



FONDAZIONE
PATRIZIO PAOLETTI
PER LO SVILUPPO E LA COMUNICAZIONE



RESEARCH INSTITUTE
PAOLETTI FOUNDATION

RESEARCH FOR GLOBAL HEALTH

RESILIENCE FOR THE FUTURE

*An International Research Roundtable
about Resilience in Times of Uncertainty*

ABSTRACTS BOOK



Index

Editorial	3
Abstracts:	
Patrizio Paoletti	
The Sphere Model of Consciousness and Resilience: I, Us, Other than Us	4
Michael Ungar	
Multisystemic Approaches to Resilience: Discovering Culturally and Contextually Sensitive Accounts of Thriving.....	6
Giacomo Bono	
How Gratitude Supports Youths' Wellbeing and Resilience in Stressful Settings	8
Grazia Serantoni and Tania Di Giuseppe	
Promoting resilience through the practice of silence: results of selected studies in different fields of intervention	10
Argyroula Kalaitzaki	
Research Findings and Interventions to Increase Older Adults and their Caregivers' Resilience in Greece	13
Aras Bozkurt	
Resilience in a time of increasing human-GenAI interaction.	15
Kaltrina Kelmendi and Sherry Hamby	
Navigating Trauma and Resilience: Insights from Post-Conflict Kosovo.....	16
Golnaz Tabibnia	
Neuroscience Education as a Tool to Reduce Uncertainty and Boost Resilience.....	18
Tal Dotan Ben-Soussan	
QMT-Induced Electrophysiological and Molecular Changes: A Multidisciplinary Approach to Enhancing Resilience.....	20

RESILIENCE FOR THE FUTURE 2024

In this second edition, the round table is part of the scientific events of I.C.O.N.S., the international conference on the neurophysiology of silence, which in 2024 brings together three important events on silence, peace and resilience, forming an articulated Summit between psychologists and neuroscientists for research on silence, peace and resilience in global health.

Resilience, understood as the ability to face adversity and emerge improved from it, has assumed a central role in scientific research. In an era marked by global conflicts and environmental crises, in which the psychosocial consequences of the Covid-19 pandemic are still vivid, understanding the mechanisms underlying resilience becomes crucial for developing effective intervention strategies to promote individual and social well-being. Through interdisciplinary approaches that combine neuroscience, psychology and pedagogy, it is possible to explore the complexity of this phenomenon and identify models and practices to foster resilience at both individual and community levels. In this sense, further research on resilience is essential to address contemporary challenges. In particular, exploring resilience-related factors (such as coping, emotional regulation, adjustment) can provide a comprehensive view of the intrapersonal and interpersonal resources needed to overcome adversity and learn from it.

Given the proliferation of resilience definitions in scientific literature, it is also necessary to reflect on procedures for measuring the construct, which enable the identification of strengths and areas for improvement, thus facilitating targeted and customized interventions. Furthermore, the development of techniques and interventions aimed at empowering individuals in unstable post-pandemic, climatic and geopolitical contexts is crucial for promoting post-traumatic growth.

Resilience should also be promoted across different age groups. Exploring resilience throughout the entire life cycle and considering new conceptual perspectives enables intervention strategies to be tailored to the specific needs of different populations and contexts, thus promoting long-term well-being, both at individual and community levels.

In the roundtable “Resilience in Times of Uncertainty” we will discuss with experienced resilience researchers from different parts of the world about:

- Innovation and models in resilience research from a multidisciplinary perspective
- Constructs related to psychological resilience
- Assessment procedures for psychological resilience and related variables
- Techniques and interventions to empower individuals in the face of post-pandemic challenges, climate change, natural risks and diplomatic conflicts
- Resilience across the life cycle and new conceptualizations of resilience



Patrizio Paoletti

Patrizio Paoletti Foundation, Italy

Patrizio Paoletti is the founder of the Research Institute in Neuroscience, Education and Didactics and the Paoletti Foundation for Development and Communication. He developed the Sphere Model of Consciousness, which has recently been considered the most advanced and elegant neuro-phenomenological model for consciousness. His research interests include the investigation of “consciousness-in-itself,” self-awareness and its neurophysiological correlates, sensorimotor paradigms aimed at the development of attention and willpower, and their educational applications. Paoletti has created several techniques aimed at enhancing brain functions, including Quadrato Motor Training, a motor training technique that has proven beneficial in developmental disorders and neurodegenerative states. In the educational field, through his numerous educational projects, Paoletti promotes a global approach to human development in terms of bodily experience, emotion regulation, and the enhancement of attention and self-awareness. The neuroscientific investigation of Paoletti and his Foundation aims to provide scientifically validated educational tools aimed at different age groups, ranging from children to adults, as well as educational professionals and non-specialized audiences. The Paoletti Foundation’s vision is embodied in education for Peace and Awareness as indispensable values for the future of humanity.

The Sphere Model of Consciousness and Resilience: I, Us, Other than Us

In an era characterized by increasing social and personal challenges, resilience emerges as a fundamental competency for individual and collective well-being. This contribution explores the Sphere Model of Consciousness (SMC) (Paoletti, 2002; Paoletti and Ben Soussan, 2019) as an innovative framework for the development of consciousness from a neuro-psycho-pedagogical perspective. The model proposes a spherical geometric representation of brain functioning and offers a theoretical and practical pathway underlying the development of “spherical resilience” (Paoletti, et al. 2023), understood not only as awareness of the personal dimension (the ‘I’ dimension) but also of the relational and social dimensions (Us and the Other than Us) (Morin, 2001; Paoletti, 2008). This multidimensionality allows individuals to consciously navigate between the different spheres of their existence. The 4 fundamental functions of consciousness: feeling, wanting, being able, and being, are represented graphically by the sphere’s axes and its central point, creating a three-dimensional map of awareness. The sphere’s central point, associated with being, is nourished by this threefold

relational dimension (moving from an individualistic perspective focused solely on “I” to the broader perspectives of “Us” and “Other than Us”), creating a matrix for the development of spherical resilience (Paoletti, et al. 2022; Paoletti et al. 2023). This vision recognizes the fundamental interconnection between personal and collective well-being, highlighting how individual dynamics are intrinsically linked to the social context through direct and indirect relationships (Fowler and Christakis, 2008). The neuro-psycho-pedagogical approach of the SMC thus offers a significant contribution to the understanding and development of resilience.

