respective cognitive emotion regulation strategies.

*Mental Health Inventory-Anxiety subscale (MHI, Pais-Ribeiro, 2001, Veit & Ware, 1983)*

The MHI consists of 38 items, which assess psychological well-being and psychological distress. Item answers are rated on a 5 or 6-point scale, ranging from 1 to 5 or 6. In the present study, the Anxiety subscale of the MHI was used to assess anxiety symptoms. The higher the score of the Anxiety subscale, the lower the severity of anxiety symptoms is.

*Perceived Stress Scale (PSS, Amaral et al., 2014; Cohen et al., 1983)*

The Perceived Stress Scale assesses perceived stress over the past month, namely the unpredictability, uncontrollability, and overload associated with daily living situations. It consists of 10 items with answers are rated on a 5-point *Likert* scale, ranging from 0 (*Never*) to 4 (*Always*). Higher scores correspond to higher levels of perceived stress.

*Pandemic Stress Index (PSI, Harkness et al., 2020)*

The Pandemic Stress Index (PSI) was developed by Harkness et al., (2020) and colleagues to assess the following three dimensions of pandemic stress: (1) Changes in behaviour (BC, refers to changes in behaviour in response to COVID-19), (2) Impact of COVID-19 on daily life (I, a single item that refers to the overall impact of COVID-19 on the individual's daily life, and (3) the psychosocial impact of COVID-19 (PSI, includes items to assess emotional distress, substance use, sexual behaviour, financial stress, stigma and support).

The PSI has been translated and adapted into several languages, including Brazilian Portuguese, and was translated and adapted into European Portuguese by our research group, following the usual translation and back-translation procedures: the original English version was translated into European Portuguese by two independent and bilingual health professionals; these two translations of the PSI into Portuguese were compared and the divergences overcome, resulting in a synthesized version, which was subsequently back-translated into English by a translator who did not have access to the original version. Finally, the back-translation into English was compared with the original version and there was great parallelism between the formulations of the items of both. The response options to some questions were slightly changed (e.g., the “check of all items that apply” to “No”/ “Yes” answer options) to be incorporated into the online questionnaire. In addition to the original ISP items, additional items were included to cover their manifestation in the last month. PSI has concurrent validity with the Portuguese version of the Perceived Stress Scale (Amaral et al., 2014) in the sample of present study: BC ( $r = .225$ ), I ( $r = .125$ ), PSI ( $r = .491$ ), Total ( $r = .482$ ),  $p < .05$  for all.

Three No (0)/Yes (1) questions from the PSI were selected to assess (1) Perceived stigma/ discrimination [*During COVID-19 (coronavirus) are you experiencing (or did you experience) stigma or discrimination from other people (e.g., people treating you differently because of your identity, having symptoms, or other factors related to COVID-19)*]; (2) SARS-CoV-2 infection

## STIGMA AND DISCRIMINATION DURING COVID-19 PANDEMIC

[During COVID-19 (coronavirus) are you experiencing (or did you experience) being diagnosed with COVID-19?]; (3) Quarantine episodes [What are you doing/did you do during COVID-19 (coronavirus)? - Isolating or quarantining yourself (i.e., while you are sick or if you have been exposed, separating yourself from other people to prevent others from getting it)]

### *Self-Reported Health*

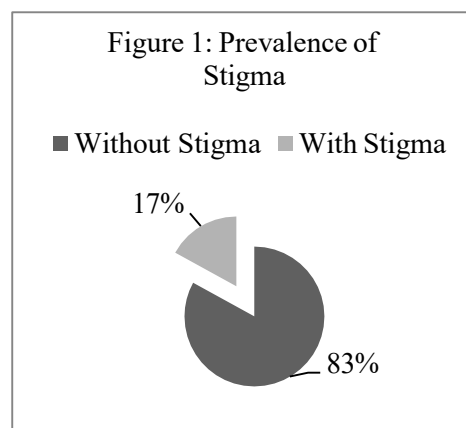
Lifetime Physical / Psychological self-reported health (SRH-Phy/ SRP-Psy) were evaluated with two questions: *In general, how has your physical health been?* and *In general, how has your psychological health been?* The answers to both items are rated on a 5-points *Likert* scale from (0) very poor to (4) very good.

### **Statistical analysis**

The data was analyzed with SPSS, 27<sup>th</sup> version (IBM Corporation, 1989, 2020) and PROCESS macro, 3.5.3. (Hayes, 2013). Descriptive statistics were performed and the normality of the distribution of continuous variables was assessed based on their skewness (Sk) and kurtosis (Ku) values. When the distribution of the variables was close to the normal distribution (Sk and Ku indices close to 0 (-1<Sk and/or Ku<1), parametric inferential tests were used; otherwise, non-parametric tests were applied. To analyze differences in continuous quantitative variables between two independent groups, the Student's *t* test and the Mann-Whitney U test were applied, appropriately. The Chi-square test was also applied to analyze associations between nominal qualitative variables with 2 or more categories.

### **Results**

Of the 705 participants assessed 17% (n=120) reported stigma (Figure 1). Students did not differ from other participants from the general population regarding the frequency of stigma (n=96/ 16.1% versus n=24/20%,  $\chi^2=2.123$ ,  $p=.145$ ).



