



UNIONE EUROPEA
Fondo Sociale Europeo



Ministero dell'Università
e della Ricerca



REACT EU



UNIVERSITÀ
DELLA CALABRIA



UNIVERSIDAD DE CÓRDOBA

Programma Operativo Nazionale Ricerca e Innovazione 2014-2020 (CCI 2014IT16M2OP005),
risorse FSE REACT-EU, Azione IV.4 “Dottorati e contratti di ricerca su tematiche dell’innovazione”
e Azione IV.5 “Dottorati su tematiche Green”

UNIVERSITÀ DELLA CALABRIA

UNIVERSIDAD DE CÓRDOBA

Dipartimento di Scienze Politiche e Sociali

Facultad de Ciencias de la Educación y Psicología

Dottorato di Ricerca in

Politica, Cultura e Sviluppo
Ciencias Sociales y Jurídicas

CICLO

XXXVII

**EVIDENCE-BASED PROJECTS FOR
THE PROMOTION OF WELL-BEING IN PREADOLESCENCE**

Settore Scientifico Disciplinare PSIC-02/A

Coordinatore:

Ch.mo Prof. Francesco Raniolo

Ch.ma Prof.ssa Eva María Romera Félix

Firma _____

Firma _____



Francesco Raniolo
20.05.2025 15:49:25
GMT+02:00

Supervisore/Tutor:

Ch.ma Prof.ssa Angela Costabile

Ch.ma Prof.ssa Eva María Romera Félix

Firma _____

Firma _____



ANGELA
COSTABILE

ROMERA FELIX EVA
MARIA - 44367471B

Firmato digitalmente por ROMERA
FELIX EVA MARIA - 44367471B
Fecha: 2025.05.16 11:14:03 +02'00'

Dottorando: Dott. Gianluca Mariano Colella

Firma Colella

Gianluca
Mariano

Firmato digitalmente
da Colella Gianluca
Mariano
Data: 2025.05.19
08:42:10 +02'00'

LIST OF CONTENTS

List of tables

List of figures

Acknowledgments and Dedications

Abstract and keywords

Introduction	p. 1
1 CHAPTER 1: Background and context of the study	p. 2
1.1 Bullying, cyberbullying, and aggressive behaviors in preadolescence	p. 2
<i>1.1.1 Developmental processes in preadolescence</i> <i>and psychological well-being</i>	<i>p. 2</i>
<i>1.1.2 Aggressive behaviors and bullying in preadolescence</i>	<i>p. 6</i>
<i>1.1.3 Development in the digital age: the role of ICTs in</i> <i>preadolescence, cyberbullying and cybervictimization</i>	<i>p. 11</i>
1.2 Overview of cyberbullying guidelines and rates across Europe	p. 18
<i>1.2.1 Legal framework and policies in European countries</i>	<i>p. 18</i>
<i>1.2.2 Rates of cyberbullying and cybervictimization</i> <i>across Europe and current research</i>	<i>p. 20</i>
1.3 Risk and protective factors of cyberbullying and cybervictimization in preadolescence	p. 24
<i>1.3.1 Risk and protective factors of cyberbullying</i>	<i>p. 24</i>
<i>1.3.2 Risk and protective factors of cybervictimization</i>	<i>p. 29</i>
<i>1.3.3 The interaction between social media use and</i> <i>psychosocial variables in cyberbullying perpetration and suffering ...</i>	<i>p. 32</i>
2 CHAPTER 2: Intervention programs for cyberbullying prevention in secondary education	p. 35
2.1 Evidence-based practices and prevention in psychology: definitions, criteria, and fields	p. 36
<i>2.1.1 The role of prevention in developmental psychology</i>	<i>p. 36</i>
<i>2.1.2 Evidence-based practices in psychology</i>	<i>p. 37</i>

2.2	The Edutainment approach and Serious Games in psychology training ...	p. 43
2.2.1	<i>Edutainment in psychology: fields and functions</i>	p. 43
2.2.2	<i>Serious Games and digital game-based learning</i>	p. 47
2.3	Overview of national and international school programs and interventions for cyberbullying	p. 51
3	CHAPTER 3: The research project	p. 59
3.1	A cross-national evidence-based research-intervention for cyberbullying: a methodological introduction	p. 60
3.2	The design of the research-intervention	p. 63
3.2.1	<i>Hypotheses and research questions</i>	p. 64
3.2.2	<i>Data collection, treatment, and analysis: ethical considerations on cross-national sampling and procedures</i>	p. 67
3.2.3	<i>The self-report questionnaire</i>	p. 71
3.2.4	<i>A cross-national serial mediation study</i>	p. 74
3.3	The intervention: a Serious Game to raise awareness on cyberbullying in Italian and Spanish secondary schools	p. 76
4	CHAPTER 4: Results and a cross-national explorative study	p. 85
4.1	The preliminary debate groups: Italian students' representations	p. 86
4.2	Research: the survey	p. 88
4.2.1	<i>Italy</i>	p. 89
4.2.2	<i>Spain</i>	p. 93
4.2.3	<i>Results from the cross-national serial mediation model</i>	p. 95
4.3	Intervention	p. 98
4.3.1	<i>Italy</i>	p. 98
4.3.2	<i>Spain</i>	p. 104
4.3.3	<i>Comparison</i>	p. 108
5	CHAPTER 5: Contribution of the project and conclusions: from a public health issue to psychological well-being promotion	p. 111

5.1 Summary of Findings	p. 111
5.1.1 <i>Discussion of findings in relation to research questions</i>	p. 112
5.1.2 <i>The cross-national serial mediation model of cybervictimization and cyberbullying perpetration</i>	p. 117
5.1.3 <i>The intervention with Pro-Social Network</i>	p. 121
5.1.3.1 <i>Comparison between Italy and Spain</i>	p. 121
5.2 Contributions and Significance of the Study	p. 124
5.3 Limitations and Recommendations	p. 129
Conclusion	p. 133
References	p. 135
Appendix A: Discussion Groups structure	p. 185
Appendix B: Questionnaire in Italian	p. 186
Appendix C: Questionnaire in Spanish	p. 196
Appendix D: Serious Game resumen	p. 204

List of tables

- Table 1:** Description of the research project – p. 61
- Table 2:** Demographic characteristics of the Italian sample – p. 68
- Table 3:** Demographic characteristics of the Spanish sample – p. 69
- Table 4:** Sociodemographic information for the Italian (N = 489) and Spanish (N = 406) samples – p. 75
- Table 5:** Explanation of the Serious Game's developmental process – p. 78
- Table 6:** Preliminary scoring system for the Pro-Social Network Serious Game's decision-making moments – p. 83
- Table 7:** Description of the research activities – p. 84
- Table 8:** Descriptive statistics of Internet-related behaviors and social media use in the Italian sample – p. 89
- Table 9:** Descriptive statistics of the investigated variables in the Italian sample – p. 90
- Table 10:** Descriptive statistics of coping sub-scales in the Italian sample – p. 90
- Table 11:** Percentage frequencies in cybervictimization and cyberbullying in the Italian sample – p. 91
- Table 12:** Bivariate correlations among the variables in the Italian sample – p. 91
- Table 13:** Bivariate correlations among coping sub-scales, cybervictimization and cyberbullying in the Italian sample – p. 92
- Table 14:** Descriptive statistics of Internet-related behaviors and social media use in the Spanish sample – p. 93

15. **Table 15:** Descriptive statistics of the investigated variables in the Spanish sample – p. 93
16. **Table 16:** Percentage frequencies and roles in cybervictimization and cyberbullying in the Spanish sample – p. 94
17. **Table 17:** Bivariate correlations among the variables in the Spanish sample – p. 94
18. **Table 18:** Descriptive statistics in the cross-national sample – p. 96
19. **Table 19:** T-test results for independent samples and mean differences controlled for gender – p. 96
20. **Table 20:** Bivariate correlations among the variables in the whole sample – p. 97
21. **Table 21:** Mediation and indirect effects with standardized estimates of cybervictimization (CV, independent variable), Problematic Social Media Use (PSMU), Moral Disengagement (MD) as serial mediators, and cyberbullying (CB) (outcome) – p. 97
22. **Table 22:** Results from the investigated variables in the EG in Italy – p. 99
23. **Table 23:** Results from the coping sub-scales in the EG in Italy – p. 100
24. **Table 24:** Results from the investigated variables in the CG in Italy – p. 101
25. **Table 25:** Results from the coping sub-scales in the CG in Italy – p. 102
26. **Table 26:** Descriptive statistics from the investigated variables in the SG – p. 103
27. **Table 27:** Correlational matrix from the investigated variables in the SG – p. 103
28. **Table 28:** Results from the investigated variables in the EG in Spain – p. 105
29. **Table 29:** Results from the investigated variables in the CG in Spain – p. 106
30. **Table 30:** Descriptive statistics from the investigated variables in the SG – p. 107
31. **Table 31:** Correlational matrix from the investigated variables in the SG – p. 107

List of figures

1. **Figure 1:** Theoretical model of serial mediation effects, linking cybervictimization and cyberbullying through the serial mediating actions of PSMU and MD – p. 74
2. **Figure 2:** A visual scene from Pro-Social Network – p. 80
3. **Figure 3:** Non-standardized estimates results of the direct and indirect serial mediation effects, linking cybervictimization and cyberbullying through PSMU and MD – p. 98
4. **Figure 4:** Realism feedback question from the SG – p. 110

Acknowledgements

L'educazione dovrà rinnovarsi per amore della creazione di un mondo nuovo.
Gandhi

Teaching a stubborn mind is never an easy task, especially when that mind has been shaped by a different educational background and resists adopting new ideas. Convincing someone that a degree of compromise is essential for success in any area of life is an invaluable lesson. Within my research lab, I discovered all of this and more. Both in Cosenza and Córdoba, I found welcoming and supportive environments—that offered not only rigorous lessons, but also engaging and fruitful discussions throughout the PhD years.

Therefore, I do acknowledge the role that each of them had throughout my journey.

I thank Giusy for being so plain to me. I thank Rocco, for being so thorough every time needed. I thank Flaviana for our numerous supportive chats in the Department. I thank Francesco for the friendly guidance throughout the formal and informal events of this journey. I thank Sara and Alberto for their support and for reminding me where I started three years ago. I thank Martina, new colleague and friend, always thoughtless and smiling. I thank Paula, from Córdoba, which provided me with material and personal advices during my abroad period. I thank Maria and Blanca, who helped me with connecting with Spanish kids. I thank Angelo and Domenico for making the job so playful, and Anna for the design of it. I thank all the teachers involved and the school headmasters for adopting our project. I thank Eva, and Rosario, for showing me the naturally kind spirit that Andalusia has to offer and for giving me the opportunity to work and grow with them.

And I thank Professor Angela Costabile, for providing me with the opportunity to experience such a unique journey as the PhD in such a unique place as the University of Calabria, daily source of inspiration and contributions.

Dedications

I dedicate this thesis, first and foremost, to my family. To my mom, a unique human who patiently listened to hours of my emotional struggles and challenging moments. To my dad, who was always there to pick me up every time I arrived at the bus station on my way back home, providing recommendations. To my sister, constantly growing and evolving. To Sofia, Dalila, and Alessandro, the lights of my heart. Your unwavering support has been a beacon, even in the darkest moments.

I also dedicate this work to the friends who stood by me. To Salvatore, Riccardo, Mario, and Danilo. To Marco, who offered me a much-needed escape from science every now and then. A special thought goes to the two Angelas in my life—one who listens and one who speaks. Christian, you're in this thesis too, somewhere. My thanks also go to Marco, Taha, and Giovanni, for the calls and voice messages that brought comfort and connection from far away. A mention for Marianna and Djidji, distant in the world but always close in thought. This journey is also dedicated to Fabrizia, who is becoming an extraordinary person and will always be my friend. I extend my gratitude to my work colleagues—Ciro, Stefano, Maria Grazia, and Alessandro—who welcomed me with open arms whenever I needed them.

To the new friends who became family: Lorenzo, Francesco, and Giuseppe, my roommates who turned into brothers. To Fabio, so young yet so wise. To Martina, new colleague and friend from Sicily. To the incredible spiritual community in Rende—Francesco, Stefano, Claudia, Giuseppe, Vincenzo, Margherita, Gianni, Tullio—your presence has been transformative, changing my life week after week.

And like in every good story, there are those who joined briefly, leaving their mark with just a “hello”. This line is for them, with Francesco's parents at the top of the list. Alessandro, Daniele and Luigi, the late-night drinks and conversations at the university made you more than just colleagues. Laura, Fabiola and Francesca, you have a place here too.

There is Elisa too, new friend, always talkative, inspiring and providing daily memes.

A special thought goes to Antonio and Giovanna—more than mentors, more than examples. Without Igino, Barbara, Valentina, Francesca, Simona, and Giuseppe, this thesis would never have come to life. This one is for you, and for the Ischia InSophia festival team.

A cherish wave goes to the counseling psychology team, so dedicated to improving students' daily life.

To my football friends themselves, a big thank you for the happy challenging moments.

A thoughtful and warm greeting goes to Barbara and Antonio, so welcoming, funny and reliable every time I get back to Naples.

Finally, I thank Sara from the bottom of my heart, the latest yet richest joy of my heart, who recently graduated, for walking beside me through the past year and a half. This journey with you has been one of growth, affection, and life-changing experiences. These months would not have been the same without you. I love you. You always want me to improve. That's difficult but stimulating.

That's all, folks!

Gianluca

Abstract

This doctoral thesis delves into preadolescents' online social behaviors, focusing on cyberbullying perpetration and victimization, exploring their psychological, social, and behavioral dynamics in school contexts across Italy and Spain. Using a cross-national evidence-based research-intervention approach, the project integrates evidence-based practices, an innovative Serious Game, and structured face-to-face discussions to foster socio-emotional competencies and mitigate cyberbullying. Key risk and protective factors, such as moral disengagement, problematic social media use, empathy, coping strategies, and life satisfaction, are thoroughly examined. The findings highlight the necessity of interdisciplinary and collaborative approaches in creating effective prevention programs that align with the unique educational contexts of preadolescents. Rooted in the principles of Positive Technology and Edutainment, this thesis demonstrates the potential of gamified interventions and discussion-based educational strategies in addressing the complexities of cyberbullying in an ever-evolving digital landscape. By examining the interconnected experiences of young people in both online and offline spheres, this research contributes to the development of safer, more inclusive, and empathetic educational ecosystems in Europe, with a long-term goal of fostering sustainable social and emotional well-being.

Keywords: cyberbullying, prevention, preadolescence, evidence-based, serious games

Resumen

Esta tesis doctoral profundiza en los comportamientos sociales en línea de los preadolescentes, centrándose en la perpetración y el sufrimiento del ciberacoso, explorando sus dinámicas psicológicas, sociales y conductuales en contextos escolares en Italia y España. A través de un enfoque de investigación-intervención transnacional basado en la evidencia, el proyecto integra prácticas fundamentadas, un innovador juego serio y discusiones presenciales estructuradas para fomentar competencias socioemocionales y mitigar el ciberacoso. Factores clave de riesgo y protección, como la desconexión moral, el uso problemático de las redes sociales, la empatía, las estrategias de afrontamiento y la satisfacción con la vida, son examinados en profundidad. Los resultados destacan la necesidad de enfoques interdisciplinarios y colaborativos en la creación de programas de prevención eficaces que se adapten a los contextos educativos específicos de los preadolescentes. Basada en los principios de la Tecnología Positiva y el Edutainment, esta tesis demuestra el potencial de las intervenciones gamificadas y las estrategias educativas basadas en el diálogo para abordar las complejidades del ciberacoso en un panorama digital en constante evolución. Al examinar las experiencias interconectadas de los jóvenes en las esferas en línea y fuera de línea, esta investigación contribuye al desarrollo de ecosistemas educativos más seguros, inclusivos y empáticos en Europa, con el objetivo a largo plazo de promover un bienestar social y emocional sostenible.

Palabras llaves: ciberacoso, prevención, preadolescencia, evidence-based, juego serio

INTRODUCTION

*« My pain may be the reason for somebody's laugh. But my laugh must never be the reason for somebody's pain. »
(Charlie Chaplin)*

Within the broader socio-cultural, educational, and ethical context of this dissertation, recognizing cyberbullying perpetration and cybervictimization as two of the most prominently pressing relational challenges among preadolescents is essential. This acknowledgment is not only relevant for psychologists and researchers, but also for teachers, educators, and parents. These individuals are at the forefront, tasked daily with the difficult challenge of managing and guiding the way youth engage with cybertechnologies for communication, learning, entertainment, and identity formation.

Today, the emergence of positive and negative online social behaviors has made the study of digital interactions a central topic in psychosocial research. Across the globe, preadolescents and adolescents are adopting Information and Communication Technologies (ICTs) as tools to communicate, learn, play, and explore their developing sense of self. As online environments profoundly influence the ways young individuals interact, express themselves, feel emotions, and think, fostering social and emotional competencies has become a key priority for healthy psychosocial development.

Grounded in developmental and educational psychology, this dissertation offers a comprehensive overview of core concepts such as preadolescence, aggression, bullying, cyberbullying, education, and prevention. Additionally, it presents an innovative research-intervention project that integrates psychological methodologies with educational and computer-based elements, exemplifying interdisciplinary collaboration.

On a broader scale, the pervasive integration of ICTs and digital screens into human life offers both unparalleled opportunities and significant risks for individuals across all stages of development—from childhood to old age. Over the past few decades, the rise of the Internet and digital technologies has transformed virtually every aspect of human activity. This shift has been further accelerated by the global COVID-19 pandemic, which redefined habits from medical self-care and education to socialization and intimate relationships.

At the heart of these transformations lies the interaction between humans and digital technologies, the foundation of cyberpsychology. This emerging interdisciplinary field is dedicated to exploring the benefits, challenges, and complexities of the Internet, social media platforms, and technological devices within the contexts of daily life. By examining this interaction, we gain valuable insight into both the promises and pitfalls of the digital world, particularly as it shapes the lives of preadolescents and adolescents in the 21st century.

1. CHAPTER 1

Background and context of the study

The first chapter of the thesis provides the background to the project and introduces bullying, cyberbullying and correlates within a developmental and educational psychology framework, supplemented by an overview of preadolescence's developmental processes, and influences on preadolescents' psychological well-being (1.1.1), followed by the portrayal of human aggressive behaviors, and bullying, in this life stage, and of causes, consequences on preadolescents' mental health and related factors (1.1.2). Subsequently, opportunities and risks of Information Communication Technologies (ICTs) for preadolescents are addressed from a scientific position, followed by definitions of cyberbullying perpetration and cybervictimization (1.1.3). For both traditional bullying and cyberbullying, an overview of the most important theoretical models developed in psychology is offered. Across the second section, the most recent and effective legal and European educational actions, as well as rates of cyberbullying and cybervictimization levels in EU countries are illustrated (1.2), through a synthetic review of the current research in the field; lastly, risk and protective factors, as well as the most common antecedents and consequences of cyberbullying and cybervictimization are depicted in relation to preadolescents' problematic online behaviors, introducing the variables of the study (1.3).

1.1 Bullying, cyberbullying, and aggressive behaviors in developmental processes in preadolescence

1.1.1 Developmental processes in preadolescence and psychological well-being

In current psychological research, the notion of developmental processes refers to the series of changes and growth episodes that individuals face across their lifespan, from infancy to old age (Bronfenbrenner & Morris, 1998; Smith et al., 2003). These processes involve physical, cognitive, emotional, and social dimensions that can grow or be maintained throughout the life cycle (Lerner, 2011). For example, in childhood these processes incorporate crucial individual and social indicators, such as learning to walk, to talk, and to form attachments and social interactions, crucial for the future social self's development (Gao & Cummings, 2019). During preadolescence and throughout adolescence, a focus on the individual identity formation and on the development of personal moral and ethical values occurs (Damon & Gregory, 1997), as well as a shift from parental to peer-oriented social relationships (Smetana et al., 2015). These processes are influenced by a combination

of genetic, environmental, cultural, and societal factors and are central to the understanding of human experiences from a scientific standpoint, and how individuals change and grow in multiple contexts across the life cycle (Rosa & Tudge, 2013).

Preadolescence, defined as preteenager or tween years, represents the transitional stage of human development occurring between the ages of 9 and 14 years (Ahn & Reeve, 2021). It represents a crucial bridge between early childhood and adolescence, involving individual physical, cognitive, social, and emotional changes (Bogaerts et al., 2019; Marcia, 1980). This period lays the foundation for the approaching adolescent years and plays a crucial role in shaping an individual's identity, his or her self-esteem, and social relationships (Crocetti, 2018). Throughout preadolescence, significant physical changes take place, as children enter puberty (Malina & Katzmarzyk, 2006), the period of human development in which physical and sexual maturation occurs, leading to the ability to reproduce (Dorn & Biro, 2011), and marked by visible transformations of secondary sexual characteristics like breast development in females and facial hair growth in males, as well as hormonal evolutions affecting the overall reproductive capabilities (Westney et al., 1983). In Western contexts, preadolescents also experience critical changes in their body image and in their self-perception, as they adjust to the physical transformations (Jensen & Steele, 2009). These changes in preadolescents' body image and in self-perception are also influenced by the widespread usage of ICTs, Internet, and social media applications for individual and social purposes: through the pervasive use of screens for multiple activities, they seek self-expression, self-determination and social recognition through a new channel and new opportunities (Spies Shapiro & Margolin, 2014). Thus, growing empirical evidence highlights the crucial positive and negative roles that internet and social media platforms play in the understanding and mentalization of the transforming bodily self of children and adolescents (Halliwell et al., 2018).

Throughout these years, the individual acquires a sense of body image through the evolutionary processes leading to an integration between the body sensations and the mental experiences. An authentic connection between the body and the self is reached in presence of a *good-enough* mother's presence and caring and warm environments (Jacobs, 1995). The emerging sense of self from physical and body changes deeply affected evolutionary trajectories of cognition, emotions, and social behaviors in preadolescence. A positive body image, cultivated through supportive relationships and healthy self-perception, contributes to developing a strong sense of self-esteem and positive well-being (Doswell et al., 1998). On the contrary, negative body image, often influenced by societal standards and peer comparisons, can lead to feelings of inadequacy and insecurity (Striegel-Moore & Cachelin, 1999). Lastly, current studies on the body image development in preadolescence confirm its role as a multifaceted construct involving interrelated dimensions, both physical, and cognitive (Kling et al., 2019). One of the main negative consequences of the construction of a negative body image are the development of eating disorders, risky healthy behaviors, and body dissatisfaction (Bornioli et al., 2019). Thus, one of the most current theoretical models adopted to study the development of negative body image is the sociocultural tripartite influence model, which posits that media, parents, and peers contribute to the internalization

of societal appearance ideals and of the tendency to in negative social comparisons. Moreover, preadolescents begin to develop abstract thinking skills, enabling them to understand and reason about concepts that are not concrete or observable (Florea & Hurjui, 2015). They also display improved problem-solving skills, the ability to think hypothetically, and an increased capacity for critical thinking (Mata et al., 2017). Their cognitive development during this period lays the groundwork for further intellectual growth and academic achievement in adolescence (Bosacki et al., 1999). This development contributes to the integration of self and identity formation, laying the ground for social development. Preadolescents also exhibit increasing cognitive abilities and more sophisticated thinking patterns (Vandenbroucke et al., 2021).

Preadolescence also marks a time of meaningful social development. In this stage, peer relationships become progressively focal in life, and friendships become increasingly important, inside and outside the school yards (Brown & Larson, 2009; Burnett & Blakemore, 2009). Preadolescents seek peer acceptance, approval, and validation, which can influence behaviors, self-esteem, and self-identity (Quinn & Oldmeadow, 2013). It is not infrequent for the first rudimentary social hierarchies to take shape in preadolescence, the first ‘gangs’ consisting of favorite friends and cliques, and the desire to fit in and belong can become prominent, both offline and online (Valkenburg & Peter, 2007). Preadolescents may also experience conflicts with peers and navigate the complexities of social interactions for multiple reasons, including body appearance and self-presentation (Laursen et al., 2001). During the educational period, preadolescents acquire competences in cognition, social relationships and emotion (Havighurst, 1952). Emotional changes become then more intense and variable, reflecting the complex interplay between physical, cognitive, and social development of children at this stage of life. These emotional fluctuations can be attributed to the previously described physical, cognitive, and social factors (Foley et al., 2017): preadolescents might in fact experience frequent mood swings, heightened self-consciousness, and a greater sensitivity to criticism or rejection. Emotional regulation skills are still developing, and they may struggle with managing and expressing their emotions effectively (Zalewski et al., 2011). Preadolescents may also begin to develop a sense of personal identity, exploring their interests, values, and beliefs (Guardo & Bohan, 1981), and are able to analyze complex emotions, understand nuances and ambivalences in feelings’ expression (Harter, 1990). Social and emotional development of preadolescents also contribute to the evolution of their moral consciousness, which now are more capable of judging ambiguous situations based on the respect of social norms and rules, and they are more capable of recognizing external authorities (Kohlberg, 1984).

Although preadolescents increasingly seek independence and autonomy, family relationships remain fundamental (Sessa & Steinberg, 1991). Parents continue to provide guidance and support during this transitional phase (Longmore et al., 2001), and preadolescents may often exhibit a push-and-pull dynamic with their parents as they strive for more independence while still relying on their important role (Van Aken & Asendorpf, 1997). This life stage also covers a crucial time for educational and personal growth: it is during this phase that academic demands increase, and children are exposed to a wider range

of subjects and extracurricular activities (Logan et al., 2019; Wittmann et al., 2008). Parents encourage preadolescents to develop their talents, interests, and skills, which can contribute to their overall sense of competence and self-worth (Baker et al., 1998). Thus, education and formation both in family and school play a vital role in shaping preadolescents' cognitive, social, emotional, and ethical development (Hernandez, 2017).

The analysis of youth's personal and social characteristics is intertwined with a critical overview of ICTs' use, of cyberspace and its role in everyday life, and of digital devices usage affecting youth's activities (especially in Western societies). In fact, digital environments can contribute to accelerating preadolescents' cognitive development and identity formation through constant access to information and educational resources among children (Geith & Vignare, 2008), while also might pose risks, like cyberbullying, excessive screen time, body image and privacy concerns, that can hinder an overall positive development (Baumgartner et al., 2012; Machimbarrena et al., 2018). Preadolescents and adolescents navigate the intersection between offline and online contexts daily (Ortega-Barón et al., 2023), forging identities, building friendships, and exploring their online interests both physically and virtually (Greenfield & Yan, 2006). To support a positive development in youth, it appears imperative to promote responsible and ethical digital citizenship (Jones & Mitchell, 2016; Kim & Choi, 2018), to encourage a balanced technology use (Rapanta et al., 2021), and to ensure that the online world complements rather than competes with the foundational processes of development occurring offline (Heeks, 2016). Understanding how developmental processes in preadolescence intersect with the onset of negative social behaviors, such as aggression and bullying, is pivotal for unraveling the underlying mechanisms that contribute to such behaviors.

