WHO DECIDE FOR ME?
The complexity of decision-making process under the neuromanagement lenses

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Theoretical background

Decision-making can be seen as a multi-component process, encompassing styles, strategies, effectiveness, awareness, and metacognition. The investigation of decision-making should begin with the simplest component: decision-making styles, defined as a relatively stable individual characteristic, and its key factors such as adaptability, decision awareness, and individual or group orientation. Although self-report measures are widely used, the integration of cognitive neuroscience provides a more objective analysis of decision-making mechanisms.

Aim

Exploring decision-making styles, emphasizing the need for a neuroscientific approach to uncover the neurophysiological mechanisms involved.
Adaptability, self-awareness, and decision-making orientation are investigated through a multi-method approach to explore real-life and organizational decision-making process in ecologically valid settings.

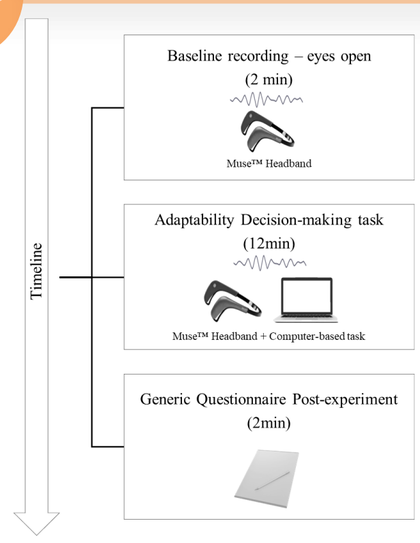
Study 1: adaptability

Rovelli, K., Angioletti, L., Acconito, C., & Balconi, M. (2024). Neurosciences tell us how to be adaptable, creative, and proactive agents in decision making: A pilot study. *Journal of Neuroscience, Psychology, and Economics, 17*(1), 30–45. https://doi.org/10.1037/npe0000184

Sample

35 Italian professionals
aged between 24 and 59 years

Procedure



Results

Increased theta power in the right hemisphere is linked to intuitive decision-making. Flexibility and proactivity are associated with more deliberate and impulsive decision-making styles, respectively.
These results emphasize the role of adaptability in professional decision-making.

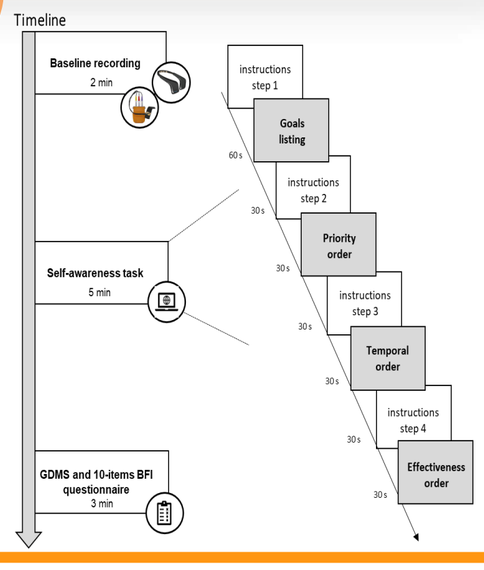
Study 2: self-awareness

Balconi, M., Angioletti, L., & Acconito, C. (2023). Self-awareness of goals task (SAGT) and planning skills: the neuroscience of decision making. *Brain Sciences, 13*(8), 1163. https://doi.org/10.3390/brainsci13081163

Sample

22 females and 13 males
aged between 24 and 59 year

Procedure



Results

Professionals have higher self-awareness of goals in terms of efficacy and time, with increased brain activity in temporoparietal areas. EEG data suggest cognitive processing during goal self-representation. Efficacy-based self-awareness is linked to a rational style, while time-based self-awareness to dependent style and conscientiousness.

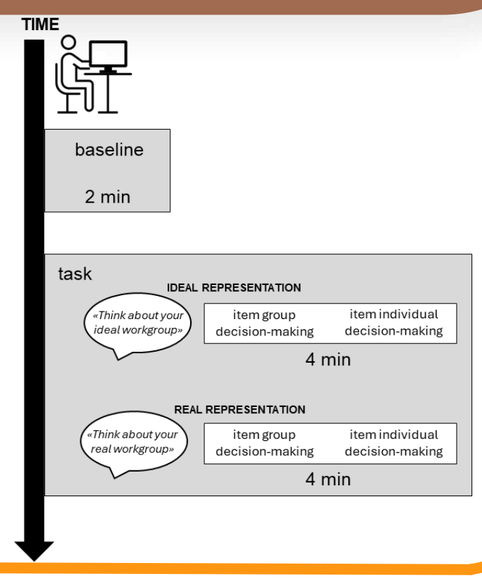
Study 3: decision-making orientation

Angioletti, L., Acconito, C., & Balconi, M. EEG markers of Ideal versus Real Group Representations in Decision-Making. Under review at *Group Decision and Negotiation*

Sample

60 Italian professionals
aged between 22 and 65 years

Procedure



Results

Professionals have higher self-awareness of goals in terms of efficacy and time, with increased brain activity in temporoparietal areas. EEG data suggest cognitive processing during goal self-representation. Efficacy-based self-awareness is linked to a rational style, while time-based self-awareness to dependent style and conscientiousness.

Conclusion

This doctoral thesis presents a **pioneering neuroscientific model for studying decision-making styles** as a core component of the broader decision-making process, focusing on adaptability, self-awareness, and decision-making tendencies. The findings suggest that **flexibility plays a key role** in decision-making effectiveness, and EEG patterns highlight **cognitive engagement, task-related processing, and creative thinking associated with decision-making**. Moreover, the research demonstrated that understanding decision-making styles can **benefit organizational practices** by improving job satisfaction, motivation, reducing cognitive load, and enhancing performance through targeted training and empowerment programs.

When Childbirth Becomes Traumatic:

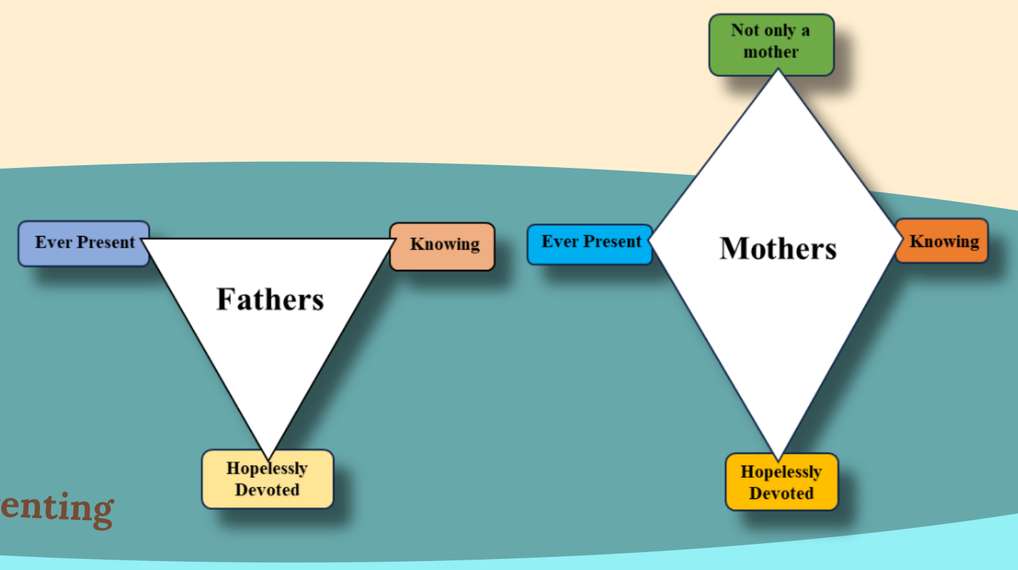
CULTURAL INSIGHTS AND DIAGNOSTIC ADVANCES IN PERINATAL MENTAL HEALTH IN ITALY

Giulia Ciuffo
Supervisors: Prof.ssa Chiara Ionio, Prof.ssa Inês Jongenelen

CB-PTSD affects **4%** of **women** after childbirth, with **12%** experiencing **significant distress**, yet it remains an **overlooked** condition in **Italy** due to a **lack** of culturally adapted **tools** and awareness.

This study examines **CB-PTSD** in the **Italian** cultural **framework** and **validates** a **tool** for its early detection.

Mixed-methods approach



The diminishing polyads of parenting

Italian mothers face pressure to embody an **'intensive' motherhood model**, demanding total **devotion to** their **child**'s needs and leading to feelings of **guilt** and **inadequacy**.

Cultural expectations place them as the **primary caregivers**, creating a significant **work-life imbalance**.

Additionally, **structural support** is **lacking**, with inadequate parental leave policies and insufficient childcare services.

Assessing mother's CB-PTSD during the first year postpartum: a systematic review

149 studies assessing **CB-PTSD** and/or **CB-PTSS** in **mothers** in the **1st year postpartum** were systematically reviewed.

Among the **self-report measures**, the **City BiTS** is the **only one** specifically created to **assess CB-PTSD** according to the **DSM-5** diagnostic criteria.

Italian Validation of the City Birth Trauma Scale: A step towards addressing CB-PTSD

255 postpartum women aged 18-38 years

The **bi-factor model** was applied to **assess** the **latent structure** of the scale

The **City-BiTS-IT** has shown **high internal consistency** ($\omega = 0.93$) and **reliability** (ECV = 51%).

The **birth-related symptoms** and the **general symptoms** showed **good reliability** ($\omega = 0.90$, $\omega = 0.89$, respectively).

Assessing Perinatal Psychiatric Morbidity: Insights into Maternal Mental Health Care in Italy

175 mothers 6-12 weeks postpartum

PREVALENCE:
18.6% depression
30.2% anxiety
1.1% CB-PTSD
but 68.4% showed at least 1 CB-PTSD symptom

COMORBIDITY:
depression was significantly associated with anxiety ($\chi2(1, N=84) = 9.131$, $p = 0.003$) and CB-PTSD ($\chi2(1, N=171) = 11.689$, $p < 0.001$). No association was found between CB-PTSD and anxiety.

IMPACT ON BONDING:
Hierarchical regression analyses highlighted that, after controlling for socio-demographic and obstetric variables (e.g., type of delivery, previous diagnoses), women with **comorbidity** between **CB-PTSD** and **depression** showed the **highest risk** of **attachment impairment**.

Clinical implications

- Mandatory **screening** for **CB-PTSD** in postpartum care
- **Healthcare training** to recognise perinatal trauma symptoms
- **Personalized support** for mothers and partners

DECODING PSYCHOSIS: PERSONALITY TRAITS AND MENTALIZATION IN RISK PREDICTION

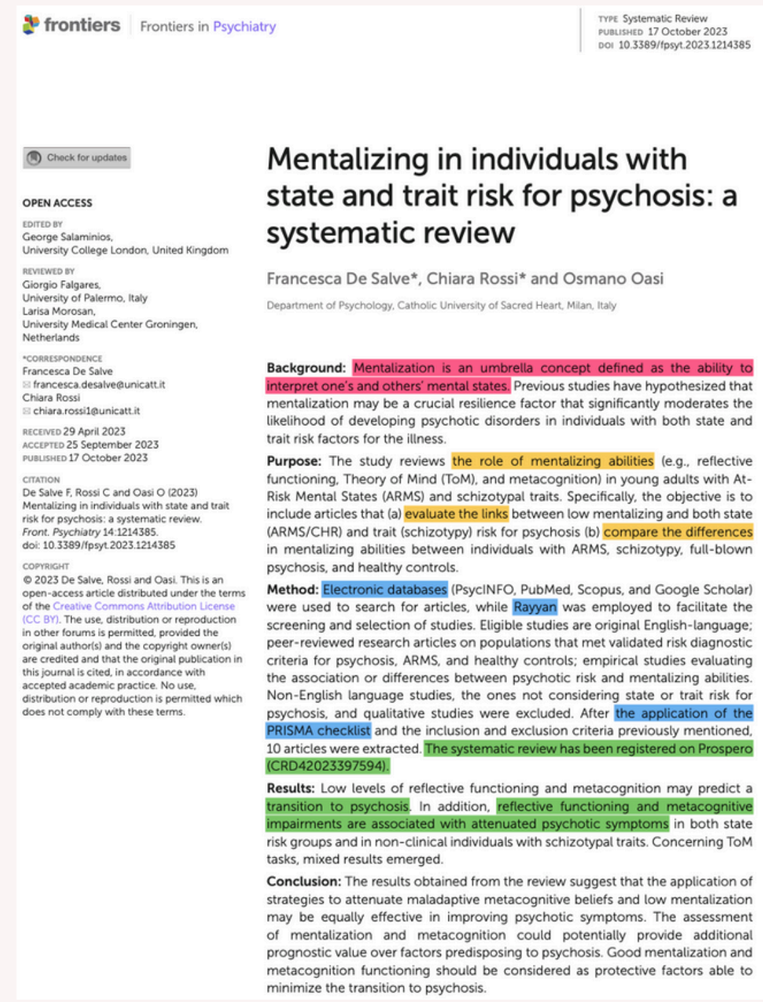
Francesca De Salve, PhD

AIM:

Investigate the role of personality traits and mentalization in contributing to psychosis risk, identifying vulnerability and resilience factors to inform early intervention strategies.

BACKGROUND

- The term **At-Risk Mental States** was introduced in the **1990s** to describe a **state**where young people are more likely to develop **a psychotic disorder (Thompson et al., 2018)**
- The positive dimension of **schizotypy** offers **limited clinically significant predictive value** for the **transition** from clinical high-risk states to psychosis (Debbané et al., 2015)



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Mentalizing in individuals with state and trait risk for psychosis: a systematic review

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Background: Mentalization is an umbrella concept defined as the ability to interpret one's and others' mental states. Previous studies have hypothesized that mentalization may be a crucial resilience factor that significantly moderates the likelihood of developing psychotic disorders in individuals with both state and trait risk factors for the illness.

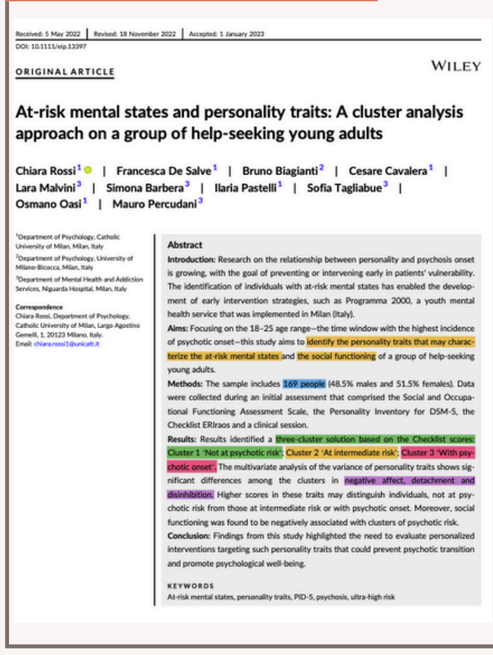
Purpose: The study reviews the role of mentalizing abilities (e.g., reflective functioning, Theory of Mind (ToM), and metacognition) in young adults with At-Risk Mental States (ARMS) and schizotypal traits. Specifically, the objective is to include articles that (a) evaluate the links between low mentalizing and both state (ARMS/CHR) and trait (schizotypy) risk for psychosis (b) compare the differences in mentalizing abilities between individuals with ARMS, schizotypy, full-blown psychosis, and healthy controls.