Participants who have already had a diagnosis of COVID-19 were 6.7% (n=47). Those already isolated/quarantined were 35.7% (n=252). Poor and very poor SRH-Phy and SRH-Psy were described by 14.7% (n=103) and 38.3% (n=270) of the students, respectively, and high levels (1 SD= $\geq$ mean) of anxiety and stress by 16.9% (n=119) and 18.3% (n=129), respectively.

## STIGMA AND DISCRIMINATION DURING COVID-19 PANDEMIC

Compared to participants without stigma the ones with stigma were older, more often females or ‘Other’ gender (Table 1).

Participants under quarantine reported stigma more often than those who were not in quarantine (23.8% versus 13.2%,  $X^2=12.795$ ,  $p<.001$  OR=2.047, CI95%= 1.376-3.045) and those who had been infected with SARS-CoV-2 described stigma more often than those who were not infected (40.4% versus 15.3%,  $X^2=19.530$ , OR=3.742, CI95%=2.013-6.956).

Students who experienced stigmatization also mostly frequently described poor lifetime physical/mental health. They also showed higher current levels of stress, anxiety, and use of negative cognitive-emotional regulation strategies. They did not differ in their use of CERQ-P (Table 1).

Table 1: Variables by groups With and Without Stigma (N=705)

Variables	Without Stigma n= 585 (83%)	With Stigma n= 120 (17%)	Test	p
Age	M ±SD 25.09 (9.34)	M±SD 26.54 (10.24)	U=29739.5	.032*
Gender	OF/E (%)	OF/E (%)	$X^2=8.178$	.017*
Males	153/142 (26.2)	19/29.3 (15.8)		
Females	430/439 (73.5)	99/90 (82.5)		
Other	2 (3.3) (.3)	2/.7 (1.7)		
SRH-Phy	M ±SD 2.55 (.94)	M ±SD 2.32 (.94)	$t=2.456$	.014*
SRH-Psy	M ±SD 1.94 (1.02)	M ±SD 1.72 (.99)	$t=2.156$	.032*
PSS	M ±SD 22.56±7.55	M ±SD 24.52 (8.18)	$t=-2.550$	.011*
Anxiety‡	M ±SD 35.92 (9.72)	M ±SD 33.13 (10.49)	$t=2.827$	.005**
CERQ-N	M ±SD 39.16 (9.06)	M ±SD 42.58 (9.40)	$t=-3.745$	<.001***
CERQ-P	M ±SD 63.33 (14.07)	M ±SD 63.24 (16.78)	$t=.051$	.960

\* $p<.05$ ; \*\* $p<.01$ ; \*\*\* $p<.001$ ; **OF/E**: Observed frequency/ Expected frequency, **SRH-Phy/SRH-Psy**: Self-reported Physical/Psychological Health; **Anxiety**: Anxiety subscale - MHI; ‡ **Anxiety**: higher score corresponds to lower anxiety symptoms **PSS**: Perceived Stress Scale,  $X^2=$  Chi-square;  $t=$  Student’s t test; **U**: Mann-Whitney U test

### Conclusions

Participants with stigma were 17%. This rate is lower than that described for the general population in a meta-analysis on stigma prevalence in infectious diseases, including COVID-19, conducted by Yuan et al. (2021). The authors found that the prevalence of stigma in patients, in the community population, and in healthcare professionals was 38%, 36%, and 30%, respectively. The estimated prevalence of stigma in studies during COVID-19 was 35%.

Stigma during COVID-19 in the general Portuguese population was related to high levels of stress, anxiety, and greater use of maladaptive cognitive emotion regulation strategies. People most vulnerable to stigma were

## STIGMA AND DISCRIMINATION DURING COVID-19 PANDEMIC

older, female or "Other" gender, those with poorer lifetime physical and psychological health, and those who had been exposed to or infected with the SARS-CoV-2 virus.

The association of stigma with gender may result from shared variance with other variables, such as, for example, the high prevalence of anxiety disorders and depression in the general population. The relationship between stigma and sexual orientation/ sexual minorities is well-founded in the literature (Cahill, 2020; Kleine, 2020; Meyer, 1995).

The COVID-19 pandemic was related to an increase in psychological distress, including in Portugal (Maia et al., 2020; Passos et al., 2020; Pereira et al., 2022). A study carried out by Frade et al. (2021) in the Portuguese population showed that the percentage of individuals revealing psychological distress is high (57.2.0%), with a higher percentage among women (79.0%) and people with higher education (bachelor's degree, master's, and doctorate) (75.8%). Another study, which used Generalized Anxiety Disorder-7 (GAD-7) and a total score of five points (mild anxiety) or above to indicate the possible presence of anxiety, reported a prevalence of generalized anxiety in the Portuguese population of 67.4% (Passos et al., 2020). In the present study about 17% of the participants had high levels of anxiety symptoms and 18.3% of stress. Methodological differences between the studies may explain the differences in the anxiety rates found.

The results of the present study suggest that stress and psychological distress, anxiety and poor physical and psychological health may be higher in people who are stigmatized / discriminated, compared to those who have not had this experience.

The relationship between stigma/discrimination and self-reported health, and physical and mental health is confirmed by the literature carried out during the pandemic and/or pre-pandemic phase (e.g., Richman et al., 2018; Van Daalen et al., 2021; Zhou et al., 2022). However, during the COVID-19 pandemic, stigma/discrimination is also extended to those who were exposed to/or infected by the SARS-CoV-2 virus, and this finding agrees with the results of other studies (e.g., Bagcchi, 2020; Yuan et al., 2022; Zhou et al., 2022)

The high use of cognitive emotion regulation strategies in participants who experienced stigmatization / discrimination may lead to the maintenance of stigma, high stress and anxiety associated with stigma.