Throughout preadolescence, individuals begin shaping their identity, developing emotional regulation skills, and forming deeper peer relationships. Thus, they start to build a strong sense of psychological well-being, defined as more than the absence of illness (Keyes, 1998; Ryff, 1989), and fosters resilience, self-confidence, and positive social interactions, allowing preadolescents to navigate challenges such as academic pressures, peer conflicts, and the growing influence of digital environments (Sagone et al., 2018). The six dimensions of Ryff's psychological well-being include Self-Acceptance, Positive Relationships, Autonomy, Environmental Mastery, Purpose in Life, and Personal Growth, reflecting a eudaimonic perspective focused on life perception rather than the hedonic focus on positive feelings (happiness, positive emotions, and life satisfaction). Clinical studies on preadolescents reported that higher PWBS scores are associated with lower levels of depression and stress, enhancing emotional regulation, and improving overall health outcomes, highlighting its restorative role in mental health (Klainin-Yobas et al., 2021; Lopes & Nihei, 2021). Preadolescents are increasingly exposed to both supportive and harmful digital and environmental influences, requiring cultivating adaptive coping strategies, emotional intelligence, and a sense of belonging in both online and offline environments. Schools, families, and communities play a key role in promoting psychological well-being by fostering safe, inclusive, and empathetic spaces where preadolescents feel valued and supported.

1.1.2 Aggressive behaviors and bullying in preadolescence

In developmental psychology, the concept of human aggression is recognized as a complex behavior involving biological, social, and environmental factors (Eisner & Malti, 2015; Faris & Ennett, 2012). Generally, the term aggression defines “any behavior intended to cause harm or injury to another person, be it physically or psychologically” (Baron & Richardson, 1994, p. 7; Benjamin, 2015), and covers a range of human actions, from verbal aggression such as threats and name-calling to physical aggression involving hitting, kicking, or other forms of harm (South Richardson, 2014), directed towards other people. In this paragraph, the concept of aggression (Greenberg & Cohen, 2014; Imtiaz et al., 2010) is described in its components and expressions, and analyzed in relation to preadolescents’ behaviors, and through some of the most important causes and consequences analyzed from several psychological theories. Following, a definition of traditional school bullying in preadolescence and an overview of the main psychological theories proposed is presented, to introduce a broader reflection on preadolescents’ social development in the current society, characterized by normative and deviant behaviors (Emond et al., 2007).

Developmental psychologists have categorized human forms of aggression into distinct expressions, namely instrumental aggression (aimed at achieving a specific goal), reactive aggression (a response to perceived threat or frustration), and relational aggression (harming others through social manipulation or damage to relationships) (Crick, 1995; Ojanen & Kiefer, 2013). These behaviors are present from childhood to adulthood, and beyond, and present widely studied advantages and disadvantages (Jennings & Reingle, 2012). In relation to preadolescence, the concept of aggression has been studied in the context of normative developmental stages, considering how socialization processes, cognitive development, and emotional regulation competences contribute to the expression and control of aggressive behaviors in several social situations involving peers (Connor, 2004; Huesmann & Guerra, 1997), contributing to the spread of aggressive behaviors and violence among preadolescents, and adolescents as a current social emergency.

In fact, aggressive behaviors can manifest in multiple forms throughout youth, including physical aggression, verbal abuse, and relational aggression (Sharma & Marimuthu, 2014). In the context of peer interactions, where youth might engage in conflicts, or fights as they navigate the complexities of social hierarchies and peer pressure, negative consequences might arise (Dodge et al., 1990). Studying aggressions to introduce the concept of bullying in school settings is helpful to gain a broader understanding of group dynamics among preadolescents. This specific form of aggression involves manipulating social relationships to harm others, often through exclusion, rumors, or social manipulation (Young et al., 2006). In the realm of bullying behaviors, understanding relational aggression is crucial because it can have severe and lasting consequences on victims’ mental health and overall well-being (Wolke et al., 2000). Unlike physical aggression, relational aggression may not leave visible scars, but its impact can be just as detrimental for preadolescents. Victims of relational aggression often face emotional distress, anxiety, and a sense of isolation (Spieker et al.,

2012). The covert nature of relational aggression makes it difficult for educators and parents to identify and intervene effectively. Moreover, as technology plays an increasing role in communication in multiple human activities, aggressive behaviors have found new avenues through social media platforms, amplifying its reach and potential harm in the form of cyberaggressions (Martins & Weaver, 2019; Marwick & Boyd, 2014). Researchers and educators can gain crucial insights into the dynamics of these behaviors, develop targeted intervention strategies, and contribute to creating safer school environments involving peer acceptance and body image control (Yoon et al., 2004). Recognizing early signs of relational aggression is critical for early identification and prevention, fostering positive peer relationships, and promoting a culture of empathy and respect among students (Flack, 2020).

In Western society, several factors can contribute to the development of aggressive social behaviors among peers during preadolescence. One of them is the frequent exposure to violence and aggression in various forms of media, including television, movies, and violent videogames, which can desensitize children to violent behavior and normalize aggression as a means of resolving conflicts. Additionally, negative family dynamics and environment play a crucial role, with experiences of neglect, abuse, or inconsistent discipline at home contributing to the adoption of aggressive behaviors (Kader & Roman, 2018). Peer influences also heavily affect behavior during preadolescence, with peer rejection or acceptance, social hierarchies, and peer pressure contributing to the development of various types of aggressive tendencies (Espelage & Holt, 2013). Furthermore, societal factors, such as socioeconomic disparities, cultural norms that glorify aggression, and limited access to opportunities can exacerbate feelings of frustration, leading to aggressive behaviors as a coping mechanism (Ellickson & McGuigan, 2000). Finally, individual factors such as temperament, emotional regulation skills, and cognitive biases can influence the propensity for aggressive behaviors (Côté et al., 2006).

The consequences of aggressive behaviors might affect preadolescents' overall health and developmental processes (Piko et al., 2006), both on a short and on a long-term basis. For example, children who consistently exhibit aggressive attitudes may struggle to form and maintain positive social competences and relationships with peers in the future, leading to social isolation and potential subsequent peer rejection (Rubin & Mills, 1988); such difficulties in interpersonal relationships and social interactions can contribute to the development of feelings of loneliness and emotional distress (Cassidy & Asher, 1992; Rubin et al., 1993). Moreover, engaging in aggressive acts may contribute to the development of emotional symptoms and psychiatric disorders, influenced by heightened stress and anxiety (Craig, 1998), and preadolescents struggling with aggressive behaviors may also face increased risk of developing conduct disorders or other mental health issues later in life (Schaeffer et al., 2003; Turgay, 2004). Aggressive actions perpetrated on other people can negatively contribute to the development of emotional regulation skills, preventing children from coping with the frustration and the stress derived from daily experiences in healthier ways (Robertson et al., 2012). On the educational and academic achievement side, aggressive behaviors have been linked to disruptions in the learning environment, affecting both the aggressor and their peers (Petrides et al., 2006). Lastly, the long-term consequences of

persistent aggression exposure in youth may extend into adulthood: individuals who exhibit aggressive behaviors during childhood may be at a higher risk of engaging in delinquent activities, substance abuse, and experiencing challenges in forming stable relationships later in life (Bushman & Huesmann, 2006; Huesmann et al., 2009).

Historically, several psychological theories have been developed trying to explain the development of human aggressive behaviors throughout the life cycle. The Frustration-Aggression model, proposed by Dollard and colleagues (Breuer & Elson, 2017), posits that frequent frustrating experiences, resulting from the blocking of goal-directed behavior, lead to act in the environment through aggressive behaviors (Vovk et al., 2020). According to this model, when adult individuals experience frustration or interference in achieving their goals, they become motivated to reduce this unpleasant state through aggression, which serves as a means of releasing the pent-up frustration and restoring a sense of control or mastery over the situation (Funkenstein et al., 1957). Importantly, the intensity of aggression is thought to be proportional to the level of experienced frustration. While the frustration-aggression model highlights the role of frustration in triggering aggressive responses, it also acknowledges that other factors, such as individual differences and situational cues, can influence the likelihood and form of aggression. This model has mainly been studied in relation to adults' aggressive behaviors.

The Cognitive Neoassociation Model, proposed by Berkowitz (2012), offers insights into the cognitive and emotional processes underlying various aggressive behaviors. According to this model, aggressive behavior is triggered by negative affective states, such as frustration or anger, which activate aggressive thoughts and memories stored in memory networks. These aggressive cognitions, in turn, increase the likelihood of aggressive behavior by biasing information processing and decision-making in favor of aggressive responses (Kuin et al., 2015). Moreover, the model suggests that physiological arousal, such as heightened adrenaline levels, can amplify the impact of these aggressive cognitions, further facilitating aggressive behavior. Overall, the CNM highlights the interconnectedness of cognitive, emotional, and physiological factors in shaping aggressive behaviors throughout the life cycle, offering a more comprehensive overview of aggressive behaviors in multiple contexts.

Lastly, the General Aggression Model (GAM) is a theoretical framework developed by Anderson and Bushman (2020) to explain the relationship between aggression and multiple factors that influence aggressive behavior. The GAM proposes that aggression is influenced by a combination of personal, situational, and cognitive factors that interact with one another over time. Personal factors such as personality traits, past experiences, and physiological factors, as well as situational factors such as environmental cues and social norms, can all influence an individual's aggressive behavior (Lau & Marsee, 2013). In addition, cognitive factors such as attention, interpretation, and memory processes can also play a significant role in shaping aggressive behavior. By considering these multiple factors and their interactions, the model has also been applied to the study of aggressive behaviors in youth and provides a comprehensive framework for understanding the complex nature of aggressive behaviors and can be used to inform the development of effective prevention and

intervention strategies. Within the context of aggression perpetration during preadolescence, investigating these features is crucial; in fact, this has been one of the most important psychological models linked to the study of aggression and bullying in youth.

Within educational settings, aggressions among preadolescents took a specific form in the past decades across different societies and cultures: bullying progressively gained its place as a global public health concern in the past decades (Merrell et al., 2006). Bullying refers to repeated, intentional aggressive behavior that involves an imbalance of power between the bully and the victim (Marsh et al., 2011). It is a significant concern that can have profound and long-lasting effects on the well-being and development of children and adolescents (Rettew et al., 2016). It can take various forms, including physical aggression, verbal harassment, social exclusion, and cyberbullying, considered both as an indirect form of bullying and as a specific behavior which distinguishes it from traditional bullying (Menesini & Salmivalli, 2017). Understanding the dynamics of bullying at school during preadolescence is crucial for effectively addressing and preventing this issue (Smith & Brain, 2000; Olweus & Limber, 2010). Bullying is prevalent in school settings, and preadolescence is a period when bullying rates tend to increase (Hemphill et al., 2015). Whether it occurs online or offline, bullying represents a multifaceted and pressing current concern (Fraser, 1996). Research has shown that bullies share several predictors of traditional physical bullying behaviours including indicators of anger, depression, anxiety (Crawford & Manassis, 2011); this early social problem involves distinct roles: the bully, the victim, and bystanders (Smith, 2004). The bully is the individual who engages in aggressive behavior to exert power over others (Menesini et al., 2013). The victim is a person who experiences bullying and is often targeted repeatedly. Bystanders are individuals who witness bullying but are not directly involved (Zych et al., 2019), and they can play a crucial role in either reinforcing or preventing bullying, depending on their actions (DeSmet et al., 2014).

Traditional bullying among children and adolescents can stem from various factors within Western society. One significant contributor is social dynamics within peer groups, where individuals may be targeted based on perceived differences in appearance, behavior, or social status (Sentse et al., 2015). Peer rejection or exclusion can also fuel bullying behavior, as individuals seek to assert power and dominance within social hierarchies (Dijkstra et al., 2007). Additionally, societal and family factors such as cultural norms that condone or overlook bullying behavior, as well as a lack of intervention or consequences for perpetrators, can perpetuate the cycle of bullying in preadolescent social settings. Furthermore, individual factors such as low self-esteem, poor social skills, or a history of victimization may make certain individuals more vulnerable to being targeted by bullies (Kljakovic & Hunt, 2016).

The consequences of bullying in preadolescence can be profound and multifaceted. At the individual level, victims of bullying often experience a range of negative outcomes, including psychological distress such as anxiety, depression, and low self-esteem (Kokkinos & Panayiotou, 2004). These effects can have long-lasting implications for mental health and well-being, potentially persisting throughout the adulthood period. Victims may also

struggle academically, as the stress and emotional toll of bullying can interfere with concentration, learning, and school engagement (Moore et al., 2017). Victims may also face difficulties in forming and maintaining peer relationships, leading to feelings of isolation and loneliness. Additionally, there is evidence to suggest that being bullied in preadolescence and adolescence increases the risk of engaging in risky behaviors such as substance abuse and delinquency (Wong & Schonlau, 2013). Furthermore, the impact of bullying extends beyond the individual level to affect the broader school environment, contributing to a culture of fear, mistrust, and insecurity among students, and poor academic performances (Hutzell & Payne, 2012).

Psychological theories developed to explain bullying in schoolchildren tried to shed light on various aspects of this phenomenon. According to the social learning theory (Bandura & Walters, 1977), individuals learn aggressive behaviors through observation, imitation, and reinforcement. In the context of bullying, children may observe aggressive behaviors modeled by peers, family members, or media figures, and subsequently emulate these behaviors in their own interactions. Positive reinforcement in the form of social status or perceived power may further reinforce bullying behavior; through repeated exposure to these social learning processes, children internalize aggressive scripts and develop a propensity for engaging in bullying behavior themselves. Additionally, the social learning theory highlights the importance of environmental factors, such as peer group norms and social dynamics, in shaping bullying behaviors.

The ecological systems theory, proposed by Urie Bronfenbrenner, offers a comprehensive perspective on bullying among schoolchildren by examining the influence of multiple environmental systems on individuals' behavior. According to this theory, individuals are embedded within a series of interconnected environmental systems, ranging from the immediate microsystem of family and school to the broader macrosystem of cultural norms and societal values (Darling, 2007). Within the microsystem, factors such as family dynamics, peer relationships, and school climate can directly impact children's experiences with bullying, both as perpetrators and victims. Additionally, the mesosystem describes the interactions between different microsystems, such as the relationship between family dynamics and school experiences in shaping bullying behavior. Furthermore, the ecosystems consider broader social structures and institutions that might indirectly influence bullying, such as media portrayals of violence or community support networks. Finally, the macrosystem encompasses cultural beliefs, societal attitudes, and legislative policies that shape the prevalence and responses to bullying within a given society.

The Social Identity Theory, proposed by Henri Tajfel (Tajfel & Turner, 2004), suggests that individuals derive a significant part of themselves from their membership in social groups, such as gender, ethnicity, or school affiliation. This theory posits that people strive to maintain a positive social identity by enhancing the status of their in-group relative to out-groups and identifying with the achievements of their group members. In the context of bullying among preadolescents, the Social Identity Theory becomes relevant as it helps explain how group dynamics influence behavior. Bullying occurs within the context of group

dynamics, where perpetrators seek to establish dominance and reinforce their in-group status at the expense of the victim, who may belong to an out-group or be perceived as different in some way. Moreover, the theory sheds light on the role of bystanders in bullying situations. Bystanders who identify strongly with the perpetrator's group may be more likely to support or condone the bullying behavior to maintain their social identity and group cohesion. Conversely, bystanders who identify with the victim's group may feel a sense of solidarity and empathy, motivating them to intervene or report the bullying behavior. Bullying behaviors target aspects of social identity and of body-self construction and mentalization, such as gender, ethnicity, or perceived social status, exacerbating feelings of exclusion or marginalization, especially in school settings (Earnshaw et al., 2018; Galán et al., 2021).

Nowadays, preadolescents across the world are highly engaged in online activities, including social networking, gaming, and information sharing (Hernández-Martín et al., 2021; Lusk, 2010). The accessibility and anonymity provided by ICTs have contributed to the materialization of opportunities, such as the growth of online social interactions, of learning environments and of communication means, but they have also exposed youth to potential risks, such as cyberbullying, or subsequent personal and social mental health problems (Bruni et al., 2015; Richards et al., 2015; Slonje et al., 2017).

1.1.3 Development in the digital age: the role of ICTs in preadolescence, cyberbullying and cybervictimization

Human development is today profoundly shaped by daily experiences in both the physical and in the digital realm (Antoci et al., 2015). The interaction between developmental processes and the digital landscape, encompassing offline and online settings and representing a new channel for communication, and self-expression (Reich et al., 2012), has become intricate and influential across multiple cultures (Scott et al., 2021; Way & Malvini Redden, 2017). The digital age has ushered in a transformative era for preadolescents, where the integration of the Internet, ICTs, and social media has redefined the very fabric of their lives and their languages. As they navigate this complex and critical intersection of development and technology, understanding their multifaceted impacts, both positive and negative, is paramount.

The term “digital landscape” refers to the general structure, characteristics, and dynamics of the digital environment, affecting multiple human dimensions and activities (Webster et al., 2020). According to the Digital 2023 report, there has been a significant increase in Internet users to 64,4% of the world's population in 2023, and 59.4% of the world's population are active social media users (We Are Social & Hootsuite, 2023). Regarding the situation on the Italian population, the report shows that there were 50.78 million Internet users in Italy at the start of 2023, when internet penetration stood at 86.1 percent; moreover,

Italy was home to 43.90 million social media users in January 2023, equating to 74.5 percent of the total population. Lastly, a total of 78.19 million cellular mobile connections were active in Italy in early 2023, with this figure equivalent to 132.6 percent of the total population. From these simple national and international rates, it is possible to recognize that the integration of technology and online spaces has introduced novel dimensions to preadolescents' overall developmental processes, and well-being (Keengwe et al., 2008). The interplay between these settings is dynamic: offline experiences shape online behaviors, and vice versa (Lieberman & Schroeder, 2020). Thus, understanding how the ICTs influence developmental processes is essential. In the context of psychology, technology, and communication, this influence encompasses various online platforms, networks, and technologies that individuals engage with, including websites, social media, apps, and digital devices. It involves the arrangement and interaction of digital elements within the virtual realm (Gualberto & Kress, 2019). Cyberspace is the specific online environment in which people fulfil crucial needs; the shift from face-to-face (FtF) to computer-mediated relationships represents a revolution not only for technology researchers, but also for psychologists and social scientists (Smith et al., 2021).

The Internet has then progressively become an essential part of human daily life. From a psychological perspective, digital spaces play a significant role in the needs and self-social development of preadolescents (Borca et al., 2015). As shown by studies in different fields of psychology involving multiple populations and adolescents in a particular way, the internet applications affect psychosocial well-being (Amichai-Hamburger & Etgar, 2018; Castellacci & Tveito, 2018; Machimbarrena et al., 2019). A minority of social media applications users show increasingly high rates of problematic use, which can affect work and academic performances, or personal, and social life (Tosuntaş et al., 2020). Access to social applications through smartphone and home computers in early childhood allow preadolescents and adolescents to text, share, edit or report to peers and with them daily and easier than in the past (Meeus et al., 2022). The increase in digital technological connectivity has had an impact on dysfunctional internet-related behavior, cognitions, emotions, and body image development (Andreassen, 2015; Appel et al., 2020) among preadolescents and adolescents, who access cyberspace daily in most parts of Western societies (van der Merwe, 2014).

In the current landscape, the dynamics related to the body appearance, peer acceptance, and involving the corporeal self are significantly influenced by the pervasive use of information and communication technologies (ICTs), particularly social media, among preadolescents and adolescents specifically. During preadolescence, the relationship between education, school, ICTs, and social media plays a pivotal role in shaping adolescents' experiences and social behaviors (Castillo-Abdul et al., 2020; Dalibert & De Iulio, 2015; Glüer & Lohaus, 2016; Valkenburg et al., 2011). With the progressive integration of ICTs and social media applications into educational settings, preadolescents gain enhanced access to multiple information and learning opportunities (Escortell et al., 2023; Fernandez-Montalvo et al., 2015; Joshi & Rose, 2018; Plester & Wood, 2009). Thus, social media platforms often amplify societal beauty standards, presenting curated images that can

impact individuals' perceptions of their own bodies and identity formation (Subrahmanyam et al., 2011), causing potential impairments in the emotional and social development. The quest for peer acceptance and self-construction, a central theme in preadolescence, extends to the online realm, where likes, comments, and virtual approval become crucial indicators of social standing, (Timeo et al., 2020), affecting emotional regulation competences (Wood et al., 2016). The constant exposure to idealized body images on social media channels may contribute to the development of feelings involving body dissatisfaction and a negative corporeal self-concept among preadolescents (Markey & Daniels, 2022). The desire for peer acceptance can intensify as these platforms become spaces for frequent comparison and validation processes. The online environment provides a platform for both positive and negative social interactions, and preadolescents may use these spaces to express their struggles with body image or, conversely, to engage in aggressive behaviors towards peers. In this context, preadolescents may engage in online interactions, seeking affirmation and social validation (Meeus et al., 2019). Thus, the digital realm could introduce new social challenges, such as cyberbullying or other consequences, where aggressive behaviors manifest in virtual spaces.

In this background, the landscape of youth relational aggressions has expanded from traditional settings, to include the online spaces (Grigg, 2010). Cyberbullying, characterized by harassment, threats, or humiliation through digital means, is a prevalent and deeply concerning form of online aggression, representing a public health concern (Langos, 2012; Notar et al., 2013a). Cyberbullying is defined «as the use of digital technologies to harass, intimidate, or embarrass others» (Smith et al., 2008; Smith, 2012; Smith & Berkun, 2017; Watts et al., 2017), which has been a global issue among schoolchildren and adolescents (Livingstone, 2019). It encompasses various forms, including sending hurtful messages or threats, sharing embarrassing or private information, spreading rumors, and engaging in exclusion or social manipulation online, presenting an overlap with traditional bullying (Sticca & Perren, 2013). The terms 'cyberbullying' and 'cyber-aggression' have been used interchangeably (Mishna et al., 2018), evidencing an occasional and partial overlap between the two terms and behaviors. Cybervictimization is defined as the harm suffered due to being a victim of cyberbullying (Corcoran et al., 2015). Even though it can be considered as a specific type of bullying, the following characteristics of cyberbullying might differentiate it from traditional bullying (Menesini et al., 2013a; Menesini et al., 2013b; Palladino et al., 2017): (a) anonymity of the harassment; (b) publicity of the aggression; (c) online permanence of the content; (d) amplification of consequences; (e) daily accessibility beyond physical restraints; (f) repetition of behaviors; (g) online social exclusion. Bullying and cyberbullying have been found to be highly correlated (Baldry et al., 2017; Modecki et al., 2014; Waasdorp & Bradshaw, 2015). Differently from bullying, cyberbullying may extend beyond school hours, infiltrating the online lives of youth and impacting their emotional well-being (David-Ferdon & Hertz, 2007), and is considered as a serious type of violent behavior among peers (Ortega-Ruiz et al., 2002). Willard hypothesized a taxonomy (2007) of cyberbullying victimization, providing a framework for understanding the specific behaviors that might have a negative online impact: (a) flaming, which means sending angry messages about a person to an online group or via email; (b) online harassment, referring to

repeated offensive messages or texts sent online; (c) cyberstalking, defining online harassment or intimidation; (d) denigration, involving negative statements shared online about a person or a group; (e) outing, meaning the online spread of personal sensitive information; (f) masquerading, which refers to posting online material as someone else; (g) exclusion, referring to online ignoring or marginalizing someone; (h) sexting, online sharing of personal explicit sexual content (Scheithauer et al., 2021). The anonymity and permanence of online interactions exacerbate the impact of cyberbullying on victims (Cyberbullying across the globe, Navarro et al., 2015). The anonymity and detachment offered by online platforms can amplify the intensity and reach of such behaviors (Vaillancourt et al., 2017). Negative experiences, such as cyberbullying, can further exacerbate issues related to body image and self-esteem.

Before delving into the causes and consequences of cyberbullying, and into the theories currently addressed by developmental psychologists studying cyberbullying, a specific mention is helpful to define the bystander role in cyberbullying behaviors among preadolescents: the cyberbystander is someone who sees what is happening between the cyberbullies and the cybervictims but is not directly involved in the episode. In traditional cases of bullying, the bystander's role is limited to that of physical witnesses of the conflictual episode. Online, the number of bystanders can be thousands or in some rare cases millions because of content spreading virally online. There is no clear distinction between a perpetrator and a bystander with regards to cyberbullying. While bystanders in traditional bullying are just passive or encourage the perpetrator, bystanders in cyberbullying can be involved in the incident. If a perpetrator posts derogatory content about a victim online and bystanders choose to share the content their role becomes like that of the cyberbully. By consuming, liking, and sharing the harmful content, bystanders may, thus, reinforce the behavior of perpetrators (Machackova, 2020). Regarding the roles involved in cyberbullying perpetration, according to Salmivalli et al., (1996), bystanders can impact on bullying or a cyberbullying situation by reinforcing the bully by joining in, or passively accepting the situation, or they can distance themselves from the bullies or defend the victims. Research has shown that bystanders can be trapped in a social conflict; they may claim to be against bullying but might also want to defend themselves and maintain their own status (Salmivalli, 2010; You & Lee, 2019). The study of the bystander's role in cyberbullying experiences is critical to understanding how indirect pro-social behaviors might inhibit perpetration of negative actions among peers in preadolescents.

The principal causes of cyberbullying perpetration and victimization among preadolescents and adolescents are complex and multifaceted. On the perpetrator's side, various individual factors may contribute to engaging in cyberbullying behavior, including a lack of empathy, low self-esteem, and a desire for power and control (Santre, 2023). Individuals with a tendency toward aggression or impulsivity may also be more likely to engage in cyberbullying as a means of expressing their frustrations or asserting dominance over others (Mills et al., 2023). Social factors, such as peer influence and a culture that condones or even encourages online harassment, can also play a significant role in shaping cyberbullying behaviors among peers (Bali et al., 2023). Additionally, access to technology

and anonymity afforded by online platforms may lower inhibitions and increase the likelihood of engaging in harmful behaviors (Brighi et al., 2019). On the victim's side, factors such as perceived vulnerability, social isolation, and low self-esteem may increase the likelihood of being targeted for cyberbullying (Bayraktar et al., 2015). Moreover, specific online behaviors or characteristics, such as sharing personal information or expressing unpopular opinions on a topic or argument, may also increase the risk of becoming a victim of cyberbullying in specific online communities (Underwood & Ehrenreich, 2017).