Method: Electronic databases (PsycINFO, PubMed, Scopus, and Google Scholar) were used to search for articles, while Rayyan was employed to facilitate the screening and selection of studies. Eligible studies are original English-language; peer-reviewed research articles on populations that met validated risk diagnostic criteria for psychosis, ARMS, and healthy controls; empirical studies evaluating the association or differences between psychotic risk and mentalizing abilities. Non-English language studies, the ones not considering state or trait risk for psychosis, and qualitative studies were excluded. After the application of the PRISMA checklist and the inclusion and exclusion criteria previously mentioned, 10 articles were extracted. The systematic review has been registered on Prospero (CRD42023397594).

Results: Low levels of reflective functioning and metacognition may predict a transition to psychosis. In addition, reflective functioning and metacognitive impairments are associated with attenuated psychotic symptoms in both state risk groups and in non-clinical individuals with schizotypal traits. Concerning ToM tasks, mixed results emerged.

Conclusion: The results obtained from the review suggest that the application of strategies to attenuate maladaptive metacognitive beliefs and low mentalization may be equally effective in improving psychotic symptoms. The assessment of mentalization and metacognition could potentially provide additional prognostic value over factors predisposing to psychosis. Good mentalization and metacognition functioning should be considered as protective factors able to minimize the transition to psychosis.

STUDY 1



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ORIGINAL ARTICLE — WILEY

At-risk mental states and personality traits: A cluster analysis approach on a group of help-seeking young adults

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Abstract

Introduction: Research on the relationship between personality and psychosis onset is growing, with the goal of preventing or intervening early in patients' vulnerability. The identification of individuals with at-risk mental states has enabled the development of early intervention strategies, such as Programma 2000, a youth mental health service that was implemented in Milan (Italy).

Aims: Focusing on the 18–25 age range—the time window with the highest incidence of psychotic onset—this study aims to identify the personality traits that may characterize the at-risk mental states and the social functioning of a group of help-seeking young adults.

Methods: The sample includes 169 people (48.5% males and 51.5% females). Data were collected during an initial assessment that comprised the Social and Occupational Functioning Assessment Scale, the Personality Inventory for DSM-5, the Checklist ERIraos and a clinical session.

Results: Results identified a three-cluster solution based on the Checklist scores: Cluster 1 'Not at psychotic risk', Cluster 2 'At intermediate risk', Cluster 3 'With psychotic onset'. The multivariate analysis of the variance of personality traits shows significant differences among the clusters in negative affect, detachment and disinhibition. Higher scores in these traits may distinguish individuals, not at psychotic risk from those at intermediate risk or with psychotic onset. Moreover, social functioning was found to be negatively associated with clusters of psychotic risk.

Conclusion: Findings from this study highlighted the need to evaluate personalized interventions targeting such personality traits that could prevent psychotic transition and promote psychological well-being.

KEYWORDS
At-risk mental states, personality traits, PID-5, psychosis, ultra-high risk

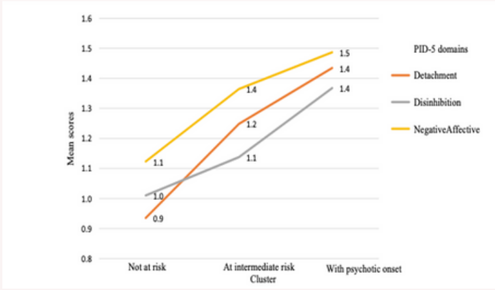
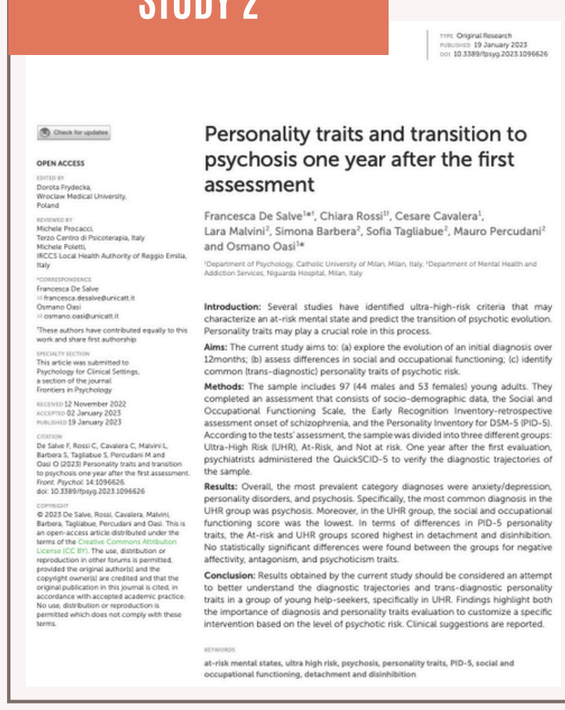


Figure 1.PID-5 domains distribution according to the cluster solution

STUDY 2



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Personality traits and transition to psychosis one year after the first assessment

Francesca De Salve[1*†], Chiara Rossi[1†], Cesare Cavalera[1], Lara Malvini[2], Simona Barbera[2], Sofia Tagliabue[2], Mauro Percudani[2] and Osmano Oasi[1*]

[1]Department of Psychology, Catholic University of Milan, Milan, Italy. [2]Department of Mental Health and Addiction Services, Niguarda Hospital, Milan, Italy

Introduction: Several studies have identified ultra-high-risk criteria that may characterize an at-risk mental state and predict the transition of psychotic evolution. Personality traits may play a crucial role in this process.

Aims: The current study aims to: (a) explore the evolution of an initial diagnosis over 12months; (b) assess differences in social and occupational functioning; (c) identify common (trans–diagnostic) personality traits of psychotic risk.

Methods: The sample includes 97 (44 males and 53 females) young adults. They completed an assessment that consists of socio–demographic data, the Social and Occupational Functioning Scale, the Early Recognition Inventory–retrospective assessment onset of schizophrenia, and the Personality Inventory for DSM–5 (PID–5). According to the tests' assessment, the sample was divided into three different groups: Ultra–High Risk (UHR), At-Risk, and Not at risk. One year after the first evaluation, psychiatrists administered the QuickSCID-5 to verify the diagnostic trajectories of the sample.

Results: Overall, the most prevalent category diagnoses were anxiety/depression, personality disorders, and psychosis. Specifically, the most common diagnosis in the UHR group was psychosis. Moreover, in the UHR group, the social and occupational functioning score was the lowest. In terms of differences in PID-5 personality traits, the At-risk and UHR groups scored highest in detachment and disinhibition. No statistically significant differences were found between the groups for negative affectivity, antagonism, and psychoticism traits.

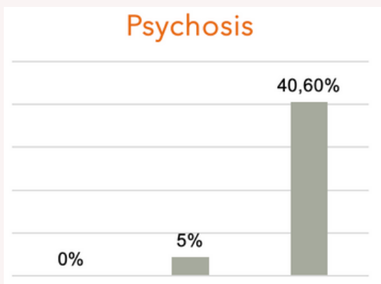
Conclusion: Results obtained by the current study should be considered an attempt to better understand the diagnostic trajectories and trans-diagnostic personality traits in a group of young help-seekers, specifically in UHR. Findings highlight both the importance of diagnosis and personality traits evaluation to customize a specific intervention based on the level of psychotic risk. Clinical suggestions are reported.

KEYWORDS
at-risk mental states, ultra high risk, psychosis, personality traits, PID-5, social and occupational functioning, detachment and disinhibition

Table 1. Descriptive statistics and post hoc

	Not at risk (0)	At Risk (1)	High Risk (2)	p-value	Post hoc
PID-5	Mean (SD)				
Detachment	.90 (.43)	1.39 (.52)	1.19 (.52)	.003	(0) vs (1) .002
Disinhibition	.91 (.31)	1.19 (.47)	1.24 (.42)	.018	(0) vs (1) .045 (0) vs (2) .022

Figure 2. Most common diagnosis after one year before the first assessment



Limitations and strengths for studies 1 and 2

Limitations

- The sample dimension is limited
- Study 1 is a cross-sectional design and the possibility of exploring whether personality traits predict the onset of psychosis is limited
- In study 2 only two measures were included, and QuickSCID-5 was only administrated after one year
- Moreover, the impact of Covid-19 was not evaluated and only a self-report measure (PID-5) was used to assess personality traits

Highlights

1. Studies suggest the involvement of personality traits in the development of psychosis-related psychopathology
2. Future research should investigate the relationship between psychopathological dimensions of personality and outcomes of early intervention programs for psychosis

STUDIES 3 AND 4

Aims and hypothesis of studies 3 and 4

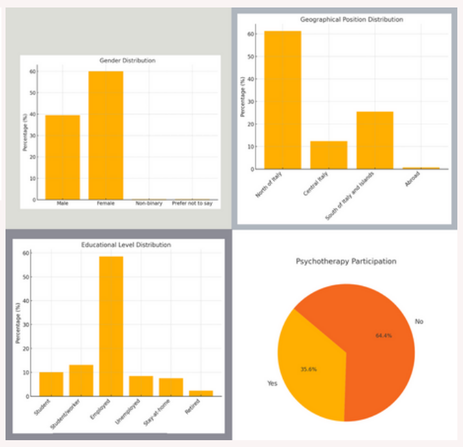
- Validate the Italian version of the Certainty About Mental States Questionnaire (CAMSQ; Müller et al., 2023) → Study 3: Psychometric Evaluation and Predictive Modeling of the Certainty About Mental States Questionnaire
- Investigate the relationship between the CAMSQ and levels of psychopathology → Study 4: Does Self and Other-Certainty About Mental States Influence Psychoticism and Schizotypal Features?

  Hp: (a) Self-Certainty will be negatively predictive of levels of psychoticism and schizotypal features (cognitive-perceptual, interpersonal, disorganization); (b) Other-Certainty will be negatively predictive of levels of psychoticism and schizotypal features

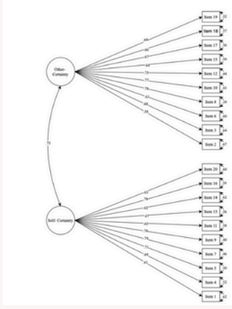
Participants

qualtrics

N= 571
Age= 18-65 (M= 40.34; SD=13.51)



Results: is the two-factor structure stable?



- Confirmatory Factor Models of the CAMSQ in the Italian sample (N=558).
- Model fit was $\chi^2(169) = 745.57$, CFI = .90, RMSEA = .80, SRMR = .05
- These values indicate an acceptable model fit, confirming the stability of the model

Table 3.Descriptive statistics of two-factor structure.

	M	SD
Self-Certainty	4.41	.79
Other- Certainty	4.11	.77

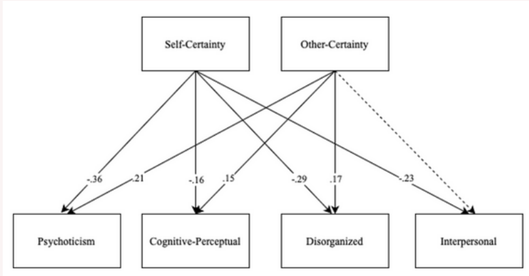
Path model

- Excellent fit indices [$\chi^2 = 0.667$, p = 0.414; CFI = 1.000, RMSEA= .000 and SRMR= 0.007]

Table 6. Model results

DV	R^2	Self-Certainty Effect (β)	Other-Certainty Effect (β)
Psychoticism	.069	-.363**	0.214**
Cognitive-Perceptual	.014	-.155*	0.15*
Disorganized	.044	-.289**	0.166**
Interpersonal	.053	-.23**	ns

Note. **p<.001; *p=.01; ns=non-significant.



LIMITATIONS AND FUTURE RESEARCH OF STUDIES 3 AND 4

•**Cross-sectional design** restricts the ability to establish causality between mentalizing deficits and psychotic traits. **Longitudinal investigations** are essential to determine the temporal sequence of these associations and to explore how changes in mentalizing abilities may influence the onset and progression of psychotic symptoms

•Reliance on self-report measures, such as the CAMSQ, may introduce **response biases** and limit the depth of understanding of nuanced aspects of mentalization àFuture research could benefit from employing a **multimodal assessment approach**, integrating behavioral tasks and neuroimaging techniques to provide a more comprehensive and objective evaluation of mentalization abilities across diverse populations and clinical settings

•**Restrict the generalizability** of findings to clinical populations and community samples Investigating potential moderating factors is crucial for a nuanced understanding of the complexities underlying mentalization and psychotic risk

“It's different when you experience it together” – How Green Exercise Can Transform At-Risk Youth's Nature Connectedness and Sense of Community

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Supervisor: Prof. Daniela Marzana e Chiara D’Angelo

INTRODUCTION

Green exercise refers to the practice of physical activity in natural outdoor environments (Barton & Pretty, 2010). There is evidence to suggest that this practice has an impact on connectedness to nature (NC): connectedness to nature is understood as an appreciation and understanding of our interconnectedness with all other living things on earth (Nisbet, et al., 2009). The connection between self-concept and nature is thought to promote a sense of belonging to a larger community, so it has been assumed that green exercise can promote a sense of community (SOC; Breunig et al., 2010). Green exercise could prove to be a useful tool for building health promotion and prevention interventions aimed at at-risk young people, such as vocational training students, who carry many different risk factors.