Fowler, J. H., Christakis, N. A. (2008). “Dynamic spread of happiness in a large social network: longitudinal analysis over 20 years in the Framingham Heart Study”. *British Medical Journal*, (337): a2338

Morin, E. (2001). *I sette saperi necessari all'educazione del futuro*. Raffaello Cortina Editore.

Paoletti, P. (2023). Il Modello sferico della coscienza: Io, Noi, Altro da noi. Presentato al seminario “Promuovere le Risorse Positive della Comunità Penitenziaria”, 15 Marzo 2023, Università degli Studi di Genova.

Paoletti, P. (2008). *Crescere nell'eccellenza*. Roma: Armando editore.

Paoletti, P. (2002). *Flussi, Territori, Luogo [Flows, Territories, Place]*. M.E.D. Publishing.

Paoletti P and Ben-Soussan TD (2020) Reflections on Inner and Outer Silence and Consciousness Without Contents According to the Sphere Model of Consciousness. *Front. Psychol.* 11:1807. doi: 10.3389/fpsyg.2020.01807

Paoletti, P., and Ben-Soussan, T. D. (2019). The sphere model of consciousness: from geometrical to neuro-psycho-educational perspectives. *Logica Univ.* 13, 395–415.

Paoletti, P., Di Giuseppe, T., Lillo, C., Serantoni, G., Perasso, G., Maculan, A., & Vianello, F. (2023). Training spherical resilience in educators of the juvenile justice system during pandemic. *World Futures*, 1-18

Paoletti, P., Di Giuseppe, T., Lillo, C., Serantoni, G., Perasso, G., Maculan, A., & Vianello, (2022). La resilienza nel circuito penale minorile in tempi di pandemia: un'esperienza di studio e formazione basata sul modello sferico della coscienza su un gruppo di educatori. *Narrare i Gruppi*. Open Access

Paoletti, P., Di Giuseppe, T., Serantoni, G., Perasso, G., Lillo, C., Anella, S. (2023) Focus adolescenza: sfide e risorse nel post pandemia. Un approccio neuro psicopedagogico per educare al benessere e prefigurare il futuro. ISSN: 9791221046076.



Michael Ungar

Dalhousie University, Canada

Michael Ungar, Ph.D., is a Family Therapist and Professor of Social Work at Dalhousie University where he holds the Canada Research Chair in Child, Family and Community Resilience. Since 2002, Dr. Ungar has directed the Resilience Research Centre, designing multisite longitudinal research and evaluation projects in collaboration with organizations such as The World Bank, Save the Children, and national public health agencies. Dr. Ungar's clinical work and research spans more than a dozen low, middle, and high-income countries, with much of that work focused on the resilience of marginalized children and families, and adult populations experiencing mental health challenges. He has published over 250 peer-reviewed articles and book chapters on the subject of resilience and is the author of 18 books for mental health professionals, researchers and parents. These include *Multisystemic Resilience: Adaptation and Transformation in Contexts of Change*, an edited volume with contributions from more than a dozen diverse disciplines studying resilience, *The Limits of Resilience*, a book for individuals and organizations experiencing stress, and *Working with Children and Youth With Complex Needs: 20 Skills to Build Resilience*, a book for mental health professionals. Dr. Ungar is a Fellow of the Royal Society of Canada and past recipient of the Canadian Association of Social Workers National Distinguished Service Award. His blog, Nurturing Resilience, can be read on Psychology Today's website.

Multisystemic Approaches to Resilience: Discovering Culturally and Contextually Sensitive Accounts of Thriving

As our understanding of the process of resilience has become more culturally and contextually nuanced, researchers have had to seek innovative ways to account for the complex, reciprocal relationships between the many systems that influence our individual and collective capacity to thrive. Whether challenged by the uncertainty associated with changing economic, political and environmental conditions, or confronting problems of individual biology and cognition, resilience is now understood to be the result of multiple interacting systems making positive development under conditions of adversity more likely to occur. Dr. Ungar's work has promoted a more contextualized, culturally nuanced understanding of resilience that provides a model for the multisystemic interactions associated with better than expected outcomes for individuals and communities. Several case studies will be used to show how a more systemic understanding of resilience can influence the design and implementation of resilience research. These include (1) the Resilient Youth in Stressed Environments (RYSE)

study, a longitudinal mixed methods investigation of adolescents and emerging adults that are coping with boom-and-bust economic cycles and diversification in communities that are dependent on oil and gas industries in Canada and South Africa; and (2) studies of the impact of programming to build resilience among Syrian refugee children and youth. Building on these examples, Dr. Ungar will discuss how we can create better investigations of resilience that are able to capture both emic and etic accounts of positive developmental processes in ways that avoid the tendency to homogenize people's experience (e.g., privileging specific behavioral outcomes without sensitivity to their function in different contexts). Limitations to doing multisystemic resilience research will also be highlighted, with special attention to the need for further innovation. Finally, Dr. Ungar will explore the implications of a systemic understanding of resilience for policy and clinical practice.