The consequences of cyberbullying perpetration and victimization among preadolescents and adolescents can be profound and far-reaching. The digital and intangible nature of cyberbullying victimization amplifies the intensity of these emotional reactions, as the attacks can be relentless and pervasive, infiltrating personal spaces and affecting victims beyond the school environment. While cyberbullying occurs in the virtual realm, physical and emotional responses have a devastating effect on young people (Connell et al., 2014). For cyberbullies, engaging in cyberbullying perpetration may lead to severe legal consequences, disruption of their reputation, and strained relationships with peers and authority figures (Berne et al., 2019). Moreover, individuals who perpetrate cyberbullying may also experience negative emotional consequences, such as impunity, or guilt, shame, and remorse, as well as an increased risk of engaging in future aggressive behaviors (Carvalho et al., 2018; Gardella et al., 2017). On the other hand, victims of cyberbullying may experience a range of negative outcomes, including psychological distress, anxiety, depression, and low self-esteem (Garaigordobil & Machimbarrena, 2019). Research in psychology indicates that victims of cyberbullying often experience heightened levels of stress, anxiety, and depression in the immediate aftermath of online victimization (Kowalski et al., 2014). Regarding the long-term consequences of cyberbullying perpetration and cybervictimization experienced during preadolescence, they cast a shadow over individuals' overall psychosocial development. Prolonged exposure to such digital aggressions, in fact, can contribute to the development of persistent mental health issues, including anxiety disorders, depression, and even an increased risk of suicidal ideation (Hinduja & Patchin, 2010). Cybervictimization can also have detrimental effects on victims' academic performance, social relationships, and overall well-being (Menken et al., 2022; Tran et al., 2022). Furthermore, the pervasive nature of cyberbullying experiences can make it difficult for victims to escape harassment, leading to feelings of helplessness and isolation, or even suicide attempts (Brown et al., 2014; Buchanan & McDougall, 2021; Dorol & Mishara, 2021). Moreover, perpetrators may experience legal consequences, damage to their reputation, and social isolation and maladjustment (Miller, 2016; van Geel et al., 2017). On the other hand, victims often endure emotional distress, school-related problems, and long-term psychological consequences, including anxiety and depression (Schoeler et al., 2018). In the process of developing their body self-concept, they may encounter unique challenges online, where body image issues can be exacerbated by the exposure to curated content, peer pressure, and potential cyberbullying incidents (Berne et al., 2014; Hamid et al., 2018). In this sense, a significant positive correlation has been found between individuals experiencing cyberbullying and successive suicidal ideation, also known as having suicidal thoughts later during the life cycle. Victims of bullying are three times more likely to be involved in an

incident of school violence or delinquency than those who are not (Hinduja & Patchin, 2007). Lastly, when considered as antecedents, researchers reported that cyberbullying and cybervictimization act as predictors for emotional and behavioral problems during adolescence (Kim et al., 2018; Kim et al., 2019). These consequences represent a strong negative influence on preadolescents' overall mental health, impacting their psychological well-being, online and offline social interactions, and jeopardizing their present and future lives (Walsh et al., 2020).

According to research, “a gold standard” in the study of cyberbullying is lacking, and scholars have been debating on its specific characteristics, and overlapping with traditional bullying (Wingate et al., 2013). This overlapping involves a direct and intricate relationship between physical and mental experiences, since looks, physical imperfections deviating from Western beauty standard or body dissatisfaction might foster cybervictimization experiences. Thus, a clear line to distinguish between traditional bullying and cyberbullying is hard to draw. Offline negative episodes might be a source for subsequent episodes of online harassment and victimization. Several scientific models have been developed to elucidate the intricate dynamics underlying cyberbullying behaviors (Barlett, 2017; Savage & Tokunaga, 2017). These models amalgamate theoretical insights with empirical evidence to delineate the myriad individual, social, and environmental factors shaping cyberbullying perpetration and victimization. While some models delve into individual attributes like moral disengagement, empathy deficits, and impulsivity, others underscore the influence of social contexts such as peer dynamics, familial interactions, and cultural norms. By offering a holistic comprehension of the multifaceted determinants of cyberbullying, these models serve as invaluable frameworks for devising targeted prevention and intervention strategies tailored to address specific risk and protective factors associated with cyberbullying behaviors.

The Bartlett and Gentile Cyberbullying Model provides a comprehensive framework for understanding the dynamics of cyberbullying, particularly in the context of preadolescence. This model posits that cyberbullying involves a complex interplay of individual, social, and environmental factors (Barlett et al., 2017). At the individual level, factors such as personality traits, attitudes, and motivations play a crucial role in shaping cyberbullying behaviors. Social influences, including peer relationships, social norms, and group dynamics, further contribute to the perpetration and reinforcement of cyberbullying. Additionally, environmental factors such as access to technology, parental supervision, and school climate can either exacerbate or mitigate cyberbullying incidents. By elucidating these multifaceted influences, this model offers valuable insights into the mechanisms underlying cyberbullying among preadolescents, informing interventions and prevention efforts aimed at addressing the unique vulnerabilities of this age group in the digital realm.

Differently, the Socioecological Diathesis Model provides a nuanced understanding of cyberbullying among preadolescents by integrating individual vulnerabilities with a broader analysis of social and environmental influences (Swearer & Hymel, 2015). This model posits that cyberbullying arises from the interaction between individual predispositions, such as

temperament, coping strategies, self-esteem, and contextual factors, including family dynamics, peer relationships, school culture, and societal norms. In the context of preadolescence, where developmental vulnerabilities may intersect with the pervasive influence of digital technologies, the Socioecological Diathesis Model highlights the importance of considering both intrapersonal and environmental factors in understanding cyberbullying perpetration and victimization. By delineating the intricate interplay between individual vulnerabilities and social contexts, this model informs targeted interventions that address the multifaceted nature of cyberbullying among preadolescents, aiming to mitigate risk factors and bolster protective factors within various spheres of their lives.

The Uses & Gratifications Theory (LaRose, 2001; LaRose et al., 2004) has been tested in association with cyberbullying perpetration in youth, as a theoretical framework that aims to explain why people use different media, such as social media platforms, and what gratifications they derive from their use. This theory suggests that individuals actively choose and use media based on their own needs, motives, and desires, rather than being passive consumers of media content. According to this theory, people use media to fulfill specific needs such as social interaction, entertainment, information-seeking, and personal identity formation. The gratifications that individuals derive from media use are thought to vary based on their individual characteristics, such as personality traits, social context, and life stage. In the context of cyberbullying, the theory has been tested to examine personal motives behind cyberbullying perpetration (Tanrikulu et al., 2021). This study suggests that perpetrators may engage in such behavior to fulfill specific psychological or social needs: the authors examine various motives behind cyberbullying perpetration, shedding light on the underlying factors driving individuals to engage in this harmful behavior. One of the limitations of this model, when applied to cyberbullying research, is that it assumes that some kind of positive personal motivation drives the perpetration of online negative behaviors, to satisfy a specific need.

Lastly, the Cyclic process model in cyberbullying posits a complex interplay of factors contributing to the perpetuation of online aggression (Den Hamer et al., 2014; Den Hamer & Konijn, 2016). This model suggests that cyberbullying behaviors often involve a cyclic process, where various psychological, social, and environmental factors interact dynamically over time. Preadolescents may struggle with regulating their emotions effectively, leading to heightened vulnerability to both perpetration and victimization in cyberbullying scenarios. Difficulties in managing emotions such as anger, frustration, or distress may fuel impulsive and reactive responses, increasing the likelihood of engaging in cyberbullying behaviors or becoming targets of such behaviors. Additionally, experiencing cyberbullying incidents can further exacerbate emotional dysregulation, creating a negative feedback loop that perpetuates the cycle of aggression. This model is helpful to address the cognitive and behavioral coping strategies that children and adolescents might adopt to regulate their emotional responses to online harassment or victimization.

1.2 Overview of cyberbullying guidelines and rates across Europe

The last decades have seen a severe rise in cyberbullying rates in various age groups, thus comprehending the current legal actions and norms shared in each country is fundamental to addressing cyberbullying and online aggressive behaviors coherently and through a preventive approach. An overview of the legal actions and of recent rates of cyberbullying and cybervictimization levels across several European countries is illustrated, to provide a broad comprehension of the current research in the field.

1.2.1 Legal framework and policies in European countries

Over the past years, developmental psychologists, educational professionals, and institutions have progressively recognized bullying and cyberbullying as concerning contemporary educational and social problems affecting multiple countries, demanding innovative intervention and prevention strategies based on empirical evidence to address the potential risks implicated in this public health problem (Wang et al., 2022).

To prevent cyberbullying, specific European policy decisions have been progressively taken throughout the years, and numerous programs have been defined and implemented across multiple countries. Nevertheless, at the current moment there is no EU-wide anti-online bullying law so far, only national directives with no legal value, and the way member states implement them in their jurisdiction remains up to the impact of this phenomenon; this means that European institutions need to continue to research, to legislate and to encourage collective and individual actions.

For example, according to the current legal framework in the EU, cyberbullying perpetration could constitute a violation of Article 19 of the UN Convention on the Rights of the Child (UNCRC) on the protection from all forms of violence¹. It could also constitute a violation of other UNCRC rights such as the right to leisure and play (Article 31) and the right to freedom of expression (Article 13). Thus, the institutional response to cyberbullying built in the European context has seen a progressive surge in innovative interventions targeting various aspects of the problem. These strategies covered a wide range of concrete actions, including school-based educational programs, peer support initiatives, the development of digital educational platforms, and applications aimed at fostering digital literacy, empathy, and responsible online conduct (Menesini et al., 2021). European countries have significantly invested in research and policy development to comprehend the complexities of cyberbullying and design evidence-based solutions (Eisner & Malti, 2012; Hutson et al., 2018; Palladino, 2014). These multifaceted interventions showcase a proactive

¹ [Convention on the Rights of the Child](#)

dedication to combat cyberbullying and cultivating a safer digital space for young individuals across the continent.

Even in the absence of a specific European law, a range of legally binding Council of Europe measures apply to bullying online. These include the European Convention for the Protection of Human Rights and Fundamental Freedoms and the European Social Charter which requires the protection of children against all forms of violence. The Conventions on Cybercrime, on Automatic Processing of Personal Data and on Protection of Children against Sexual Exploitation are also relevant to cyberbullying. Although not binding, the Council's Strategy on the Rights of the Child for 2016-2021 identifies children's rights in the digital environment among its priorities. In this sense, the EU Agenda for the Rights of the Child (2011-2014) sets a range of objectives including combating violence against children in the online environment. Moreover, regarding children's safety online, specific policy initiatives have been adopted. The Commission's 2012 Strategy for a Better Internet for Kids (BIK) aims to protect children from exposure to harmful content and empower them to deal with online risks such as cyberbullying. This strategy contributed to the launch of several specific programs, including the support to industry self-regulatory initiatives. In the same context, a wide range of EU financial programs have been launched such as the Better Internet for Kids program (Better Internet for Kids, 2016). Furthermore, on the 25th Anniversary of the UNCRC, the European Parliament adopted a Resolution recognizing the growing concerns regarding the protection of children on the internet (European Parliament, 2014). The Resolution requires Member States to combat cyberbullying and raise awareness of the phenomenon. Efforts from institutions, universities, professionals, schools, and policymakers align with the goals set forth by the United Nations 2030 Agenda for Sustainable Development (Burbules et al., 2020). Despite the commitment of the EU institutions to tackle cyberbullying, several limitations are still preventing the governments' work.

In 2009, the European Commission initiated a systematic campaign against online forms of aggression among youth, including cyberbullying. The campaign identified the presence of a large online audience, and the challenges associated with removing shared content as key elements contributing to this negative social behavior (Menesini et al., 2012). Crucial established evidence in psychological research field underscores the effectiveness of interventions targeting antisocial behavior by fostering emotional and relational skills, especially through early educational initiatives during childhood and preadolescence. These programs usually aim to enhance students' positive mental health, encompassing elements such as aggression management, resilience, self-esteem, and self-efficacy, achieved through the development of social, emotional, and communication competencies.

At the national level, according to the European Union, Member States measure cyberbullying regularly and systematically, and preventive approaches addressing children as active agents of transformative changes are preferable. Educational programs have been adopted within and outside the school context in Estonia, Germany, Greece, Italy, the Netherlands, Romania, Sweden, and the United Kingdom. These programs aim to prevent

bullying and cyberbullying by proactively informing children about the dangers of the internet, encouraging victims to report cyberbullying, and helping perpetrators to understand the effects of their behavior. Similarly, helplines aimed at supporting victims of violence including cyberbullying exist in Estonia, Germany, Italy, the Netherlands, Romania, Sweden, and the United Kingdom. In Italy, a significant legislative stride was made with Law No. 71 of 29 May 2017, focusing on the “*Provisions for the protection of minors in the prevention and combat against cyberbullying*”. This law aims to address the phenomenon of cyberbullying by delineating preventive actions and a comprehensive strategy directed at safeguarding and educating minors involved, whether as victims or perpetrators of such offenses. It underscores the importance of proactive measures, protection, and educational initiatives targeted at minors impacted by cyberbullying.

All the programs with a universal approach in the European context adopt a social theoretical foundation and act on more levels, with the involvement of teachers and, at times, of parents in the implementation of the program, through a socio-ecological approach (Lan et al., 2022). The general theory behind this kind of intervention is that bullying and cyberbullying may be related to the general social climate in the school contexts (Hinduja & Patchin, 2012). Therefore, these programs are directed at changing the school climate and improving learning environments and peers’ relationships. It is crucial to keep promoting these actions across multiple contexts, to inform youth and to contribute in their developmental processes to finally become engaged and respectful citizenships.

1.2.2 Rates of cyberbullying and cybervictimization across Europe and current research

About cyberbullying, previously known in the scientific framework as electronic bullying (Kowalski & Limber, 2007), scientific and public health interests have evolved throughout the years, recognizing it as a critical area of research all around the world, shedding light on the multifaceted dimensions of this social emergency, and on its features (Donegan, 2012). Researchers in psychology, sociology, and education have historically explored the definitions, the prevalence rates, the dynamics, and the consequences of both cyberbullying and cybervictimization, recognizing their distinctive features in comparison to traditional forms of bullying, though sharing some similarities and overlapping features. Studies documenting the widespread occurrence of cyberbullying among preadolescents and adolescents, with various forms such as harassment, spreading rumors, or posting hurtful content online, have been published and synthesized in recent systematic reviews (Cosma et al, 2020; Smith, 2019; Zych et al., 2015).

While the first studies on traditional bullying appeared in Scandinavia decades ago (Olweus, 1973), where this behavior became a problematic phenomenon and an early social

problem among children and adolescents, leading to a larger visibility of the issue during the 90s, and to a proliferation of studies decade after decade, the first studies on cyberbullying were published in the beginning of the 21st century (Ybarra & Mitchell, 2004). Geographically, developed countries in Western societies produced the largest amount of current research in this field, though Asia explored the problem within a slightly different point of view, through the concept of *ijime* (Toda et al., 2020). Considering the differences and similarities between cyberbullying and traditional bullying across different school grades and settings, scientific studies in psychology often are categorized according to the comparison between these two behaviors, definitions, related variables, and preventive interventions. Originally, cyberbullying was studied within the context of bullying (Olweus, 2013); current directions of cyberbullying studies involve studies on minorities, discrimination, and online hate speech, as well as gender inequalities (Al-Garadi et al., 2016; Weinstein et al., 2021).

In the global context, the prevalence, and dynamics of cyberbullying and cybervictimization among young individuals have garnered increasing attention in the past few years, shedding light on the scope of the issue within this diverse and interconnected setting in which multiple cultures and States participate. According to UNICEF (2019), over 33% of adolescents in 30 countries indicated that they had been a victim of a cyberbullying incident during their lives. Exploring rates of cyberbullying perpetration and cybervictimization across the continent provides a foundation for understanding the nuanced challenges faced by preadolescents in different cultural contexts. These insights not only shape the discourse on the prevalence of cyberbullying but also inform targeted interventions and policies. Prevalence rates can vary based on cultural norms, technological infrastructure, and educational policies across countries. It becomes evident that a nuanced understanding of cyberbullying is essential, considering its multifaceted nature and the diverse context within which it unfolds across different European nations. Cyberbullying research is continually evolving, and specific rates may vary based on factors such as the year of study, methodology, and regional differences. Thus, data in this area must be considered with extreme caution. For general information on cyberbullying trends and rates, reports have been made available from organizations such as the European Union Agency for Cybersecurity (ENISA), the European Institute for Gender Equality (EIGE), or Eurostat.

Cyberbullying has been identified as a serious type of violent behavior among peers in multiple online and digital contexts (Ortega-Ruiz et al., 2002). Recent and past pioneering studies have highlighted the fluctuating prevalence rates of cyberbullying in preadolescents, its features, and multidimensional characteristics, which appear to be contingent upon several individual and environmental factors like age, gender, and cultural milieu (Kowalski et al., 2020). Regarding cyberbullying prevalence, Olweus (2012) claimed that in some scientific studies, there has been an overlapping between the categories of bullies, victims, cyberbullies and cybervictims. Regarding the role of age in cyberbullying experiences, evidence has shown that older children, 14 years old and above, more frequently emerged as potential perpetrators of negative social online behaviors. During the past decade, it has also been highlighted that the rates of cyberbullying might vary largely between different studies

(Genta et al., 2012; Livingstone et al., 2011; Ortega et al., 2012); rates of cyberbullying perpetration in specific studies ranged from 5.3% to 31.5% (Gradinger et al., 2009). In the following years, cyberbullying levels increased among children aged 11 – 16 from 7% in 2010 to 12% in 2014 (EU Kids Online, 2014), showing that the dimensions of the phenomenon are worrying across the whole continent: at that year, 3% of the total sample of preadolescents between 9 – 16 years old had carried out cyberbullying. A seminal systematic review of the literature (Zych, 2016) including 21 studies revealed that, since 2010, median perpetration of cyberbullying in Spain was 24.64%. Subsequently, a study comparing cyberbullying perpetration rates in eight European countries showed that Spanish rates were among the lowest in the continent (Sorrentino et al., 2019). In a study involving Poland, Spain, Italy, the UK, Germany, and Greece, 6.77% of the total sample were perpetrators of cyberbullying (Del Rey et al., 2015). Poland presented higher prevalence rates of cyberbullying than Spain, the UK and Germany in all the cyberbullying roles, but lower than Italy and Greece. In 2020, 33% of girls and 20% of boys in Europe reported experiencing disturbing content online at least once a month. And the pandemic has not improved this situation. For over five years, cyberbullying has consistently been the biggest issue for young people contacting EU-funded safer internet centers across Europe. At the end of 2022, nearly 1 in 6 contacts to their helplines were about cyberbullying.

Tragic incidents around the world, such as those involving young individuals like Tyler Clementi in 2010 (Byers, 2013) and Phoebe Prince in 2011 (Neiman et al., 2012; O'Higgins Norman & Connolly, 2011; Ryalls, 2012), serve as stark reminders of the severe consequences of cyberbullying, significantly influencing public perceptions of this phenomenon. To recognize the breadth of risk behaviours established among preadolescents and adolescents, the international HBSC (Health Behavior in School-aged Children) study, in which Italy has participated since 2001, has been active since 1983. The most recent snapshot of youth's behavior was taken by the 2022 survey of the HBSC Italia Surveillance System, promoted by the Ministry of Health and the CCM - Centre for Disease Control and Prevention of the Ministry of Health, coordinated by the *Istituto Superiore di Sanità* together with the Universities of Turin, Padua and Siena and carried out in collaboration with the Ministry of Education and Merit, the Regions, and Local Health Authorities.

In the 2022 HBSC Italian survey, 94,178 children aged 11, 13, 15 and 17 completed the questionnaire, distributed throughout all regions; 6,388 classes were sampled. In the 11-year age group, 17.2% of males and 21.1% of females are victims of cyberbullying; 12.9% of boys and 18.4% of girls are victims of cyberbullying; 9.2% of boys and 11.4% of girls are victims of cyberbullying in the 15-year age group. The survey reports that in families, as age increases, the ease with which boys open to their parents decrease; 13- and 15-year-old girls, compared to boys of the same age, find it more difficult to talk to their father figure. To conclude, one in two teenagers in Italy is a victim of cyberbullying, a worrying figure that is constantly increasing. In 2022, 31% of students were victims of cyberbullying at least once, compared to 23% in 2020.

Regarding the European framework, trends reflect a relationship between age and frequency of victimization with a higher number of victims in the group of 13–15-year-old children. According to the Net Children Go Mobile survey, which interviewed 3,500 children of seven EU Member States, over the period 2013–2014, children between 13 and 14 years of age were the most affected by cyberbullying. Victims of cyberbullying tend to be younger than perpetrators according to the findings of this study. The countries where children are most at risk of sexual exploitation and exposure to harmful content are Denmark, Finland, the Netherlands, and Norway, confirming previous results (Olweus, 1987). The “EU Kids Online” study of over 25,000 children between the ages of 9 and 16 reported prevalence of cybervictimization ranging between 2 and 14%, lowest in Italy and Portugal and highest in Estonia and Romania (Lobe et al., 2011). The “Net Children Go Mobile” project found higher rates, increasing from 7 to 12% from 2010 to 2014 (O’Neill & Dinh, 2015). According to the 2014 EU Net Children Go Mobile Report, 12% of the 3,500 children aged 9-16 years old were cyberbullied (Mascheroni et al., 2014). With reference to the “EU Kids Online” report (2011), among the 9-16-year-old participants, 33% were bothered or upset by inappropriate material online, 12% were bothered or upset meeting online contacts offline, and 80% were fairly or very upset by cyber-bullying². In the mentioned systematic review, Zych et al. (2016) reported a median cybervictimization prevalence of 26.65% in Spain since 2010, on 21 studies. Differently, Del Rey et al. (2015) reported that 6.11% of the sample among the cited European countries were cybervictims.

National studies in individual European countries have found rates of cyberbullying victimization from 5.5 to 44% (Kapatzia & Syngollitou, 2007; Riebel et al., 2009). Moreover, according to a meta-analytic study, 15% of adolescents worldwide have suffered from cybervictimization (Modecki et al., 2014). Rates of cybervictimization have ranged from 2.2% to 56.2% (Perren et al., 2010). Tokunaga (2010) documented that the evidence indicates that cyberbullying victimization is not limited to an insignificant proportion of children and teens, reporting that an average of 20 – 40% of youngsters have been victimized during their life. These alarming data not only reveal the extent of cyberbullying and cybervictimization in Europe but also underscore the importance of continued research and concerted efforts to address these challenges and promote a safer digital environment for European youth, with a specific focus on preadolescence and its features, which are crucial for future healthy developmental processes of individual and educational and social outcomes as well.

² [Eu Net Children](#)

1.3 Risk and protective factors of cyberbullying and cybervictimization in preadolescence

In the context of the scientific studies produced on positive and negative social behaviors in youth, both internationally and nationally, antecedents and consequences of cyberbullying and cybervictimization among preadolescents are still unclear and represent critical elements for the development of preventive efforts and targeted actions (Livingstone & Smith, 2014). Given the critical features of their digital experiences, various factors cover the role of both risk and protective factors of these two expressions of negative online social behaviors.

In psychology, risk factors are defined as any condition, characteristic, or behavior increasing the likelihood of negative outcomes or problems occurring (Kraemer et al., 2001). A range of variables, including individual traits, environmental influences, and socio-cultural factors, is encompassed within this definition. In multiple contexts, such as health, school, work, and risk factors are studied to identify the variables that elevate the probability of harm, disease, or unfavorable events (Hayes, 1992). These factors often highlight areas where intervention and prevention efforts can be targeted to mitigate potential negative impacts. Differently, protective factors are attributes, circumstances, or behaviors that enhance an individual's resilience and decrease the likelihood of adverse outcomes (Hall-Lande et al., 2007). They act as buffers or safeguards, promoting positive well-being and reducing vulnerability to negative consequences.

Research in psychology has chased the trend of technological advance, with studies being progressively carried out on cyberbullying and its many traits (Hinduja & Patchin, 2008; Kowalski et al., 2008), and with a large focus on investigating its risk and protective factors, useful to gain insight into antecedents and consequences of cyberbullying perpetration and suffering, and to promote interventions aimed at increasing pro-social behaviours (Betts et al., 2016).

1.3.1 Risk and protective factors of cyberbullying

Understanding the risk and the protective factors that might contribute to increase cyberbullying perpetration in youth is crucial for developing effective prevention and intervention efforts targeting schoolchildren and adolescents (Hinduja & Patchin, 2008). Among the risk factors, several individual, interpersonal, and contextual causes might play a role in the perpetration of cyberaggression throughout childhood and adolescence across multiple contexts (Clark & Bussey, 2020). These might include personal characteristics (e.g., aggression, empathy deficits), peer social dynamics, family influences, school climate, technological and digital applications and contexts, and societal norms (Van Cleemput et al.,

2014). Indeed, studies on correlates of cyberbullying report that a lack of family rules, and predisposition to internet harassment predict cyber-aggression (Martins et al., 2017). The interplay of these factors requires a comprehensive examination to address cyberbullying efficiently among schoolchildren to prevent negative long-term consequences (Brighi et al., 2019). According to Tokunaga (2010), most of the research on cyberbullying has been conducted without the adoption of specific theoretical frameworks. Moreover, there have also been few studies conducted to determine the motivation for cyberbullying. Motivation in cyberbullying has been found to be for fun (Mishna et al., 2010), revenge and social influence (Hinduja & Patchin, 2013), and to evaluate self-esteem (Palermi et al., 2017). Namely, low levels of empathy and poor emotional regulation skills are often emotional and cognitive factors associated with an increased likelihood of cyberbullying perpetration (Steffgen et al., 2009). Preadolescents who struggle to understand and navigate their own emotions, as well as the emotions of other people, may resort to aggressive or violent behaviors in the digital realm as a means of coping or asserting control (Arató et al., 2022). Risk factors such as exposure to violence, lack of parental supervision, and a culture that normalizes aggression and online harassment increase vulnerability to cyberbullying (Zych et al., 2015).