GAPS

- Existing literature focused on the individual-level effects of green exercise while there is little on the **community-level effects**
- Predominantly quantitative approaches fail to capture subjective experiences: lack of **qualitative and ethnographic** research capturing lived experiences.
- Underrepresentation of specific **populations**, such as urban, lower class, non-white and young population
- Short-term studies show immediate benefits, but **long-term** psychological and social effects remain unclear: need for longitudinal studies to assess sustained benefits

Green Exercise & Nature Connectedness

Sense of Community

at-risk Youths & VET Students

A MULTI-APPROACH FRAMEWORK

METHOD	STUDY	REASONS
Grounded Theory	1	Exploring emerging mechanisms of green exercise without predefined hypotheses
Action Research	2-3	Health-oriented dimension Cyclical process Ensures stakeholders engagement Adaptive and context-sensitive
Mixed Methods	2	Quantitative methods identify trends & qualitative methods explore meaning and experience
Ethnographic Approach	3	Captures social and cultural dynamics Researcher acted as a participant-observer, uncovering lived experiences

STUDY 1

AIM: Exploring mechanisms linking outdoor physical activity to nature and community connections
METHODS: Grounded Theory approach with interviews of 11 stakeholders in sports and environment
RESULTS:

1. Nature-based activities can promote well-being, SOC, and NC, emphasizing experiential engagement in both urban and green settings
2. Stakeholder engagement led to collaborations with practitioners and researchers

THE INTERVENTION

- Action-research framework to design and implement a health-promoting intervention
- Partnered with a vocational school in a marginalized area of Milan, addressing limited access to green spaces and socioeconomic barriers
- Chose orienteering as the primary activity for its physical, psychological, and social benefits in natural settings.
- Sessions conducted in four urban parks of Milan: team-based orienteering & awareness sessions

THE TARGET

- 125 first-year vocational education students chosen due to several risk factors
- Engagement barriers included lack of student motivation, low teacher involvement, and cultural factors (e.g., Ramadan fasting).
- Behavioral issues (lateness, competition sabotage, bullying) addressed through reflection activities and disciplinary actions.

METHODOLOGICAL APPROACH & STUDY DIVISION

- The intervention was analyzed through two separate studies adopting two separate perspectives
- Combining quantitative and qualitative methods allowed for a comprehensive understanding of the intervention’s potential

STUDY 2

Longitudinal mixed-methods
Questionnaire & Focus Groups (T1 - T2) aimed at measuring SOC & NC changes
Students’ perspectives

STUDY 3

Ethnographic approach
Teachers interviews & researchers’ field’s notes
Transformation of social and natural community connections

LIMITATIONS AND FUTURE RESEARCH

Limited student involvement	Youth-led participatory research
Existing nature connectedness scales may not reflect adolescents’ cultural and developmental differences	Future research should develop age-appropriate, inclusive measurement tools
Study focuses on urban vocational education students, limiting applicability to other populations	Future research should expand GE interventions to diverse demographics and contexts

KEY TAKEAWAYS & CONTRIBUTIONS

1. Addresses gaps in both public health policy and environmental psychology
2. NC does not always increase through GE, especially in task-oriented contexts where nature is secondary
3. Green spaces and activities serve as protective resources fostering resilience, well-being, and social inclusion in youth
4. Adolescents prioritize SOC over NC, indicating a need for teamwork-based intervention

Becoming Diversity & Inclusion Makers

Fostering Diversity Management through organizational culture and participatory training

Shata Diallo, Catholic University of the Sacred Heart, Milan, Faculty of Psychology – Doctoral School in Psychology
Supervisor: Professor Caterina Gozzoli

- **Diversity Management (DM) often fails** due to **cultural resistance and lack of integration** with HR strategies, leading to superficial inclusion efforts
- **Organizational Cultures of Difference (OCDs)** shape how diversity is managed, influencing **workplace well-being and inclusion outcomes**
- **Experiential and participatory learning** approaches enhance **DE&I competencies**, enabling managers to drive real cultural change

METHODOLOGY

KEY FINDINGS

EXPLORATORY STUDY

Which representations and opportunities HR/D&I managers related with DM?

- **Qualitative, phenomenographic study**
- **50 semi-structured interviews** with HR and D&I managers
- **Thematic analysis** to identify key representations and challenges

Diversity Representation
Focus on visible traits (e.g., gender, ethnicity)

Approaches to DM
Reactive, compliance-driven, weak strategic integration

HR Competencies
Key for DM, limited strategic skills, resistance issues

Policy vs. Implementation
Gaps due to resource & strategy misalignment

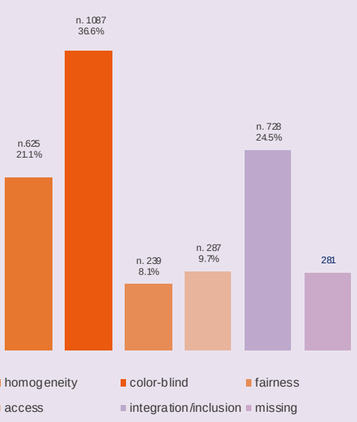
DM Goals
Inclusion & reputation-focused, lacks measurable outcomes

DM is often treated as a compliance requirement rather than a strategic asset. Key challenges include limited HR competencies, gaps in policy implementation, and a narrow focus on visible diversity traits, highlighting the need for deeper integration into organizational strategies.

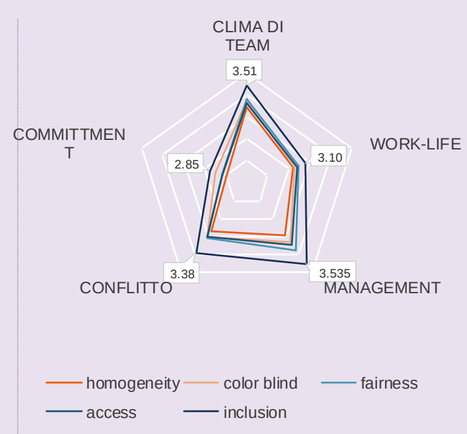
EXPLORATORY STUDY

How do different OCDs impact the quality of life at work?

- **Quantitative study using ANOVA/MANOVA**
- **Survey with 3,247 respondents** across 15 organizations
- **ANOVA/MANOVA tests**



More than half of the sample perceives their company as being characterized by a culture that does not value or allow space for difference.

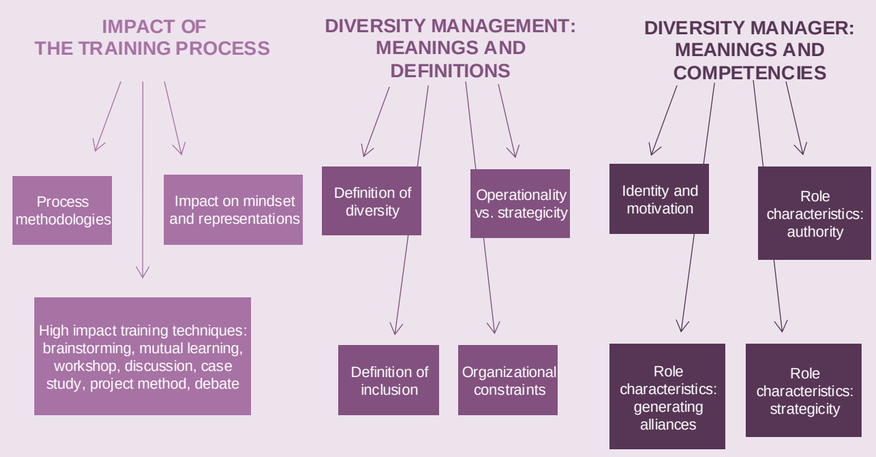


The organizational culture of integration is strongly correlated with all indicators of organizational quality of life, achieving higher scores and high statistical significance (<.001).

LONGITUDINAL STUDY

How can participatory training programs foster the development of strategic competencies in HR and Diversity Managers?

- **Interpretative Phenomenological Analysis (IPA)**
- **Longitudinal study (6 months) with 7 HR/D&I managers**, including pre- and post-training interviews
- **IPA applied to pre/post interviews**



Experiential learning and participatory training reshape diversity managers' roles, shifting from compliance-focused tasks to strategic leadership. This transformation enhances their competencies, fosters reflective learning, and strengthens alliances within organizations.

CONCLUSIONS & PRACTICAL IMPLICATIONS

OCDs & DM: The Role of Organizational Culture
Different organizational cultures (OCDs) influence engagement, retention, and innovation.

From Compliance to Strategic DM
Many organizations still treat DM as a compliance-driven initiative rather than a strategic lever for business success.

Strategic Diversity Management: A Continuous Process
DM is not a one-time initiative but an ongoing effort embedded into leadership, HR policies, and corporate culture.

Developing HR & D&I Competencies
Participatory and experiential training develops more effective HR and D&I managers, equipping them to handle diverse workplace challenges.

Embedding DM into Organizational Strategy
DM must be tailored to the organization's specific OCD type, and continuously monitored for long-term impact.

- **Embedding Diversity in Organizational Strategy:** Diversity Management (DM) should be integrated into organizational operations, treating it as a strategic element rather than a standalone HR function.
- **Promoting a Culture of DM:** Align DM initiatives with the organizational culture to create environments that encourage diverse perspectives and foster innovation.
- **Investing in Continuous Development:** Organizations should commit to long-term professional development for diversity managers to keep DM strategies adaptive and effective .

MINDFUL MODULATION OF ATTENTION IN THE PLACEBO EFFECT

PHD CANDIDATE, FRANCESCA GROSSO

Introduction

Placebo and nocebo are phenomena that highlight the role of expectations in mind-body processes. The Bayesian model of the mind suggests that the brain does not perceive reality objectively, but constructs it based on expectations and predictive updates. In this context, mindful attention can modulate sensory perception, influencing the effectiveness of placebo effects.

Aims and Methods

This study explores how attention regulation can optimize psychophysiological responses, enhancing well-being and therapeutic efficacy.
To comprehensively investigate the role of mindful attention in placebo and nocebo effects, this thesis utilized a mixed-methods approach. This included a literature review, meta-analysis, and experimental studies designed to test predictions derived from the Bayesian model.

Results

i. Attention & Placebo: Mindful attention modulates placebo/nocebo effects;
ii. Mindfulness & Resilience: Mindfulness enhances resilience to stress;
iii. Social Factors & Pandemic: Social context impacts mental health.

Discussion and Conclusion

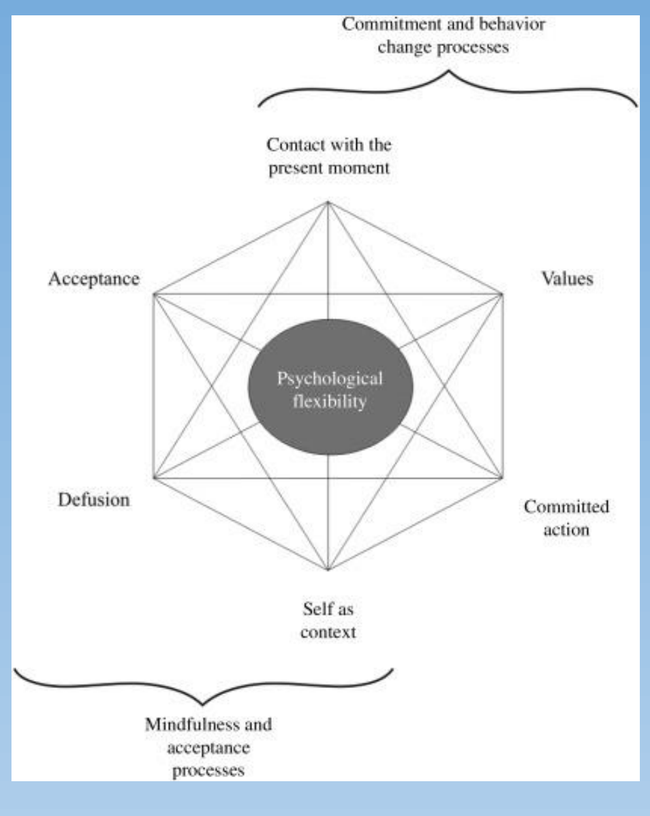
This thesis demonstrates that mindful attention modulates placebo/nocebo effects, enhances resilience, and highlights the impact of social context on mental health. These findings support a Bayesian framework, suggesting that attentional modulation can recalibrate expectations and optimize mind-body interactions for improved well-being. Future research should explore the long-term clinical applications of these insights.

The role of psychological flexibility and psychological factors on chronic pelvic pain: the ACTonPAIN project

Ph.D. Candidate: Chiara Manna
Supervisor: prof. Gianluca Castelnuovo
XXXVII Doctoral Cycle

Chronic pelvic pain (CPP) is defined as pain in the pelvic area lasting more than 6 months. It is a multifactorial condition, with various factors contributing to its onset and persistence, including physical symptoms, psychological aspects, and social factors.
It is considered an umbrella term that encompasses different conditions of various origins (e.g. endometriosis, vulvodynia, and chronic prostatitis).
It can affect both men and women, although it is more common in females.

Patients with CPP have higher rates of anxiety and depression compared to the general population, a lower quality of life, and greater psychiatric comorbidities (such as personality disorders).
Psychological flexibility is defined as "the ability to be open, aware, and in contact with the present moment" (Hayes, 2006)
The psychological flexibility model is gaining significant interest in the treatment of chronic pain; however, it has not yet been explored in the context of chronic pelvic pain.



AIM OF THE PROJECT:
to explore the role of psychological factors, particularly the model of psychological flexibility, on pain and quality of life in CPP patients.

Study 1:
Systematic Review
Objective: to identify the psychological predictors of pain and quality of life in different CPP conditions.

- 37 included studies
- QUIPS instrument to assess the risk of bias
- Catastrophizing was the most common predictor for pain and quality of life
- Good methodological quality and low risk of bias.
- Wide heterogeneity between predictors and outcomes.

Study 2:
Correlational Study
Objective: to explore the relationship between PF, psychological distress, pain and quality of life in CPP patients.

- 114 women
- Measures DASS-21, MPFI, BPI, NRS, SF-12
- Psychological distress and PF were associated with pain interference. Other PF dimensions related to pain interference were: self as context, defusion and values.
- Physical Quality of life was associated with Experential avoidance and Lack of values clarity, while Mental Quality of life was associated with Psychological Inflexibility and Self as content.

Study 3:
IPA study
Objective: to explore the lived experience of women with CPP

- 7 women with CPP diagnosis
- Semi-structured interviewes
- 3 main themes were identified: Disease as identity, Loneliness and Need for recognition.
- This study delves into the experiences of women with CPP, underling significant aspects that contribute to the complexity of this condition.

OVERALL CONCLUSIONS:
CPP is a complex experience that affect patients in many life-domains. Psychological flexibility has a role in pain perception, its interference and mental quality of life. These factors should be addressed in multidisciplinary interventions for CPP.

SCUOLA DI DOTTORATO DI PSICOLOGIA
XXXVII CICLO
DIPARTIMENTO DI PSICOLOGIA

VALUTARE LE ATTIVITÀ DI GRUPPO IN UN CONTESTO RESIDENZIALE PSICHIATRICO: QUALI INDICATORI DI UN BUON FUNZIONAMENTO?