The present study is an online survey, which is one of its limitations, as it only covers people with access to a computer and with skills in using the internet. Another limitation is the use of a single question to assess social stigma/discrimination, as a single item may not assess all the nuances of the construct. However, the relationships found between stigma and the remaining study variables show their convergent validity.

Strategies to reduce social stigma during pandemics involve the collaboration of government, media, institutions, and citizens (Van Daalen et al., 2021). In future health crises like COVID-19, stigmatized/discriminated people may need special attention from public health services/professionals and should be a target group for mental health prevention and interventional programs. Anti-stigma psychoeducation and health literacy programs could also be offered to the general population to respond appropriately to pandemic adversity and prevent stigmatization/discrimination.



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**The Development of Children's Connection with Nature and the Effects on Resilience**

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**Abstract**

Amongst the challenges both emerging and past in the forms of natural disasters (bushfires), pandemics (Covid-19), and other technological changes, the necessity for children to develop resilience to deal with adversities, foreseen and unforeseen, is of vital importance. The development of resilience has been studied from the early years of a child, as such there has been growing interest in examining the effects of nature and the well-being of children. The current study aims to investigate the effects of children's connection with nature and their development of resilience by employing a mixed methods approach within a Learning in Nature program for children aged 4-5 years old. A thematic analysis was conducted with 662 student draw-tellings in conjunction with quantitative data collected during the early and late program stage. 4 main themes emerged from our findings: naming and nature cycles, fostering of intrapersonal connections, facilitation of interpersonal relationships, and children seeing themselves as agents of change within the environment. Moreover, the results from this study provides preliminary support for nature contact and the positive effects on resilience factors, namely, social relationships, cognitive functioning, and self-esteem.

*Keywords:* Connection to nature, resilience, interpersonal connection, intrapersonal connection, agency

### **Children's Connection with Nature and the Effects on Resilience**

There is little doubt that the natural environment has had and continues to have a profound impact on human beings. A large and steadily growing body of research has shown that access to the natural environment benefits young people in multiple ways, including mental-wellbeing (Chawla, 2015), physical health (Cleland et al., 2008) and cognitive performance (Taylor & Kuo, 2009). In addition to these benefits, the call to develop resilience in children in the current world climate has grown strong amidst ongoing global challenges.

The natural world refers to animals, plants, organisms, and other existing elements that are not made or caused by humans (Wilson, 1984). Wilson's (1984) biophilia hypothesis posits that humans have an innate need to interact with nature. This affiliation stems from the processes of human evolution and has been biologically encoded such that humans have learned to depend on the natural environment over time. As such, nature has a profound influence on human's physical, emotional and cognitive processes (Kellert & Wilson, 1993). The biophilia hypothesis has led to the development of other theories that relate human wellbeing to their interaction with nature

Attention-Restoration Theory (ART) suggests that mental fatigue and concentration can be improved by time spent in, or looking at nature (Kaplan & Kaplan, 1989) This theory was put forth on the basis that the capacity of the brain to focus on a specific task is limited and results in attention fatigue. Hence, time spent in nature has a restorative quality that allows for individuals to recover from stress and fatigue caused by the overuse of the brain's inhibitory attention functions. ART and its implications in educational based settings has led to the development of nature-based interventions in schools. The effects of this have been supported by research with schoolchildren, revealing how contact with nature aids children's ability to restore concentration and reduce stress (Ohly et al., 2016). As such, one topic of investigation for researchers is to examine the experiences of nature in children that shape their perception of the natural world.

#### ***Children in Nature***

The age at which children begin to interact with nature has become a growing interest in research as it has been suggested that early age interaction plays a crucial role in shaping environmental attitudes and behaviours that continue to adulthood (Wells & Lekies, 2006). The years prior to age 11 in childhood has been documented to be a significant period that influences children's perception of nature (Wells & Lekies, 2006). These benefits include physical health, cognitive functioning, psychological well-being, spiritual development, emotional regulation and coping habits. In accordance to the seminal research of Giusti

## CONNECTION WITH NATURE AND EFFECTS ON RESILIENCE

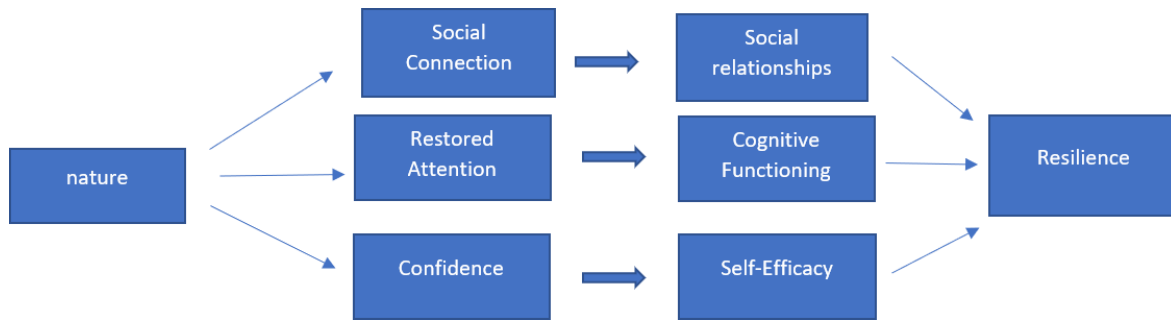
(2017), who developed a framework to measure children's connection with nature, the conceptualisation of child-nature connectedness is defined as "the summation of influences that surroundings, opportunities, or conditions of life have on promoting human-nature connection in individuals or populations of children." In short, the properties that foster a social-ecological system to connect children to nature. Research into nature play and children's well-being has yielded a plethora of psychological benefits. In a detailed case study of one boy's ability to cope with change, McArdle et al. (2016) provided observations of the boy's development in confidence and ability to take risks and push boundaries within an outdoor setting. While previous studies show promising results of nature contact and children's wellbeing, there are only a limited range of studies that have explored the connection between nature contact and the effect it has on children's resilience.