To begin with, a history of aggressive behavior in offline settings can serve as a precursor to cyberbullying perpetration (Graf et al., 2022); in fact, preadolescents who exhibit aggression in face-to-face interactions may extend these patterns to the online world, utilizing digital applications as an extension of their aggressive tendencies. Kokkinos & Voulgaridou (2017), for example, reported that proactive and reactive aggression were more frequently associated with cyberbullying in a sample of Greek adolescents; this result might be interpreted as the existence of overlapping between the factors that contribute to the expression of physical violence and aggressivity, and the need to act maliciously in online contexts in youth. The negative influence of peer relationships is another significant risk factor for cyberbullying, since preadolescents who generally associate with peers who endorse or engage in cyberbullying may be more likely to adopt similar behaviors (Mishna et al., 2012). Moreover, social dynamics within peer groups can play a crucial role in shaping online behaviors, with the desire for peer acceptance sometimes overriding ethical considerations (Betts et al., 2017).

Within the landscape of cyberbullying risk factors, several studies regarding the features of smartphones and social media platforms that contribute to the increase of cyberbullying and cybervictimization levels in samples of children and adolescents, found that the frequency of use of the internet (Walrave & Heirman, 2011), level of specific computer abilities, internet cruising ability (Vandebosch & VanCleemput, 2009), and general risky internet use (Erdur-Baker, 2010) predict a heightened likelihood of subsequent cyberbullying perpetration. Regarding the risk factors of cyberbullying, early social media platforms engagement in preadolescence plays a prominent role in cyberbullying perpetration among peers. Research shows that problematic social media use is related to cyberbullying perpetration in international samples (Giordano et al., 2021; Kircaburun et al., 2019). It appears that early exposure to social media use might influence preadolescents' attitudes

about cyberbullying, which could lead to perpetration (den Hamer & Konijn, 2015). One prominent factor that promotes the development of dysfunctional social media applications use is a lack of parental monitoring and supervision regarding online activities (Baldry et al., 2019). As in traditional bullying, the intimate feeling of personal sense of power can play the role of antecedent of cyberbullying too, through increased levels of perceived online popularity of the individual identified as the bully: in a representative study, Pieschl et al., (2013) asked to nominate popular and unpopular students of their classrooms through cyber vignettes to a sample of German adolescents before administering an online self-report questionnaire. They discovered that the power relative to the popularity of cyberbully was a significant factor anticipating online aggression in a large part of the sample. To better introduce the most studied concepts regarding online behaviors in youth, following a theoretical foundation to problematic internet and social media applications use is given, to provide a crucial viewpoint of positive and negative activities that preadolescents might carry out daily in online settings.

Anonymity, power imbalance, low empathy levels, and moral disengagement stand as pivotal antecedents in the context of problematic Internet use (PIU) and potentially spread cyberbullying episodes among preadolescents (Barlett et al., 2016; Wachs et al., 2019). Anonymity, often afforded by online interactions, allows individuals to distance themselves from their actions and their consequences (Moore et al., 2012). This sense of invisibility provided by screens and internet can embolden preadolescents to engage in cyberbullying behaviors they might not exhibit in face-to-face settings, as they perceive reduced accountability for their actions (Cohen-Almagor, 2020). The anonymity factor removes accountability and reduces the fear of consequences, emboldening individuals to engage in cyberbullying behaviors they might not consider in face-to-face interactions (Harrison, 2015). On the same level, power imbalance significantly influences cyberbullying perpetration seen in the form of a power differential between the perpetrator and the victim, allowing the perpetrator to exert control and dominance over the victim (Butler et al., 2009). This dynamic of power can be magnified in the digital realm, where anonymity provides a shield behind which perpetrators can hide (Barlett et al., 2016).

Particularly, the online disinhibition effect is implied in PIU and in anonymity mechanisms, in fact it refers to the phenomenon wherein individuals display more uninhibited behavior and expressiveness in online settings compared to face-to-face interactions (Wachs et al., 2019). This effect can be particularly pronounced among preadolescents in the context of cyberbullying perpetration, through the activation of moral disengagement mechanisms: in online environments, the anonymity and reduced accountability often exacerbate moral disengagement tendencies, allowing preadolescents to detach from the ethical consequences of their actions and engage in cyberbullying behaviors without considering the harm inflicted on others (Wang et al., 2022). The online disinhibition effect, coupled with moral disengagement, creates a potent combination that facilitates cyberbullying perpetration among preadolescents, highlighting the importance of addressing both factors in interventions aimed at preventing cyberbullying.

The concept of moral disengagement emerges as a crucial risk factor deserving specific consideration in cyberbullying perpetration, based on the cited components of social media platforms. Moral disengagement, rooted in the social cognitive theory (Bandura, 2001), delineates the psychological mechanisms through which individuals can justify and detach themselves from morally reprehensible behaviors, such as cyberbullying (Moore, 2015). Moral disengagement, as proposed by Bandura (1991), involves cognitive strategies individuals employ to justify or rationalize harmful behaviors (Bandura et al., 1996). It suggests that individuals adopt self-regulatory processes to disengage from moral standards in specific settings. Preadolescents who morally disengage in the context of cyberbullying may employ tactics such as dehumanizing their victims, blaming them for their own victimization, or minimizing the consequences of their actions (Mascia et al., 2021). This cognitive restructuring enables them to evade guilt and engage in cyberbullying with reduced moral restraint (Runions & Bak, 2015). As a risk factor, moral disengagement operates as a cognitive strategy that permits individuals to navigate their involvement in harmful online activities without the burden of moral constraints (Wachs, 2013). This includes justifying aggressive actions, minimizing the consequences, or attributing blame to the victim. Understanding moral disengagement in the context of cyberbullying provides a nuanced perspective on the psychological processes that contribute to the perpetration of harmful behaviors in digital spaces. Its inclusion in the examination of risk factors enriches the comprehension of the multifaceted dynamics at play in the realm of cyberbullying among preadolescents. In cyberbullying studies, moral disengagement is defined as “an influence on traditional bullying and cyberbullying cognitive process, by which a person justifies his/her harmful or aggressive behavior, by loosening his/her inner self-regulatory mechanisms (...) which usually keeps behavior, in line with personal standards” (Pornari & Wood, 2010, p. 81). Bandura’s cognitive mechanisms on moral agency (2002) can clarify the association between moral disengagement and cyberbullying perpetration. In a meta-analysis including 27 studies, Gini et al. (2014) indicated that low moral commitment was directly related to aggressive behaviors, laying the ground for deeper analyses in moral disengagement and cyberbullying studies.

Preadolescents with low empathy may find it easier to morally disengage by dehumanizing their victims, justifying their actions, or minimizing the harm they cause. Low empathy, in fact, plays a crucial role in cyberbullying dynamics, as it refers to a diminished ability to understand and share the feelings of others (Davis, 1990). Preadolescents with low empathy may struggle to recognize the emotional impact of their online actions on their peers (Bosacki & Wilde Astington, 1999). This lack of empathy can desensitize them to the harm they cause and make it easier to engage in hurtful behaviors, such as spreading rumors, name-calling, or exclusion (King et al., 2013; Nelson et al., 2019). Thus, low empathy can create fertile ground for the deployment of moral disengagement mechanisms in preadolescents, fostering online negative social behaviors (Chan et al., 2023).

On the other side, several key protective factors of cyberbullying perpetration emerge from a psychological viewpoint. Generally, studies underlined effective family support and communication as pivotal protective factors of cyberbullying (Fanti et al., 2012), since

fostering an environment where children feel secure and understood, diminishing the likelihood of engaging in harmful online behaviors, is a positive means to prevent the development of cyberbullying behaviors. Besides, positive peer relationships and social integration contribute significantly as protective factors (Cortés-Pascual et al., 2020); when children have a sense of belonging and positive connections with peers, the motivation for aggressive online behaviors diminishes (Lucas-Molina et al., 2020). Additionally, a robust foundation of social-emotional skills, including empathy, emotional regulation, and conflict resolution, equips preadolescents with the tools necessary to navigate the challenges of today's online interactions more effectively (Arató et al., 2020).

In the realm of socio-emotional competences, empathy, encompassing both its cognitive and affective dimensions, is a multifaceted construct crucial for understanding and addressing social behaviors, including cyberbullying perpetration in preadolescence (Cuff et al., 2016; Hall & Schwartz, 2019), and represents a key dimension investigated throughout the dissertation. Empathy might act as a protective factor by promoting prosocial behaviors and discouraging aggressive actions (Chan et al., 2022). Preadolescents with well-developed empathy are more likely to consider the impact of their online behavior on others, fostering a sense of responsibility and ethical decision-making (Cooper, 2004). Moreover, empathy contributes to the formation of positive peer relationships, creating a supportive social environment that mitigates the risk of cyberbullying perpetration. In a meta-analysis of 25 empirical studies, Zych et al. (2019) found that cyberbullies score low on empathy.

Empathy refers to the ability to understand and share the feelings of others. It is often divided into two components: cognitive empathy and affective empathy (Navarro et al., 2018). Cognitive empathy involves the ability to understand and share the perspective of others, commonly referred to as perspective-taking (Bensalah et al., 2016). It is the cognitive capacity to comprehend someone else's thoughts, feelings, and points of view, facilitating a deeper understanding of their experiences (Davis & Love, 2017). In preadolescence, the development of cognitive empathy contributes significantly to social interactions, fostering positive relationships and reducing the likelihood of engaging in harmful online behaviors (Choudhury et al., 2006). Moreover, the cognitive component of empathy involves the ability to understand and take the perspective of another person (Rieffe & Camodeca, 2016). This cognitive dimension of empathy enables individuals to truly "walk in another person's shoes" by comprehending their experiences and motivations (Grant & Berry, 2011). Affective empathy, on the other hand, involves the emotional response to someone else's emotions (Aaltola, 2014). It is the capacity to vicariously experience and share the emotional states of others. This emotional resonance can act as a powerful deterrent against engaging in cyberbullying perpetration, as the empathetic individual is more attuned to the potential harm caused by such actions. The affective component of empathy involves the emotional response one experiences when perceiving the feelings of others (Losoya & Eisenberg, 2001). This emotional resonance enables individuals to share in the joy, sadness, or distress of those around them, creating a powerful connection (Powell, 2018). Both components of empathy contribute as protective factors in cyberbullying perpetration among preadolescents

and are investigated as buffering dimensions inhibiting the intentionality of acting aggressively towards others.

Further protective factors could play a role in cyberbullying perpetration, especially in several educational contexts. Emotional intelligence, for example, largely studied in past psychological research (Goleman, 2001), equips preadolescents with the tools to navigate the complexities of online interactions, fostering empathy and reducing impulsive aggression (Yudes et al., 2022). Prosocial peer relationships, built on positive connections, create an environment where cooperation is valued over harmful online behaviors (Davis & Koepke, 2016). As seen before, high levels of empathy act as a powerful deterrent, instilling a sense of responsibility and care for others. Moreover, effective communication skills enable preadolescents to express themselves respectfully, resolving conflicts without resorting to cyberbullying (Guarini et al., 2012). Moral reasoning, rooted in distinguishing right from wrong, guides ethical decision-making (Müller et al., 2014). Healthy self-esteem minimizes the desire for negative validation through cyberbullying, while media literacy empowers critical evaluation of online content (Patchin & Hinduja, 2010). School connectedness provides a supportive community, and supervision and monitoring by parents discourage harmful behavior (Kim et al., 2020). Lastly, access to mental health support might equip preadolescents with the abilities to learn specific coping mechanisms, contributing to a positive online presence and resilience development (Santos et al., 2021).

1.3.2 Risk and protective factors of cybervictimization

Regarding the study of cybervictimization's risk factors, individual characteristics such as low self-esteem, social anxiety, and a lack of assertiveness and self-regulation can render individuals more susceptible to online victimization (Gradinger et al., 2012; Peker, 2017; Strohmeier & Gradinger, 2023). Additionally, pre-existing mental health issues may amplify the impact of cybervictimization (Boer et al., 2021). Family dynamics and parenting styles also play a role, with insufficient parental monitoring or support potentially increasing the risk of cybervictimization (Katz et al., 2019; Kokkinos et al., 2016).

Individual risk factors for cybervictimization during early adolescence may encompass poor digital literacy, excessive screen time for social purposes in preadolescence, and limited parental involvement, which render preadolescents more vulnerable to online victimization (Holfeld & Sukhawathanakul, 2017). Engagement in risky online behaviors, such as sharing personal information or provocative content, can elevate the likelihood of becoming a cybervictims (Mehari et al., 2020). Moreover, high levels of emotional intelligence enable preadolescents to interpret and manage online interactions effectively, reducing susceptibility to emotionally distressing situations (Estévez et al., 2020). As anticipated, empathy, which cultivates an understanding of others' feelings, promotes prosocial behavior,

and discourages victimization (Wang et al., 2020), is a crucial protective factor. Secondly, lack of family communication serves as a significant risk factor for cybervictimization in schoolchildren. A proficient family communication structure is crucial for fostering a supportive environment where children feel comfortable sharing their online experiences, concerns, and challenges (Fanti et al., 2012). When communication within the family is lacking or strained, schoolchildren may be less likely to confide in their parents or caregivers about instances of cybervictimization (Buelga et al., 2017). This communication gap hinders the early detection of online risks and prevents the timely intervention necessary to address and mitigate the impact of cyberbullying. Moreover, a lack of open communication may contribute to feelings of isolation in schoolchildren who experience cybervictimization, exacerbating the emotional toll of the online harassment they endure (Cañas et al., 2020). Thirdly, school and peer environments contribute significantly; a lack of school-based interventions and a culture that tolerates or normalizes online aggression may foster cybervictimization (Williford et al., 2013). Positive early peer relationships play a crucial role during childhood and preadolescence, fostering a sense of belonging and support acting as a deterrent against potentially harming victimization experiences (Heiman et al., 2022).

In the context of behavioral and cognitive reactions to cybervictimization, coping strategies might play a crucial role in determining an individual's resilience and ability to navigate online challenges (Raskauskas & Huynh, 2015; Siah et al., 2022). The adoption of effective coping strategies, including problem-solving and emotion regulation skills, could be crucial to underline their role in empowering preadolescents to navigate the challenges of the digital realm confidently (Bradbury et al., 2018). Coping strategies refer to the cognitive and behavioral efforts employed by individuals to manage, reduce, or tolerate stress and adversity (Lazarus & Folkman, 1984). These strategies can be classified as either adaptive or maladaptive based on their effectiveness in dealing with the emotional and psychological impact of cybervictimization (Bittner et al., 2011). Adaptive coping strategies are constructive and promote psychological well-being (Fischer et al., 2021). Examples include seeking social support, problem-solving, positive reframing, and engaging in activities that foster emotional regulation (Frydenberg, 2014). These approaches empower individuals to address the emotional consequences of cybervictimization healthily and effectively, reducing the likelihood of prolonged distress. On the other hand, maladaptive coping strategies are less effective in managing the negative effects of cybervictimization and may exacerbate emotional distress (Wright, 2016). Examples of maladaptive coping include avoidance, refocusing, or rumination (Thompson et al., 2010). These strategies often offer short-term relief to victims of cyberbullying but can lead to detrimental long-term effects, perpetuating a cycle of victimization. Despite providing temporary relief, certain dysfunctional coping mechanisms, such as retaliation, can exacerbate the problem rather than resolve it. In some cases, victims may derive a sense of personal gratification from retaliating against their aggressors or engaging in similar negative behaviors. However, such actions only serve to escalate conflicts and contribute to a hostile and adversarial online environment among preadolescents. Instead of fostering empathy, cooperation, and understanding, these retaliatory behaviors perpetuate a cycle of aggression and counter-

aggression, hindering the development of a prosocial and supportive online community (Erath & Tu, 2014).

Resilience, built through positive social connections and coping mechanisms, helps preadolescents rebound from potential online adversities (Brighi et al., 2019). School-based initiatives that promote inclusivity and address bullying behaviors contribute to a protective school environment (Menabò et al., 2023). Finally, access to mental health resources provides preadolescents with the necessary support to cope with the emotional aftermath of cybervictimization (Mohseny et al., 2020). Thus, within the protective factors against cybervictimization in preadolescence, coping strategies that encompass various aspects that mitigate the risk of experiencing harm in online environments are included. These protective factors may include strong social support networks, positive peer relationships, effective communication skills, and a supportive family environment. In addition to these protective factors, coping strategies play a crucial role in mitigating the impact of cybervictimization.

Dealing with coping strategies, the concept of cognitive emotional regulation refers to the cognitive actions that individuals adopt to manage and control their emotional experiences in negative situations (Garnefski et al., 2001). Cognitive emotional regulation involves processes like reappraisal, where individuals reinterpret a situation to alter its emotional impact, and suppression, where they consciously inhibit emotional expressions (McRae, 2016). During preadolescence, a period marked by ongoing development in emotional regulation skills, cognitive strategies play a pivotal role in managing intricate social dynamics, particularly in online environments (Gross, 2002). One such cognitive strategy, refocusing on planning, emerges as a crucial mechanism for effectively navigating digital interactions (Sacchi & Den Glauser, 2021). By directing attention toward constructive problem-solving, individuals, especially preadolescents, can empower themselves to proactively address challenges encountered online. This strategy equips preadolescents with the tools needed to strategically plan responses to potential online threats, thereby enhancing their ability to navigate the complexities of the digital landscape. Minimizing rumination, differently, involves avoiding prolonged dwelling on negative online experiences, preventing the escalation of emotional distress (Pe et al., 2013). Individuals adept at regulating their cognitive and emotional responses exhibit resilience in the face of adversity, reducing the likelihood of succumbing to the negative impacts of cybervictimization (Troy & Mauss, 2011). Recognizing the significance of protective factors of cyberbullying perpetration and of cybervictimization is paramount for developing targeted prevention strategies that empower preadolescents with the skills and support needed to navigate the digital world safely, according to tested theories or enabling scholars to develop new models, possibly affecting real world context through concrete actions and measures.

1.3.3 The interaction between social media use and psychosocial variables in cyberbullying perpetration and suffering

The overview of cyberbullying and related factors given in previous paragraphs has highlighted the components, motivations, nuances, and predictive elements of these problematic online social behaviors spread among preadolescents.

In the attempt to propose a scientific overview of the factors identified in the study, it rapidly appears crucial to identify the context in which both positive and negative preadolescents' social interactions all around the world daily happen nowadays. ICTs and social media platforms play a crucial role influencing the habits and the concrete exchanges of online interpersonal relationships and competencies in young people. The critical and unique framework that cyberspace provides represents a peculiar digital social yard in which preadolescents currently fulfill their personal and social needs, differently from the past, when socialization and identity formation processes mainly took place in the school yards or in other physical settings (Smith et al., 2021). The current use (and misuse) of communication technologies, the young age at which people have their first experience with ICTs, and the consistent amount of time they spent with such technologies (Livingstone & Haddon, 2009) are indicators of the fact that young people are acutely aware of the huge opportunities that new technologies can offer them (Bakker & De Vreese, 2011). However, although they frequently use ICTs, they may not necessarily be aware of all risks, nor able to master or decide upon the strategies to realize their online experiences in a safe fashion (Lennings et al., 2010). They may be exposed to inappropriate material (such as sexually explicit content; violence etc.), to sexual predators seeking to build relationships with children (i.e., pedophiles or cyberstalks), to thefts of personal information, and to online harassment by peers.

By delving into the definition and characteristics of Problematic Internet use (PIU), the thesis aims to contribute valuable insights into the intricate relationship between social media engagement and the well-being of preadolescents (Paakkari et al., 2021; Vannucci et al., 2019), presenting the socio-cognitive variables selected for the current study in educational settings. Among the scientific labels adopted to describe the multiple negative and compulsive forms regarding internet use, PIU is most used and is labelled as a maladaptive psychological dependency on SNS to the point that behavioral addiction symptoms occur (Cao et al., 2020). Some scholars advocate for the term “problematic use” to distinguish such maladaptive Internet uses from formal clinical and psychiatric conditions (Caplan, 2010). Nevertheless, defining and measuring problematic social media use is by no means consistent in the current scientific literature in psychology. Moreover, “problematic social media use” is a broad term that can refer to using social media for illegal, unethical, or socially unacceptable activities (e.g., online stalking, cyberbullying, and spreading scams and false information).

The term PIU refers to excessive or compulsive engagement with online activities, leading to potential negative consequences in various areas of individuals' personal lives, including social, psychological, and academic functioning (Spada, 2014; Tokunaga & Rains, 2016). Among preadolescents' online activities, according to some authors PIU can be easily and closely related to cyberbullying perpetration, and to frequent negative online behaviors, due to the pervasive screen time use which is necessary to carry out these behaviors. Excessive time spent on social media platforms, in fact, can contribute to a heightened sense of anonymity and a persistent feeling of online disinhibition among potential aggressive peers (Decker & Gay, 2011), making it easier for preadolescents to engage in a range of harmful online actions, including cyberbullying (Chan et al., 2022). Furthermore, the constant exposure to curated, idealized online figures can fuel feelings of envy and of social comparison, potentially leading to negative behaviors aimed at other peers, through several factors involved in social media users' physical comparison (Robinson et al., 2019).

Through ICTs' applications use, the concrete risk among individuals of being a victim of indirect aggressions or unpleasant social behaviors has increased dramatically in the past decades, since the internet plays a crucial role in the development and maintaining of interpersonal relationships (Tokunaga & Rains, 2010; Reiner et al., 2017). Social media applications use has expanded greatly in recent years, among children, adolescents, and adults. For instance, not so many years ago, it has been underlined that Facebook and YouTube bring together 68% and 73% of the adult population in the U.S. respectively (Smith & Anderson, 2018). The misuse of social media platforms is linked to several negative outcomes both for adults and for children and adolescents: some studies highlighted the role of social media use on poor sleep quality and on cognitive failures in a sample of young adults (Xanidis & Brignell, 2016), and on fewer beneficial social relationships through extroversion in a sample of German adolescents (Müller et al., 2016). Other studies investigated the relationship between other forms of sleep problems caused by (Koc & Gulyagci, 2013; Wolniczak et al., 2013), low life satisfaction in a sample of Polish young narcissistic adults through Fear of Missing Out (FOMO) (Hawi & Samaha, 2016), and feels of jealousy, anxiety, and depression (Pantic, 2014). Problematic social media use, compulsive social media applications use is adopted interchangeably to designate the phenomenon of maladaptive social media use characterized by either addiction-like symptoms and/or reduced self-regulation (Casale et al., 2018; Marino et al., 2018; Tarafdar et al., 2020). Regarding the extent of adolescent Internet and SNS use, higher levels have been associated with increased risk of cybervictimization (Mesch, 2009).

Thus, problematic social media use has emerged as a potential predictor of cyberbullying perpetration and victimization among preadolescents. Excessive engagement with social media platforms can facilitate the amplification of negative behaviors and interactions, contributing to the likelihood of involvement in cyberbullying incidents (Hinduja & Patchin, 2010). Additionally, cognitive processes such as perspective-taking and moral disengagement have been identified as potential mediators in the relationship between social media use and cyberbullying experiences among preadolescents (Kowalski et al., 2014). While perspective-taking fosters empathy and understanding of others' feelings, moral

disengagement mechanisms can rationalize harmful behaviors, both influencing the engagement in cyberbullying behaviors (Bandura, 2002). Moreover, rumination and refocus on planning strategies play pivotal roles as mediators in the cyberbullying process, affecting how preadolescents perceive and respond to online conflicts (Sacchi & Den Glauser, 2021). Furthermore, satisfaction with life, a component of overall well-being, may act as a predictor, mediator, or outcome in cyberbullying experiences among preadolescents (Wong et al., 2011). Individuals with higher levels of life satisfaction may be less susceptible to the negative effects of cyberbullying, while those experiencing cyberbullying may see a decline in their overall satisfaction with life.

2. CHAPTER 2

Intervention programs for cyberbullying prevention in secondary education

The second chapter of the dissertation proposes the description, analysis, and exploration of the most crucial scientific concepts related to the development and implementation of prevention actions, and of the most important recent and less recent international intervention programs developed to carry out educational efforts to counteract cyberbullying and related risk factors in preadolescence.

The aim of this chapter is to provide synthetic definitions of the concepts of Evidence-Based Practices (EBPs), and prevention in psychology, since they play crucial roles in producing innovative and scientifically oriented learning and prevention strategies, in multiple fields (2.1) (Aswadi et al., 2022; Gesser-Edelsburg et al., 2017; Spiel & Strohmeier, 2012). Following, the Edutainment paradigm and Serious Games methodology will be presented; the Edutainment approach represents a quite recent methodological framework which leverages engaging and interactive tools, such as Serious Games or gamification, to impart specific knowledge and behavioral skills effectively, while maintaining participants' interest and personal motivation (2.2). Moreover, EBPs in scientific research offer empirically supported interventions that are effective in addressing various mental health issues, including preventing negative behaviors, such as cyberbullying, developed through the concrete evidence gained from previous research. In fact, by combining the principles of Edutainment and EBPs, innovative interventions and programs can be designed and implemented, to effectively address multiple topics, such as social and educational problems, like cyberbullying and problematic social media channels use among preadolescents. These interventions are not only informed by rigorous research and empirical evidence, but are also engaging and interactive, ensuring greater receptivity and potential for positive outcomes due to the participants' first-person engagement (2.3) (Samuel & Rahman, 2018).

In psychology, often a confusion is made among various definitions, instruments, and approaches, because related and sometimes overlapping fields exist among them, such as e-learning, Edutainment, game-based learning, and digital game-based learning (Davies, 2012; Kratochwill & Shernoff, 2004). Some will be defined throughout the chapter, to clearly distinguish potentially ambiguous terms, strategies, and instruments. As seen in the first chapter, within the developmental and educational psychology scientific framework, the urgency to combat cyberbullying among young individuals has grown significantly in the past years (Ang, 2015; Notar et al., 2013).