Giacomo Andrea Minazzi, Ph.D. Candidate *Supervisor: Prof. Cesare Cavalera*

STUDI E OBIETTIVI DEL PROGETTO

A) GROUNDED THEORY	Identificare gli **indicatori di processo** caratteristici di un "**buon funzionamento**" delle **attività di gruppo** dal punto di vista di pazienti e operatori
B) SCOPING REVIEW	Verificare cosa dice la **letteratura scientifica** a riguardo della valutazione delle attività di gruppo e unire questi risultati a quanto emerso dallo studio A per costruire uno **strumento ad hoc**
C) COSTRUZIONE DELLO STRUMENTO	Verificare **l'usabilità pratica** di questo strumento e implementare le eventuali modifiche necessarie
D) SOMMINISTRAZIONE STRUMENTO	Mappare la **presenza degli indicatori di processo** individuati e identificare punti di forza e di lavoro nelle diverse aree

GROUNDED THEORY

METODOLOGIA

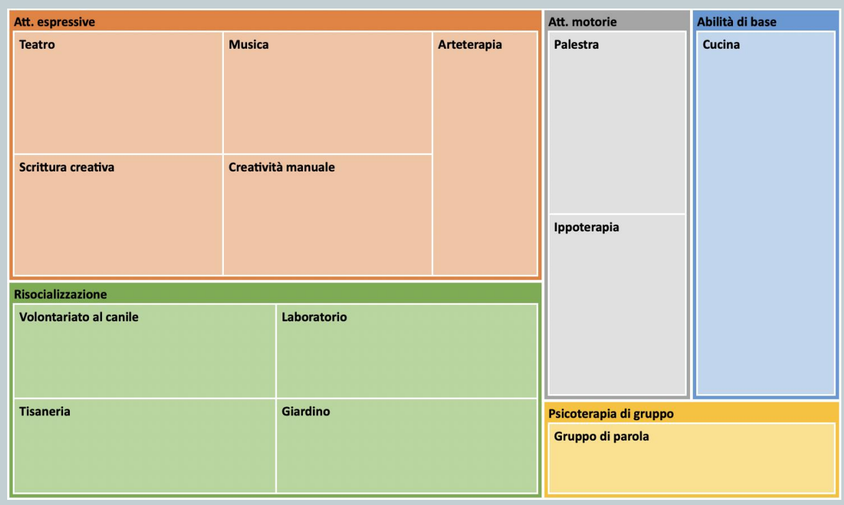
Theoretical sampling

13 soggetti intervistati
- 9 pazienti
- 4 operatori

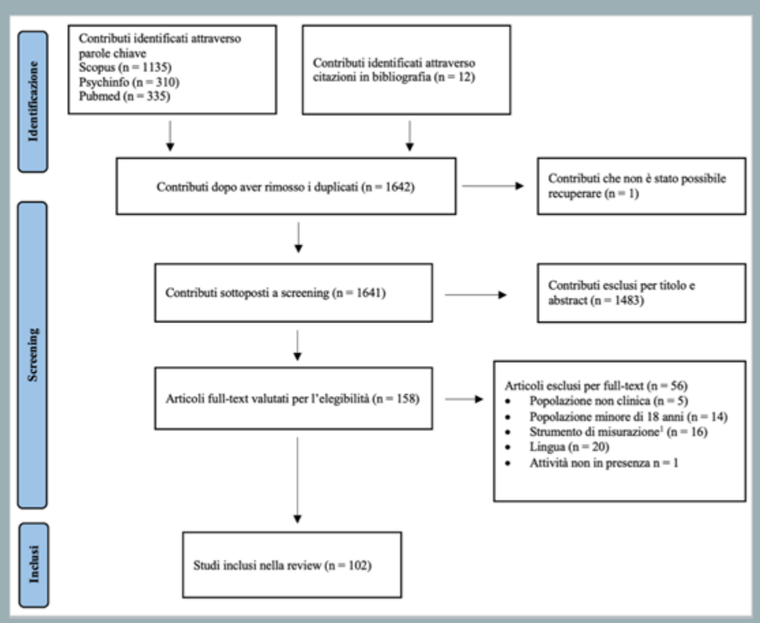
Durata media interviste
- 53'03" (d.s. = 14'04")

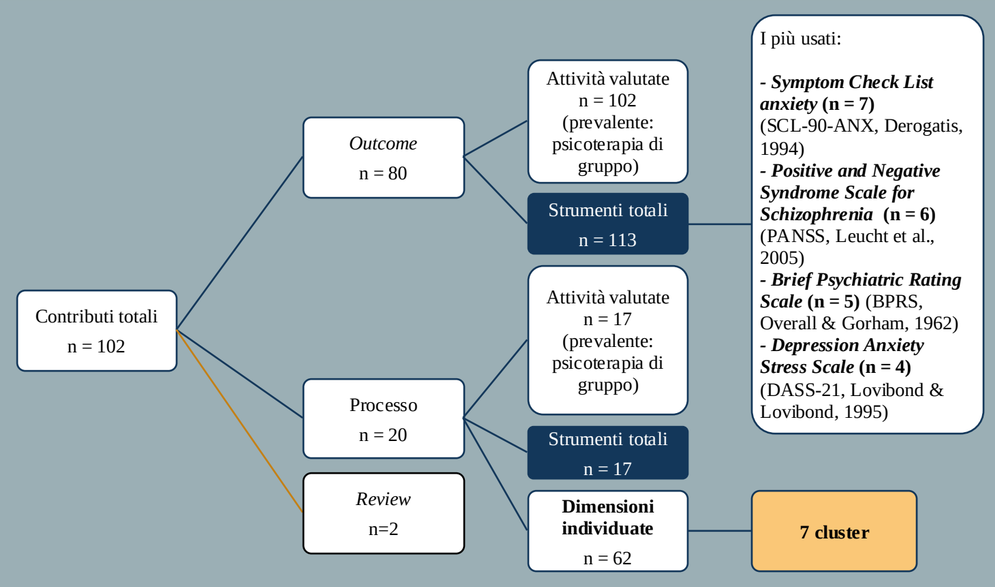
Dati
- 2525 reference totali
- 1506 initial codes

RISULTATI



SCOPING REVIEW





7 Cluster emersi
1) Relazioni
2) Coesione
3) Condivisione emotiva e di esperienze
4) Apprendimento di gruppo, sociale e comunicazione di informazioni
5) Coinvolgimento nell'attività / partecipazione attiva
6) Compiti e obiettivi di lavoro
7) Speranza

COSTRUZIONE DELLO STRUMENTO

CLUSTER DELLA SR	DIMENSIONI COERENTI DELLA GT
Condivisione emotiva e di esperienze	**Posizione attiva** ▪ Esprimersi ▪ Socializzare
Apprendimento di gruppo, sociale, e comunicazione di informazioni	**Posizione attiva** ▪ Novità e apprendere cose nuove
Relazioni	**Posizione attiva** ▪ Socializzare **Buon clima di gruppo** ▪ Conduttore
Coinvolgimento nell'attività / partecipazione attiva	**Posizione attiva** ▪ Sentirsi competenti ▪ Socializzare **Buon clima di gruppo** ▪ Motivazione iniziale
Speranza	**Posizione attiva** ▪ Sentirsi competenti
Coesione	**Buon clima di gruppo** ▪ Conduttore ▪ Motivazione iniziale
Compiti e obiettivi di lavoro	**Posizione attiva** ▪ Sentirsi competenti

SOMMINISTRAZIONE STRUMENTO

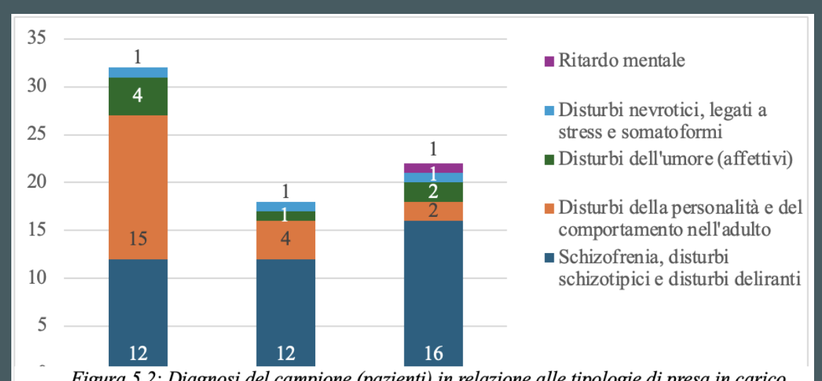


Figura 5.2: Diagnosi del campione (pazienti) in relazione alle tipologie di presa in carico.

Questionari TOT = 207
Pazienti N = 74; questionari pz = 168
Operatori N = 24; questionari op = 39

RISULTATI PRINCIPALI

- Buona congruenza valutazioni pz-operatori
- Pz ritengono di avere una posizione più attiva, di sentirsi più competenti e valutano più positivamente i conduttori rispetto agli operatori
- Attività di risocializzazione percepite con meno elementi di «novità» rispetto alle altre
- Attività corporee riportano punteggi più elevati di altre attività nella subscala «sentirsi competenti»
- Pazienti psicotici danno valutazioni più alte agli «elementi strutturali»
- Attività in CPA hanno punteggi più alti rispetto ad attività in CRA
- Correlazione negativa fra durata della presa in carico e clima di gruppo percepito

LIMITI

- Natura esplorativa dello studio, no correzione Bonferroni per molteplici analisi
- Numerosità ridotta del campione
- No validazione strumento
- Bias desiderabilità sociale

SVILUPPI FUTURI

- Validazione strumento con campione più ampio e rappresentativo
- Attendibilità convergente con altri strumenti

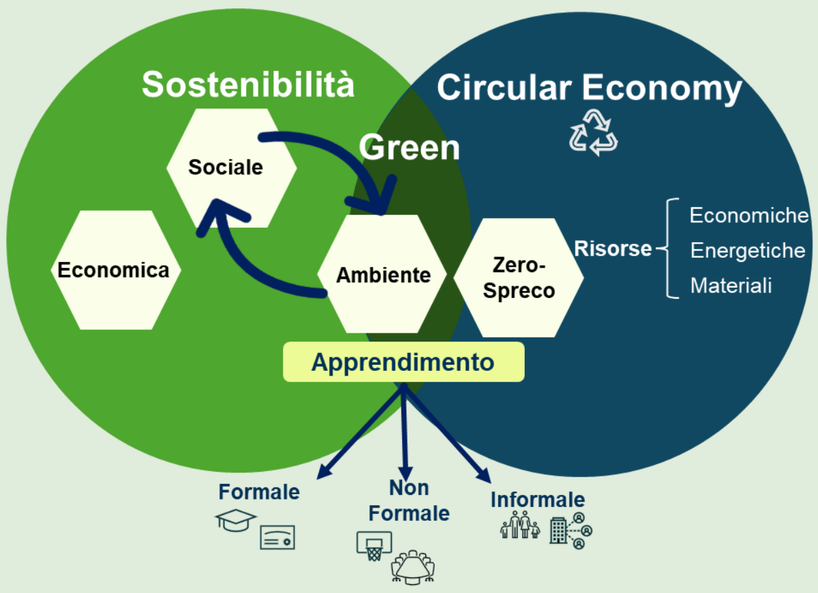
GREEN CULTURES & GREEN SKILLS:
Repertori di competenze per la sostenibilità organizzativa

Dottorato di ricerca in Psicologia – in collaborazione con: UMANA S.p.A.
Dipartimento di Psicologia, Università Cattolica del Sacro Cuore
S.S.D. M-PSI/06 Psicologia del Lavoro e delle Organizzazioni

Carlotta Morozzi

Frame teorico

La ricerca affronta la rilettura del costrutto di competenze attraverso la lente metodologica dell'Individuazione, Validazione e Certificazione (IVC), in riferimento al D.lgs 13/2013 e al D.M. 115/2024. In questo quadro, assume particolare rilevanza il concetto di contesto di apprendimento, inteso come chiave per riconoscere e valorizzare competenze acquisite in ambiti formali, non formali e informali. La metodologia proposta mira a integrare i quadri di competenze nazionali ed europei nei contesti organizzativi, promuovendo una visione che unisce le logiche della circular economy alla gestione del capitale umano.



Scopo del progetto

Ripensare la gestione del capitale umano al fine di accrescere la consapevolezza, da parte di lavoratori e organizzazioni, delle competenze informali e non formali possedute. L'obiettivo è progettare processi e pratiche "green" che non si concentrino sul prodotto dell'impresa, ma sul suo capitale umano, ponendo così le basi per una cultura organizzativa orientata alla valorizzazione delle competenze in un'ottica "zero-waste skills".

La Metodologia

	Spreco VS valorizzazione delle competenze informali e non formali nelle organizzazioni: ***uno studio sulla consapevolezza dei professionisti delle Risorse Umane***	**Un processo metodologico per l'individuazione delle competenze:** ***dall'Atlante del Lavoro italiano alla mappatura organizzativa***	**Esplorare il legame tra valorizzazione delle competenze e soddisfazione lavorativa:** ***risultati di un pilot study***
	Esplorare credenze, artefatti, rappresentazioni delle competenze (non formali e informali).	Sviluppare un processo rigoroso per la costruzione di uno strumento di individuazione delle competenze all'interno di un'organizzazione.	Misurare se la percezione di valorizzazione delle competenze da parte dei superiori e dei colleghi è un predittore significativo della job satisfaction.
	Qualitativo	Qualitativo: iterativo e partecipativo con HR aziendali	Quantitativo
	4 focus group 2 h	Quadri delle competenze: Atlante Lavoro e EntreComp	Questionario online
	26 aziende di settori diversi 28 HR partecipanti	90 lavoratori Settore alberghiero	138 lavoratori Settore alberghiero
	Software Atlas.Ti Analisi tematica incrociata: bottom-up e top-down		Software SPSS Analisi di regressione

I Risultati

1

Rappresentazioni delle competenze

Visione dicotomica
Hard/Soft

Approccio funzionale
A cosa servono?

NF / IN
Consapevolezza incompleta

NF / IN
Non considerate in relazione al ruolo

Fase di selezione e valutazione
NF / IN come ancoraggio a..