Choi, K. W., Wilson, M., Ge, T., Kandola, A., Patel, C. J., Lee, S. H., & Smoller, J. W. (2022). Integrative analysis of genomic and exposomic influences on youth mental health. *Journal of Child Psychology and Psychiatry*, 63(10), 1196-1205. <https://doi.org/10.1111/jcpp.13664>

Kuru, N. & Ungar, M. (2020). Refugee children's resilience: A qualitative social ecological study of life in a camp. *Journal of Refugee Studies*, 34(10). doi:1093/jrs/feaa092

Masten, A. S., & Cicchetti, D. (2016). Resilience in development: Progress and transformation. In M. Cicchetti (Ed.), *Developmental psychopathology, Vol. 4: Risk, resilience and intervention (3rd Ed.)*. (pp.271-333). Wiley.

Murphy, K., Cameron, E. S., Stone, K., Strand, L., Combs, C., Khan, A., & Ungar, M. (2022). "Steeped in oil": The sociopsychological factors and processes that influence community members' attitudes toward economic diversification in an oil and gas-producing community. *Society & Natural Resources*. DOI: [10.1080/08941920.2022.2081999](https://doi.org/10.1080/08941920.2022.2081999)

Ungar, M. (2021). Modeling multisystemic resilience: Connecting biological, psychological, social, and ecological adaptation in contexts of adversity. In M. Ungar (Ed.), *Multisystemic resilience: Adaptation and transformation in contexts of change* (pp.6-34). New York: Oxford University Press.

Ungar, M. (2024). *The limits of resilience: Knowing when to persevere, when to change, and when to quit*. Toronto: Sutherland House.

Murphy, K., Cameron, E. S., Stone, K., Strand, L., Combs, C., Khan, A., & Ungar, M. (2022). "Steeped in oil": The sociopsychological factors and processes that influence community members' attitudes toward economic diversification in an oil and gas-producing community. *Society & Natural Resources*. DOI: [10.1080/08941920.2022.2081999](https://doi.org/10.1080/08941920.2022.2081999)



Giacomo Bono

**California State University Dominguez Hills,
Carson, CA, USA**

Giacomo Bono is a Professor of Psychology at California State University, Dominguez Hills. He has a Ph.D. in Applied Social Psychology from Claremont Graduate University. His research focuses on forgiveness, gratitude, well-being, mental health and development among youth and emerging adults. Dr. Bono is the author of *Thanks! A Strengths-Based Gratitude Curriculum for Tweens and Teens*, co-author of a book entitled *Making Grateful Kids: The Science of Building Character*, and co-author of the *Gratitude Playbook with Character Lab*. As director of the Youth Gratitude Project, he examines youths' social emotional skills and wellbeing and develops assessment tools and interventions to promote student success and wellness in primary and secondary schools.

How Gratitude Supports Youths' Wellbeing and Resilience in Stressful Settings

Gratitude reliably supports adolescents' mental health (Cregg et al, 2021) and wellbeing (Armenta et al., 2022; Jans-Beken et al., 2018). However, much remains unknown about how gratitude benefits adolescents' and emerging adults' social and emotional development. This talk has two aims. One aim is to present two studies using different methods that expand our understanding of gratitude's advantages to mental health, wellbeing and resilience for adolescents and young adults. A second aim is to discuss how such studies can be done in the context of Italian youth settings to stimulate new directions for positive educational scholarship focused on gratitude, social relationships, and resilience.

Study 1 was based on a 6-week high school gratitude intervention that used a social media platform and a curriculum for teens to practice gratitude personally and interpersonally (Bono et al., 2023). Results showed that gratitude benefitted the intervention group over the control group in terms of wellbeing and mental health (anxiety and depression) and that changes in perceived stress accounted for gratitude's benefits to these outcomes. Examples of thanks messages exchanged during the intervention also illustrated psychological safety – a critical feature neglected in prior gratitude interventions with adolescents. Thus, roundtable discussion will emphasize how such practices can be effectively used in secondary schools or other youth settings in Italy.

Study 2 was a 10-week longitudinal study of gratitude and resilience in undergraduate college students during the height of the Covid-19 pandemic. Results showed that trait gratitude predicted better mental health for first-generation students but better pandemic resilience for continuing-generation students, suggesting different ways that gratitude protected college

students from the pandemic. Roundtable discussion here will thus emphasize how differences in socioeconomic status and differences between native and immigrant college students can be examined in Italy as well as implications for interventions targeting these populations.

Bono, G. & Duffy, T. (2023). Gratitude. In H. Friedman & C. Markey (Eds.), *Encyclopedia of Mental Health* (2nd ed.). Cambridge, MA: Elsevier.

Bono, G. & Duffy, T., & Merz, E. (2023). Gratitude and adolescents' mental health and well-being: Effects and gender differences for a Positive Social Media Intervention in High Schools. *Education Sciences*, 13(3), 320.

Hescox, J., Bono, G. & Palacios, M. (2023). Harnessing sociocultural and sociodemographic factors to promote gratitude in diverse youth (pp. 57-70). *Flourishing in Contexts and Cultures: Sociocultural Perspectives on Promoting Youth Well-Being* (14th ed). Information Age Publishing.

Bono, G., Duffy, T., & Moreno, S. (2022). Gratitude in school: Benefits to students and schools (pp.118-134). In K. A. Allen, M. J. Furlong, S. M. Suldo, & D. A. Vella-Brodick (Eds.). *The Handbook of Positive Psychology in Schools* (3rd ed.). Taylor and Francis.

Bono, G. & Fauteux, M. (2020, December). Giving thanks at school to promote equity and excellence. *Positive Psychology: Theory & Application*, 14(1), 6-13.

Bono, G., Mangan, S., Fauteux, M., & Sender, J. (2020). Effective gratitude interventions in schools for supporting student mental health and wellbeing. *The Journal of Positive Psychology*, 15(5), 657-665.

Bono, G., Reil, K., & Hescox, J. (2020). Stress and wellbeing in college students during the COVID-19 Pandemic: Can grit and gratitude help? *International Journal of Wellbeing*, 10(3), 39-57.