### *Drawing the Connection between Nature and Resilience*

The well-being outcomes of both physical and psychological flourishing for children spending time in nature is widely accepted. Recent studies have begun to make connections between children's resilience to nature and well-being (Chawla, 2015). To assess the plausible linkages between resilience and nature contact, Wells (2014) considers the two main factors that are solidly grounded as predictors of resilience, these being: social relationships and intellectual functioning. Building on the research that showcases how relationships with caring prosocial adults and good intellectual functioning are the two most widely reported predictors of resilience (Masten & Coatsworth, 1998), studies are beginning to understand the processes in which the natural environment can act as protective factors to help support these predictors. Recent resilience literature has bolstered the view that resilience can be fostered through building self-esteem and self-efficacy (Well, 2014). Self-efficacy refers to an individual's confidence in their ability to exert control over their environment, motivation, and behaviour (Bandura, 1977). Figure 1 provides an overview of the ways in which nature has been shown to support resilience through Wells (2014) research.

**Figure 1** *Overview of Well's (2014) framework of nature and the effects on resilience*

## CONNECTION WITH NATURE AND EFFECTS ON RESILIENCE



### ***Current Study***

In turn, while research into children and nature has primarily focused on wellbeing outcomes, there is a limited understanding of how these wellbeing outcomes relate to the development of resilience. Moreover, the majority of research has focused on measuring the well-being outcomes of children in nature, while research says little about the extent of the connection and relationship that is formed between children and the natural environment. Guisti's (2017) research provides evidence to suggest that the depth of connection children experience within nature has a profound impact on their wellbeing outcomes. Hence, it is important to shift the research focus away from just the *outcomes* of wellbeing, but also to understand the *processes* of how deeper connections can be formed. As highlighted from previous research, a combination of both qualitative and quantitative methods has yielded rich results to understand the intricacies of children's development of nature connection.

The current study aims to contribute to this gap in literature by conducting research within the Learning in Nature Program (LNP) run by the University of Melbourne Early Learning Centre (ELC). Additionally, the current study aims to explore children's connection with nature and the effects on resilience using a mixed-methods approach. The following research questions are used to guide the direction of research:

- (1) What kinds of connections are being formed between children and their experience of nature?
- (2) What are the processes that occur for children to build connections with nature?
- (3) How does nature contact promote social relationships, cognitive functioning, and self-efficacy in children?
- (4) How do children's connection with nature have an effect on resilience?

## **Method**

### ***Participants***

Participants included LNP students ( $N=83$ ), their parents ( $N=48$ ), and LNP teachers ( $N=4$ ) for 2021 and 2022. Student participants in 2021 ( $N=27$ ) and 2022 ( $N=56$ ) had a mean age of 4 years 4 months in 2021 and 4 year 8 months in 2022. Of these students, 33 were



## CONNECTION WITH NATURE AND EFFECTS ON RESILIENCE

female. LNP student participants attended the University of Melbourne Early Learning Centre (ELC) located in Abbotsford, Victoria, Australia. Full time students ( $N=21$ ) attended the ELC on Thursday and Friday mornings, while part time students ( $N=62$ ) attended on either Thursday or Friday.

### *Design*

This research aims to explore children's connection with nature and its effects on resilience in young children through an early childhood environmental education program. Previous research suggests that increased nature contact can foster a deeper sense of connection within children that acts as a protective factor for resilience (Richardson et al., 2017). Methods of measuring resilience has been employed using quantitative measures examining a host of self-regulation and coping skills (Chen et al., 2020; Feder et al., 2019, Masten & Cicchetti 2016). Hence, the current student employs a mixed-method design to provide a richer and deeper exploration of the types of connection nature contact has on children and its effects on resilience.

### *Procedure*

Two classrooms were selected from the ELC to participate from the program through the voluntary involvement of the lead classroom teachers. Once student participants were designated, a letter of invitation was sent to parents through the school's newsletter Story Park. The plain language statement, consent form, parent questionnaires (Appendix C), were distributed to parents using both electronic and paper forms by the two teachers each to their respective classrooms. The two teachers were provided with a plain language statement and consent forms as well as a set of teacher interview questions (Appendix D). This procedure was identical to the research in 2021.

### *Data Collection*

Both qualitative and quantitative data sources were used to support the exploration of the current research question. Data was collected across both 2021 and 2022 cohorts.

### *Qualitative Data*

Qualitative data was obtained from teachers, students, and parents. The following data was collected:

#### *(a) Questionnaire Schedule for Teachers*

Teachers were asked to write down their observations of the children and insights into how the children have responded to nature through the LNP. Questionnaires were distributed at the start and end of the LNP and returned via email with an estimated

## CONNECTION WITH NATURE AND EFFECTS ON RESILIENCE

participation time of 30 minutes.