Confine
vita personale/ extra lavorativa

FIL ROUGE DEI SUCCESSIVI STUDI

2

- Analisi del contesto organizzativo
- Esplorazione preliminare dell'Atlante Lavoro ed EntreComp

- Analisi ADA per tutti reparti alberghieri
- Creazione documento di mappatura attività per ciascun reparto

- Creazione e Validazione dei cluster di reparti
- Revisione e selezione finale delle competenze

77 Tecniche
6 Trasversali

Stesura del questionario
- Possesso e contesto apprendimento
- Percezione quantità utilizzo
- Livello autopercepito

Likert 5p

3

Caratteristiche lavorative	Mesi di lavoro, tipo di contratto, regime orario, lavoro su turni, livello gerarchico, reparto/area funzionale
La convivenza organizzativa	*Team Climate Inventory - Rahim Organizational Conflict - Organizational Checkup System - Diversity Perspective Questionnaire*
Valorizzazione competenze	*Scala ad hoc* per 6 competenze soft: Collaborazione, Leadership, Proattività, Responsabilità, Problem solving, Empatia
Soddisfazione lavorativa	*Generic Job Satisfaction Scale.*
Socio-demo	Genere, età, nazionalità, titolo di studio conseguito

Modello 1

Conflitto intrapersonale (ROCI-I)	,565
Valori (OCS)	,179
Media percez. Valorizz. competenze (superiori)	,190

R quadrato= 0,624

Modello 2

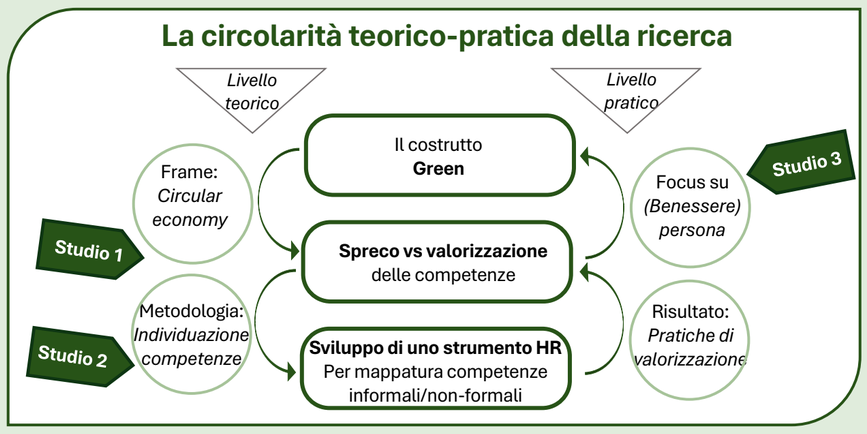
Conflitto sociale (ROCI-I)	-,323
Valori (OCS)	,437
Media percez. Valorizz. competenze (superiori)	,260

R quadrato= 0,509

Conclusioni e Discussioni

Abbracciare una prospettiva basata sulla circolarità delle competenze e sull'apprendimento permanente significa intraprendere un percorso che valorizza le persone come il cuore dell'organizzazione. In primo luogo, riduce lo spreco di talenti, trasformando ogni competenza in una risorsa preziosa per la crescita collettiva. In secondo luogo, consente alle organizzazioni di rispondere con agilità e creatività ai cambiamenti del mercato, grazie a una forza lavoro che non solo è più qualificata, ma anche profondamente connessa al proprio valore e potenziale. Infine, questa visione contribuisce a costruire ambienti lavorativi che non sono soltanto inclusivi e stimolanti, ma luoghi in cui ogni individuo può sentirsi visto, apprezzato e sostenuto nel proprio percorso di sviluppo.

La circolarità teorico-pratica della ricerca



Pratiche di valorizzazione e Utilizzo Quadri Competenze

- Outplacement
- Riscrittura CV e Job Description
- Progettazione processi di valutazione

Percorsi di **job rotation:**
- crescita professionale dei lavoratori (reskilling/upskilling)
- flessibilità organizzativa (esigenze operative e di sviluppo strategico)

Progettazione formazione mirata
- Su competenze di reparto→ migliorare la performance
- Su competenze trasversali → clima e avanzamento ruolo

Emotional regulation as a mechanism underlying well-being: the case of hope

PhD Candidate: Eleonora Pagani
Supervisor: dott.ssa Stefania Balzarotti
XXXVII Doctoral Cycle

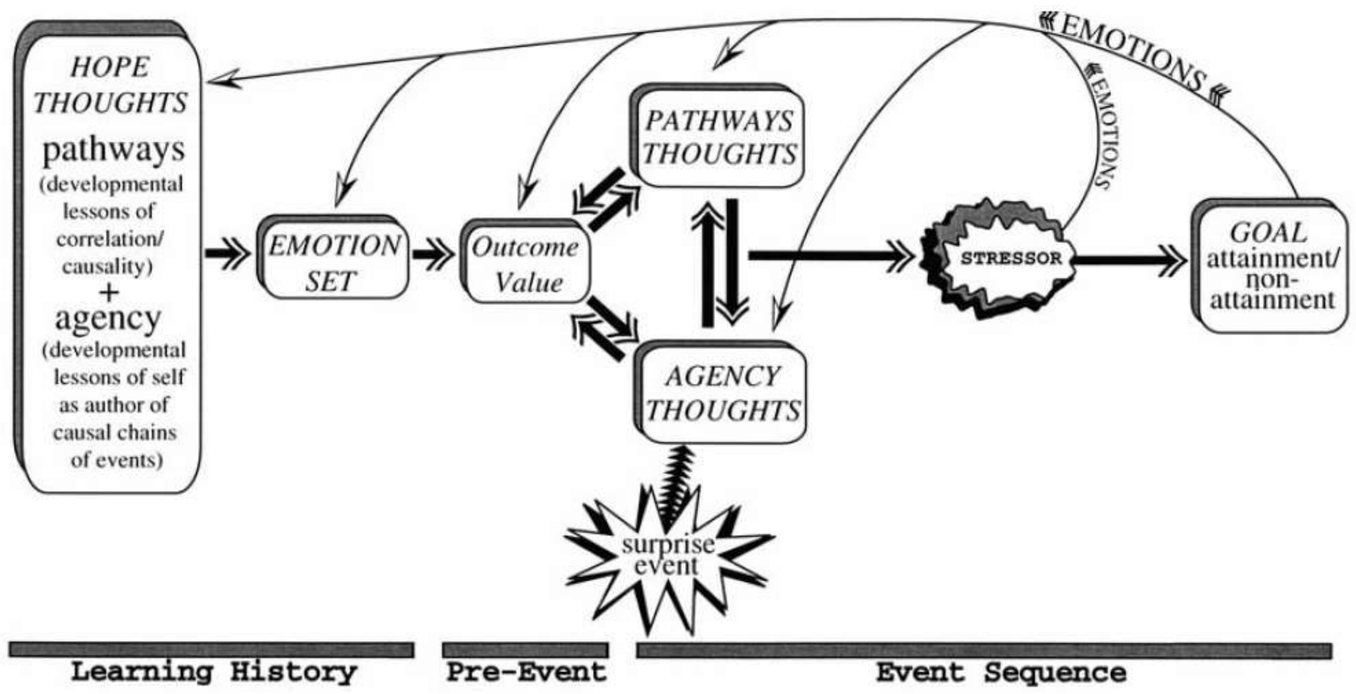
Positive Psychology Intervention

Since the birth of positive psychology, several interventions have been implemented to enhance positive emotions, cognitions and behaviors to help individuals experience greater flourishing and greater well-being. Different metanalysis have confirmed the effectiveness of PPI. But the effect of PPIs on well-being varies trought the studies. A possible explanation for this fluctuation: Emotion regulation as an underlying mechanism (Quoidbach et al., 2015)

Emotion regulation

refers to the processes through which we influence what emotions we have, when we have them, and how we experience and express them.
Five families of ER: situation selection, situation modification, attention deployment, cognitive change and suppression

Snyder's Hope Theory



Objective:

This thesis seeks to contribute to Quoidbach et al.'s hypothesis by examining the effectiveness of one ER family—situation selection—using hope as a target positive psychology construct

Effectiveness of Positive Psychology Intervention and emotion regulation: a meta-analysis

Aim: a meta-analysis was performed to empirically test Quoidbach et al.'s framework
Methods: Data from 76 studies were analyzed, with interventions categorized according to ER strategies
Results:
The results revealed different effect sizes across the five ER families. Specifically, attention deployment (g=0.62) and reappraisal (g=0.55) showed medium effects on well-being at post-test

Measuring hope: Italian adaptation of the Adult Dispositional Hope Scale in a sample of young adults

Aim: investigate the factorial structure of the Adult Dispositional Hope Scale (ADHS) and the relationships between hope, ER, and well-being
Results: the factorial structure of the ADHS was partially confirmed (RMSEA = 0.073). We found strong correlations between hope components (agency and pathways) and well-being, ER, negative affect, and perceived stress. Additionally, dispositional hope predicted well-being and ER strategies in distinct ways. Agency predicted various aspects of well-being, excluding life satisfaction and reappraisal, while pathways predicted all aspects of well-being but were associated with suppression, not reappraisal.

Looking at the future with hope: an intervention to enhance well-being in a sample of young adults

Aim: enhance hope, well-being and future work self-salience in young adults. Analyse the relationship between ER stategies and outcome variables
Methods: we implemented the *GrowingHope* intervention in a sample of 39 partecipants
Results: the intervention ameliorate only the future work self-salience in young adults. ER strategies are influence hope outcome in or sample

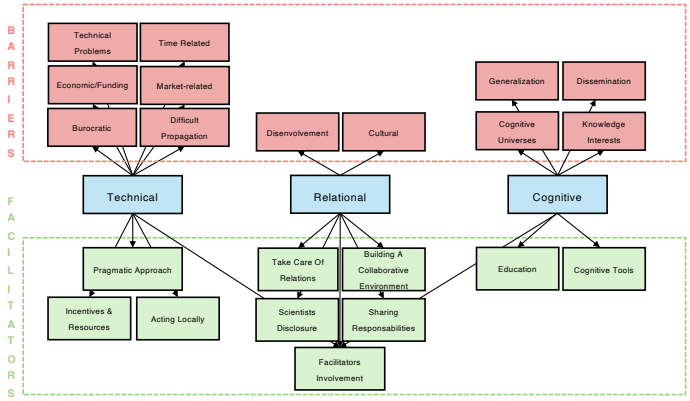
Conclusions:

These findings advance our understanding of PPI effectiveness and offer partial support for Quoidbach et al.'s hypothesis. They also provide new insights into the relationship between hope, well-being, and emotion regulation. Analyzing the agency and pathways components of hope offers a more nuanced understanding of how ER strategies influence hope, ultimately contributing to a more complex perspective on their role in promoting well-being.

PROMOTING DIALOGUE AND ENGAGEMENT BETWEEN SCIENCE AND FARMERS FORCOLLABORATIVE INNOVATION:

a participatory project in the field of bamboo cultivation

PhD Candidate: Michele Paleologo (michele.paleologo@unicatt.it) – Supervisor: Prof. Guendalina Graffigna
Università Cattolica del Sacro Cuore, Department of Psychology

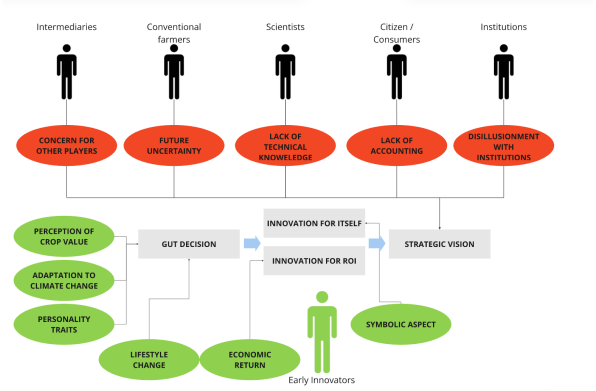


Scoping Review on Participatory Agricultural Innovation.

Objective: mapping participatory methodologies in agricultural innovation projects to identify theoretical frameworks, key stakeholders, engagement modes, and barriers/facilitators.

Method: systematic search following PRISMA-ScR guidelines; search string: *participatory research* AND *agriculture* AND *innovation*. Extracted variables: types of innovation studied, participatory modalities, barriers & facilitators to participation.

Results: average duration 5 years; innovations focus on climate change, crop choice, irrigation, pest management, and technical improvements. Intermediaries (e.g., extension agents) can bridge gaps between farmers & scientists. Need for clearer reporting guidelines to improve comparability in participatory research.

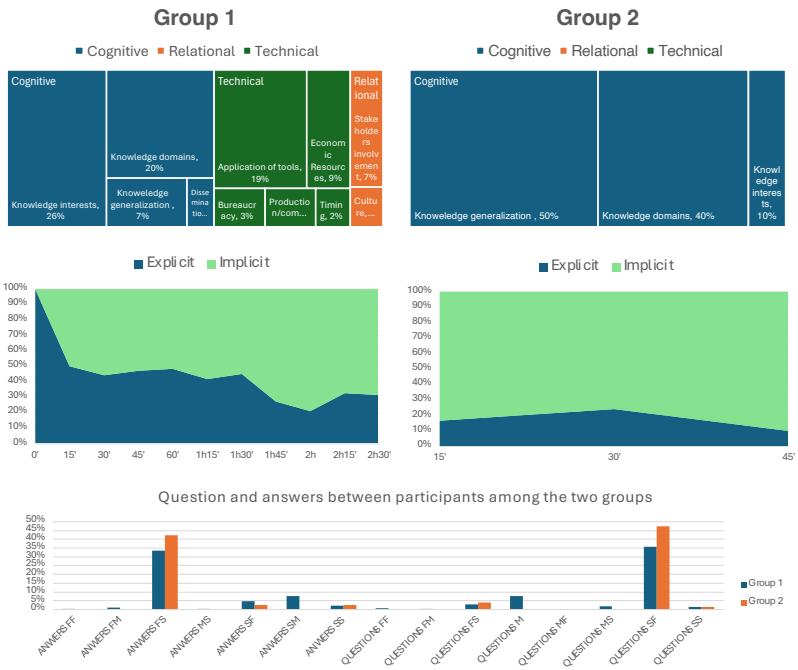


Situation Analysis on Bamboo Cultivation in Italy.

Objective: investigating bamboo adoption in Italy as a spontaneous innovation case study, exploring psychosocial and economic factors influencing its diffusion.

Method: 20 semi-structured interviews with farmers, experts, and stakeholders. Situation analysis: mapping actors, relationships, and contextual factors to identify the social world that influences the situation of bamboo cultivation

Results: early innovator such as bamboo farmers are driven by multiple factors, categorized into 6 drivers that can form a process of three phases. Five categories of potential obstacles are described and linked to key actors beside the bamboo farmers are *intermediaries*, *scientists*, *conventional farmers*, *institutions, and citizen/consumers*.



A Coding Scheme for Group Dynamics in Science-Farmer Collaborations.

Objective: to develop and test a new tool designed to analyze interactions within collaborative groups involving farmers and scientists in agricultural contexts aimed at fostering innovation

Method: expert consultation & iterative codebook refinement. Testing: applied to two collaborative groups different in participants compositions, aim and moderation → group1: 7 farmers, 3 scientists, with a moderator and aimed at define the collaboration modalities for a predetermined question; group 2: 9 farmers, 2 scientists, without a moderator and aimed at the defining the research question.