Grazia Serantoni

Patrizio Paoletti Foundation, Italy

Grazia Serantoni is a RINED researcher, developmental and adult clinical psychologist and group psychotherapist, trainer and author of numerous scientific publications. Since the beginning of her professional activity, she has been involved in research, design and evaluation (of processes, impact and outcome) and training in the public and private sectors through collaborations with universities, ministries and private research organizations. In her almost twenty years of collaboration with the Faculty of Medicine and Psychology of the SAPIENZA University of Rome as a Subject Matter Expert (SME), she has participated in research in the areas of: education and promotion of health and positive resources (resilience, emotional regulation, self-efficacy, etc.) in developmental age in school and out-of-school settings; psycho-oncology in developmental age; evaluation of the effectiveness of health promotion interventions in the healthcare and educational fields with adults; evaluation of the effectiveness of clinical and rehabilitation interventions in the psychiatric field. She collaborates with the Patrizio Paoletti Foundation for Development and Communication, within the socio-neuropsychopedagogical area, dealing with the co-design and evaluation of the effectiveness of interventions in emergency, prison, and in particular, educational settings. For the latter area, she is involved in the study and analysis of positive resources in developmental age, such as: resilience, emotional regulation, self-compassion, self-determination, and coping.



Tania Di Giuseppe

Patrizio Paoletti Foundation, Italy

Chair of the event

Tania Di Giuseppe is a psychologist, psychotherapist and Head of the Psycho-Pedagogical Research Department of the Patrizio Paoletti Foundation's RINED Institute. She collaborates with various universities to promote training and research on the constructs of mindfulness, hope, resilience and planning. An expert lecturer in Pedagogy for the Third Millennium, she is involved in the design and supervision of psycho-pedagogical interventions and training courses for professionals, teachers and communities, particularly in the context of emergency and social marginalization. Since 2017, she has been the Director and Co-Creator of the educational, scientific, outreach program Envisioning the Future: Promoting Hope and Planning, which has reached and trained more than 200 thousand people over several years of intervention: schools, communities affected by natural and other disasters, prison communities, families and adolescents.

Promoting resilience through the practice of silence: results of selected studies in different fields of intervention

The studies on silence and meditation conducted in recent years can offer the field of educational intervention valuable insights into the neurophysiological and psychosocial effects implicit in the practice of silence, as well as regarding the methodology and techniques used to achieve these effects, promoting resilience and overall psycho-social well-being [1]. According to the “Sphere Model of Consciousness”, silence is an intentionally created psychophysical state that enhances perception of the here and now with effects on the capacity for self-perception, emotion management and self-determination [2]. The practice of silence, aiming at focused attention coupled with a non-judgmental attitude towards the experience of the present moment, can be applied in various educational settings, including emergency contexts, in order to strengthen a resilient self that allows for the promotion of general well-being through increased awareness of thoughts, feelings and sensations. [6].

This presentation summarizes the qualitative and quantitative research carried out from 2022 to 2024 and ongoing, within the neuro-psycho-pedagogical didactic programme “Prefigurare il Futuro” (Envisioning the Future) which aims at strengthening resilience-related variables, implemented in different contexts: school-based with adolescents and the entire educating community [3], emergency-based with the parents of Ukrainian refugees [4], and with detained people and educators in the Italian prison system [5].

The comparison of research results on the neuro-psycho-pedagogical impact of participation in the “Envisioning the Future” Programme in different contexts seems to converge on the effectiveness of the training in strengthening positive resilience-related resources through the application of specific techniques such as the “Practice of Silence”: (a) proactive self-narration and self-determination; (b) self-efficacy in managing positive and negative emotions; (c) self-perception of one’s own body in space/time, with increased awareness of internal psycho-physical instances; (d) self-compassion, in particular self-compassion and a sense of common humanity.

In conclusion, the results of the research carried out within the framework of “Envisioning the Future” highlight the value of silence in fostering resilience, the capacity for self-compassion, greater awareness of the inner and outer worlds, inner growth, personal transformation, a state of greater psycho-physical health and safety, with an impact on the individual and the entire community.

- [1] Dulčić, F.J.L. (2021). The practice of silence as an educational tool: guidelines for competence-based education. *Educação e Pesquisa*, 47, e224651.
- [2] Paoletti, P., & Ben Soussan, T.D. (2019). The sphere model of consciousness: from geometrical to neuro-psycho-educational perspectives. *Logica Universalis*, 13, 395-415.
- [3] Paoletti, P., Di Giuseppe, T., Serantoni, G., Perasso, G., Lillo, C., Anella, S. (2023). Focus adolescenza: sfide e risorse nel post pandemia. Un approccio neuropsicopedagogico per educare al benessere e prefigurare il futuro. ISSN: 9791221046076.
- [4] Paoletti, P., Perasso, G. F., Lillo, C., Serantoni, G., Maculan, A., Vianello, F., & Di Giuseppe, T. (2023). Envisioning the future for families running away from war: Challenges and resources of Ukrainian parents in Italy. *Frontiers in Psychology*, 14, 1122264 .
- [5] Paoletti, P., Perasso, G., Lillo, C., Serantoni, G., Maculan, A., Vianello, F., & Di Giuseppe, T. (2023). Practice of silence to promote coping, emotion regulation, and future planning of imprisoned individuals during the COVID-19 pandemic: a qualitative study. *Journal of Offender Rehabilitation*, 62(7), 444-462.
- [6] Serantoni, G., Di Giuseppe, T. (2024) Promuovere il benessere in adolescenza nel post pandemia: risultati di due studi quali-quantitativi sui predittori della resilienza e sull'applicazione della pratica del silenzio. Oral presentation presso I.C.O.N.S. "la ricerca per una salute globale- Aspetti neurofisiologici, psicologici e molecolari della salute e del benessere", 3 luglio, Sapienza Università di Roma.