### (b) *Questionnaire Schedule for Parents*

Parents were provided with a questionnaire about the changes and observations about their children throughout the LNP. Total participation time was approximately 5-10 minutes for each parent.

### (c) *Student Draw-Tellings*

A large component of the LNP encourages children's reflection in nature by using visual journals to draw and orally reflect on their experiences. Each student has a visual journal that they share with their "learning buddy". Journal entries are made with every nature outing. Students were asked to draw their experiences in nature and orally reflect what they have drawn to the staff. These draw-tellings (Wright, 2007) provide longitudinal data for 6 months. Block quotes from these journals were obtained to conduct a thematic analysis.

## *Quantitative Data*

Teachers completed the following quantitative measures for each student: Children's Coping Scale: Teacher Rating Form (Yeo et al., 2014), Strengths and Difficulties Questionnaire (Goodman, 1997), and Empathy Questionnaire teacher version (Rieffe et al., 2010). Teachers were asked to fill out the forms at the start (Time 1) and end (Time 2) of the program.

### (a) *Children's Coping Scale: Teacher Rating Form (CCS)*.

The CCS comprises of 29 coping strategies, in which participants rate how frequently their child uses each of these strategies in different situations. The scale uses a 3-point Likert scale (0=never, 1=sometimes, 2=a lot). The scale consists of Positive coping (PC), negative coping-emotional expression (NEE), and negative coping-emotional inhibition (NEI). The subscale's internal consistency fell within acceptable ranges ( $\alpha=.66$  to  $.87$ ) (Yeo et al., 2014).

### (b) *The Strengths and Difficulties Questionnaire (SDQ) Teacher Version*

The SDQ has 25 questions that form five scales: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems and prosocial behaviour. The SDQ uses a 3-point Likert scale (0=not true, 1=somewhat true, 2=certainly true) Each subscale was within a satisfactory internal consistency ( $\alpha=.73$ ) and acceptable cross-informant consistency ( $r=.34$ ) (Goodman, 2001).

### (c) *Empathy Questionnaire for Children and Adolescents (Teacher version) (EmQue)*.

This scale consists of 19 items which indicates a child's ability to empathise with others over the past two months. Three subscales of contagion, attention, and prosocial behaviour were

## CONNECTION WITH NATURE AND EFFECTS ON RESILIENCE

attained through sum of corresponding items according to the three-factor model with acceptable internal consistency ( $\alpha=.7$ ) (Rieffe et al., 2010).

### *Data Analysis*

#### *Qualitative Analysis*

A thematic analysis as described by Braun and Clarke (2006) was used to explore student experiences in nature. Triangulation of sources of information including parent questionnaires, teacher questionnaires, and student draw-tellings was used to help establish validity. Moreover, intercoder reliability was assessed and determined to be consistent by two student researchers each cross coding 15% of responses (O'Connor & Joffe, 2020).

Draw-telling quotes were transcribed and sectioned into three periods: early program, mid-program, and late program. Each period was separated by approximately 2 months. A total of 662 drawings were analysed. It should be noted that the 2021 cohort experienced a period of isolation mid-program due to the COVID-19 lockdown. As such, the 2021 cohort had a significantly reduced amount of time in nature compared to the 2022 cohort. Data from parents and teachers were transcribed and coded. Eighteen initial sub-codes were identified and then organised into 4 main themes.

#### *Quantitative Analysis*

The IBM Statistical Package for the Social Sciences (SPSS) was used to analyse the quantitative data. Outliers scores from the SDQ, EmQue, and CCS were removed from the dataset. A repeated measures Analysis of Variance (ANOVA) was conducted to obtain the difference in subtest scores between Time 1 (early program stage) and Time 2 (late program stage). The independent variable was Time while the dependent variables were Peer Problems (PP), Emotional Problems (EP), Prosocial Behaviour (PSB), Empathy Contagion (EPCO), Empathy Prosocial Behaviour (EPPRO), Positive coping (PC), Negative Coping Emotional-Expression (NCEE), and Negative Coping-Emotional Inhibition (NCEI) according to Well's (2014) conceptualization of resilience.

## **Results**

### *Qualitative Analysis*

Thematic analysis as outlined by Braun and Clarke (2006) was employed to identify themes and subthemes in the student's draw-tellings, parent questionnaires, and teacher questionnaires. Themes are organized into broad themes and subthemes with the inclusion of selected block quotes.

#### *Theme 1: Naming, and Nature Cycles*

## CONNECTION WITH NATURE AND EFFECTS ON RESILIENCE

Children's knowledge about nature began to expand throughout the program. At the early program stage, both cohorts used simple concrete descriptions to identify nature such as "big long grass. A river. A spiral" or "These are trees and flowers; the black part is dirt." Towards the mid-program stage, changes in children's naming ability became more evident. Students across both cohorts started identifying specific names for nature "I spotted 25 or 26 gum trees" "I found mushrooms and eucalypt leaves". By the late program stage, children demonstrated knowledge of the natural elements around them. Detailed names like "crow, honeyeater, helmeted honey eater, Bunjil" were used in the draw-tellings. Students began to refer to the river as the "Yarra" and increasingly used specific names for trees, plants, and animals.