Results:

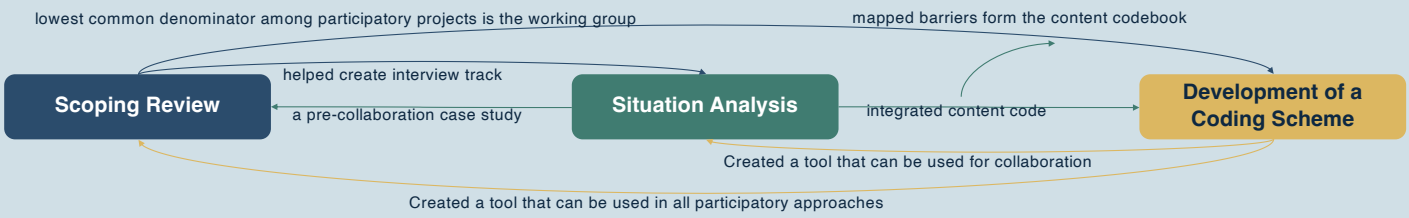
The coding scheme includes two dimensions:

1. content categories (technical, relational, cognitive barriers).
2. communication patterns and explicitness (topic shifts, Q&A exchanges, interpersonal connections).

Moderated groups discussed a wider range of barriers explicitly, integrating diverse perspectives. Unmoderated groups focused more on cognitive issues, with fewer structured exchanges.

Scientists led technical discussions, while farmers contributed practical concerns.

LINKS BETWEEN STUDIES



Nudging Organizations Towards Sustainable Practices: Addressing Energy and Material Waste in Workplace Environments

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Università Cattolica del Sacro Cuore, Department of Psychology

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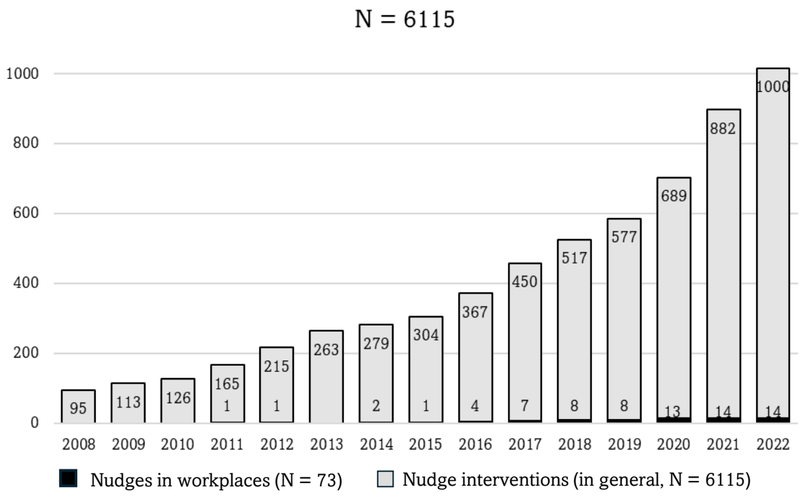
Introduction & Research overview

Nudges are changes to the decision-making context to gently guide individuals' behaviors towards better decisions in a predictable way, without limiting freedom of choice (Thaler & Sunstein, 2008). [a]

Systematic review → Field studies → Autoethnography

Systematic Review: Are Nudges Applied in Workplaces?



While widely used in household domains, their application in workplaces remains underexplored despite their potential to promote behavioral change.

Behavioral domains targeted

- Most nudge interventions (55%) target **health-related behaviors** (e.g., promote healthier food choices, increase physical activity); 19% target sustainability through reducing waste of resources; 19% aim to improve workers' performance, 7% promote long-term saving behaviors.

Type of nudge used

- Most interventions (78%) use **decision information nudges** (e.g., feedback on behaviors, information messages); decision structure nudges (e.g., default nudge) are less used (27%); 16% use decision assistance nudges (e.g., reminders).

SCAN ME FOR MORE

Pinel et al., 2024 [b]

Field Studies (Part I): Can Nudges Promote Business-Related Behaviors? [c]

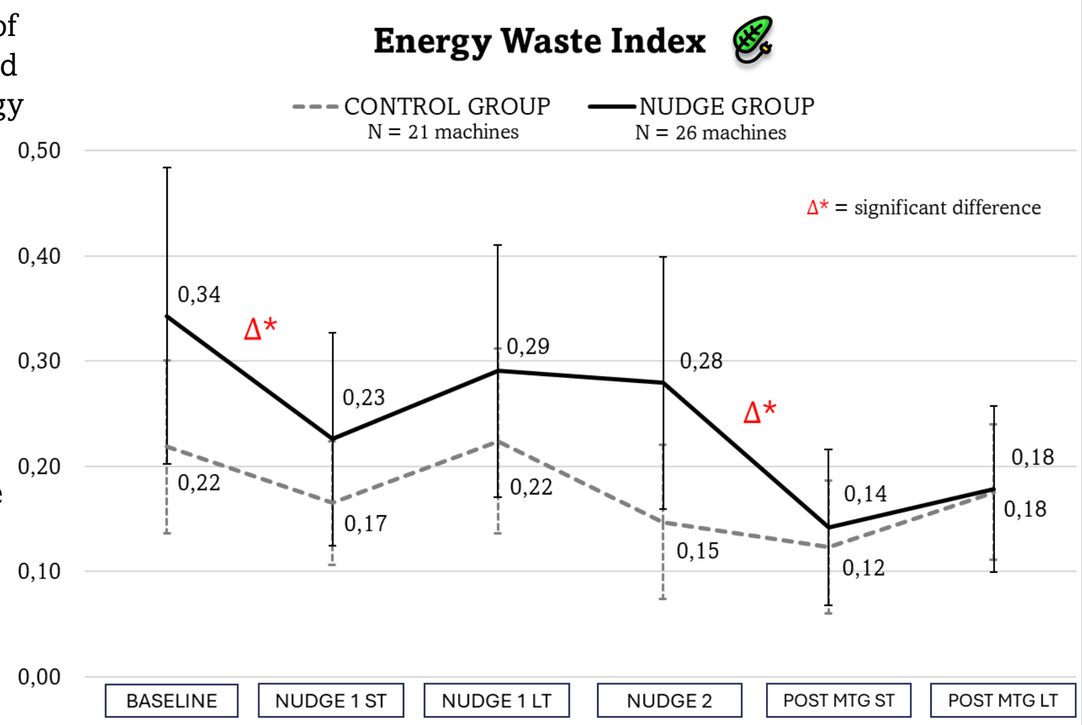
Promote the de-energization of machines during not scheduled shifts to reduce waste of energy

QL phase → nudge design → QT phase → nudge re-design

NUDGE: de-energization report stating the % of hours machines remained active during not scheduled shifts:

- **NUDGE 1**: + household energy consumption equivalent of waste
- **NUDGE 2**: + economic waste equivalent & relative amount of CO_2 emissions

Short-term (**ST**) and long-term (**LT**) analysis of within-group changes



POST MTG = After Plant Director's meeting to raise awareness to the de-energization issue (to both groups)

The repeated measures ANOVA showed a **significant reduction** in the energy waste index for the **NUDGE group**, particularly:

- **in the short-term following the first intervention** [NUDGE 1 ST, $F(1, 25) = 7.748$, $p = 0.010$, partial $\eta^2 = 0.237$)]
- and **after the Plant Director's meeting** [POST MTG ST, $F(1, 25) = 10.025$, $p = 0.004$, partial $\eta^2 = 0.286$].

Targeting manufacturing shops characterized by **hierarchical aspects** and **a behavior that is closely related to business profits**, might require more complex interventions than implementing single nudges.

A nudge (e.g., the mere perception of the waste being generated) may encourage short-term behavioral change but might need to be sustained by organizational change and systemic engagement for long-term improvements.

Field studies (Part II): Can Nudges Improve Individual-Level Behaviors at Work?

IMPROVE WASTE DISPOSAL

[$X^2(1) = 23.467$, $p < 0.001$]

REDUCE PAPER TOWEL CONSUMPTION

[$X^2(1) = 0{,}46$, $p = 0.498$]

REDUCE WATER WASTE

[$W = 0.000$, $p = 0.028$]

Autoethnography: What Challenges in Applying Nudges in Workplaces?

The autoethnography accounted various process-related elements and challenges arose during the design and implementation of nudge interventions.

Aspects	Methodological Implications on				Researcher's feelings		
	Context Mapping	Intervention Development	Intervention Implementation	Data Collection and Analysis	Frustration	Helplessness	Challenge
Organization and Structure of the Context	✓	✓		✓	✓	✓	
Characteristics of the Target Behavior		✓		✓	✓		✓
(Lack of) Engagement of Involved Actors	✓		✓		✓		✓
Interface with Indirect Stakeholder			✓		✓	✓	
Ethical Issues				✓	✓		✓

Key insights & Implications

- **In workplaces, both business-related (organizational) and individual-level behaviors can be targeted.** Clearly identifying whether the targeted behavior is "individual" or "organizational" is essential for designing and implementing effective nudge interventions.
- To identify the connection between the target behavior and the organization's core business, **it is essential to map the behavior and identify key decision-making points** that can influence the change process.
- Business-related behaviors present distinct challenges compared to individual-level behaviors due to their impact on business profits. The engagement of key stakeholders is crucial for addressing resistance to changing established routines.
- The challenges encountered in the design, implementation, and measurement phases highlight the **real-world difficulties of gathering evidence** that can enrich the scientific literature on nudges in workplace settings.
- By addressing the complexities of applying nudges in workplaces, this project aims to provide **guidelines for future researchers and practitioners** interested in the use of nudges to promote behavioral change in environments where individuals spend most of their time.

[a] Thaler, R. H., & Sunstein, C. R. (2008). Nudge: Improving decisions about health, wealth, and happiness. Penguin Books.

[b] Pinel, H., Sesini, G., & Lozza, E. (2024). Nudges in Workplace Environments – A Systematic Review and Research Agenda. Journal of Personnel Psychology. https://doi.org/10.1027/1866-5888/a000362.

[c] Pinel, H., Bonanomi, A. & Lozza, E. Organizational Nudges to Increase Energy-Saving Behavior: a Quasi-Field Experiment in an Italian Manufacturing Context. REVISED AND RESUBMITTED TO ENERGY RESOURCE & SOCIAL SCIENCE

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PsiCom
Centro studi e ricerche di Psicologia della Comunicazione

Full text:

The Aesthetic of User Experience: the Role of Affect and the Impact on Behavior

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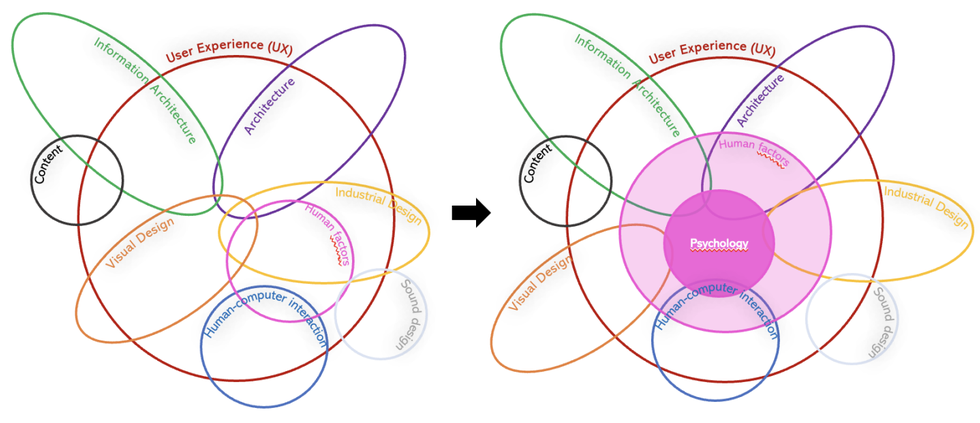
Abstract

This doctoral thesis examines User Experience (UX) through a psychological lens, redefining the role of aesthetics in shaping user interactions with artifacts. It introduces the concept of Transformative Experiences (TEs) (***Obj.1***) and systematically reviews empirical literature on how artistic artifacts can elicit profound experiential changes (***Obj.2***). The thesis also explores the influence of aesthetic emotions on UX through empirical studies the impact of Virtual Reality on cognitive and affective responses to design artifacts (***Obj.3***), well as investigating the relationship between aesthetics and prosocial behavior (***Obj.4***). The findings contribute to a theoretical framework that integrates psychology, design, and technology (***Obj.5***), offering insights for enhancing UX through aesthetics, emotion-driven engagement, and the design of immersive, meaningful experiences.

Background

User Experience Psychology (UXP) explores how perceptual, affective, and cognitive processes shape human-artifact interactions. Beyond functionality, aesthetics plays a crucial role in UX, influencing emotions, engagement, and behavior. Psychological research highlights that aesthetically pleasing artifacts enhance attention, positive affect, and meaningful interactions[1,4]. As technology advances, immersive media like **Virtual Reality (VR)** further amplify aesthetic experiences, demonstrating their transformative impact[2,3]. Understanding and redefining UX as an **aesthetic phenomenon** provides deeper insights into how design shapes perception, emotion, and user behavior, emphasizing the importance of aesthetics in creating engaging and impactful experiences.



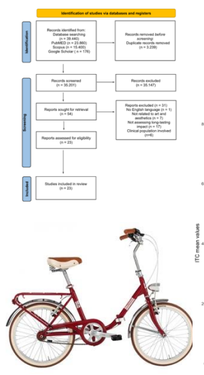
Objectives

- ***Obj.1:*** *Mapping Transformative Experiences (TEs)*
- ***Obj.2:*** *Investigating TEs promoted by aesthetics*
- ***Obj.3:*** *Analyzing the role of affect in our interaction with artifacts*
- ***Obj.4:*** *Analyzing the behavioural responses in our interaction with artifacts*
- ***Obj.5:*** *Integrating Aesthetics, Emotions and Technology in UX*

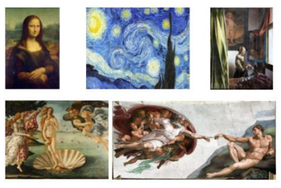
Methods

- ***Obj.1***: A conceptual analysis on TEs
- ***Obj.2:*** A systematic review on the transformative potential of aesthetics

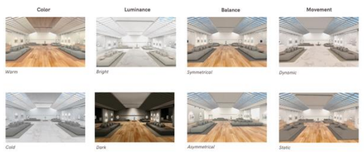
- ***Obj.3:***
  - ➢ *Study 1:* Virtual vs. Real UX of the *Graziella* Bicycle
  - ➢ *Study 2:* Affective responses to paintings in immersive VR vs. non immersive VR



- ***Obj.4:***
  - ➢ *Study 3:* Does Symmetry in Architecture Promote Prosocial Behavior?