Argyroula Kalaitzaki

Hellenic Mediterranean University, Greece

Argyroula Kalaitzaki (BA, MSc, Ph.D., CPsychol), is an Associate Professor of Clinical Psychology, Social Work Department, Hellenic Mediterranean University (HMU), head of the Laboratory of Interdisciplinary Approaches for the Enhancement of Quality of Life, and head of the postgraduate program “Interdisciplinary Management of Chronic Diseases, Disability, and Ageing”. She is also an affiliated researcher at the “AgriFood and Life Sciences Institute”, deputy head of the Research Ethics Committee, and member of the Training and Lifelong Learning Center at HMU. She was the head of the Social Work Department from February 2022 to February 2024. She received a BA in Psychology (1992), an M.Sc. (1996), and a Ph.D. in Clinical Psychology (2000) from the University of Crete, Greece, and a second Ph.D. (2005) from the University of Sunderland, U.K. She has also been appointed the European Diploma in Psychological Therapies (European Institute of Psychotherapy). She has nearly 100 peer-reviewed papers and chapters in books, and over 150 presentations at scientific conferences, co-authored and co-edited books. She has participated in many research projects and has 24 years of educational experience in higher education. Her scholarly interests mainly include three applied clinical areas: (a) interpersonal relationships, (b) older people, dementia, and Alzheimer’s disease, and (c) traumatic experiences. Her work is informed by the combination of psychopathology and Positive Psychological concepts (e.g., resilience, positive emotions, relationships, well-being etc).

Research Findings and Interventions to Increase Older Adults and their Caregivers’ Resilience in Greece

Attempting to understand why and how some individuals have negative outcomes in the face of life adversity, whereas others do not, among other resources, psychological resilience has progressively gained its place within the research. Notwithstanding that, a unanimous agreement on the definition of psychological resilience is still lacking, it has systematically and consistently been correlated with beneficial health trajectories on successful aging over and above the predictive effects of other inner resources and with positive outcomes in individuals with chronic diseases. That being said, research findings have informed public health policies and relevant interventions. Studies have shown significant effects of interventions and smartphone applications among older adults and individuals with chronic diseases.

In Greece, research findings have recognized various factors associated with resilience. For instance, resilience was found to protect older adults' well-being from the harmful effects of their negative relationships with their oldest child. Among informal caregivers of people with dementia, their resilience levels fully mediated the relationship between perceived behavioral problems of people with dementia and their level of quality of life; dementia-related knowledge and higher levels of familism were associated with higher levels of resilience, whereas higher frequency of dealing with behavioral problems was associated with lower resilience.

Based on these findings, this presentation will introduce multidisciplinary efforts to increase resilience among older adults and adults with chronic diseases through various pathways. One such attempt was a program funded by the Region of Crete during the COVID-19 lockdown; the «NOT ALONE ANYMORE» was an online program of Integrated Interventions to strengthen the cognitive and psychosocial abilities of older people living in residential homes. "Empowered" was a funded program of an integrated, intelligent assistant for the support of independent living of older people with chronic diseases. Another program addressed the update of healthcare professionals' skills and knowledge working in Day Care Centres for older people. The results of the efficacy of these interventions to increase individuals' and their caregivers' resilience will be presented and discussed.

Angevaere, M. J., Roberts, J., van Hout, H. P. J., Joling, K. J., Smalbrugge, M., Schoonmade, L. J., Windle, G., & Hertogh, C. M. P. M. (2020). Resilience in older persons: A systematic review of the conceptual literature. *Ageing research reviews*, 63, 101144. <https://doi.org/10.1016/j.arr.2020.101144>

Babić, R., Babić, M., Rastović, P., Ćurlin, M., Šimić, J., Mandić, K., & Pavlović, K. (2020). Resilience in Health and Illness. *Psychiatria Danubina*, 32(Suppl 2), 226–232.

Denckla, C. A., Cicchetti, D., Kubzansky, L. D., Seedat, S., Teicher, M. H., Williams, D. R., & Koenen, K. C. (2020). Psychological resilience: an update on definitions, a critical appraisal, and research recommendations. *European journal of psychotraumatology*, 11(1), 1822064. <https://doi.org/10.1080/20008198.2020.1822064>

Kalaitzaki, A., Koukouli, S., Foukaki, M.-E., & Tziraki, Ch. (2022). Dementia family carers' quality of life and their perceptions about care-receivers' dementia symptoms: the role of resilience. *Journal of Aging and Health*, 34(4-5), 581-590. First Published October 19, 2021. <https://doi.org/10.1177/08982643211050206>

Kalaitzaki, A., Koukouli, S., Panagiotakis, S., & Tziraki, Ch. (2022). Resilience in informal dementia carers: Familism as a culture-specific factor. *The journal of frailty and aging*, 11(3), 299-301. Published online April 22, 2022, <http://dx.doi.org/10.14283/jfa.2022.31> [Impact factor: 2.744]

Kalaitzaki, A.E., Pattakou-Parasyri, V., & Foukaki, M.-E. (2020). Depression, negative relating with the oldest child and the mediating role of resilience in community elders' psychological well-being: A pilot study in Greece. *Psychogeriatrics*, 20(1), 70-78. <https://doi.org/10.1111/psyg.12461>

Kim ES, Tkatch R, Martin D, MacLeod S, Sandy L, Yeh C. Resilient Aging: Psychological Well-Being and Social Well-Being as Targets for the Promotion of Healthy Aging. *Gerontology and Geriatric Medicine*. 2021;7. doi:[10.1177/23337214211002951](https://doi.org/10.1177/23337214211002951)