2.1 Evidence-Based Practices and prevention in psychology: definitions, criteria, and fields

2.1.1 The role of prevention in developmental psychology

Historically, there have been efforts to establish standards for evaluating scientific evidence in various psychological fields. However, these efforts have yielded varying criteria, resulting in inconsistent conclusions regarding programs' effectiveness (Slavin, 2008). To address this, the Society for Prevention Research formed a committee aimed at defining standards for identifying effective prevention programs and policies (Kellam & Langevin, 2003). An efficacious intervention, according to these standards, undergoes testing in at least two rigorous trials involving well-defined samples and populations. These trials employ robust measures and data collection methods, rigorous statistical analyses, demonstrate consistent positive effects, and report significant long-term follow-up outcomes without adverse effects. This methodology ensures that interventions, policies, or strategies are not merely based on theoretical postulations but are substantiated by rigorous empirical evidence. In contrast, effective intervention is practical, supported by manuals and technical guidance, tested under real-life conditions, and demonstrably beneficial to its intended recipients (Ennett et al., 2011). Finally, an Evidence-Based Intervention is poised for dissemination in outer context when it is cost-effective, prepared for implementation at scale after reproducibility trials, and supported by monitoring materials designed for use across various settings (Spiel & Strohmeier, 2012, p. 152). Whether in healthcare, education, or various social interventions, the reliance on evidence-based practices contributes to more informed, effective, and ethically grounded approaches.

In psychological research, the concept of prevention refers to the proactive strategies and interventions aimed at mitigating or avoiding the onset, exacerbation, or recurrence of psychological issues, disorders, or maladaptive behaviors (APA, 2014). It encompasses a range of approaches designed to identify risk factors, strengthen protective factors, and promote resilience, well-being, and adaptive functioning among individuals and communities. Prevention efforts can target various levels of human development, including primary prevention (preventing the occurrence of a disorder or problem), secondary prevention (early detection and intervention to reduce the impact of a disorder or problem), and tertiary prevention (minimizing the negative consequences of an existing disorder or problem) (Neil & Christensen, 2009). Prevention efforts in psychology are informed by methods provided by translational research, which facilitates the application of scientific findings to real-world interventions.

Translational research is identified as a multidisciplinary approach that seeks to bridge the gap between scientific discoveries in the laboratory (basic research) and their practical application in real-world settings (applied research) (Woolf, 2008). It involves the systematic, two-way flow of knowledge, with the goal of developing innovative interventions, treatments, or practices that can directly benefit individuals' health and well-

being. Translational research, prevention and Evidence-Based Practices are three intertwined pillars of the scientific and healthcare communities. Translational research, in fact, serves as the bridge that links the insights and discoveries generated in the laboratory to real-world applications. It is the means through which scientific knowledge is transformed into practical, evidence-based interventions and treatments. EBPs, on the other hand, represent the practical implementation of translational research findings. It relies on a rigorous and systematic approach to evaluate and incorporate scientific evidence into clinical and healthcare decision-making. In essence, EBPs is the culmination of translational research, as it operationalizes the knowledge produced in research laboratories and clinical trials into effective and efficient strategies for patient care. Evidence-Based Practices stands as the practical manifestation and application of translational research in the realm of healthcare and clinical settings. It operates as a comprehensive framework that relies on a systematic and meticulous evaluation of scientific evidence derived from translational research, aiming to inform and guide healthcare decision-making processes. EBP adopts a rigorous approach, integrating empirical evidence, clinical expertise, and patient preferences to design, implement, and assess the most effective interventions and treatments. By drawing from the wealth of knowledge generated in research laboratories, clinical trials, and various scientific studies, EBP serves as the conduit through which these research findings are translated into tangible, patient-centered strategies for healthcare practitioners, ensuring that clinical practices align closely with the latest, validated scientific evidence. Ultimately, EBP acts as the practical realization of translational research, empowering clinicians, and healthcare professionals to provide the most optimal, evidence-based care for patients.

By leveraging translational research approaches, psychologists can identify effective prevention strategies, develop innovative interventions, and tailor interventions to the specific needs and contexts of diverse populations. This interdisciplinary approach facilitates the dissemination and implementation of evidence-based prevention programs, promotes collaboration between researchers and practitioners, and enhances the scalability and sustainability of prevention efforts. Ultimately, the integration of prevention science and translational research in psychology contributes to the promotion of mental health, resilience, and well-being across the lifespan.

2.1.2 Evidence-based practices in psychology

In the field of developmental psychology, Evidence-Based Practices (EBPs) represent the gold standard regarding the realization of strong empirical research and interventions development, since this approach involves the integration of multiple unique characteristics and steps: specialized scientific expertise in a field, peculiar client values and professional preferences, and the best available research evidence at the current moment on a given topic (Cook & Odom, 2013). This approach prioritizes the adoption of interventions and

assessments' strategies that have demonstrated strong empirical support through multiple rigorous research methodologies, such as randomized controlled trials, systematic reviews, and meta-analyses (Graham & Harris, 2017). EBPs aim to emphasize the importance of gaining solid scientific evidence as a foundation for informing professional decision-making and improving client outcomes in multiple contexts (Chambless & Hollon, 1998; Flay et al., 2005).

First and foremost, EBPs are rooted in a strong commitment to the methodology of scientific inquiry and in data-driven research. They are defined by a systematic and meticulous approach to problem-solving actions that prioritize the procedures of collection and critical evaluation of empirical evidence. Furthermore, EBPs are exceptionally well-suited for psychological research because it demands a comprehensive understanding of the existing body of knowledge on a peculiar topic. By conducting systematic literature reviews and synthesizing the available evidence, researchers can build upon the work of their predecessors, ensuring that new interventions are informed by, and contribute to, the existing wealth of knowledge. In projects related to psychological well-being and mental health, the use of EBPs is today imperative: it not only provides a foundation for effective interventions but also serves as a quality control mechanism, ensuring that proposed strategies have been subjected to empirical testing, are supported by rigorous research, and have a demonstrable impact (Barlow & Ellard, 2006; Bywater & Sharples, 2017).

In the recent past, several task forces which worked on EBPs development, coding and implementation provided recommendations to carefully followed progressive criteria. Whether addressing school-aged children, adolescents, or adults, EBPs rigorously embrace a workflow of actions, research, improvement, and training to ensure the enrichment of the specific psychological field in which they are allocated. EBPs for prevention in psychology offer a summation of findings of current empirical research in that field, providing transfer to practice in real contexts. Following, a list of necessary steps to develop an EBPs intervention is presented as an example to frame the present project:

1. Define the problem: clearly articulate the issue or challenge that requires intervention.
2. Review existing evidence: conduct a solid review of existing literature and research relevant to the identified problem.
3. Specify objectives: clearly define the goals and objectives of the proposed intervention or practice.
4. Identify relevant research: select studies or research that directly address the defined problem and align with the objectives.
5. Assess quality of evidence: evaluate the quality, relevance, and reliability of the selected research studies.
6. Adapt to the context: consider the specific context, population, and setting where the intervention will be implemented.
7. Collaborate with stakeholders: engage key stakeholders, including practitioners, policymakers, and those affected by the issue, in the decision-making process.

8. Develop protocols and procedures: create clear protocols and procedures based on evidence to guide the implementation of the intervention.
9. Implement and practice: introduce the evidence-based practice in the targeted setting, ensuring fidelity to the established protocols.
10. Monitor and evaluate: continuously monitor the intervention's implementation and evaluate its impact on the identified problem.
11. Collect data: gather relevant data to assess the effectiveness and outcomes of the evidence-based practice.
12. Adjustment: based on ongoing evaluation, be prepared to adjust the practice for continuous improvement.
13. Disseminate findings: share the results of the evidence-based practice, contributing to the broader knowledge base.
14. Reflect on learned lessons: reflect on the overall process, considering successes, challenges, and areas for improvement.
15. Promote sustainability: develop strategies to ensure the sustainability of implementation of EBPs over time.

Over the past decades, it has become increasingly evident that the development, implementation, and dissemination of sustainable strategies in various psychological fields require intense collaboration among researchers, policymakers, administrators, and the media (Spiel et al., 2011). Regarded as a cornerstone in contemporary psychological sciences, EBPs stand out for their rigorous methodology, commitment to empirical validation, and the tangible benefits they offer across diverse realms of research and intervention.

Adopting evidence-based practices in psychology offers numerous advantages. The decision-making processes involved in the implementation of EBPs might influence professionals' personal motivation and belief, beyond specific scientific competences. Thus, the appeal in developing a EBPs consists in the recognition of the benefits coming from the outcomes. In psychology, many research and intervention fields require critical awareness of the issue that needs change, and empirical evidence is necessary to promote this change (APA, 2006). For example, in the horizon of contemporary research and through quantitative methods, those approaches, based on a determination of biopsychosocial conditions influencing that problem, address individuals, groups or organizations to promote research and clinical decision-making around a specific condition, disorder or life problem. As described previously (Spring & Hitchcock, 2010), psychologists can have three primary kinds of relationship to research evidence. First, as researchers, they can design, conduct, analyze, and report research, thereby contributing directly to creating the evidence. Second, as systematic reviewers, they can locate, appraise, and quantitatively synthesize research for evidence users. Third, as research consumers, they can access research evidence, appraise its quality and relevance for their context, and integrate research into their practical decision-making. Each of these three ways of relating to research assumes some common base of research knowledge, and each also entails some specialized skills. Both public health and psychologists' professional wellbeing stand to benefit from more primary and secondary research that directly compares outcomes and cost-effectiveness for medical and

psychosocial treatments. To advance the study of behavioral treatments and facilitate comparative effectiveness research, it is useful for psychologists to understand research traditions in clinical medicine (Kohlwes et al., 2006). EBPs' purposes are to improve the results of professional decisions and to increase the use of practices that lead to desired outcomes while eliminating dysfunctional practices (Morgan, 2021). Professions and policymakers engaged in EBPs development make use of current scientific evidence and methodologies prominently, reflecting the argument that science can improve outcomes of contemporary social and scientific problems through a better understanding of the world (Melnik & Fineout-Overholt, 2011; Wells & Miranda, 2006). This approach originated in medical sciences in the 1980s, to promote systematic use of evidence regarding physical activity and clinical treatments (Barends & Briner, 2014).

The adoption of EBPs in psychology does not come without risks or obstacles. In educational settings, for example, psychologists often face administrative and practical barriers that are not always present in research settings. Moreover, even when psychologists are aware of the empirical evidence supporting a technique or procedure, they may not infuse this evidence into practice because doing so requires more work than time permits or more resources than are available. Thus, some psychologists may be more influenced by clinical judgment than by research supporting EBPs when designing, implementing, and evaluating their own interventions (Wilson & Reschly, 1996).

Following, a list of features regarding the adoption of EBPs in psychology is presented:

1. Collaborative Responsibility: Developing effective interventions requires a collective effort involving researchers, trainers, and practitioners. This shared responsibility can manifest through active practitioner involvement in evidence-based intervention (EBPs) task forces, participation in practice-research networks, and real-world contexts evaluation.
2. Guidelines for Implementation: Recognizing the complexity of translating research findings into practical settings, implementing EBPs may benefit from the formulation and utilization of evidence-based practice guidelines. To facilitate the integration of interventions in practice settings, practitioners are encouraged to utilize manuals and procedural guidelines. Flexibility and local adaptation should be permitted within these guides to align with specific contextual needs.
3. Augmented Practice Guidelines for Efficacy: Mere designation of interventions as "evidence-based" might not be enough to ensure their practical application. It posits the urge for a comprehensive practice guideline that goes beyond offering a menu of interventions. These enhanced guidelines should contribute to operationalizing evidence-based practices in the field of psychology.
4. Need for professional development: working together with stakeholders could provide professional development for scientists in the field of psychology towards the integration of multiple competencies in several different disciplines and contexts.

5. Need for a scientist-practitioner training model: to strengthen connections between research and practice, especially regarding the urge for evaluating the tested models.

Moreover, EBPs in social sciences should present the following characteristics:

1. A practice-research network, which is, according to Lockard et al. (2013), a collective of practitioners actively involved in evaluating the outcomes of clinical replication research. This network serves as a valuable strategy to engage practitioners in the research process, focusing on understanding contextual variables influencing intervention implementation. Practitioners within this network function as integral members of a research team, contributing information on various variables like evaluation procedures, intervention components, integrity, service costs, implementation limitations, and adjustments for success. By participating in these networks, practitioners play a crucial role in expanding the evidence base for implementing evidence-based interventions in real-world settings. Such networks can leverage online platforms for efficient data collection and management. Initiatives like the Hawaii Empirical Basis to Services Task Force exemplify the practical application of evidence-based practices in community settings, emphasizing the importance of capturing intervention programs and strategies developed by psychologists in school practice.
2. The literature on EBPs draws a distinction between efficacy and effectiveness in the methodology (APA, 2002; Fonagy et al., 2003). Efficacy, the standard for assessing interventions in controlled research, is typically conducted in laboratories or clinical research facilities using rigorous methodologies such as randomized controlled trials. On the other hand, effectiveness serves as the standard for evaluating interventions in real-world practice contexts, focusing on the generalizability of the intervention. Both types of studies, efficacy, and effectiveness, are vital for the field of school psychology. Type I involves efficacy studies conducted in controlled research contexts, while Type II includes transportability studies examining the generalization, feasibility, and acceptability of EBPs in practical settings. These studies address real-world challenges such as training requirements, treatment provider characteristics, resource availability, treatment acceptability, cost efficiency, and administrative support. Type III studies, termed Dissemination studies, involve deploying intervention agents within the service system, such as schools. In this research, the intervention protocol is implemented by school psychologists, either directly or as mediators collaborating with teachers or parents. It's noteworthy that, as formal research protocols are still involved, researcher control and supervision may influence the intervention and its eventual effectiveness. Type IV, termed System Evaluation studies, is introduced to overcome the "investigator effect" present in dissemination studies. This research aims to determine whether the practice elements can lead to positive outcomes when a system operates independently. The author emphasizes the collaborative role of practitioners and researchers in

advancing these four types of research and utilizing the findings to enrich the knowledge base for the successful integration of EBPs in practical settings.

3. Establishing guidelines for interventions in various contexts: understanding principles of change, recruitment criteria, socio-economic and cultural backgrounds of participants and stakeholders, the practice should be assessed throughout a training involving progressive steps, focusing on consultation and analysis of the guidelines itself.
4. Creating professional development opportunities: in the face of the remarkable expansion of our knowledge in psychology and education (Adair & Vohra, 2003), committing to professional development can seem challenging. Nevertheless, both the APA and the National Association of School Psychologists (NASP) underscore the significance of professional development in their ethical codes. Specifically in the domain of EBIs and evidence-based practice, proficiency in “best practices” demands continuous development of skills and comprehension to effectively match EBPs with specific problems in given circumstances and oversee their implementation. This extends beyond best practices, integrating professional development into assessment protocols and intervention manuals. Embracing such an agenda represents a commitment to evidence-based practices.
5. Collaborating with other professional groups: interest in evidence-based practice has surged in the last decade. School psychology followed with its own task force in 1999. Despite common objectives, these efforts have often been independent, presenting uncertainties about collaborative options. Nevertheless, collaboration among these groups could yield several advantages for each group and the broader EBPs movement.

Initially spread in the field of public health and in medicine, EBPs in psychology offer today new guidelines for interventions in each different social and psychological problem. In developmental psychology, EBPs are rooted in the framework of prevention strategies and actions. Thus, an overview of the concept of prevention is crucial as a context background for the EBPs movement.

In the context of developmental and educational psychology, and in line with the current dissertation involving European first grade secondary schools, hereby some specific dedicated arguments are shared to outline the adoption of EBPs, and prevention within the current research project. The role of teachers and education in Western societies is currently undergoing a profound re-examination amid the impact of digital technologies on everyday life (Costley, 2014; Eady & Lockyer, 2013; Fishman et al., 2016). Educational psychologists, pedagogists, and philosophers are exploring innovative tools, models, and multiple teaching practices to align their professions with 21st-century communicative dynamics. While preserving central features like motivation and inclusiveness, teachers and educators are challenged by the transformation of transmitting information, and by the current surge in available digital data. These recent shifts in communication dynamics, including the COVID-19-induced digitalization of teaching, have led to increased attention to teacher competencies (Lukas & Yunus, 2021; Pressley, 2021; Pressley & Ha, 2021). The COVID-19 pandemic, innovations in student-centered strategies, and the rising importance of games

have in fact spurred research on Digital Game-Based Learning (DGBL) (Purnama et al., 2021; Wati, 2020). Coined by Prensky (2001), and now representing a dismissed term, DGBL integrates digital games into curricula, offering benefits like enhanced learning, social development, and collaborative skills applied to learning processes of formal education subjects and themes. DGBL, Edutainment and Serious Games will be presented throughout the chapters to face the contemporary topics relevant to the European educational systems (Ragni et al., 2023) and then discussed within the effort of building prevention programs for cyberbullying in youth.

2.2 The Edutainment approach and Serious Games in psychology training

EBPs aim at creating an environment where developing programs to facilitate certain behaviors became a rigorous methodological experience (Zin & Zain, 2010).

To address the pervasive issue of cyberbullying among preadolescents, and related dimensions, current innovative projects in psychology emerge at the convergence of frontier concepts: Edutainment, and Serious Games. This section of the chapter seeks to harness the captivating and educational potential of the Edutainment approach, drawing from evidence-based practices to inform its design. Embedded within this project is the utilization of Serious Games, which blends engagement and learning to create a dynamic platform for cyberbullying prevention. The term Edutainment is a neologism coined in the 1990s by National Geographic documentary filmmaker Bob Heyman to indicate the possibility and necessity of teaching and learning while having fun in a group.

The expression is a combination of the words education and entertainment. This endeavor represents a forward-looking fusion of established best practices and cutting-edge technology, underpinning a novel approach to equip preadolescents with the skills and awareness needed to foster empathy, digital citizenship, and emotional intelligence, ultimately combating cyberbullying in a proactive and effective manner.

2.2.1 Edutainment in psychology: fields and functions

This section aims to dissect the role of Edutainment in fostering engaging and effective educational experiences in current learning and educational contexts, differentiating it from gamification and digital game-based learning, and applying it to the study of cyberbullying in preadolescence through the development of specific prevention practices.

The cornerstone of this analysis lies in recognizing the significance of play as a pivotal human activity. Indeed, play is an essential facet of human existence that transcends age, culture, and life stages, serving as a crucial developmental, cultural, and sensemaking endeavor. As Huizinga eloquently elucidates in his seminal work *Homo Ludens* (1955), play is far more than a mere recreational pursuit; it is a deeply ingrained and meaningful pursuit that profoundly influences our comprehension of the world and ourselves. According to the author, play embodies five key characteristics: (i) freedom, epitomizing a realm of liberated expression and intrinsic motivation; (ii) a distinct temporality and spatiality that sets it apart from the routines and responsibilities of daily life; (iii) despite its structured nature, play remains divorced from material gain or external inducements; (iv) instead, it serves as an authentic expression of human interaction and (v) enjoyment.

Pioneering and contemporary scientific reflections have underscored the pivotal role of play in facilitating imaginative exploration, experimentation, and creativity, thereby fostering cognitive, emotional, and social development (Athey, 2018; Smith, 2005). Play serves as a conduit for learning, problem-solving, and the acquisition of vital life skills, laying the groundwork for adaptive behaviors and resilience. Moreover, play is deeply ingrained in cultural practices and traditions, acting as a vehicle for the transmission of societal norms, values, and beliefs across generations (Henricks, 2023; Pellegrini, 2009). Whether manifested through structured games, rituals, or spontaneous activities, play has a central role in shaping cultural identity and fostering social cohesion (Burns et al., 2018; Frissen et al., 2015; Levinson, 2005). Additionally, play serves as a potent sensemaking activity, enabling individuals to navigate the complexities of life, express emotions, and make sense of their experiences (Davis, 2017). It provides a platform for self-expression, identity exploration, and the negotiation of social roles, thereby promoting personal growth and well-being (Baird, 2021; Hawkins, 2002). Ultimately, Huizinga's insights underscore the profound significance of play as a universal and multifaceted phenomenon that enriches human existence across all life stages.

The playful term Edutainment identifies the combination of the words “education” and “entertainment”, combining the role of human play in learning processes. In fact, it embodies a dynamic and innovative learning approach that merges educational content with captivating and enjoyable elements (Hamid, 2012). Leveraging the power of the human ability to play, to entertain through interactivity, and through the immersive encounters with educational topics, Edutainment aims to render learning an enjoyable and effective process for multiple targets, from children to adults (Anikina & Yakimenko, 2015), to engage and educate individuals through entertaining contents, in diverse domains (Williamson & Smoak, 2005); this approach embraces media, playful tools, and multiple activities, such as educational games, interactive simulations, multimedia presentations, and storytelling methods (Kleftodimos et al., 2020), basing on the specific needs of the teaching activity. Whether in classroom settings, museums, digital platforms, or television programs, Edutainment usually captivates learners of different ages by nurturing curiosity, stimulating critical thinking, and encouraging active involvement of the subjects (Zorica, 2014). It acknowledges the philosophy that individuals tend to absorb information more effectively

and retain knowledge when learning is an engaging personal or social experience (Bukit et al., 2023). In the field of pedagogical sciences, the progressive educational philosophy of John Dewey, which emphasizes the role of active learning processes in knowledge development, problem-solving abilities, and the integration of real-life experiences into the learning curriculum, aligns seamlessly with the essence of Edutainment itself (Dewey, 1998). In fact, both Dewey's practical education philosophy and the Edutainment approach share a common emphasis on fostering engaging and interactive learning experiences that capture apprentices' interest while delivering educational content. By incorporating multiple experiences and tools (such as Serious Games), Edutainment initiatives create a dynamic and immersive learning environment that can be applied across various psychological domains (Landers & Callan, 2011), fostering individual and collaborative learning engagement.

In the past decades, Edutainment strategies have been applied in diverse areas within psychology and educational sciences. In psychoeducation, Edutainment interventions have been adopted to educate individuals about several mental health conditions, treatment options, coping strategies, and prevention efforts. These interventions contribute to enhance knowledge on a specific topic, reduce stigma, and promote help-seeking behaviors in multiple aspects of life (Navarro-Pérez et al., 2019; Shavinina, 1998). In the field of skills development, Edutainment programs are employed to develop and enhance several transversal competences, such as social skills, emotional regulation, problem-solving, critical thinking, and decision-making. Interactive games and simulations provide opportunities for practice, feedback, and reinforcement in learning programs addressing children, adolescents, and adults (Green & McNeese, 2007; Korkmaz, 2013). In the field of health promotion, Edutainment strategies and actions have been promoted to foster the development of specific healthy behaviors and habits, such as physical activity, healthy eating, smoking cessation, and substance abuse prevention or eating disorders treatment. Through interactive games and multimedia, individuals are educated and motivated to adopt and maintain healthy behaviors and lifestyles (DeSmets et al., 2015; Dias et al., 2016). Lastly, in cognitive rehabilitation processes, Edutainment tools are used in cognitive rehabilitation programs for individuals with cognitive impairments or neurological deficits. These interventions provide cognitive stimulation, memory training, and attentional exercises in an engaging and enjoyable format for children, adolescents, and adults. (Gamito et al., 2017; Rego et al., 2017).

The Edutainment approach in psychology can offer several advantages, targeting diverse specific learning functions and correlates: these strategies foster engagement and motivation, since Edutainment captures individuals' attention and motivates active participation, enhancing learning outcomes and skill development, especially among schoolchildren (Yafie, 2017). In the tools adopting this approach, personalization processes are often empowered: Edutainment programs can be tailored to individual needs, allowing for personalized learning experiences and targeted interventions (Lim et al., 2019). Experiential learning is the key to success for this approach: Edutainment provides opportunities for hands-on learning, problem-solving, and decision-making in a risk-free environment,

facilitating skill transfer to real-world settings and vicarious learning through diverse techniques (Feenstra et al., 2015). To conclude, accessibility and reach are empowered, since Edutainment interventions can be delivered through various platforms, such as mobile applications and online platforms, allowing for broad accessibility and reaching a wider audience (Archambault et al., 2008).

The relationship between Edutainment, media, and EBPs forms a dynamic nexus in modern educational environments (Maushak et al., 2001). The goal of Edutainment could also be to promote the innovative methodology known as Media Education (Buckingham, 2007), which encompasses the critical analysis and understanding of various forms of media, teaching individuals to navigate, interpret, and create media thoughtfully (Steffes & Duverger, 2012). When intertwined with Edutainment, these concepts enhance media literacy by promoting a deeper comprehension of media messages, their impact, and their production processes. Edutainment, with its entertaining yet informative approach, serves as a powerful tool within Media Education (Kalogeras, 2013), fostering not only a more engaged learning experience but also empowering individuals to become discerning, informed consumers and creators of media content (Moola & Cilliers, 2019).

In the domain of developmental and educational psychology, innovative educational interventions adopting Edutainment hold profound significance for several reasons. First, traditional approaches might fall short in comprehensively addressing the multifaceted challenges modern students encounter, including cyberbullying, diverse learning preferences, and technological advancements. Innovations in interventions provide a response to these contemporary issues, providing adaptable and engaging strategies that resonate with the ever-evolving needs of students. Furthermore, these interventions foster an inclusive learning environment by catering to diverse backgrounds, abilities, and learning styles (Aksakal, 2015). They facilitate personalized learning experiences tailored to individual students, promoting heightened engagement, motivation, and overall academic success (Rabah et al., 2018). Moreover, in an era of rapid educational and technological progress, innovative interventions enable educators to remain conscious of the latest advancements. This empowerment allows them to implement evidence-based practices proven to enhance learning outcomes and address psychological concerns among students. Edutainment, gamification, storytelling, and Serious Games are three distinct yet interconnected concepts within the realm of interactive learning. Edutainment blends educational content with entertainment elements, aiming to engage learners in enjoyable yet informative experiences. It often involves incorporating games, storytelling, or multimedia to make learning more engaging, as well as Augmented Realities and Virtual Realities. Gamification, often seen as part of digital game-based learning, involves incorporating game elements like progress displays and rewards into non-gaming contexts like education and business (Kim et al., 2017). Advocates highlight the positive impacts on outcomes such as academic performance and user engagement, while critics argue that gamification leans more toward behavior modification. Distinctions are made between gamification and game-based learning, emphasizing the contrast between purposeful game design and behaviorism-rooted approaches in education (Kapp, 2012). It is one of the methods adopted by Edutainment, but

it goes beyond Edutainment itself, since it can be adopted in multiple fields and not only in learning and educational environments. In the next subparagraph, the concept of Serious Games is discussed in more detail in relation to digital game-based learning (DGBL).