### ***Theme 2: Intrapersonal Connections to the Self through Nature***

A second broad theme that emerged from the transcripts consisted of intrapersonal connections that children began to draw. These connections relate to children accessing their emotions, appreciation for nature, and imagination.

#### *Emotions*

Regulating emotions and positive emotive words began to emerge as children were more exposed to nature. During the early program stage, minimal emotion words were used by children to describe their experience in nature. During the mid-program stage, children began to relate nature to help regulate their emotions. Children's imagination came directly from the observations of nature "I saw a tree with eyes", "I imagined a dragon and maybe Peter Rabbit", "Some part of the tree is turning into a lava monster because someone stole the heart of the tree." Other children used nature to play pretend "we like it here because we pretend the rocks are rocket ships." Parents from both cohorts observed that children have started "pointing out certain plants and animals when out and about" as well as "Gaining greater observational skills in the parks and on walks. He notices things in nature and brings it to our attention."

### ***Theme 3: Nature Fostering Interpersonal Connection Between Friends, Family, and Social Communities***

The draw-tellings revealed how children can make connections with nature as well as interpersonal relationships in the form of their peers, family members, and the wider societal community. The enjoyment of nature was often paired with their friends "my friend on the grass, we are feeling happy", and "I drew a tree, flowers, and a rainbow with some love heart. There were three girls smiling." Nature becomes a facilitating space for children to play and

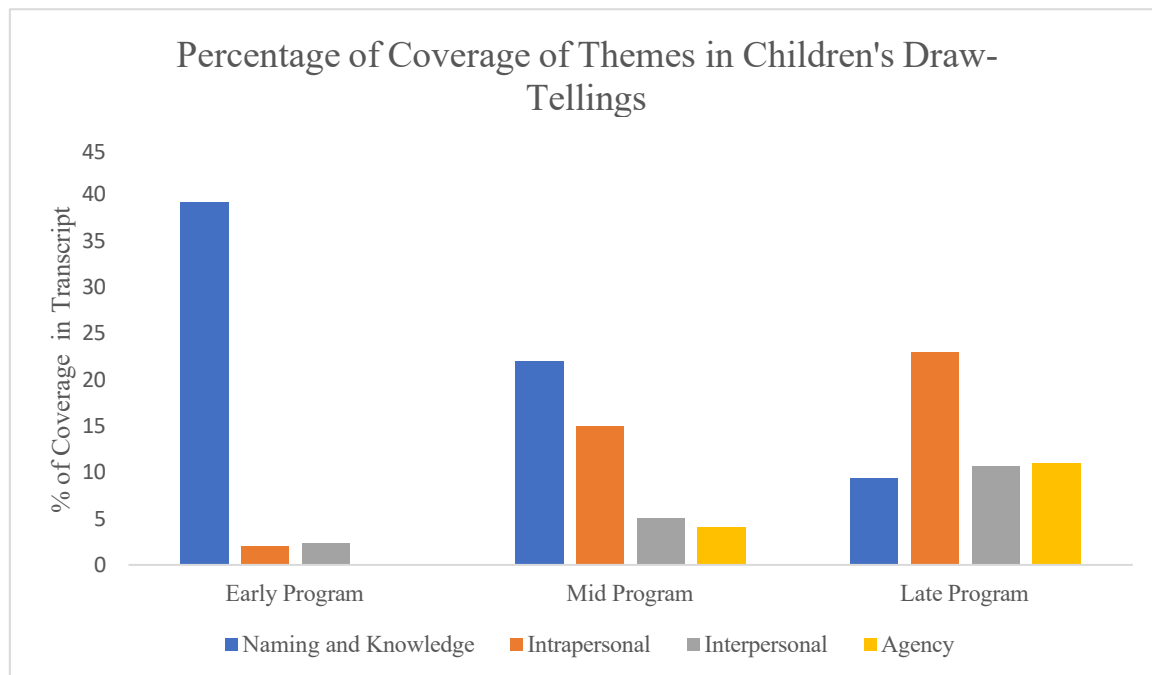
## CONNECTION WITH NATURE AND EFFECTS ON RESILIENCE

enjoy themselves with friends as well as a connection point that links them with wider communities and to share knowledge.

### *Theme 4: Children as Agents of Change within Nature*

Children drew themselves as active agents of change within nature in the late program stage. Children understood that their actions can have a direct impact on nature “this is me picking up rubbish with the grabber because rubbish is not good for the community and the world, it might get stuck into the animal’s throat and it might get sick”.

**Figure 3.** Overview of the percentage of coverage of themes in Children’s Draw-Tellings



### *Quantitative Analysis*

Analysis of Variance (ANOVA) was employed to investigate the difference in subtest scores between Time 1 and Time 2, combining data from 2021 and 2022.

#### *Peer Problems and Emotional Regulation*

A repeated measures ANOVA was conducted to determine if there was a difference of Peer Problems, Empathy Contagion, and Emotional Problems between Time 1 and Time 2. The results revealed that there was a significant reduction in Peer Problems over time, with a small effect size ( $F(1,82) = 18.32, p < .001, \eta^2 = .18$ ). There was a significant reduction in Emotional Problems ( $F(1,79) = 23.27, p < .001, \eta^2 = .23$ ). However, the results indicated that there was no significant effect of time for Empathy Contagion ( $p = .036$ ).