Kim, G. M., Lim, J. Y., Kim, E. J., & Park, S. M. (2019). Resilience of patients with chronic diseases: A systematic review. *Health & social care in the community*, 27(4), 797–807. <https://doi.org/10.1111/hsc.12620>

Tarsitani, L., Pinucci, I., Tedeschi, F. et al. Resilience of people with chronic medical conditions during the COVID-19 pandemic: a 1-year longitudinal prospective survey. *BMC Psychiatry* 22, 633 (2022). <https://doi.org/10.1186/s12888-022-04265-8>

Taylor, M. G., & Carr, D. (2021). Psychological Resilience and Health Among Older Adults: A Comparison of Personal Resources. *The journals of gerontology. Series B, Psychological sciences and social sciences*, 76(6), 1241–1250. <https://doi.org/10.1093/geronb/gbaa116>

Ye Z. J. (2022). Editorial: Resilience in Chronic Disease. *Frontiers in psychiatry*, 13, 846370. <https://doi.org/10.3389/fpsyt.2022.846370>



Aras Bozkurt

Anadolu University, Türkiye

Aras Bozkurt is a researcher and faculty member at Anadolu University, Türkiye. With MA and PhD degrees in distance education, Dr. Bozkurt's work focuses on empirical studies in areas such as distance education, online learning, networked learning, and educational technology. He applies critical theories like connectivism, rhizomatic learning, and heutagogy to his research. Dr. Bozkurt is also interested in emerging research paradigms, including social network analysis, sentiment analysis, and data mining. Dr. Bozkurt's studies also cover the integration of artificial intelligence technologies into educational processes in the axis of human-machine interaction.

His dedication to advancing the field is reflected in his editorial roles as the Editor-in-Chief of Open Praxis and Asian Journal of Distance Education, as well as his roles as an associate editor for prestigious journals like Higher Education Research and Development, Online Learning, eLearn Magazine, and Computer Applications in Engineering Education.

Resilience in a time of increasing human-GenAI interaction

Resilience is a relative concept, and the degree to which we are resilient may be related to whether the situation we face is a challenge, an unknown, or a situation for which we are not yet ready. In this context, technological developments may also require us to have resilience skills. Resilience, especially in the context of human-machine interaction, is related to socio-economic as well as psychological dimensions and requires a multi-perspective understanding.

The evolving dynamics of human-AI interaction (Turing, 1950) and more specifically generative AI (OpenAI, 2022) present new dimensions to the discourse on resilience. As AI technologies become more integrated into our daily lives and decision-making processes (Bozkurt & Sharma, 2024), it's crucial to investigate how these interactions can either support or hinder the development of resilience. This includes understanding the psychological impacts of relying on AI for problem-solving, emotional support, and crisis management.

Bozkurt, A., & Sharma, R. C. (2024). Are we facing an algorithmic renaissance or apocalypse? Generative AI, ChatBots, and emerging human-machine interaction in the educational landscape. *Asian Journal of Distance Education*, 19(1), i-xii. <https://doi.org/10.5281/zenodo.10791959>

OpenAI. (2022). Introducing ChatGPT. <https://openai.com/blog/chatgpt>

Turing, A. (1950). Computing machinery and intelligence. *Mind: A Quarterly Review of Psychology and Philosophy*, 236, 433-460. <https://doi.org/10.1093/mind/lix.236.433>



Kaltrina Kelmendi

University of Prishtina “Hasan Prishtina”, Kosovo

Kaltrina Kelmendi, Ph.D., is an associate professor at the Department of Psychology, University of Prishtina, in Kosovo. Her research interests are domestic violence, gender-based violence, youth violence, and child protection. Recently she has been working on the issue of resilience in Kosovo and South-Eastern Europe. Kaltrina was a Fulbright Visiting Scholar during 2020/2021.



Sherry Hamby

University of the South & Life Paths Research Center, USA

Sherry Hamby, Ph.D. is Distinguished Research Professor of Psychology at the University of the South and Director of the Life Paths Research Center. An influential researcher who focuses on trauma and resilience, she has been ranked in the top 1% among more than 6 million researchers in 22 disciplines based on citations to her more than 200 publications. Her awards include Outstanding Contributions to the Science of Trauma Psychology from the American Psychological Association (APA).

Navigating Trauma and Resilience: Insights from Post-Conflict Kosovo

Based on extensive research, it is widely acknowledged that adverse experiences have a significant impact on both physical and mental health outcomes (Beilharz et al., 2020; Gilbert et al., 2015; Leza et al., 2021). Nonetheless, many individuals who have experienced trauma demonstrate resilience, using their individual assets and external resources to achieve healthy functioning and wellbeing (Bonanno, 2004; Hamby et al., 2018; Luthar et al., 2000). Although the majority of resilience research has been limited to Western, Industrialized, Educated, Rich, and Developed (WEIRD) countries, our work seeks to address this gap by employing the resilience portfolio model (RPM) to understand how individuals navigate victimization (Grych et al., 2015; Hamby et al., 2018).

This research program marks the inaugural quantitative and qualitative RPM studies in a collectivist and post-conflict society, focusing on Kosovo in Southeastern Europe. Our efforts to date also include a scoping review of work on resilience in the Balkans. The findings provide a nuanced understanding of the psychosocial strengths that reinforce resilience and

well-being in a collectivist society, enriching the global comprehension of these constructs. Additionally, our research has identified a sense of purpose as a key strength associated with subjective well-being (SWB) and post-traumatic growth (PTG), aligning with previous studies indicating that sense of purpose and poly-strengths are among the best predictors of positive outcomes (Brooks et al., 2023; Gonzalez-Mendez & Hamby, 2020). Moreover, our qualitative findings show that future orientation and personal growth are highly intertwined with a sense of purpose (Hamiti et al., 2024). Furthermore, interpersonal factors such as peer and family support emerged as significant contributors to resilience.