2.2.2 Serious Games and digital game-based learning

Before delving into the definition and features of Serious Games, it is important to define the broader framework of Game-based learning, to which these tools belong. Game-based learning (GBL) is described as “a branch of serious games that deals with applications that have defined learning outcomes”. Some authors have considered game-based learning and Serious Games as the same instrument (Corti, 2006). Nevertheless, GBL aims at improving training actions through the activation of multiple psychological dimensions, such as engagement, motivation, role playing, and repeatability (feedback strategy), involving analogical and traditional physical games and activities (Ucus, 2015). Differently, digital game-based learning (DGBL) is related to GBL, with the additional restriction that it specifically concerns digital games. In the words of Marc Prensky, American writer in the field of learning and education, DGBL could currently be considered as the “newest trend in e-learning” (Squire, 2008). Currently, Prensky’s guidelines and thoughts are objects of debate within pedagogy and educational psychology, criticized as too simple to envelop all the nuances involved in learning processes. Nonetheless, he provided insightful indications on a definition of DGBL based on two key premises: (i) the thinking patterns of learners today have changed, that is, today’s students are ‘native speakers’ in the language of digital media; (ii) this generation has experienced a radically new form of computer and video game play, and “this new form of entertainment has shaped their preferences and abilities and offers an enormous potential for their learning, both as children and as adults” (Prensky, 2001). Within the DGBL framework, Serious Games are one of the opportunities to promote learning across different ages. Thus, they are introduced as core elements of this approach.

As digital technologies permeate daily life for multiple purposes, Digital Game-Based Learning (DGBL) gains prominence in multiple contexts. DGBL explores the interplay between computer games and learning processes, drawing from interdisciplinary research. However, the term remains contested, sparking debates on game definitions, digital affordances, and the assessment of learning outcomes. Scholars diverge in their perspectives, with positivist views emphasizing gamification for specific outcomes, interpretive approaches understanding DGBL as embedded social practices, and critical paradigms interrogating power dynamics and ideology. Educators adopt various approaches, integrating commercial games, developing educational games, engaging students in game creation, and employing gamification elements. Despite its influence, DGBL faces critiques concerning educational effectiveness, game quality, and ethical considerations, including concerns about commercialism and social implications. Yet, the field continues to expand, driven by

evolving technologies and cultural shifts (Aguilera & DeRoock, 2022). Games are used in classrooms in several ways, broadly falling into four categories: integrating commercial games into learning, creating games for educational purposes, engaging students in game creation for learning, and applying game elements to non-gaming contexts, known as gamification (Van Eck, 2015).

The increasing proliferation of notebooks, smartphones, and tablets, and the consequent widespread use of the internet everywhere, has completely transformed people's lifestyles, both personally and professionally, providing everyone with the opportunity to access increasingly simple and intuitive online learning services. Within the realm of education and training, this transformation has been even more remarkable, thanks to the nature of these cross-cutting competencies, which are well-suited to non-traditional training methods, as they encompass a range of skills acquired throughout life in formal, informal, and non-formal situations. Thus, training, and leveraging technological innovations, and especially the increasingly improved creation of virtual environments and their graphics, enters the realm of video games. This phenomenon is further accentuated by the efforts of the European Community, which in recent years has funded many projects aimed at studying the combination of video game technology and training tools. This emerging field of research and industrial development arises from the intersection of multiple disciplines such as psychology, software engineering, gaming technologies (gamification), pedagogy, and organizational management, and is known as Serious Gaming.

Serious Games, an integral part of the Edutainment framework, serve specific purposes such as education, training, or behavioral modifications (Abt, 1987; Ratan & Ritterfeld, 2009). This overview delves into the concept of Serious Games within psychology, shedding light on their potential applications and advantages (Tsekleves et al., 2016). These interactive games are purposefully designed to impart knowledge, skills, or induce behavior change (Laamarti et al., 2014; Micheal & Chen, 2005). In psychology, Serious Games are utilized for therapeutic, educational, and assessment purposes. These games often incorporate elements of challenge, feedback, rewards, and immersive experiences to promote learning, behavior change, and psychological well-being (Nguyen et al., 2017). The term Serious Games (SGS) dates to the early 1970s, thanks to the work of Abt, although it only began to be discussed in 2002, thanks to B. Sawyer and D. Rejeski and the Serious Games initiative, which involves using games for training in specific types of work, such as military personnel training. Since then, an intense and interesting debate has ensued, focusing primarily on the definition of SGS.

Serious Games essentially strike a balance between serious objectives and playful engagement. Their developmental focus aims at creating effective and enjoyable training experiences, leveraging various genres, technologies, mediums, and tailored to suit diverse audiences. Often, interactive virtual simulations are considered examples of Serious Games. Both these tools share a core objective of skill development and competency enhancement, facilitating practical application in the real world through practice in a simulated yet controlled environment. Michael and Chen (2005, p. 21) define Serious Games as «games

that do not have entertainment, enjoyment, or fun as their primary purpose». The authors do, however, remark that this is not to say that serious games are not entertaining, enjoyable, or fun, just that there is another purpose. Nevertheless, education can be entertaining, but also the reverse is true. “Fun”, however, is neither the only form of entertainment, nor the only way to engage players in a game.

These games have a historical foundation in military use, expanding to the industrial sector from the 1980s and sparking interdisciplinary collaboration between engineering and psychology (Susi et al., 2007). The recognition of the potential of games as effective learning tools has led researchers, psychologists, educators, and game developers to collaborate on designing principles that enhance their educational impact. Role-playing simulation games, situated along a continuum based on their structure and learning objectives, can stimulate effective learning when integrated into a training program with clear goals (Aldrich, 2009; Alrehaili & Osman, 2022; Carr et al., 2010). Serious Games, especially in digital formats, combine entertainment with diverse media to enrich players’ experiences and convey educational messages, fostering learning (Laamarti et al., 2014). Daniela Ahrens (2015) highlighted the value of Serious Games in improving the experiences of skilled workers in the workplace. She identified six main properties contributing to their effectiveness: a structured set of rules and goals, experiences offering robust learning opportunities, a balance between accessibility and effectiveness, a model facilitating abstract learning, encouragement of resourcefulness and creativity in players, and a user-friendly interface. In the process of developing a Serious Game, creating credible virtual agents is a critical pursuit. Designing situational psychological agents for training and psycho-pedagogical purposes in simulation and role-playing scenarios is reshaping traditional training practices. In psychological assessment Serious Games, virtual agents often rely on human-authored dialogue, considered the gold standard in natural language generation. However, it’s crucial to recognize that human-produced language can be influenced by the authors’ personal characteristics, such as gender, power status, and cultural orientation. The interdisciplinary process of designing the behaviors of these agents involves collaboration across psychology, cognitive modeling, artificial intelligence, and graphics (Dell’Aquila et al., 2022). Evidence drawn from the application of educational video games in soft skills learning contexts (Dell’Aquila et al., 2017b) fosters the confidence of scholars interested in proposing these tools in different scenarios characterized by specific objectives, as they are important in various contexts. One such scenario could be the prevention of social withdrawal or rehabilitation in individuals at risk of isolation and addiction to the Internet, video games and social networks. The achievement of these objectives is conditioned by the possibility of reaching a relatively large community of young people, accompanied by a multidisciplinary team of professionals capable of accommodating the specific psychological and social needs of this population; since shame, helplessness and frustration are the fundamental experiences of this problem, it could be functional to design the intervention starting from these.

Currently, in the design and implementation of Serious Games (SGS), various pedagogical models are adopted, including the model of experiential learning. Virtual

experiences, like real ones, might involve the acquisition of information and sensations, which leave a strong impression and allow the player to refine perception, attention, and memory, fostering behavioral changes through learning by doing. Learning is no longer just about a passive transfer of knowledge between a teacher and a learner, but about an active and conscious acquisition of new knowledge through continuous and consistent experimentation, supervised and guided by an expert. These elements make learning an interesting and even “fun” experience that increases users’ motivation and willingness to complete their educational journey.

Serious Games are currently employed in various psychological domains:

1. Therapy and intervention: Serious Games may serve as a support for therapeutic tools for psychological interventions, addressing conditions such as anxiety, depression, phobias, and post-traumatic stress disorder. They provide a safe and controlled environment for exposure therapy, relaxation training, and cognitive restructuring (Eichenberg & Scott, 2017).
2. Assessment and diagnosis: Serious Games can be utilized as interactive assessment tools to evaluate cognitive abilities, attention, memory, executive functions, and emotional regulation. These games offer a standardized and engaging assessment approach (Silney & Murphy, 2011).
3. Training and skill development: Serious Games are utilized for training purposes, such as healthcare professional training, social skills training, and education and job-related skills development. They provide interactive and immersive environments for practice, feedback, and skill refinement (Romero et al., 2015).
4. Behavior changes and health promotion: Serious Games are applied to promote behavior change and healthy habits, targeting areas such as smoking cessation, physical activity, medication adherence, and stress management. Gamification elements, rewards, and progress tracking enhance motivation and engagement, are adopted to obtain improved outcomes in education, therapy, assessment, and behavior change initiatives (Dias et al., 2016).

Serious Games have emerged as a valuable tool in the prevention of cyberbullying (Calvo-Morata et al., 2020). These interactive digital games create a virtual environment where players can explore, learn, and practice strategies to prevent and address cyberbullying incidents, as well as other conditions (Almeida & Buzady, 2022; Dell’Aquila et al., 2017a; Hassan et al., 2021). Serious Games for cyberbullying prevention typically incorporate elements such as role-playing, decision-making scenarios, and interactive simulations (Neo et al., 2018). Generally, players are presented with situations and are encouraged to make choices that promote empathy, respect, and positive online behaviors (Ferreira et al., 2021). Through engaging gameplay and immediate feedback, Serious Games might help to raise awareness about risks connected to cyberbullying and problematic social media use in youth, fostering empathy, and equipping players with the knowledge and the soft skills necessary to prevent and intervene in aggressive peer interactions, such as in the Serious Game Friendly Attac (DeSmet et al., 2018).

Considering the average starting budget for Serious Games creation is relatively low, around one million dollars, they emerge as a viable alternative to initiatives with more general objectives but less feasibility. The strength of Serious Games lies in their focus on enhancing competencies in specific areas, avoiding a broad and inadequate approach to change. While various game design models share foundational concepts, the criteria for development exhibit both similarities and differences. For a comprehensive understanding of these models, Tahir, and Wang's (2018) comparative analysis is referenced, emphasizing the importance of recognizing the strengths and limitations of different frameworks to promote experimental research in educational games. It is crucial to note that each framework is guided by specific theories, principles, functions, and objectives derived from studies conducted by psychologists or educators, underscoring the multidisciplinary nature crucial in every stage of Serious Games design.

2.3 Overview of national and international school programs and interventions to tackle cyberbullying

Offline and online forms of violence among young people are a global concern that has gained considerable recognition from international agencies in the past years, including the World Health Assembly (WHA, 1996, 49.25). Indeed, it is now generally acknowledged as a pressing issue that demands the attention and expertise of professionals across various educational, legal, and social fields. The gravity of the topic is underscored by its far-reaching contemporary implications for the well-being, mental health, and future of young individuals, prompting concerted efforts to comprehensively address and mitigate this complex challenge. Cyberbullying (and traditional bullying) are problems that require great attention to be paid to the people involved. Witnesses, parents, teachers, friends, and pediatricians, are figures with a decisive role to play in intercepting, supporting, and interrupting a physically and psychologically painful action. prevention and early intervention actions need to be implemented, using the school as a container. For bullying and cyberbullying, judgements on the results of the rates in different countries must be evaluated according to the context (Menesini & Salmivalli, 2017). This section contributes to an overview of cyberbullying research. Schools often represent challenging settings, characterized by difficulties regarding the understanding of the prevention programs, limits in terms of funding, time, and space to foster actions.

With reference to the social and moral development throughout preadolescence, the alarming rise in cyberbullying necessitated the development of increasingly specific EBPs for effective prevention interventions. This approach considers the complexity of these phenomena within the broader scope of cyber behaviors during preadolescence in contemporary society (Calvete et al., 2021). The decision to promote preventive research-intervention is rooted in the recognition that cyberbullying poses significant risks to the

psychological well-being of young individuals, often resulting in anxiety, depression, and social withdrawal (Hinduja & Patchin, 2010; Kowalski et al., 2014). This intervention acknowledges the need for a comprehensive approach that integrates current empirical findings and theoretical models. By focusing on enhancing socio-emotional competencies and fostering a supportive school environment, the initiative aimed to mitigate the harmful effects of cyberbullying and promote resilience among preadolescents. This effort aligns with contemporary calls for the integration of evidence-based strategies in educational settings to address behavioral and psychological challenges effectively (Durlak et al., 2011).

In psychology, the term research-intervention represents a methodological approach that seamlessly integrates empirical research with practical interventions in specific contexts, aiming to address real-world issues and produce positive changes in individuals or communities (Cook & Campbell, 1979; Kazdin, 2003); this approach emphasizes the application of evidence-based practices derived from systematic research methodologies. This process involves an iterative cycle of investigation, implementation, and assessment, fostering a reciprocal relationship between theory and practice, and revers, congruently with EBPs criteria. Research-intervention, akin to Kurt Lewin's seminal work on action research (Lewin, 1946), encapsulates a commitment to understanding and transforming real-world issues through a systematic and iterative process. Lewin's action research, rooted in the idea of a collaborative and cyclical inquiry, shares a fundamental synergy with research-intervention in psychology. Both methodologies emphasize the fusion of empirical investigation and practical intervention, forming a dynamic feedback loop between research findings and applied strategies. By adopting Lewin's spirit of active collaboration between researchers and practitioners, research-intervention enhances the relevance and impact of psychological research, particularly in developmental and educational contexts. The multifaceted nature of research-intervention is particularly pertinent in developmental and educational psychology, where its application in schools with preadolescents can yield valuable insights and contribute to the development of effective strategies for psychological well-being and academic success. Embracing a multidisciplinary approach, involving theoretical and practical engineering and psychological skills, the current project transcends the mere deciphering of psychosocial intricacies of cyberbullying behaviors during preadolescence, proper to basic research (Levin & Kratochwill, 2012), aiming to forge tangible connections between theoretical insights and practical resolutions (Gabrielli et al., 2021).

Nowadays, the educational system has been identified as a context where bullying and cyberbullying behaviours occur, both in Europe and in other Western countries (Myers & Cowie, 2019). Sometimes, persecution and conflicts also occur on the way to and from school but cyberbullying, by definition, can occur anywhere. Thus, research indicates that it seems of primary importance to develop and promote school-based interventions to counteract negative social attitudes and behavior related to cyberaggression, promoting social and emotional competences. Some programs are defined "whole school" and include several intervention levels (classroom, teacher, parents, students: individually and in group)

(Chan et al., 2015). Others can be defined “multi-level” since they consider fewer levels than the former (Kashy-Rosenbaum & Aizenkot, 2020).

In recent years, schools adapted and started to employ a range of interventions to counteract bullying and cyberbullying, including education on responsible citizenship, fostering empathy through awareness programs, implementing clear anti-bullying policies, encouraging reporting mechanisms, involving parents in prevention efforts, and integrating technology into the curriculum to promote responsible online behavior, after the first studies on bullying conducted by the Scandinavian scholar Daniel Olweus (1972). These interventions aimed at creating a safer and more inclusive school environment, while equipping students with the skills and awareness needed to combat bullying. Some of these interventions will be described in this section, both for Europe and Italy, considering how these equipment, laws and policies have been modified to counteract cyberbullying in recent years. Thus, preventing and addressing bullying and cyberbullying at school required a comprehensive approach that involves various stakeholders, including parents, educators, school administrators, and the wider community (Holt et al., 2013). By implementing a multi-faceted approach that targets individual, family, school, and community factors, it has been possible to create programs to foster a safer and more supportive school environment for preadolescents (Wang & Degol, 2016). The goal has often been to promote positive social interactions, reduce bullying behaviors, and support the well-being and development of all students during this critical phase of their lives (Bers et al., 2012). Studies report that schools which made their adolescent students feel safe, and that created a good school-student attachment, were less likely to allow bullying behaviors to occur (Fossum et al., 2023).

Nowadays, counteracting cyberbullying is a complex process involving a multi-tiered approach connecting different stakeholders beyond the boundaries of schools’ programs (Snakenborg et al., 2011). Hence, prevention efforts often encompass educational programs promoting digital citizenship, empathy, and ethical online behavior (Salmivalli et al., 2013) both for children, and for parents. Interventions today focus on early identification, effective reporting mechanisms, support for victims, and an analysis of how to deal with consequences for perpetrators as well as victims: collaborative efforts among schools, families, policymakers, and ICTs industry stakeholders are essential for comprehensive and sustainable solutions (Ansary et al., 2020). Thus, a socio-ecological systems perspective could represent the gold standard to face cyberbullying dynamics at school (Cross et al., 2015), involving all the actors that play a crucial role to prevent negative developmental behaviors and promote safety both in online and offline settings. Specifically, to combat issues of cyberbullying, different methods have been adopted: schools have attempted to ban mobile phone usage in schools, for instance (Selwyn & Aagard, 2021). Despite this, Smith et al. (2008) found that young people would still attempt to use them secretly or continue victimization after school hours. Even if banning mobile usage during the school day was to occur, cyberbullying will continue outside of school and the predicaments that relate to cyberbullying will continue to affect young people throughout their daily lives, including while they are attending school (Smith et al., 2008).

In Italy, namely, the *NoTrap!* evidence-based program, initiated in 2008 to combat bullying and cyberbullying in high schools, has emerged as a highly effective intervention within Italian contexts (Palladino et al., 2016). This school-based program adopts a peer-led approach, demonstrating promising outcomes in altering attitudes toward bullying and cyberbullying over time. The encouraging data regarding shifts in attitudes underscores the program's effectiveness in bringing about positive changes in perceptions and behaviors related to these issues among high school students. The dedicated platform of the project is divided into sections targeting definitions of bullying, school climate, roles, cyberbullying, and possible actions to counteract negative consequences of this behavior. The promotion of good practices based on peer-education strategies is the goal of this project.

In Spain, the *ConRed* program is an evidence-based intervention rooted in the theory of normative social behavior and aims to reduce behavioral problems such as cyberbullying and problematic Internet use and refocus the misadjusted perception of information control in the social networks to promote their use in a more beneficial way (Del Rey et al., 2012). The use of mobile devices, smartphones, tablets, laptops has transformed the social features of peers' interactions and bullying into cyberbullying experiences. Schools need to consider in their social promotion programs that interpersonal relationships are now maintained through technology.

On a broader conceptual level, the promotion of positive and adaptive coping strategies to counter negative offline and online behaviors among peers represents a promising area of research (Machackova et al., 2013), aiming to cultivate pro-social competencies, enhance the school climate, and bolster overall well-being during preadolescence (Raskauskas & Huynh, 2015). Particularly, when discussing bystanders, acquiring safer strategies to support and defend victims may allow defenders to safeguard themselves against potential negative consequences while encouraging proactive intervention. Linking coping strategies with the United Nations 2030 Agenda for positive school climate interventions is pivotal in fostering a safer and more inclusive educational environment. Equipping students with effective coping mechanisms not only assists in navigating cyberbullying incidents but also aligns with Goal 4 (Quality Education) by cultivating an inclusive and equitable learning environment. Furthermore, these interventions contribute to Goal 16 (Peace, Justice, and Strong Institutions) by creating a safer and fairer school atmosphere that promotes social harmony, thereby advancing the broader objectives of the United Nations' 2030 Agenda.

A proliferation of research and interventions against bullying and cyberbullying affected Europe and developed countries during the past decades (Pichel et al., 2021). As anticipated in the first chapter, in a problematic and diversified legal framework and in the specific context of good practices often adopted by peculiar schools, policymakers or communities, a larger scientific international uniformity regarding development criteria, implementation and evaluation of interventions is hoped for. To make bullying and cyberbullying prevention effective, there is need to build, test and disseminate evidence-based prevention programs based on the identification of the causal risk factors and mechanisms that lead to violence

and aggressive behaviours in youth, as well as knowledge regarding the protective factors (Kratochwill, 2007; Rathvon, 2008).

The development of effective projects to address these concerns necessitates establishing consensus on the specific operational definitions of cyberbullying and cybervictimization, which are prevalent worldwide and from childhood to late adolescence (Ansary, 2020). While various literature reviews highlight specific pedagogical elements in educational programs combating cyberbullying (Calvo-Morata et al., 2020; Hutson et al., 2018; Lan et al., 2022), other studies demonstrating the effectiveness of these interventions are currently limited (Espelage & Hong, 2017). Further issues are related to specific prevention principles, such as embedding violence prevention into a public health strategy that aims at reducing a range of negative outcomes that are sharing many risk factors and should hence be considered as elements of a larger prevention strategy (“a public health perspective”) (Brownson et al., 2009; Kohatsu et al., 2004). It is important to adapt intervention intensity to risk exposure (e.g., combining universal, indicated, and selective action) and to adopt an ecological perspective of the multi-layered prevention action (Hong et al., 2014). Moreover, an evidence-based approach to policy change must inform the governments’ decisions, integrating policymaking and research by using high-quality basic research to guide innovation in prevention programs and strategies, by rigorously testing prevention strategies in methodologically sound outcome evaluations, and by working with governments and policymakers to achieve real-world effects. This requires close cooperation between local and national governments and researchers. Another important indication concerns the need for more and better evaluation research to create the knowledge base required for achieving a reduction in youth violence. Finally, the researchers emphasized the need to improve knowledge regarding the mechanisms and active components of preventive interventions. Understanding the principles of why some interventions work is essential for further progress in this field. Across Europe, an increasing demand for good evidence that can inform policies aimed at reducing violence against and among children and adolescents is emerging (Ubbink et al., 2013).

The literature regarding these interventions offers mixed results. Few studies have been published up to 2016 about programs targeting cyberbullying (Menesini et al., 2012; Ortega-Ruiz et al., 2012; Williford et al., 2013; Wölfer et al., 2014), and the amount of cited research on antibullying programs is significant. In the latest meta-analysis on the efficacy of intervention to tackle bullying, Ttofi & Farrington (2011) evidenced that evaluated programs are often likely to concretely counteract the phenomenon: bullying has decreased by 20 – 23% and victimization by 17 – 20%. At the same time, the authors emphasized the necessity of acquiring scientific knowledge regarding the most effective components of the programs, articulated in the need for research with a rigorous design and higher methodological standards along with theoretically grounded intervention models. Despite some limits of this meta-analysis (Smith et al., 2012), the scholars are encouraged to evaluate the programs rigorously. It is important to follow high standards to have programs that can be evidence-based (Eisner & Malti, 2012). Many prevention programs were carried out in K12 schools, including primary and secondary prevention to counteract and reduce cyberbullying

perpetration. A wide range of interventions lacked manual and specific scientific guidelines, resulting in difficult replication of the protocols (Hutson et al., 2018). Thus, training's outcomes regarding various cyberbullying components (e.g., coping skills, parenting, attitudes, norms, self-efficacy) should be evaluated according to the presence of manuals, follow-up, adaptability to multiple contexts and ages.

Systematic reviews and meta-analyses have examined the effectiveness of cyberbullying interventions, yielding inconsistent findings. Notably, Cantone et al. (2015) highlighted studies between 2000 and 2013 that did not demonstrate positive long-term effects in reducing cyberbullying. For instance, Tanrikulu's descriptive systematic review noted the effectiveness of most school-based anti-cyberbullying programs up to 2016 (Tanrikulu, 2018) produced a significant impact. Conversely, Mishna et al. (2011), in a review of three intervention studies on online safety, found no statistically significant impact on risky online behavior, including cyberbullying, with inconclusive evidence on long-term effectiveness. Recent meta-analyses by Gaffney et al. (2019), Ng et al. (2022), and Polanin et al. (2021) revealed varying effect sizes in reducing cyber aggression and victimization across various targets, showcasing modest decreases but with nuanced impacts on reducing cyberbullying frequencies. This inconsistency in findings underscores the complexity of cyberbullying interventions and emphasizes the need for further comprehensive research to assess their efficacy and sustained impact over time.

Regarding prevention programs adopting Edutainment approaches or Serious Games (SGs) counteracting cyberbullying, considering that, as anticipated, consequences of cybervictimization can impair personal and social health and well-being throughout the entire lifespan cycle, an overview of the principal strategies' results available at the current moment is a due act: thus, Nocentini et al. (2015) shared results regarding different roles played by general ICTs in preventing cyberbullying. Boyle et al. (2016) presented a literature review investigating the adoption of digital Serious Games to enhance skills and learning processes. In Italy, Pecorini et al. (2016) reviewed several anti-bullying and cyberbullying virtual programs used in different European countries at the current time. This work presents the results of a systematic review on the main cyberbullying prevention interventions found in scientific literature. The first part outlines the search strategies, inclusion criteria, results, and the adopted coding system. In the second part, a description of the most relevant interventions ("*Mii-School*", "*Noncadiamointrappola!*", "*The Quest for the Golden Rule*", "*SMART Talk*", "*FearNot*", "*KiVa*"), an analysis of the effectiveness of each program, and an evaluation of how well they meet the standards of evidence defined by the scientific community, is given.

Even though not specifically related to cyberbullying, Saleme et al. (2020) published a systematic review regarding the adoption of digital games to promote prosocial behaviors in youth: within the framework of Positive Technology (Riva & Gaggioli, 2019), their work, based on the socio-emotional learning and on the theory of prosocial behaviors, emphasized several technology-based games. The final eleven studies, conducted mainly in North America, Europe, and one in Barbados, published between 2011 and 2019, explored the

novelty of digital games for promoting prosocial behaviors. In response to the objectives of the review, outcome measures are classified into five categories (socio-emotional skills, attitudes toward self and others, prosocial behaviors, conduct problems, and emotional distress). Notably, studies may use different scales for the same construct, and diverse reporting methods, including self-report, parent report, and peer nomination, were employed to evaluate outcomes. Studies generally yielded positive and significant results on social-emotional competencies, attitudes about self, others, and school, enhancing prosocial behaviors. Conclusively, the review highlighted that there is potential for digital games to shift from a game design orientation based on user experience toward a more objective assessment to demonstrate what works and what does not. In the context of this dissertation, the analysis provided in this section provides to bring to attention that videogames developed not only for leisure purposes, but also for educational and training aims, are effective to increase awareness and teach specific skills and social attitudes, contributing to a wider action to improve social development and relationships among preadolescents.