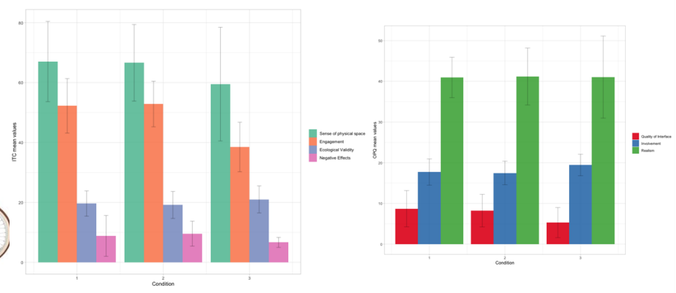


- ***Obj.5:***
  - ➢ *Study 4:* The Impact of Spatial Design Elements on Emotional and Aesthetic Responses in a Virtual Museum



Results

➢ *Study 1*



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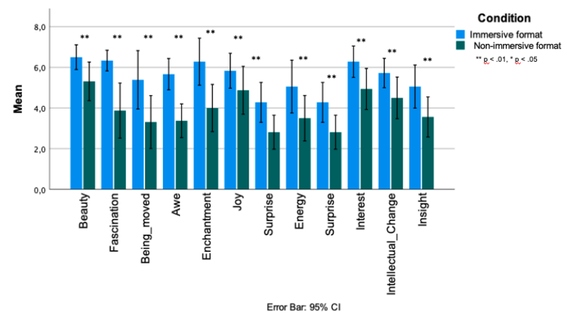
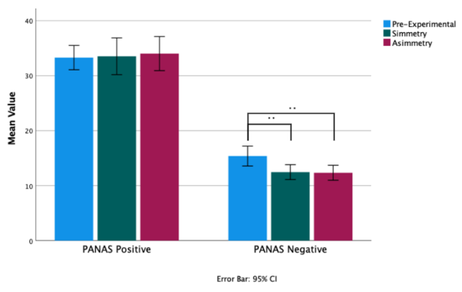
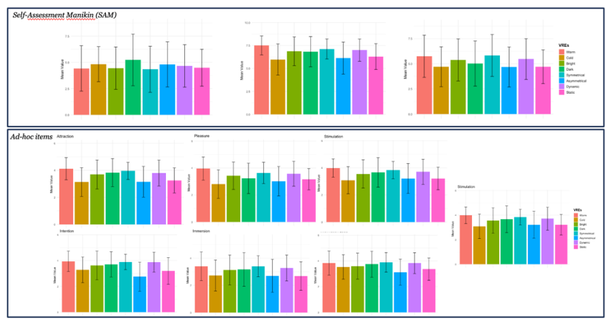


➢ *Study 3*



➢ *Study 4*



Discussion and Conclusions

This work reinforces the central role of psychology as the foundational discipline in understanding **User Experience (UX)**, positioning UX as an inherently aesthetic phenomenon. Methodologically, it highlights the importance of psychological principles in UX research and underscores Virtual Reality (VR) as a valuable medium for presenting and evaluating artifacts. Empirical findings consistently demonstrate that emotional responses are fundamental to user interactions and evaluations, further affirming the inherently aesthetic nature of these experiences. From a practical perspective, the study advocates for a user-centered design approach and emphasizes the necessity of multidisciplinary collaboration to enhance UX research and practice.

Main References:

[1] Norman, D. A. (2004). *Emotional design: Why we love (or hate) everyday things*. Basic Books. [2] Riva, G., Waterworth, J. A., & Murray, D. (2007). *Interacting with presence: A framework for experiential design in virtual environments*. *Virtual Reality*, 11(3), 201–206. [3] Slater, M., & Wilbur, S. (1997). *A framework for immersive virtual environments (FIVE): Speculations on the role of presence in virtual environments*. *Presence: Teleoperators & Virtual Environments*, 6(6), 603–616. [4] Tractinsky, N. (2013). *The Midas touch in HCI: Aesthetic experience and the design of interfaces*. In *Human-Computer Interaction: The Agency Perspective* (pp. 15–30). Springer.

NUDGE AND SUSTAINABLE FINANCE

PROMOTING SOCIALLY RESPONSIBLE INVESTMENTS THROUGH CHOICE ARCHITECTURE

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Supervisor: Prof. Paola Iannello

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The attention of investors toward Socially Responsible Investments (SRI) has rapidly increased over the last two decades. In 2018, sustainable financial assets reached a value of over $35 trillion. The value for SRI is expected to grow up to $50 trillion by 2025 (Bloomberg, 2021).

Despite literature in the field is increased, there is still a research gap on the motivations and psychological characteristics of socially responsible investors (Garg et al., 2022).

Moreover, though the share of SRI has grown in recent decades, the market is still dominated by institutional investors, while retail investors account for only a small percentage.

The low participation of private investors in the SRI market could be explained by the unfavorable choice architecture of the decision process (Pilaj, 2017). Further research is thus needed to understand how to promote SRI using nudges to overcome potential barriers towards sustainable investing.

PURPOSE

The doctoral project thus aimed at:

1. Identifying the psychological profile of socially responsible investors adopting the Theory of Planned Behavior as theoretical framework.
2. Testing the role of nudges in promoting SRI among private investors using a simulated investment scenario.

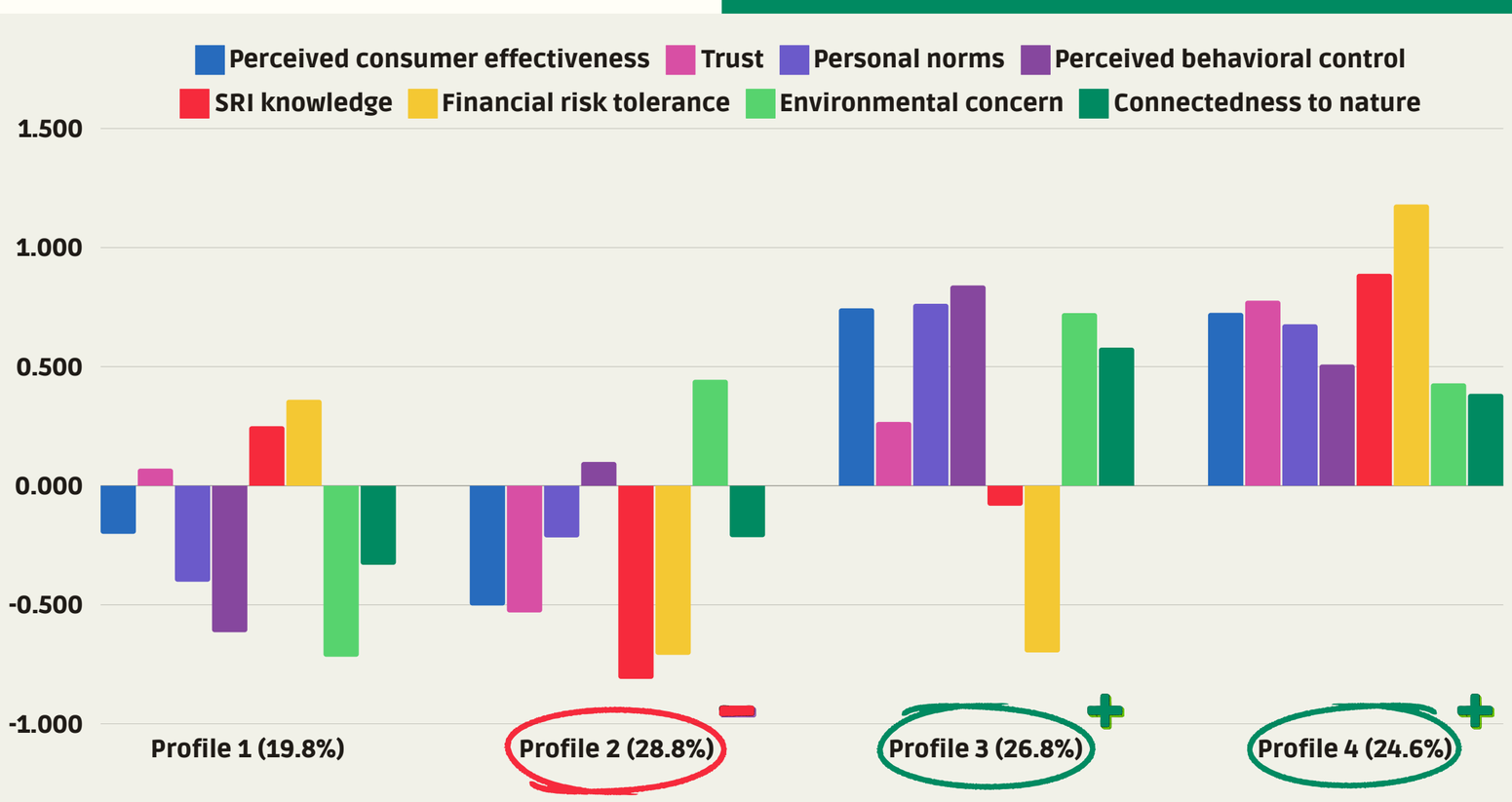
FIRST AIM

To define the identikit of socially responsible investors, a person-centered approach was adopted.

This allowed us to understand how different variables interact with eachother in determining the decision to invest in SRI.

For research purposes, we:

1. Identified the profiles that best describe the heterogeneity within our sample for the different variables through a Latent Profile Analysis.
2. Performed Chi-square test and ANOVA to investigate which of the psychological profiles obtained are more likely to be (current or potential) socially responsible investors.



Only profile 4 was significantly more likely to hold sustainable financial assets, whilst profile 2 is less likely to include current socially responsible investors.

Both profile 3 and profile 4 are more inclined to invest in SRI in the future. Profile 2 is instead not willing to invest in responsible financial assets.

SECOND AIM

An investment task was designed to examine the role of nudges in prompting sustainable investing. The experimental setting consisted of navigating through a fictional website of an imaginary bank to simulate a hypothetical investment scenario.

Participants were required to explore the website page and to invest a fictional capital (€10,000) according to their preferences. Within the scenario, they could choose to invest among six funds. The proposed products differed in the level of risk, the annual financial performance, and the ESG score.

A 3 x 1 between-subjects design was implemented, consisting of a control condition and one nudge for each of the two experimental conditions.

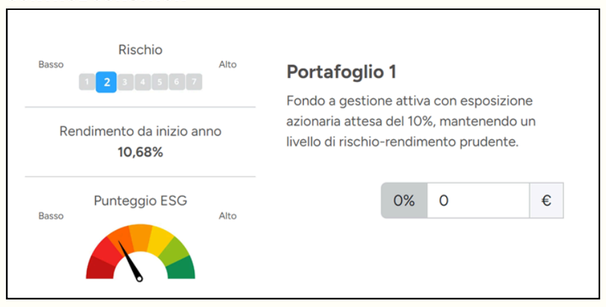
A first nudge aimed to prime people by activating a "social frame" (versus "money frame") through a banner designed to raise awareness about ethical and sustainability issues.

CONTROL CONDITION

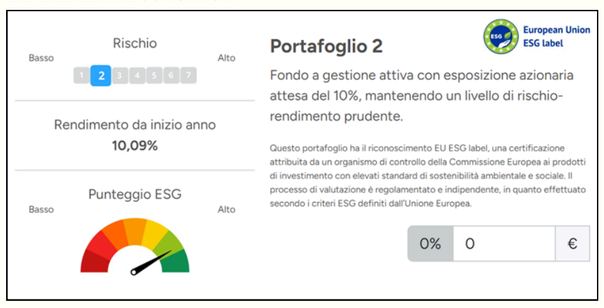
EXPERIMENTAL CONDITION

The second nudge consisted of an institutional label aimed at increasing trust attitudes on ESG ratings. Indeed, the lack of standardized evaluation procedures for ESG criteria can undermine trust in SRI. The badge was applied only to funds with high ESG scores.

CONTROL CONDITION



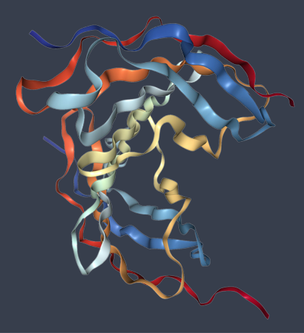
EXPERIMENTAL CONDITION



Our results suggest that socially responsible investing is a matter of different aspects. Classical determinants of investment decision making (i.e., risk tolerance and knowledge on SRI) alone are not enough to explain the decision to invest responsibly. Personal values, positive attitudes towards SRI, and the belief to have control over the environment also shape the decisional process.

Overall, our findings provide partial support for the effectiveness of nudges in shaping sustainable investment behaviors. Specifically, the fictional label increased participants' preference for SRI. We speculate that having a reliable third-party certification authority, such as the European Commission, could increase individuals' positive attitudes towards SRI, possibly by enhancing trust in ESG ratings.

Physical activity as a source of psychophysical wellbeing: evaluation of the release of circulating exerkines and their potential neurocognitive impact



Introduction

Exercise has well-documented health benefits, however the molecular mechanisms behind these effects remain unclear. Emerging evidence suggests that exerkines-humoral factors released during exercise mediate these benefits by facilitating organ cross-talk and influencing metabolism and physiological functions. Some exerkines also impact brain health, supporting the role of exercise in neurodegenerative disease management. Nevertheless, significant knowledge gaps persist, necessitating further investigation.

Aims

The first study investigated how physical exercise modulates the release of irisin, BDNF, adiponectin, and B-endorphin and explored their relationships. Furthermore, the impact of BDNF on creativity and cognitive performance in young (YA) and middle-aged (MA) adults was assessed.

The second study compared the acute irisin response to cycling with and without Functional Electrical Stimulation (AFESK™) at the start and end of a 6-week training period in healthy men. Additionally, it examined whether irisin elevation could promote improvements in memory, positive and negative affective states, anxiety levels, and risk-taking behavior.

Methods

Thirty-four healthy males were divided into two groups: YA (N: 22; 24,6±3,6 yrs) and MA (N: 12; 54,6±5,7 yrs). Participants performed an incremental cycling exercise test to exhaustion. Prior to exercise and after 24 h from exercise, memory (RAVLT and Corsi test) and creativity performances (CRA) were evaluated. Blood samples were collected before the exercise, 15 min and 24 h post-exercise. Quantification of exerkines levels in serum was performed using ELISA Kits. One-way repeated measures ANOVA, Mann Whitney test, Whitney test, Wilcoxon signed rank test, and Spearman correlation analysis were performed.

Sixteen active men (39±10 yrs) were randomly allocated to two groups and matched for VO_{2peak} and age. The cycling group (CON) performed 42 min of interval training. The cycling group with AFESK (EXP) followed the same training program, using the VIK8 device. Before and after 24 and 48 h memory (Corsi test), positive and negative affective states (PANAS), anxiety levels (STAI), and risk-taking behavior (BART) were assessed. Irisin levels were evaluated before and after (15 min, 24 h, 48 h) the first (S1) and the last training session (S14) and were detected by ELISA assay. Two-way repeated measures ANOVA (TimexGroup) with Bonferroni correction and Spearman correlation analysis were performed.