However, it is important to note that family members and peers were also identified as burdens for some participants in interviews, demonstrating a mixed profile for interpersonal resources. This aligns with findings from other resilience portfolio studies and highlights the complexity of family support in both promoting well-being and potentially leading to vulnerability and distress (Hamby et al., 2018; Acero et al., 2017; Herrera et al., 2011; Parra et al., 2018; Kellezi et al., 2019). These findings are preliminary, and further research is needed to understand the factors that support thriving in the face of adversities. The study suggests the need to explore nuances of meaning making in the context of Kosovo's post-war rebuilding efforts. Additionally, creating a more collectivist measure of community or nationwide meaning making could yield valuable insights. Nation-building emerged as a crucial factor in shaping resilience in post-conflict Kosovo, contributing to the country's reconstruction (Kelmendi and Hamby, 2021). The studies also point to the necessity of developing a measure of trauma in post-conflict environments, particularly addressing damaged social relations, destructive social norms, and a low sense of collective political and social efficacy. Lastly, future research should develop measures of strengths aligned with the collectivist values prevalent in this environment and explore sources of resilience within different layers of the social ecology.

Kelmendi, K & Hamby, S. (in review). Enduring Strengths: How Childhood Adversity Shapes Adult Resilience in Kosovo. *Child Protection and Practice*.

Hamiti, E., Kelmendi, K., Retkoceri, S., & Hamby, S. (2024). Resilience in the Kosovo Context: A Qualitative Study of Young Adults. *Emerging Adulthood*, 21676968241261086.

Kelmendi, K., & Hamby, S. (2022). Resilience After Trauma in Kosovo and Southeastern Europe: A Scoping Review. *Trauma, violence & abuse*, 15248380221093693. Advance online publication. <https://doi.org/10.1177/15248380221093693>

Hamby, S., Grych, J., & Banyard, V. (2018). Resilience portfolios and poly-strengths: Identifying protective factors associated with thriving after adversity. *Psychology of Violence*, 8(2), 172-183. <https://doi.org/10.1037/vio0000135>

Hamby, S., Taylor, E., Mitchell, K., Jones, L., & Newlin, C. (2020). Poly-victimization, trauma, and resilience: Exploring strengths that promote thriving after adversity. *Journal of Trauma & Dissociation*, 21(3), 376-395. <https://doi.org/10.1080/15299732.2020.1719261>



Golnaz Tabibnia

University of California Irvine, USA

Dr. Golnaz Tabibnia is a neuroscientist and an Assistant Research Psychologist in the Department of Psychological Science at the University of California, Irvine. She received her PhD in Psychology at UCLA and was an Assistant Professor at Carnegie Mellon University in Pittsburgh for three years before moving back to California. Dr. Tabibnia's research focuses on the interaction of emotion and cognition in the brain, including emotion regulation, impulse control, and resilience. Ultimately, she is interested in using insights from neuroscience to explore novel behavioral strategies for improving mental health and wellness. Dr. Tabibnia has received multiple awards for her teaching and research, and her work has been published in such journals as *Psychological Science*, *Journal of Neuroscience*, *Current Opinion in Behavioral Sciences*, and *Science*, as well as in the *Harvard Business Review*.

Neuroscience Education as a Tool to Reduce Uncertainty and Boost Resilience

During these times of increasing uncertainty, there is now a greater need for scalable interventions that can empower individuals facing challenges. An emerging method for boosting psychological resilience is neuroscience education (NeuroEd) – education about how the brain regulates distress and facilitates coping [1]. A growing number of researchers believe that NeuroEd, particularly when it highlights the malleability of the brain, can be a very empowering tool for boosting resilience. For example, randomized controlled studies indicate that teaching patients with chronic pain about how the brain processes and regulates pain improves patient's self-efficacy (belief in their own ability) to cope [2] and substantially reduces pain and disability (e.g., [3]). However, until recently, no controlled study had examined the effect of NeuroEd on management of emotions, such as fear and anxiety. In our lab, we recently developed NeuroEd videos to help people with anxiety boost their self-efficacy and growth mindset (“I can change my brain”), self-compassion (“it's not me; it's my brain”), and treatment expectancy (“therapy changes the brain”). In an international sample of 43 adults with likely anxiety disorder, NeuroEd videos significantly improved self-efficacy, growth mindset, self-compassion, and treatment expectancy ($p_{\text{corr}} < 0.0001$). Compared to a separate but comparable international group of 43 adults who viewed psycho-education videos, NeuroEd videos lead to greater improvements in self-efficacy and growth mindset ($p_{\text{corr}} < 0.05$). These results demonstrate the efficacy of NeuroEd in boosting optimistic beliefs that are key to psychological resilience and to the success of psychotherapy. Future work can establish NeuroEd as a scalable novel tool to augment psychotherapy for anxiety, in the same

way that NeuroEd has augmented physiotherapy for pain. This tool can eventually be adapted as an add-on to therapy for additional disorders, such as addiction and depression. Thus, NeuroEd can help demystify the process of resilience and restore individuals' confidence that adult brains can indeed learn to become more resilient. In short, NeuroEd can provide the kind of knowledge that helps reduce uncertainty about resilience.

[1] Tabibnia, G. (2024). Neuroscience education as a tool for improving stress management and resilience. *Current Opinion in Behavioral Sciences*, 59, 101401.

[2] Benedict, T. M., Nitz, A. J., Gambrel, M. K., & Louw, A. (2024). Pain neuroscience education improves post-traumatic stress disorder, disability, and pain self-efficacy in veterans and service members with chronic low back pain: preliminary results from a randomized controlled trial with 12-month follow-up. *Military Psychology*, 36(4), 376-392.

[3] Siddall, B., Ram, A., Jones, M. D., Booth, J., Perriman, D., & Summers, S. J. (2022). Short-term impact of combining pain neuroscience education with exercise for chronic musculoskeletal pain: a systematic review and meta-analysis, *Pain* 163(1), e20-e30.