In Europe, a recent Spanish review (Calvo-Morata et al., 2020) carried out to analyze the role of multiple prevention tools in addressing cyberbullying among different school grades ages, inform about Serious Games that attempted to promote motivation and awareness about different roles in cyberbullying experiences, and to detect cyberbullying behaviors among schoolchildren and high school students. Digital tools for prevention discussed in the review can increase awareness, teaching knowledge, changing attitudes, and promoting specific skills (Calderón & Ruiz, 2015). Analyzed SGs included in the review were used not only for prevention, but also to detect cyberbullying perpetration among the participants. The Serious Games review involved a two-phase search: the first phase aimed to compile a list of publications discussing games designed to address bullying and cyberbullying, employing specific term combinations in various databases, and applied clear inclusion/exclusion criteria. The second phase concentrated on identifying actual publications linked to the video games identified in the previous phase. From more than thirty publications, games were examined for the supporting evidence in the literature, regarding mechanics, effectiveness, and evaluation.

Within this scientific framework, *Conectado*, a recent Serious Game to detect and prevent cyberbullying among adolescents, was developed (Calvo-Morata et al., 2021; Morata et al., 2018). The SG was developed to promote a teacher-led classroom discussion once students have a common experience of cyberbullying acquired after playing. The crucial aim of the SG was to raise awareness among bullying and cyberbullying in students, through the identification of the victim's feelings. It was designed to be used during school classes by an educational expert, to promote playful interaction with the participants, adolescent students. The first step of the implementation consists of the performance within the SG, followed by a discussion with the expert supervising the session. The educator raises topics related to storytelling and to potentially similar real-life experiences lived by the students. The video game takes the form of an adventure-style narrative, immersing the player in the shoes of a student experiencing bullying and cyberbullying in a new school environment daily. Set over the course of five days, the protagonist navigates between home and school, encountering

various characters and interacting with different scenarios. As the storyline progresses, the protagonist experiences increasing ostracism and harassment from peers, both online and in person, as classmates either actively participate in or passively condone the ongoing mistreatment. The first-person experimentation of various types of harassment connected to bullying and cyberbullying affects the protagonist both at home and within the online context. Within the possible behavioral options eligible to react, violence is never proposed, to prevent an escalation of aggressions. In fact, asking for help when in need is the desired goal reachable at the end of the simulation. To limit the possibility of amplifying the time needed to complete the SG, both for physical scenarios and within the social network context, pre-generated response options are provided. After data collection, the experimentation was assessed through Learning Analytics tools, in association with pre-post questionnaires evaluating effectiveness of the SG and cyberbullying awareness. Questions given at the end of the simulation assessed both the effect of the SG on students, and the agreement on specific actions. This SG has been adopted as a direct inspiration for the development of the innovative educational tool presented in this dissertation.

In conclusion, the exploration of EBPs, Edutainment, Serious Games, and the evaluation of cyberbullying interventions in this section illuminates the multifaceted landscape of addressing cyberbullying among preadolescents, in current psychological research. The diverse methodologies and interventions discussed highlight the dynamic efforts made to combat this pervasive issue by pedagogists, psychologists, and teachers. While some interventions have shown promise in reducing cyberbullying instances, the varied findings across systematic reviews underscore the complexity and variability of these interventions' effectiveness, promoting empathy, coping skills, positive bystander behaviors, and pro sociality in general. This chapter sets the stage for a deeper dive into an evidence-based project that integrates Edutainment and Serious Games, offering a proactive approach towards fostering empathy, digital citizenship, and psychological well-being among preadolescents. This evidence-based endeavor aspires to contribute to the ongoing conversation and interventions aimed at creating a safer and more supportive digital environment for young individuals. Thus, the development and implementation of evidence-based programs in European countries is foundational to foster a safer online environment for children, preadolescents and adolescents and to prevent aggression in all forms, both in schools and outside. This effort is justified by the spread of negative online and offline behaviors such as social emergencies and public health topics.

3. CHAPTER 3

The research project

The third chapter presents the aims and methods of research-intervention, the implementation of the study, the hypotheses, the samples' characteristics, and the analysis plan.

The research project is introduced in its cross-national aspect throughout the doctoral years (Hantrais & Mangen, 1996), aiming at identifying the similarities and differences between the two European countries (Italy and Spain) in which the study took place (3.1). The second section of the chapter is dedicated to the presentation of research-intervention, hypotheses, research questions, data collection and participants, and quantitative research through self-report questionnaire (3.2). Subsequently, a comprehensive presentation of *Pro-Social Network*, a newly developed Serious Game to raise awareness on cyberbullying and related factors in secondary schools' students, is given; the digital educational prototype, developed within the University of Calabria, is presented both in its technological and psychological components (3.3).

The research has been carried out in two different time periods throughout the doctoral years, in Calabria (Italy) and Andalucia (Spain) and surged with precise scientific aims and a cross-cultural inspiration. The primary aim of the research has been to delve into the regularities and differences in cyberbullying and related socio-cognitive factors among Italian and Spanish preadolescents, probing into the purposes and repercussions of engaging in problematic online social behaviors via ICTs and social media in the two different educational contexts. The second aim, and the focal point of the project, has been to test how Italian and Spanish preadolescents behave on social media, and how social relationships can be positively impacted through the adoption of an evidence-based intervention adopting a newly developed educational tool, the Serious Game *Pro-Social Network*, parallelly preventing cyberbullying through face-to-face discussion in school classes.

The project has been developed in collaboration with an innovative technology start-up, *ArtéMat*³, embedded in the context of the University of Calabria's *TechNest*, and together with the *Laboratorio de Estudios sobre Convivencia y Prevención de la Violencia* (LAECОВI) of the University of Córdoba⁴. Within a developmental and educational psychology perspective and basing on the recent international literature on cyberbullying prevention and well-being promotion in preadolescence, the project aimed at offering a novel and innovative comprehension of this public health issue, and its socio-behavioral correlates, through an evidence-based research-intervention. The research group at the University of Calabria specifically selected Italian and Spanish school settings as the context for this scientific investigation, for research and academic reasons that will be presented throughout the paragraphs. The research-intervention was carried out in classroom settings, with the

³ [ArtéMat](#)

⁴ [Laecovi](#)

approval of school-directors, and with the help of the teachers involved during the interventions' sessions.

The dissertation ventured into the prevalence of cyberbullying experiences, and the levels of related socio-behavioral factors, within the selected Italian and Spanish schools, providing a comparative statistical analysis between Italian and Spanish youths' experiences with cyberbullying and cybervictimization. The main objective of the dissertation was to uncover motivations and attitudes driving young to engage in cyberbullying perpetration, defining the developmental socio-behavioral processes behind early offline and online aggressive behaviors, as well as online behaviors, and their consequences for victims and perpetrators (Hinduja & Patchin, 2012). The hypotheses were initially presented and discussed with the research groups in the Universities of Calabria and Córdoba. Throughout the third year, following the collection of data and the completion of the intervention, these hypotheses underwent rigorous revision and refinement.

3.1 A cross-national evidence-based research-intervention for cyberbullying: a methodological introduction

This paragraph presents the design of the research-intervention, framed into the EBPs paradigm, highlighting similarities and differences between the two national contexts chosen for the study, to outline the educational setting of the research project.

International research on cyberbullying and related factors is currently growing, reflecting the global public concern surrounding this topic (Aboujaoude et al., 2015). An expanding body of psychological studies highlights the urgency of understanding and addressing cyberbullying and related social phenomena from an international viewpoint, emphasizing the need for effective prevention and intervention strategies to mitigate their impact on children's mental health and well-being. In line with recent trends (Escortell et al., 2020), there is a pressing need to investigate cyberbullying, risk and protective factors in preadolescents through school interventions based on scientific approaches and based on different countries. Such interventions can provide robust, evidence-based solutions tailored to the developmental stage of preadolescents, fostering a safer and more supportive school environment. Among the psychological theories and practices internationally developed in the fields of development and education, to carry out significant and enriching research and intervention on specific evolutionary subjects, there are some which represent and fit the principal objectives related to the investigation of certain themes (Amir & McAuliffe, 2020). Regarding the development of interventions on technology-mediated interactions, several key elements have been identified to carry out tailored studies.

The research-intervention addressed the typical challenges faced during the critical preadolescent years in two European samples. Drawing inspiration from the principles of social psychology and Lewin’s influential action research (Leff et al., 2014), as well as from evidence-based practices (EBPs) and the Edutainment approach, the study explores the applied aspects of first-grade secondary schools for prevention purposes, navigating the complexities of preadolescent psychology within educational contexts (Mascia et al., 2023). This research-intervention aims not only to demystify preadolescent psychology, but also to actively contribute to the construction of nurturing, inclusive contemporary educational ecosystems (Robinson et al., 2016). It recognizes the interconnectedness between the school environment and the social and cultural backgrounds in which preadolescents grow and live.

The aim is to lay the groundwork for enduring psychological well-being and positive social relationships among preadolescents, mirroring the transformative spirit of action-research within the realm of school interventions. Through a cross-national design, the study sought to scrutinize socio-behavioral correlations associated with cyberbullying across two cross-national distinct cohorts of preadolescents in Italy and Spain. Socio-behavioral correlates of cyberbullying and cybervictimization (e.g., coping strategies, moral disengagement, empathy, problematic social media use), in fact, were derived from the current international literature in psychological research on cyberbullying, as described in the previous chapters. The project comes with an educational inspiration and a preventive goal to accomplish, and it is complemented to favor the development of moral components of youth’s personalities (Falla et al., 2022). This project was the outcome of a collaborative effort spanning three PhD years, leveraging the expertise of the supervisor and other research unit members in the University of Calabria and the University of Córdoba. Comprehensively, the project was built on a multidisciplinary approach, involving both scientific expertise in psychology and computer science. To maintain participant anonymity while preserving data integrity across pre, intervention and post-tests, each participant in Italy and Spain received a randomized, personal ID code during the data collection process. The developmental trajectory of this research journey can be summarized as shown in Table 1:

Table 1: description of the research project

First year – 2022	The first year has been dedicated to a comprehensive review of scientific literature on preadolescence, evidence-based practices, Edutainment, cyberbullying, empathy, moral disengagement, coping strategies, soft skills, and related interventions. The research design, including research questions, hypotheses, methodology, and procedures, was meticulously structured in collaboration with the supervisor and the research team. Preliminary discussion groups were conducted with Italian students to glean insights into cyberbullying experiences, coping strategies, and social media applications usage habits, aiding in
--------------------------	--

	the development of the Serious Game. Additionally, formal contacts have been established with selected educational settings in Italy, initiating discussions with school authorities for future sampling and intervention's procedure. Concurrently, preliminary contacts were made with the University of Córdoba for the development of an international collaboration in the form of a joint doctoral program.
Second year – 2023	The second year witnessed the execution of the research-intervention, through the data collection process in Italian schools through the pre-test questionnaires. An evidence-based intervention was conducted in the province of Cosenza over a two-month period, followed by the collection of post-test questionnaires in both the experimental and control groups. Data analysis ensued, resulting in the initial research findings and discussions. The research efforts also extended to Spain during the first and second abroad period, involving the translation of instruments, liaising with Spanish supervisors, and conducting interventions and post-tests with Spanish schoolchildren. Data analysis was conducted to compare results both from Italy and Spain.
Third year – 2024	The third year focused on continued data analysis, revising the research model and questions based on initial results, conducting follow-up data collection in Italy, and disseminating research outcomes to schools in Italy and Spain. Meanwhile, the dissertation was redacted, and the first scientific papers were written and published.

The research project is a randomized, controlled (two parallel groups) cross-national study involving preadolescents in two regions (Italy, Spain). The project is a research and innovation project funded by the European Union's FSE REACT-EU, and from the *Ministero della Università e della Ricerca* in Italy. The program is aimed at promoting a culture that enhances mental pro-social behaviours at school in the age-group 9 – 14 years, through a multidisciplinary educational approach. The methodological approach on which the program is based has the following main characteristics: identification of the research questions, research plan and instruments development, creation of the intervention, involving school

principals and teachers in a preliminary formation encounter presenting the research. Following, implementation of the research-intervention through a systemic perspective; evaluation of effectiveness according to the principles of empirical evidence, via re-test questionnaires; use of mixed methodologies to test its effectiveness, acceptability, and cost-effectiveness. The theoretical framework of the project was initially based on an extensive review of existing EBPs interventions in schools, through Edutainment instruments. Within a national and international context characterized by the pervasive spread of ICTs for multiple purposes, the development of this research-intervention posed several educational stimuli. First, the comparison of empirical results across several countries, school settings, age range and different adopted measures influenced the decision-making process related to the scientific dimensions involved in the research; second, applying the proposal of good practices in school settings provided advantages and disadvantages, due to the nature of the context: confronting teachers, and school principals represented a relational crucial effort as a doctoral student and as an early career researcher. Together with the members of the research unit, the current research proposal has been crafted before, during and after the doctoral course.

Lastly, this cross-national study aims to compare the effectiveness of the intervention in different cultural contexts, specifically between Italy and Spain. Previous cross-national programs addressing similar educational topics have highlighted the benefits of such comparisons in understanding cultural influences on educational outcomes (e.g., the EU-funded *E-EVALINTO* project focused on intercultural learning and reducing early school leaving). The development of the research questions, the identification of the key variables for the questionnaire development, and finding appropriate scales posed significant scientific challenges that will be comprehensively discussed in the subsequent paragraphs. It required extensive literature review and expert consultations to ensure the instruments were culturally sensitive and scientifically robust. The following section delves into a comprehensive description and introduction of the developmental processes behind the Serious Game development, and the following intervention prototype.

3.2 The design of the research-intervention

This section describes the research design, the objectives and the primary hypotheses of the doctoral project, and the relative research aims, as well as the self-report questionnaire adopted in the study. As an experimental approach, in fact, research-intervention presents specific limits due to the mixed methods adopted, the difficulty of the topic, and the contexts in which the work has been carried out. Thus, the hypotheses were proposed according to the EBPs approach and inspiring on the efficacy of previously utilized Edutainment intervention to counteract cyberbullying among schoolchildren.

3.2.1 *Hypotheses and research questions*

This study adopts a mixed-methods research design (Powell et al., 2008) to investigate cyberbullying and its psychosocial correlates among preadolescents in Italy and Spain. The integration of qualitative and quantitative methodologies enables a multidimensional understanding of both individual and contextual factors, aligned with EBPs in developmental and educational psychology. The fusion of qualitative and quantitative data collection methods in this mixed-methods approach is instrumental in comprehensively probing this multifaceted phenomenon through the underlining of different variables' roles (Espey & McGuckin, 2013). By integrating diverse data collection tools such as debate groups, questionnaires, and the utilization of a Serious Game, this methodology facilitates a nuanced exploration of cyberbullying and its associated protective and risk factors.

The research design is multifaceted, beginning with a preliminary phase that involves discussion groups with Italian students. These discussion groups have been essential for gathering firsthand insights and perspectives on cyberbullying and related issues, helping to inform the subsequent stages of the intervention. The core of the research-intervention involves two distinct groups, as presented in the first paragraph of this chapter: an Experimental Group and a Control Group. The intervention for the Experimental Group includes a five-week educational SG, designed to educate and prevent cyberbullying through interactive and engaging scenarios. This SG aims to enhance socio-emotional competencies and foster a supportive school environment.

Qualitative phase

Debate groups are inspired by focus group, a qualitative research method adopted in developmental and educational psychology to gather insights into participants' attitudes, perceptions, and experiences (Gibbs, 1997; Kitzinger, 1995; Morgan, 1996). In developmental psychology, focus groups provide a platform to delve into the cognitive and emotional processes associated with cyberbullying experiences among preadolescents. In the context of cyberbullying research, focus groups could involve a structured discussion with a small group of participants, typically preadolescents in educational settings. This method allows researchers to explore the multifaceted aspects of cyberbullying, such as the participants' understanding of the phenomenon, their attitudes towards online interactions, and the impact of cyberbullying on their well-being (Cuesta Medina et al., 2020). Through the adoption of focus groups to address cyberbullying's features, researchers can uncover developmental nuances in how individuals perceive and respond to online aggression. Educational psychologists adopted focus groups to understand the dynamics within school environments, examining how cyberbullying influences peer relationships, classroom atmospheres, and the overall learning experience (DeSmet et al., 2015). The interactive nature of focus groups fosters group dynamics, encouraging participants to share diverse perspectives, validate or challenge each other's experiences, and generate rich, qualitative data. This approach is particularly valuable for cyberbullying research, where subjective

experiences and social dynamics play a crucial role. The insights gained from focus groups contribute to a deeper understanding of the psychological and educational implications of cyberbullying, informing the development of effective prevention and intervention strategies.

Quantitative phase

The quantitative phase involved a research-intervention implemented in both countries. Two groups were identified: an Experimental Group (EG) and a Control Group (CG). The EG engaged in a five-week program combining pre/post-test survey administration with the interactive SG, *Pro-Social Network*, while the CG completed only the surveys at two time points. This design allowed for a preliminary assessment of usability and effectiveness of the intervention in preventing cyberbullying.

The main objectives of the project are:

1. To assess levels of cyberbullying perpetration and related socio-behavioral factors in Italian and Spanish preadolescents, testing risk and protective factors through descriptive and serial mediation analyses.
2. To experiment the potential of the newly developed Serious Game *Pro-Social Network*, designed both in Italian and Spanish languages for the purpose of the research in an evidence-based program.

From these objectives, three specific research questions emerged:

RQ1: How do cyberbullying and cybervictimization experiences, and socio-behavioral correlates differ across Italian and Spanish preadolescents in educational contexts at different times?

RQ2: In a cross-national sample of preadolescents, is cybervictimization related to cyberbullying perpetration through the serial mediating action of problematic social media use and moral disengagement, such that higher levels of cybervictimization lead to higher levels of problematic social media use and moral disengagement, thus leading to higher levels of cyberbullying perpetration?

RQ3: How does the adoption of an educational digital Serious Game in an EBP research-intervention contribute to cyberbullying prevention in first grade secondary schools on Italian and Spanish preadolescents?

Hypothesis 1 (H1): As presented in RQ1, in a cross-national level, as shown by previous studies Italy and Spain will present similar levels of socio-behavioral factors involved in cyberbullying, with no statistically significant differences. Moreover, the T1 and T2 research procedure within the Experimental Group will present no statistically relevant differences in cybervictimization and cyberbullying perpetration levels. H1 recognizes the complex, multi-dimensional and socio-ecological contribution of different factors in the experiences of cybervictimization and cyberbullying. Thus, to contribute to the evaluation of the significance of the innovative evidence-based intervention, considering the pinnacle in

empirical research within psychology, several levels should be considered. This hypothesis emphasizes the pivotal role of integrating EBPs, especially within educational settings, to effectively reduce instances of cyberbullying and promote positive psychosocial behaviors among preadolescents. It stresses the importance of employing methodologies that adhere to rigorous empirical standards, ensuring the reliability, reproducibility, and validity of the research protocol and its outcomes.

Hypothesis 2 (H2): The cross-national serial mediating model tested on the sample shows that problematic social media use and moral disengagement play a positive serial mediating between cybervictimization and cyberbullying perpetration, due to their established roles in facilitating aggressive online behaviors. Both populations share a similar Mediterranean socio-cultural background in terms of schooling systems, family structures, and peer interactions. The model thus offers a unified understanding of shared risk mechanisms across the two national contexts regarding online social interactions.

Hypothesis 3 (H3): Connected to RQ3, the adoption of a SG in an innovative research-intervention, based on EBPs criteria and involving both traditional and innovative methods, contributes to maintain or lower levels of cyberbullying perpetration, cybervictimization and related factors among preadolescents. H3 postulates that research-intervention serves as an effective proposal capable of fostering prosocial competences and diminishing negative social behaviors among pre-adolescents within school environments. This hypothesis is rooted in the burgeoning literature within developmental and educational psychology, showcasing the proliferation of EBPs and Edutainment interventions addressing various social challenges in preadolescence and adolescence. As elucidated in Chapter 2, Edutainment emerges as a promising avenue for scientific research and the creation of interventions geared towards socio-emotional learning.

An exploration of the prevalence rates and diverse manifestations of cyberbullying among preadolescents in Italy and Spain was conducted through the verification of two experimental hypotheses. This understanding is pivotal to grasping the multifaceted nature of cyberbullying, including its various forms, frequencies, and the context in which it occurs within the two distinct cultural settings. The study's focus on socio-behavioral correlates and responses to cyberbullying scenarios within the SG helped assess the behavioral patterns and decision-making strategies employed by preadolescents when confronted with cyberbullying incidents. It provided insights into their coping mechanisms, attitudes, and emotional responses within the digital realm. Two hypotheses were developed for the purposes of the study. By examining the effectiveness of the *Pro-Social Network* intervention through the SG and questionnaire, the research questions aimed to gauge the intervention's impact on mitigating cyberbullying behaviors. This evaluation holds significant implications for future intervention strategies, allowing for the refinement and enhancement of school-based initiatives to combat cyberbullying effectively. In the next sub-paragraph, the self-report survey adopted in Italy and Spain is presented.

3.2.2 Data collection, treatment, and analysis: ethical considerations on cross-national sampling and procedures

The data collection phase was anticipated by a deliberate selection process of schools located in a specific region of Italy and Spain, close to the Universities research laboratories and within the electronic communication reach of the research units. Initial contacts were established with these schools through email communication, aiming to introduce the research objectives and solicit their cooperation. After obtaining approval for the research protocol from the respective educational institutions, meticulously written communications were prepared. These documents were tailored for dissemination among both school principals and parents, aiming to impart comprehensive details regarding the research objectives and elucidate the procedure for participation. The primary intent of these communications was to ensure transparency in the process, elucidating the voluntary nature of participation while accentuating the research's significance. This communication strategy was strategically employed to encourage the active involvement of both schools and parents in the research endeavors.

In Italy, the sample selection process involved sampling three schools located in the vicinity of the University of Calabria. The research group-initiated contact through emails and cover letters. With the consent of the school principals, twenty-seven classes were selected, and participants were identified and divided into Control Group (CG) and Experimental Group (EG). Following parental consent, the questionnaire was administered to the students. Among these classes, those eligible for experimentation were determined based on the willingness of professors to participate in the study. The CG was composed of two classrooms from two schools and received no intervention in the roadmap of the study (two months). The EG was composed of two classrooms from two schools and received intervention during the roadmap of the study (two months, between pre-test and post-test questionnaire). A need for randomization in age and gender distribution was maintained in the selection process.

The study and the procedures were conducted according to the ethical principles for psychological research (2015) and to the criteria of the Ethics Committee of the University of Calabria, Prot. no. 0010986 of 02/13/2023. The procedures adopted in this study adhere to the tenets of the Declaration of Helsinki. The participants were contacted after selecting thirty-one classes in schools in the region of Calabria (Italy), willing to participate. The schools were selected by a search database, where a list of local school institutions was stored, and persuaded to join in the investigation through a motivation letter to the school principals, introducing the purposes of the study. After obtaining permission from the corresponding school principals, the participants' parents were informed by letter about the purpose of the research, the voluntary nature of participation and the anonymity of responses. Parents provided informed consent for their son or daughter's participation. In addition, participants provided signed assent agreeing to take part in the study. Italian research assistants collected the data after providing a general description of the research aims and

measures (particularly, defining what social medias are, and what cyberbullying is in terms of aggression and victimization).

The questionnaire was previously structured and presented through the platform *Google Forms*, titled “*The use of social media at school*” and generated URL was given to the participants during school-hours. The researchers explained the aims and development of the study, guiding the subjects throughout the compilation of the survey. It took approximately 40 minutes to complete the questionnaire, each student doing so through their smartphone. The findings from the Italian sample are presented from a descriptive point of view. Participants provided their responses on a Likert scale ranging from 1 (“Less than one hour a day” or “Never”) to 5 (“More than one hour a day” or “Always”), allowing for anonymous reporting of their digital tool usage. Specific results related to the educational institutions that comprised the sample are highlighted to establish a foundation for discussing some longitudinal outcomes associated with the experimental group that received the intervention. Prior research has indicated that, among the sociodemographic factors, gender is a significant factor linked to both cyberbullying and cybervictimization (Gori & Topino, 2023; Gradinger et al., 2016), prompting its inclusion as a covariate in all analyses. Gender was coded as a dichotomous variable (0 = female, 1 = male, 2 = prefer not to answer, 3 = other).

A total of 489 preadolescents aged between 10 and 14 years ($M_{age} = 11.90$, $SD = 0.783$; 50.3% females) were recruited from 6th to 8th grade in an urban area in Calabria, Italy (see Table 2). Participants’ parents provided informed consent, and the schools principals’ consent was obtained. An online self-report survey was administered through Google Forms during school hours. A van der Waerden transformation (van der Waerden, 2013) was applied to the kurtosis and skewness values for the variables of cybervictimization and cyberbullying due to their excessive magnitudes, to normalize variables with excessive skewness and kurtosis, converting ranked data into quantiles of the standard normal distribution to meet the assumptions of parametric analysis. This transformation aimed to normalize the distribution and address the extreme values observed in these variables.

Table 2: Demographic characteristics of the Italian sample

Gender		
	<i>n</i>	%
Females	246	50,3
Males	236	48,3
Prefer not to respond	6	1,2

Differently, the Serious Game *Pro-Social Network* was administered on a total of 36 Italian preadolescents (27.8% females), through smartphones and schools' personal computers.

In Spain, the realization of the research was previously anticipated from the presentation of the whole study and related aims, through a presentation of the survey and of the Serious Game sent to school principals in Córdoba. Six schools were selected in Córdoba for the data collection process, with twenty-two classrooms participating in the research. The intervention was proposed to one school, which provided the participants for the EG coming from six classrooms, while a different school provided the participants for the CG, coming from four classrooms. Both in the EG and in the CG, the roadmap of the intervention lasted two months, reflecting the process proposed in Italian context. In this case too, the selection was based on randomized distribution and on school principals' willingness to be involved in the study. After obtaining signed informed consents' both from school principals and parents, a total of 406 preadolescents aged between 10 and 14 years ($M_{age} = 10.42$, $SD = 0.745$; 51.5% females) were recruited from 5th and 6th from Early and Primary schools in Córdoba, Andalucía (see Table 3). A self-report survey was administered through pen and pencil during school hours.

Table 3: Demographic characteristics of the Spanish sample

Gender		
	<i>n</i>	%
Females	209	51,5
Males	197	48,5

The Serious Game *Pro-Social Network* was administered on a total of 46 preadolescents (39.1% females).

The analysis plan for this research-intervention involves a comprehensive approach to examine the data collected from the pre-test and post-test measures across both Italy and Spain. The following steps outline the planned statistical analyses, conducted via SPSS 27.0 and the PROCESS Macro (Hayes, 2012).