Results

Exerkines time-course for the total sample is shown in **Fig 1**. Significant differences in exerkines concentrations between age groups were found. BDNF levels in YA and MA in **Fig 2.** Improvements in memory and creativity test performances were recorded 24 h post-exercise. In MA, significant correlations were found between changes in BDNF and improved memory performance (in the RAVLT), an increase in correct answers and a decrease in omitted answers in the creativity test.

Irisin levels in EXP and CON are shown in **Fig 3**. The research showed that exercise sessions, regardless of the intervention type, did not appear to significantly impact risk-taking behavior, memory, anxiety, or emotions. However, the small sample size and high variability in psycho-cognitive data may have limited our ability to detect significant changes or correlations between variables.

Fig 1

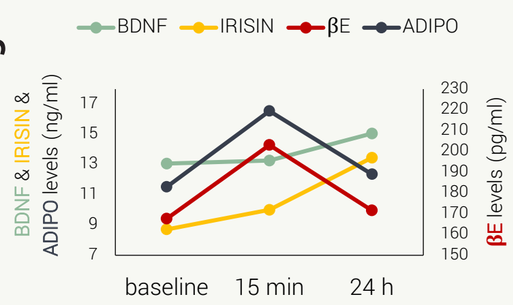


Fig 2

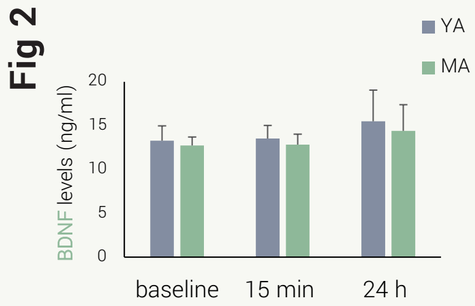
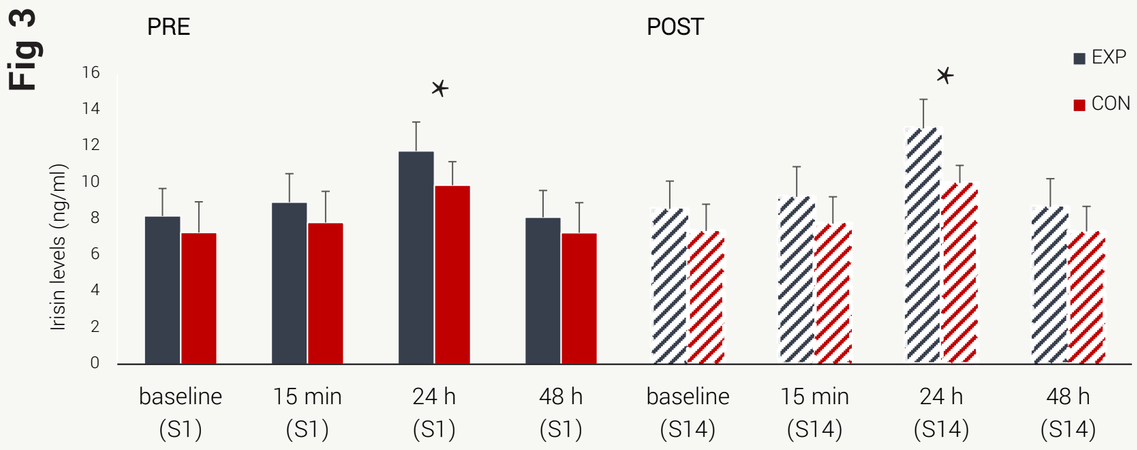


Fig 3



Conclusion

The first study suggests that BDNF might act as molecular mediator of the positive effects of acute exercise on cognitive performance. The second study reveales that cycling with AFESK resulted in a greater irisin release 24 h post-exercise compared to normal cycling, highlighting the potential of AFESK to enhance the physiological benefits of exercise. Further research in a larger sample are needed to better assess potential effects of irisin on psychological and cognitive function.

Faculty of Psychology - Doctoral School in Psychology - Cycle XXXVII

Ester Tommasini PhD candidate

Daniela Tavian Supervisor

UNIVERSITÀ CATTOLICA del Sacro Cuore

CENTRO RICERCHE MAPEI SPORT

PSYCHOLOGY OF CONSPICUOUS CONSUMPTION

Psychosocial exploration of practices related to the consumption of luxury goods and analysis of motivations to purchase counterfeit products

Sara Zannelli, Università Cattolica del Sacro Cuore, Department of Psycology

Supervisor: Prof. Cinzia Castiglioni, Università Cattolica del Sacro Cuore, Department of Psycology

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121 billion €: value of counterfeit market in EU

- The **counterfeit market** represents one of the most intricate challenges for global legal economies. To contrast such illicit market – which operates on the principle of supply and demand like any other conventional market – it is of paramount importance not only to organize repressive activities but also to **understand drivers and antecedents of counterfeiting purchasing behaviour**.
- Starting from these, this thesis **aims to understand the mechanisms that guide consumer purchase of counterfeit products**, focusing on the drivers of consumption and the possible barriers, and attempting to theorise a model capable of summarising the complexity of this illicit behaviour.

Scoping Review

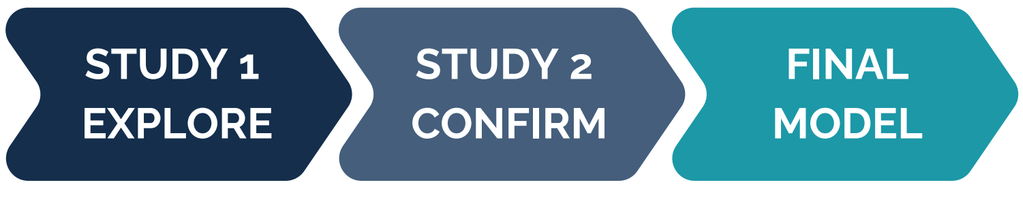
This part of the research systematically examined the existing literature from a psychological perspective to understand the purchasing motivations of both authentic and counterfeit luxury goods, and the barriers to the purchase of counterfeit products, in order to identify key drivers and deterrents and find any gaps in knowledge on the subject. Following the SPAR-4-SLR protocol, the analysis of 29 articles from three different databases revealed a significant gap in psychological studies on this topic, indicating the need for further research.
The most interesting findings from this study are:

the **double impact that social influence has** on the consumption of counterfeit luxury goods, as it can both drive and deter this kind of purchases. Future research should further investigate the extent of these social forces and analyse how, in which contexts, at what conditions, and in which people they act in one or another direction (Bian et al., 2016; Wilcox et al., 2009).

the **lack of a comprehensive model integrating the barriers and drivers of counterfeit consumption**. Developing such a framework could enhance understanding and inform effective countermeasures. A relevant example from another field is the Slippery Slope Framework (Kirchler et al., 2008).

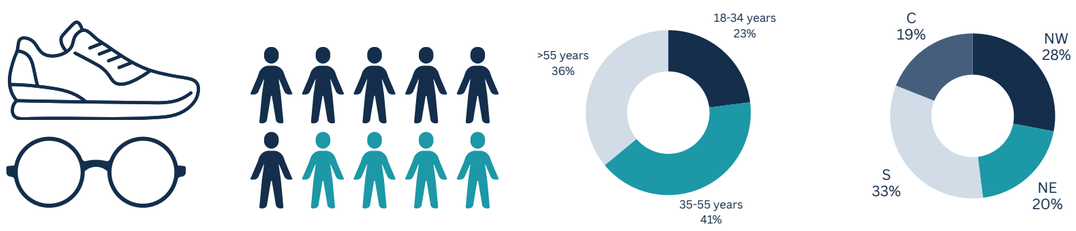
A model for understand counterfeit consumption

- The model of **Slippery Slope Framework** (Kirchler et al., 2008) – originally developed in the tax evasion domain **appears to be suitable to be adapted for describing counterfeit consumption too**, and could allow us to discern which activities—whether repressive or awareness-building—are most effective within the context under study.
- Drawing inspiration from the aforementioned model, we have sought to **adapt it to consumer behavior**, retaining certain aspects while incorporating additional variables such as **Brand Engagement and social aspects** (Hollebeek et al., 2014), to better reflect the characteristics of the phenomenon, where companies, rather than institutions, play a central role, and the social and ostentatious aspect of consumption is a distinctive feature.



A study was performed to test an adapted model of the Slippery Slope Framework on counterfeiting purchasing, incorporating both validated psychometric scales (adapted for the purpose), such as Consumer Brand Engagement (Hollebeek et al., 2014)[2], Self-brand connection (Escalas, 2004)[3], Face consciousness (Wu & Zhao, 2021)[4] and an adapted version of the TAX-I (Berti et al., 2013)[1] and ad hoc items.

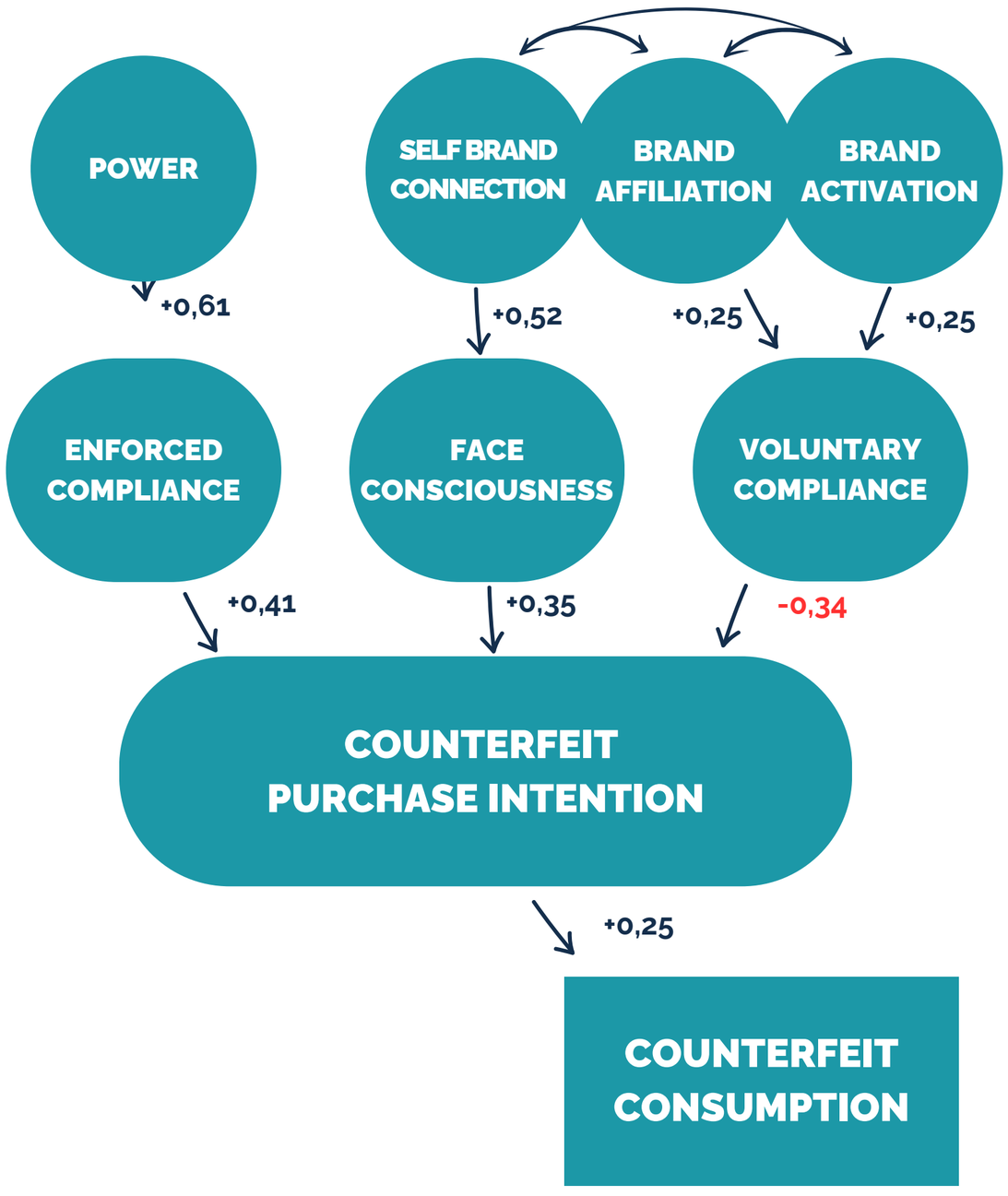
Result



- The exploratory study (Product category: sunglasses; sample: 596 - representative of the Italian population) confirmed hypothesized relationships between constructs using data from a representative Italian sample, with correlation and regression analyses revealing significant variable connections.
- In the confirmatory study (category: sneakers; 786 consumers - representative of the Italian population), a model was constructed, drawing inspiration from the original model while incorporating a new set of variables. The model was analyzed with IBM SPSS AMOS, using structural equation models (SEM). The resulting model demonstrated excellent goodness-of-fit: CFI - 0,918; TLI - 0,910; RMSEA - 0,056; CMIN/DF - 3,426.

Final Model

- Integrating the data from both datasets provided a more comprehensive and robust understanding of the relational dynamics involved.
- Combining the participants in Study 1 and Study 2, a total of 1382 consumers participated in the study.
- The resulting model demonstrated excellent goodness-of-fit: CFI - 0,933; TLI - 0,928; RMSEA - 0,050; CMIN/DF - 4,445.



Antecedentes of Counterfeit Consumption Model

Experimental Study

- Building on these findings, we explored how variables from the theoretical model can inform targeted communication campaigns against counterfeit purchases. To assess their impact, an experimental study tested the influence of different communication frames on consumers' propensity to buy counterfeits (Kahneman & Tversky, 1981).
- The research design consists of a 2 (product category: sunglasses vs. sneakers) x 5 (framing condition: control vs. Enforced Compliance vs. Voluntary Compliance vs. Social Influence – driver vs. Social Influence – barrier) experimental setup. To test the two product categories, two different administrations were performed on two different samples.
- None of the theorized frames proved effective in influencing the intention to purchase counterfeit goods. In summary, the lack of significant results in the experimental portion of this research may be attributed to several factors, for example that text-based communication frames alone were insufficient to influence purchasing intent. future research should focus on identifying effective rhetorical narratives.

Pratical Implication

This thesis provides practical insights for anti-counterfeiting strategies, emphasizing the role of awareness campaigns in highlighting the ethical and social impact of counterfeiting. Institutions can engage the public, while brands can foster emotional connections to strengthen loyalty to authentic products. By promoting prevention, education, and authentic values, this approach aims to create a fairer, more transparent market.

Reference

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