Tal Dotan Ben Soussan

Patrizio Paoletti Foundation, RINED, Italy

Tal Dotan Ben-Soussan, Ph.D., is the director of the Research Institute for Neuroscience, Education and Didactics (RINED) - Paoletti Foundation. Ben-Soussan leads international studies on training and neuroplasticity from neurophysiological and psychobiological perspectives. As a neuroscientist and bio-psychologist, she has published numerous articles on the importance of movement and meditation in improving cognitive and emotional well-being. Her pioneering work on Quadrato Motor Training has led to a significant understanding of the underlying neuronal and biological mechanisms that mediate cognitive improvement following movement meditation for healthy development and aging. Ben-Soussan is fascinated by the topic of consciousness, the enhancement of cognitive functions and their electrophysiological and molecular correlates. She has dedicated more than 20 years to understanding the mechanisms of wellbeing in children and adults and their application in different settings, including schools, hospitals and the workplace. Ben-Soussan is a member of the main think tank of the School Mental Health International Leadership Exchange (SMHILE). Her recent review on the electrophysiological correlates of different states of the self, in relation to different types of meditation and higher states of consciousness, emphasizes the importance of movement in accessing the embodied self, anchored in the here and now, while non-dual practices of transcending the self, allow for a greater state of empathy and connection with the other, such as Patrizio Paoletti's Quadrato Motor Training and OMM One Minute Meditation. She acts as an editor and reviewer in several renowned journals and coordinates international conferences integrating theoretical, methodological and practical approaches on various topics, such as neuroplasticity, training and neuroeducation. She has edited 3 books on the topic of silence in *Frontiers in Psychology* and *Progress in Brain Research*.

QMT-Induced Electrophysiological and Molecular Changes: A Multidisciplinary Approach to Enhancing Resilience

At this pivotal moment in history, characterized by rapid external and internal uncertainty, we urgently need tools to better manage stress and adapt to fast-paced change. To keep up, individuals may require greater self-awareness, flexibility, and emotional regulation. By utilizing various training paradigms, people can stimulate neuroplasticity, which in turn fosters resilience. Stress is known to suppress various brain functions, including the synthesis of brain-derived neurotrophic factor (BDNF), which is crucial for learning and neuronal plasticity. Interestingly, while some antidepressants have been found to increase BDNF levels, direct injection of BDNF paradoxically produced depression-like effects, highlighting the importance of activating the body's

innate resources. To address this problem, we used Quadrato Motor Training (QMT), a structured movement meditation developed by Patrizio Paoletti, which has been shown to improve neuronal communication, promote attentive relaxation, and increase cognitive flexibility. After 12 weeks of daily practice, we observed an increase in proBDNF levels. More recently, we also discovered that QMT reduces pro-inflammatory markers, induces changes in DNA methylation related to genomic stability, and enhances individuals' sense of purpose. These results support the integration of training programs like QMT throughout the lifespan, suggesting that they can help mitigate stress and improve overall well-being. Together, we will explore the underlying biological and neuronal mechanisms that mediate improvements in cognitive and emotional function, expanding on existing knowledge of how such training enhances emotional, molecular, and neuronal resilience.

Ben-Soussan, T.D., & Paoletti, P. (2024). Life in light of the Sphere Model of Consciousness: a bio-electrophysiological perspective on (well-) being and the embodied self. *Current Opinion in Behavioral Sciences*, 55, 101344.

De Fano, A., Leshem, R., & Ben-Soussan, T.D. (2019). Creating an internal environment of cognitive and psycho-emotional well-being through an external movement-based environment: an overview of Quadrato Motor Training. *International Journal of Environmental Research and Public Health*, 16(12), 2160.

Ben-Soussan, T. D., Piervincenzi, C., Venditti, S., Verdone, L., Caserta, M., & Carducci, F., (2015). Increased cerebellar volume and BDNF level following sensorimotor training. *Synapse*, vol. 69, pp. 1-6, 2015.

Verdone, L., Caserta, M., Ben-Soussan, T. D., & Venditti, S. (2023). On the road to resilience: Epigenetic effects of meditation. *Vitamins and Hormones*, 122, 339-376.

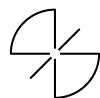
Verdone, L., Marson, F., Caserta, M., Zampieri, M., Reale, A., Bacalini, M.G., . . . & Venditti, S. (2023). Quadrato Motor Training (QMT) influences IL-1 β expression and creativity: implications for inflammatory state reduction and cognitive enhancement. *Progress in Brain Research*, 277, 63-83.

Chair

Tania Di Giuseppe

Scientific Coordination

- **Tania Di Giuseppe**, Psychologist and head of the Department of Research and Didactics at Fondazione Patrizio Paoletti's RINED institute
- **Carmela Lillo**, Educational Project Manager
- **Grazia Serantoni**, Researcher, Developmental and Adult Clinical psychologist and group psychotherapist, trainer and author
- **Tal Dotan Ben-Soussan**, Director of the Research Institute for Neuroscience, Education and Didactics (RINED) – Paoletti Foundation



**FONDAZIONE
PATRIZIO PAOLETTI**
PER LO SVILUPPO E LA COMUNICAZIONE

Patrizio Paoletti Foundation
Via Nazionale, 230 - 00184 Rome
Tel. +39 06 80 82 599 - Fax 06 92 912 688
fondazione@fondazionepatriziopaoletti.org
www.fondazionepatriziopaoletti.org



RESEARCH INSTITUTE
PAOLETTI FOUNDATION

Rined - Research Institute for Neuroscience,
Education, and Didactics
Via Cristoforo Cecci, 2 - 06081 Assisi (PG)
research@fondazionepatriziopaoletti.org
www.rined.institute