#### *Negative Coping*

A MANOVA was conducted using Negative Coping Emotional Expression and Negative Coping Emotional Inhibition as the two constructs reflect maladaptive coping

## CONNECTION WITH NATURE AND EFFECTS ON RESILIENCE

behaviours There was a significant main effect of time with a medium effect size ( $\eta^2 = .26$ ). Paired wise comparison suggested that there was a small effect for NCEI ( $\eta^2 = .12$ ) and a moderate effect for NCEE ( $\eta^2 = .3$ ).

### *Positive Coping*

A MANOVA was conducted using the subscale Positive Coping, Empathy Prosocial, and Prosocial Behaviour as these variables all relate to positive coping strategies. There was a significant main effect of time on positive coping strategies with a medium size effect size ( $\eta^2 = .5$ ). The paired wise comparison revealed a moderate effect for PC ( $\eta^2 = .43$ ), small effects for both Empathy Prosocial ( $\eta^2 = .23$ ) and Prosocial Behaviour ( $\eta^2 = .28$ ).

The qualitative findings revealed 4 main themes: naming and nature cycles, interpersonal connections, intrapersonal connections, and Agency. Results from the quantitative analysis showed a significant increase in empathy prosocial, prosocial behaviour, and positive coping skills. Both negative coping styles, peer problems, and emotional problems showed a significant decrease between early program and late program.

## **Discussion**

The present study aimed to explore the relationship between children's connection to nature and resilience through evaluating the LNP, an environmental education program in an Australian early childhood educational setting. The following discussion will consider the implications of findings from a mixed-methods approach to data collection. Through the collection and thematic analysis of 662 draw-tellings, four themes of connections emerged, these are: naming and nature cycles, intrapersonal connections, interpersonal connections, and agency.

### *Naming and Nature Cycles*

Naming and Nature Cycles was the first theme identified. This theme involves children being able to observe, identify, and name objects in nature. As this theme progresses, children begin to draw connections between natural elements. Notably, the level of connection between self and nature is at a baseline when individuals are simply naming nature objects (Hasova, 2020). While children are able to identify nature objects such as "this is a worm" or "these are trees", they do not associate nature objects with other aspects in their lives. As such, in the early stages of the program, there is little connection drawn between child and nature. Evidently, children see nature as separate to themselves, with them being the observer and nature being the object. However, Stibbe's (2021) research on eco-linguistics points out the importance of naming things in nature. Naming objects establishes a

## CONNECTION WITH NATURE AND EFFECTS ON RESILIENCE

foundation for learning and concretising categories in order for humans to make sense of the objects. Stibbe (2015) highlights the notion that children's learning of names and gaining knowledge about objects becomes the foundational blocks for connections to be built upon.

In the late program stage, children have shifted from naming nature objects as concrete "this is a bug" to being interconnected with other aspects of nature "the bee is collecting pollen from the flower". As such, children begin to shift their understanding of nature as being separate to interdependent.

### *Intrapersonal Connections to the Self through Nature*

The second theme that was identified was children's connections to themselves through nature. Connections to self involves intrapersonal connections in which children can identify and regulate their emotions, as well as enjoy their experience in nature. This theme primarily began to emerge in the mid program stage. Children were able to use nature to self-regulate their emotions. For example, one child notes that "the clouds were telling me to stay calm", or another that looks to nature to uplift their mood "I feel happier when I look at the flowers." This is in line with a host of other researchers that have found nature to help with emotional regulation in children (Bruni et al., 2017; Wells, 2014; Chawla, 2015).

Our findings point to another important sub-theme: children's appreciation and enjoyment of being in nature. The emergence of words describing nature to be "beautiful" and the experience of "loving nature" comes to the fore at the late program stage. Children are not only identifying the ways in which nature makes them feel but are able to simply enjoy being within nature. Similar to the findings of Guisti (2017), children's connection with nature changes as they see themselves as not just *observing* nature but being *a part of* nature. Guisti (2017) argues that deeper human and nature connections are formed when children begin to see themselves dwelling within nature as opposed to only observing nature.

### *Nature Fostering Interpersonal Connection Between Friends, Family, and Social Communities*

The third theme that was identified was children's interpersonal connections with others through nature. Interpersonal connection involves children's feelings of connectedness to friends, family, and other societal communities. In the early program stage, children's draw-tellings were sparse in connecting nature to others. Nature was seen as isolated objects that children observed. By the mid program stage, children began to draw connection between nature as a facilitating space to play in with their friends "Me and my friend holding hands on the grass, we are feeling happy." This is in line with Larson et al.'s (2019) work at investigating the impact of green spaces in school yards. Their findings suggest that nature

## CONNECTION WITH NATURE AND EFFECTS ON RESILIENCE

becomes an environment to form social connections with friends by playing and exploring together. This can be exemplified by one child's draw-telling "we like it here because we pretend the rocks are rocket ships."

Children also used the environment to connect with their family. In the late program stage, children began to draw pictures of nature as spaces where parents and children can enjoy together "this is me and my mummy lying down on the grass thinking about the Wurundjeri people and looking after the land." Moreover, children began to draw connection between the land and the wider community of the Wurundjeri people. In their draw-tellings, children drew the link between land and communities "showing kindness to the plants and the Wurundjeri people and the land" as well as "I am bringing cookies to the tree to celebrate the Indigenous people." Evidently, children see the connection of treating nature with kindness to respect the Indigenous community. As such, children's connection with nature extends beyond themselves and into their social relationships, linking land and communities together.

### *Children as Agents of Change within Nature*

The fourth theme that emerged was related to children seeing themselves as agents of change within the natural environment. This theme involves prosocial behaviour, environmental attitudes, and sharing knowledge with others. Notably, this theme emerges within the late program stage. In their draw-tellings, children begin to make the connection between their own action and the change it can bring to the natural environment: In concurrence with Guisti's (2018) framework of human and nature connectedness, a deeper sense of connection is made when children see themselves as standing for nature and actively playing a role in its protection. Importantly, the essence of time and recurring experiences in nature plays a significant role in facilitating agency in children (Guisti, 2018).

These findings are similarly reflected in our findings, with the progression of children's connection to nature stemming from basic naming and learning (observing nature), to becoming more interconnected to themselves and social groups (being with nature), and finally developing a sense of agency to feel and act for nature (being for nature). In consideration of childhood attachment theories (Bowlby, 1958), time and routine with an environment can provide the necessary familiarity for the child to feel safe before further exploration. In other words, before the child can feel care or concern for the environment, a child needs to at least feel at ease and comfortable within the natural elements.

### **Figure 5** *Draw-Telling examples across program stages*



CONNECTION WITH NATURE AND EFFECTS ON RESILIENCE

<p>Early Program</p> <p>Features:</p> <p>Naming, Concretised, and Isolated Nature Objects</p>			
<p>Mid Program</p> <p>Features:</p> <p>Emotion words, time with friends, imagination</p>			
<p>Late Program</p> <p>Features:</p> <p>Active agents within the environment, admiration and positive environmental attitudes</p>			

***Nature Contact and the Effects on Resilience***

The results from our studies corroborate with previous research that suggest nature contact can help to foster resilience in children. Wells (2014) study considers social relationships, cognitive functioning, and self-esteem as key factors of resilience. We discuss the role of nature in these three areas of resilience together with quantitative results.

The results of this study indicated that there was a significant decrease in peer problems within childrens interactions from the early program stage compared to the late

## CONNECTION WITH NATURE AND EFFECTS ON RESILIENCE

program stage ( $F(1,82) = 18.32, p < .001, \eta^2 = .18$ ). When asked about the observable changes of children's behaviour towards one other, the teacher comments "the children's ability to positively support and encourage their peers was also observed, with children offering verbal and non-verbal care and assistance to each other throughout the program."

Additionally, there was a significant increase in pro-social empathy measures between early and late program stages ( $F(1,80) = 24.43, p < .001, \eta^2 = .23$ ). Pro-social empathy refers to an individual's ability to be sensitive to other's distress while paired with a drive towards their welfare (Wells, 2014). Pro-social empathy can be evidenced throughout children's draw-tellings in emotional regulation, "this is me holding hands with my partner who will look after me. She was sad too, so I looked after her" as well as working collaboratively as a team "me and my friend setting up a picnic [when] a picnic mat fell." These findings support the notion that the natural environment provides a space that is used to facilitate social interaction and the contribution to the development of social bonds in children (Wells, 2014; Taylor et al., 1998; Kweon et al., 1998; Larson et al., 2019).

Previous research has shown that an individual's cognitive functioning, especially attentional capacity, has been linked with the ability to cope and adapt to challenging situations (Masten & Coatsworth, 1998). Kaplan's (1995) seminal work in Attention Restoration Theory (ART) showcases the beneficial effects that nature contact can have on an individual's cognitive functioning, especially in reducing stress and regulating negative emotions. The results from our quantitative analysis revealed a significant decrease in emotional problems in children ( $F(1,79) = 23.27, p < .001, \eta^2 = .23$ ), as well as a reduction in negative coping strategies ( $F(2, 78) = 117.65, p < .001, \eta^2 = .31$ ).

The current study's qualitative and observational research into children's relationship with nature revealed how many children felt more confident after spending time in nature. This is supported through teacher observations that "Spending time in the natural world also encouraged the children to navigate different environments independently and freely, in turn building their resilience and strength, in both the mental and physical domains."

While this study provides an in depth understanding of the processes of building connection with nature, to better understand the long-term benefits and gains in learning it would be helpful to have longitudinal data so that resilience can be assessed over a longer period. As such, follow up studies can be a direction for future research in examining the changes and behaviours of children in the later years in life. Additionally, this research is conducted with children 4-5 years of age, a period of significant developmental trajectories such as theory of mind (Patnaik, 2008, refinement of fine and gross motor skills (Sharma,

2021), and development of cognitive functions (Sharma, 2021). It is difficult to delineate the effects of nature contact within children's development. Thus, future studies can consider using different age groups to help understand developmental trajectories in a range of areas.

### **Conclusion**

In summary, the results from this mixed methods study found that children can connect with nature in multifarious and dynamic ways. Namely, children build connection through (a) knowledge about nature and the interconnectedness of natural elements, (b) using nature to connect to their own emotions and enjoyment, (c) seeing nature as a connection point for their interpersonal relationships with peers, family, and wider communities, and (d) children seeing themselves as agents of change as they see a link between their own actions and the impact it has on nature. Moreover, the process of connection is built and strengthened through consistent time spent in nature.

With the ongoing and positive emerging outcomes of these learning environments, research into nature and resilience can be an important area to focus on as part of the movement towards outdoor learning. In an age of constant change, theorists and practitioners would benefit from a greater understanding of nature's capacity to bolster resilience, while also gaining clarity into how the implementation of nature-based programs could support developing more resiliency within the upcoming generations.

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