1. Frequencies and descriptive statistics:

- Frequencies: calculating the frequencies of key demographic variables (e.g., age, gender, sociodemographic) and other categorical data to understand the sample composition was a key starting point for the analysis plan.
 - Descriptive statistics: for continuous variables, descriptive statistics such as mean, standard deviation, skewness, and kurtosis will be computed. This provides an overview of the central tendency and dispersion of the data for all measured variables and set the basis for the cross-national comparison between Italian and Spanish samples.
2. Bivariate correlations:
 - Pearson correlations: Bivariate correlations will be conducted to examine the relationships between key variables, such as coping strategies, empathy, cognitive emotion regulation, satisfaction with life, and levels of cyberbullying victimization and perpetration. Pearson's correlation will be used for normally distributed variables.
 3. Mediation and moderation analysis:
 - Mediation analysis: To explore the potential mediating effects of variables such as perspective-taking, moral disengagement and cognitive emotion regulation strategies on the relationship between problematic social media use and cyberbullying behaviors, we employ mediation analysis using the PROCESS macro in SPSS or similar software.
 - Moderation analysis: moderation analyses will be conducted to investigate whether factors like satisfaction with life moderate the relationship between coping strategies and cyberbullying outcomes.
 4. Covariates:
 - Inclusion of covariates: relevant covariates (e.g., age, gender, baseline levels of the outcome variables) will be included in the analysis to control for potential confounding factors, recognizing their influence on cyberbullying and relative behaviors in preadolescence. This ensures that the effects are attributable to the intervention and not to these extraneous variables.
 5. Mean Differences (t-tests):
 - Paired samples t-test: to compare pre-test and post-test scores within the same group, paired samples t-tests will be conducted. This will help determine the effectiveness of the intervention by examining changes over time within the experimental group.
 - Independent samples t-test: to compare differences between the control and experimental groups at pre-test and post-test, independent samples t-tests will be used. This will help assess the impact of the intervention compared to no intervention.

The results from these analyses will provide a comprehensive understanding of the effectiveness of the intervention, the relationships between key variables, and the impact of various factors on cyberbullying behaviors and victimization. Detailed findings and interpretations will be presented in Chapter 4 of the thesis, elucidating the outcomes of this cross-national study. In conclusion, this cross-national research-intervention has been meticulously designed to explore the efficacy of an educational serious game in preventing

cyberbullying among preadolescents in Italy and Spain. The research plan involved preliminary discussion groups to gather initial insights, followed by a rigorous intervention utilizing both control and experimental groups. The procedures adhered to strict ethical standards, ensuring informed consent, confidentiality, and the psychological well-being of the participants. By integrating evidence-based practices within diverse cultural contexts, this study aims to contribute significantly to the understanding and prevention of cyberbullying, highlighting the importance of socio-emotional competence development in school settings. The results section of the thesis (Chapter 4) will profoundly present the data according to these pre-test and post-test comparisons proposed both in Italy and Spain.

3.2.3 *The self-report questionnaire*

Both research groups completed a self-report questionnaire before and after the intervention. This questionnaire is meticulously designed to measure baseline levels and changes in cyberbullying behaviors, attitudes, and socio-emotional competencies. The development of this questionnaire posed a significant scientific challenge, requiring extensive literature review and expert consultations to ensure the instruments are culturally sensitive and scientifically robust. Surveys are a common research method in cyberbullying studies, offering a systematic approach to gather data on individuals' experiences, attitudes, and behaviors. In the realm of developmental and educational psychology, surveys play a crucial role in understanding the prevalence, impact, and contributing factors of cyberbullying among preadolescents. Quantitative surveys employ structured questionnaires with predetermined response options, facilitating statistical analysis to identify patterns, trends, and correlations. These surveys often use Likert scales or closed-ended questions to measure the frequency, severity, and types of cyberbullying behaviors. They provide a quantitative overview of the prevalence rates and allow for statistical comparisons across demographic variables.

In the context of the present research, a self-report survey has been adopted. This survey entails participants directly responding to questions about their own experiences of cyberbullying. Self-report surveys are common in developmental psychology as they allow participants to share their unique perspectives on the phenomenon. The survey, administered both in Italian and Spanish, explores various dimensions of cyberbullying, including the frequency of exposure, emotional impact, coping mechanisms, and attitudes toward online interactions. By combining quantitative and qualitative elements, this self-report survey aims to provide a comprehensive understanding of cyberbullying experiences among preadolescents in educational settings.

The participants completed an online self-report questionnaire containing a set of different measures.

1. Sociodemographic information was collected such as gender, age and Internet and social media frequency of use and habits among the participants.
2. Problematic Social Media Use was assessed using the Italian and Spanish version of the *Bergen Social Media Addiction Scale* (BSMAS; Copez-Lonzoy et al., 2023; Monacis et al., 2017b). The BSMAS is a 6-item self-report measure that assesses addictive behaviors related to social media use, such as withdrawal symptoms, mood modification, and conflict (e.g., “You spend a lot of time thinking about social media or planning how to use it.”). Participants rated each item on a Likert scale from 1 (*very rarely*) to 5 (*very often*), with higher scores indicating higher levels of social media addiction.
3. Moral disengagement was measured using the adolescent Italian and Spanish version of the *Moral Disengagement Scale* (MDS; Bandura et al., 1996b; Romera et al., 2023). The scale is a 24-item self-report measure that assesses cognitive mechanisms that allow individuals to justify or excuse their harmful behaviors (e.g., “It is alright to fight to protect your friends.”). Participants rated each item on a Likert scale from 1 (*not at all*) to 5 (*very much*), with higher scores indicating higher levels of moral disengagement. Given confirmation from prior studies of the internal consistency of the single factor structure of the scale (Gini et al., 2015), a total mean score was calculated for moral disengagement.
4. The Italian and Spanish version of the *European Cyberbullying Intervention Project Questionnaire* (ECIP-Q, Brighi et al., 2012; Ortega-Ruiz et al., 2016) was used to assess cybervictimization and cyberbullying levels among participants. The ECIP-Q is a 22-item self-report measure, with the former 11 items measuring victimization and the latter 11 measuring aggressions, that assesses the frequency and severity of cybervictimization and cyberbullying behaviors in the past two or three months, such as spreading rumors, posting mean comments (e.g., “I altered pictures or videos of another person that had been posted online.”), or excluding others from online groups or stealing someone’s identity and personal information (e.g., “Someone created a fake account, pretending to be me.”). Participants rated each item on a Likert scale from 1 (*never*) to 5 (*several times a week*), with higher scores indicating higher levels of cybervictimization and cyberbullying.
5. The Italian version of the *Coping with Cyberbullying Questionnaire* (CWCQ, Sticca et al., 2015) was used to assess seven different coping strategies to face cybervictimization among participants. The CWCQ is a 36-item self-report scale, with the items measuring seven coping strategies: i) Distal Advice (e.g., “... go to the police”), ii) Assertiveness (e.g., “... tell the bully to stop it”), iii) Helplessness (e.g., “... be completely desperate”), iv) Active Ignoring (e.g., “... get around that person”), v) Retaliation (e.g., “... get back at him in the real world”), vi) Close Support (e.g., “... talk to my friends because it’s good for me”), vii) Technical Coping (e.g., “... put less information on the Internet”). The scale assesses levels of coping sub-strategies, distinguishing between adaptive and maladaptive coping behaviors. Participants rated each item on a Likert scale from 1 (*certainly not*) to 5 (*no answer*).
6. The Spanish version of the Coping with Cyberhate Questionnaire (CWCQ, Gámez-Guadix et al., 2020) was used to assess seven different coping strategies to face

cybervictimization among participants. The scale assesses levels of six coping sub-strategies through 20 items, distinguishing between adaptive and maladaptive coping behaviors: (i) Distal Advice (e.g., "... go to the police"), (ii) Assertiveness (e.g., "... let the person know that I do not find it funny at all"), (iii) Helplessness (e.g., "... be completely desperate"), (iv) Close Support (e.g., "... talk to my friends because it is good for me"), (v) Technical Coping (e.g., "... pay more attention to who gets access to my data"), and (vi) Retaliation (e.g., "... insult the person in cyberspace"). Participants rated each item on a Likert scale from 0 (definitely not) to 3 (definitely yes).

7. To assess the cognitive component of empathy, identified as perspective-taking, the Italian and Spanish version of the *Interpersonal Reactivity Index* (IRI, Albiero et al., 2006; Pérez-Albéniz et al., 2003) was adopted only in its sub-scale dedicated to perspective-taking. The 28-item IRI is a self-report measure consisting of four 7-item subscales: Perspective Taking (tendency to adopt the psychological point of view of others); Fantasy (tendency to transpose oneself imaginatively into the feelings and actions of fictitious characters in books, movies, and plays); Empathic Concern (feelings of sympathy and concern for others); and Personal Distress (feelings "self-oriented" feelings of personal anxiety and unease in tense interpersonal settings). Scores on each subscale are determined by the summation of the item responses. The Perspective Taking subscale (e.g., "... In case of disagreement, I try to take into account everyone's point of view before making a decision") assesses the participants' habit to adopt empathetic cognitive styles in different situations on a Likert scale from 0 (*never true*) to 4 (*always true*).
8. The Italian and Spanish version of the *Cognitive Emotional Regulation Questionnaire* (CERQ, Balzarotti et al., 2010; Lemos et al., 2021) was used to assess cognitive coping strategies among participants. The CERQ is a 36-item self-report scale, with items measuring nine distinct cognitive emotion regulation strategies: i) Self-blame (e.g., "I feel that I am the one to blame for it"), ii) Acceptance (e.g., "I think that I have to accept that this has happened"), iii) Rumination (e.g., "I often think about how I feel about what I have experienced"), iv) Positive Refocusing (e.g., "I think of nicer things than what I have experienced"), v) Refocus on Planning (e.g., "I think about how I can best cope with the situation"), vi) Positive Reappraisal (e.g., "I think I can learn something from the situation"), vii) Putting into Perspective (e.g., "I think that other people go through much worse experiences"), viii) Catastrophizing (e.g., "I keep thinking about how terrible it is what I have experienced"), and ix) Other-blame (e.g., "I feel that others are responsible for what has happened"). The scale assesses levels of cognitive emotion regulation strategies, distinguishing between more adaptive and less adaptive coping behaviors. Participants rated each item on a Likert scale from 1 (*almost never*) to 5 (*almost always*). For the purposes of the study, only the sub-scales of Rumination and Refocus on Planning were adopted.
9. The Italian and Spanish version of the *Satisfaction with Life Scale* (SWLS, Di Fabio & Gori, 2016; Vázquez et al., 2013) was used to assess life satisfaction among participants. The SWLS is a 5-item self-report scale designed to measure global

cognitive judgments of one's life satisfaction. The items are as follows: i) "In most ways my life is close to my ideal," ii) "The conditions of my life are excellent," iii) "I am satisfied with my life," iv) "So far I have gotten the important things I want in life," and v) "If I could live my life over, I would change almost nothing." Participants rated each item on a Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The scale provides a single score that reflects overall life satisfaction, with higher scores indicating greater satisfaction with life.

3.2.4 A cross-national serial mediation study

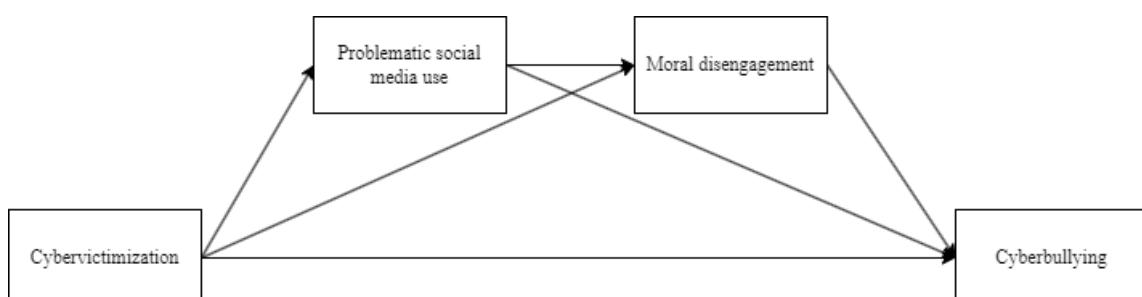
This study investigates online social behaviors and psychological characteristics in Italian and Spanish preadolescents, linking cybervictimization, PSMU, MD, and cyberbullying perpetration. Moreover, a serial mediating model testing the serial indirect effect of PSMU and MD on the association between cybervictimization and cyberbullying perpetration has been examined. We were interested in exploring the following research questions:

RQ1: How is cybervictimization associated to cyberbullying perpetration among Italian and Spanish preadolescents?

RQ2: Is this relationship mediated by the serial indirect effect of PSMU and MD in both samples?

As serial mediating factors, PSMU and MD may contribute to the perpetration of cyberbullying by facilitating negative and aggressive online interactions among peers, providing a platform for anonymity and disinhibition, and amplifying peer influence dynamics (see Fig. 1). Thus, understanding the serial mediating roles of PSMU and MD is crucial for designing effective preventive interventions aimed at mitigating the negative impact of cyberbullying and cybervictimization among preadolescents.

Figure 1: Theoretical model of serial mediation effects, linking cybervictimization and cyberbullying through the serial mediating actions of PSMU and MD



Among the numerous risk factors associated with cybervictimization and cyberbullying in preadolescents, it is worth investigating the intricate interplay of PSMU and MD within the context of negative online interactions among peers, due to their pervasive influence in preadolescents' social behaviors (Kircaburun et al., 2019; Lo Cricchio et al., 2021). Understanding the dynamics between these variables in the link between cybervictimization and cyberbullying perpetration is essential for unraveling the processes that might enhance the cycle of negative online interactions among preadolescents (Chan et al., 2023). Previous research conducted in Italy and Spain (Baldry et al., 2019; Henares-Montiel et al., 2022) highlights both sociocultural similarities and differences between the two countries regarding cyberbullying and cybervictimization. Given these parallels and distinctions, as well as comparable educational contexts (Mancinelli et al., 2021), further investigation into the perpetuation of online aggression is crucial.

The statistical analyses were conducted in four steps using *SPSS 27.0*. First, descriptive analyses were performed on the main study variables. Second, Pearson bivariate correlations were calculated among these variables. Third, a serial mediation analysis was conducted to explore whether PSMU and MD serve as serial mediators in the relationship between cybervictimization (independent variable) and cyberbullying (dependent variable), utilizing the PROCESS macro in SPSS, Model 6 (Hayes, 2013).

The hypotheses under investigation in this cross-national study are the following: (i) cybervictimization and cyberbullying perpetration present a direct association in a cross-national sample of Italian and Spanish preadolescents; (ii) problematic social media use and moral disengagement serially mediate the relationship between cybervictimization and cyberbullying perpetration, such that higher levels of cybervictimization lead to higher levels of problematic social media use and moral disengagement, which in turn lead to higher levels of cyberbullying perpetration, both in Italy and Spain.

Adopting the self-report survey, we assessed levels of cybervictimization, PSMU, MD, and cyberbullying in a sample of Italian and Spanish preadolescents ($N = 895$, 50.9% female; 54.6% Italian participants), aged 9 to 14 years ($M = 11.23$, $SD = 1.064$) (see Table 4).

Table 4: Sociodemographic information for the Italian ($N = 489$) and Spanish ($N = 406$) samples

	Italy		Spain	
	<i>N</i>	%	<i>N</i>	%
Gender				
Male	236	48.3	197	48.5
Female	246	50.3	209	51.5

Prefer not to respond	6	1.2		
Non-binary	1	0.2		
Age				
9			44	10.8
10	14	2.9	165	40.6
11	131	26.8	182	44.8
12	236	48.3	13	3.2
13	105	21.5	2	0.5
14	3	0.6		

3.3 The intervention: a Serious Game to raise awareness on cyberbullying in Italian and Spanish secondary schools

An introduction to socio-emotional learning (SEL) paves the way for the Serious Game presentation. SEL represents an integral inspiration and a foundation for educators, teachers and experts involved in learning and social development programs (Mondi et al., 2021). SEL fosters educational equity and excellence by cultivating authentic partnerships between schools, families, and communities (CASEL, 2023). These partnerships are crucial for establishing learning environments that prioritize trusting and collaborative relationships among students, educators, and families. This collaborative approach allows for the development of a rigorous and meaningful curriculum that caters to the individual needs of all students (CASEL, n.d.). Furthermore, SEL can address various educational inequities by empowering students and adults to become active participants in shaping their learning experiences. This fosters a sense of agency and allows them to co-create thriving school communities that promote safety, well-being, and social justice. Multiple learning and intervention programs adopting SEL, and similar strategies have been internationally developed to address cyberbullying and social problems at school. Recently, Edutainment and Serious Games took their toll in this new research field.

Following the recently developed *Positive Technology* approach (Riva et al., 2012), empirical evidence showed that ICTs can also be harnessed to enhance emotional,

psychological, and social well-being: technology influences experiences through structuring (goals, rules, feedback), augmentation (multimodal and multisensory experiences), and replacement (simulating physical presence in a synthetic world). These strategies can modify three aspects of personal experience: to promote affective quality in hedonic well-being (positive emotional states, exposure therapy), to foster engagement and self-actualizing experiences for eudaimonic well-being, and improve interconnectedness among people (Argenton et al., 2014). The Serious Game (SG) is a prototype and was programmed and screen played in collaboration with an innovative software start-up named *ArtéMat*, embedded in the University of Calabria, and translated in Italian and Spanish before the experimentation in the educational settings involved in the study. The system and the procedures adopted for the development of the SG will be presented throughout the paragraph. The present Serious Game, titled *Pro-Social Network*, investigated specific protective and risk factors associated with cyberbullying and cybervictimization in preadolescence, to change behaviors long-term by educating students about social media use in classes (Anastasiadis et al., 2018). The Serious Game was adopted during school hours, in a safe environment, under the supervision of a researcher and a teacher.

The development of the digital Serious Game (SG) represented a pivotal and intricate aspect of this project in its early stage. *Pro-Social Network*, an open-web software merging psychological and IT components, stood as an interactive simulation of an instant messaging app, and was developed in collaboration with *ArtéMat*, a cutting-edge startup within the *TechNest* of the University of Calabria, the SG was a result of rigorous planning and technical precision, involving both engineering and storytelling competences. Prior to crafting the game's storytelling, a comprehensive understanding of the SG's technical aspects and design has been necessary, as well as a literature review of similar tools developed for educational purposes. The development system chosen, namely the *Web InBasket* technology, previously utilized for human resources and soft skills assessment in adult subjects, underwent adaptation to suit a younger target audience and an educational-related purpose.

The design of the web-based gamification application, mirroring the logic of “in-basket” tests, engaged participants in decision-making scenarios of varying complexities. The application's framework was constructed through a sequential process, encompassing the definition of behaviors for analysis, development of a storytelling consistent with the target audience, choice of predefined Avatars, creation of a multitude of narrative paths, integration of decision-making moments influencing the simulation's course, establishment of an analysis and scoring system based on user choices, and generation of a profile/ranking mapping against predefined skills or behaviors.

In the design of a web-based gamification application and according to the logic of *in-basket* tests, participants are called upon to make decisions on various situations of varying complexity, which allow them to obtain a picture/profile against a predefined set of skills or behaviors.

The Web InBasket application is based on the following steps:

- Definition of set of competences or behaviors to be analyzed.
- Definition of a storytelling consistent with the type of target audience it is intended for.
- Choice by the user of an “Avatar” with a predefined profile.
- Development of a collection of Events through specific storytelling and organized with a hierarchical tree structure generating a multiplicity of possible paths.
- Development of a collection of decision-making moments capable of modifying the course of the simulation path (tree structure);
- Creation of an analysis and scoring system based on the choices made by the user.
- Creation and return of a profile/ranking with consistency mapping against a predefined set of skills or behaviors.

The Web-Based application is then developed as a Web platform with certain features:

- Information access system based on at least roles: user and platform administrator.
- Architecture organized on at least three levels: a database, a server-side application on which the application logic resides, a graphic web interface developed with modern HTML5 techniques (css3 and JavaScript).
- GUI of the application optimized for mobile devices.
- Installation on a virtual dedicated server.

The implementation of the SG follows an educational design framework that incorporates the key elements of SG design (Ravenscroft et al., 2012) (Table 5):

1. The educational objectives must have explicit instructional references.
2. The domain simulation must accurately represent the target area within the gameplay to effectively teach and raise awareness about the true subject matter.
3. The progression and challenges that the player will face must be well-defined.
4. The game must possess graphical interfaces that make it appealing to the player.
5. The interactions between the player and the simulation must be clearly specified.
6. The conditions of use, including how, when, where, and by whom the video game will be used, must be clearly detailed.

Access to the Serious Game, available online, is guaranteed by a unique personal code that respects the anonymity of the participant. Used as a digital input stimulus for face-to-face discussions, the tool has a short duration and aims to stimulate classroom interaction.

Table 5: Explanation of the Serious Game’s developmental process

Pro-Social Network: technical component	The web-based platform boasted distinct features, such as an access system based on user roles, a multi-tiered architecture comprising a database, server-side
--	--

Pro-Social Network: psychological component	application, and a modern HTML5-based graphical web interface optimized for mobile devices. Installation was facilitated on a virtual dedicated server, ensuring seamless functionality. When crafting the SG’s storyline, various forms of cyberbullying were considered, shaping the scenarios within each chapter. The SG’s structure, compiled in an Excel sheet, encompassed diverse storytelling elements: characters, scene introductions, conversations, decision-making junctures, and feedback queries. The storyline unfolds across five chapters, each commencing with text and images and simulating an instant messaging app. Decision-making moment within a tree structure enabled players to steer the narrative, resulting in multiple outcomes and preliminary scores on investigated psychometric factors. The SG was presented in two versions: a full-length storytelling tool and a segmented chapters version. Each session, lasting an hour, encompassed a structured intervention plan spanning seven weeks, involving pre-tests, SG sessions, discussions on cyberbullying and related themes, and post-tests with students in the experimental and control groups. The intervention design was meticulously structured to accommodate SG sessions addressing various cyberbullying scenarios, coping strategies, emotional regulation, moral disengagement, empathy, well-being, and positive relationships. The chapters were titled as follows: 1. The pic in the group 2. The revenge 3. Christmas’ dinner 4. The teacher’s project
---	---

Figure 2: A visual scene from *Pro-Social Network*



In the intricate landscape of creating *Pro-Social Network*, the synergy between engineering precision and psychological storytelling becomes pivotal. The engineering component forms the backbone, ensuring seamless functionality and immersive experiences within the simulation. It lays the groundwork for dynamic interactions and realistic scenarios. However, the soul of the simulation lies in its storytelling infused with psychological depth, framing narratives that resonate with the intricacies of human behavior.

This fusion of engineering and psychology necessitates a harmonious collaboration between these two professions. Engineers provided technical prowess to bring the simulation to life, while psychologists contributed their understanding of human behavior, emotions, and social dynamics. It's in this collaborative dance that *Pro-Social Network* emerges as an effective and challenging simulation. The symbiosis between the technical and the psychological not only ensures a robust platform but also weaves a narrative that authentically mirrors the complexities of real-world social interactions. This interdisciplinary collaboration is the heartbeat of *Pro-Social Network*, promising a simulation that not only challenges but also profoundly engages its users in a rich tapestry of social experiences.

This setup allows for the assessment of individual performance based on specific protective and risk factors of cyberbullying, identified during the literature review (Kowalski et al., 2019). The interdisciplinary development process involved constant dialogue and integration between computer engineers and psychologists, resulting in a simulation of contemporary instant messaging apps commonly used by preadolescents. The SG's formal

screens include character introductions, gameplay, narrative choices, and feedback mechanisms. Following, a synthesis of the *Pro-Social Network*'s storytelling is presented:

Presentation: Giovanni/Gaia is a 12-year-old student in the second year of middle school. He/she is a thoughtful student who enjoys going to school, making new friends, and nurturing personal interests. This game portrays unpleasant events that could happen to you or a friend, either at school or on social media. Your choices influence the story, so pay attention to your actions! Each interaction throughout the events corresponds to a score. Have fun!

Introduction: Growing up in the neighborhood, Giovanni/Gaia had a peaceful life without notable incidents. He/she is the second child with an older sister aged 15, with whom there's a great bond. Giovanni/Gaia rarely breaks rules set by parents or teachers. Their dad and mom, a worker and homemaker, always ensured a proper education, acknowledging its importance for their future. As a result, Giovanni/Gaia consistently earned good grades, engaged in school-related sports and arts, and even joined the school orchestra. During elementary school, friendships were formed during Christmas or year-end performances. Luckily, all of Giovanni/Gaia's friends live in the same neighborhood.

Characters: Flavio, an only child, is quite popular owing to his parents' high status in the community. Though he was one of Giovanni/Gaia's best friends during elementary school, he gradually distanced himself, joining another group focused on impressing girls and engaging in sports events. Initially, he excelled in school, but later shifted focus mainly to social life, sports, and some unpleasant behaviors, prompting Giovanni/Gaia to distance themselves from Flavio. Alessia, another elementary friend, shared unpleasant experiences with Giovanni/Gaia; both were targeted by older, bullying children in the neighborhood. In middle school, Alessia started hiding insecurities, associating more with popular groups. Christian, the "nerd" of the class, is shy and studious. Giovanni/Gaia is one of the few to engage with him on matters other than academics, trying to include him in alternative social activities. Eva, very introverted, struggles to make friends. For some reason, she finds it challenging to connect with new people, which keeps her separate from the main groups in class. Riccardo, passionate about music and art, spends ample time on tablets and is adept with digital tools. Giovanni/Gaia admires him for having such interests while maintaining respectful social behavior. Professor Cardinale, teaching Italian and humanities, is a central figure in the class, guiding the students over the three school years. She's passionate about her work, even though students can sometimes be challenging, and unpleasant or alarming events occur. She's dedicated to improving social relations among the youth to create a more pleasant school atmosphere, making her an essential figure in the institute. All classmates are either opening or about to open their personal accounts on the most famous social media platform of the moment, Pro-Social Network—an app enabling connections with friends through chatting, photo/video sharing, commenting, and liking others' posts. It's a virtual environment famous among youngsters, allowing them to present themselves as they wish through their profiles. The platform features instant messaging, allowing private chats or limited group creation.

- 1. The pic in the group:** On a regular school day, only a few weeks into the academic year, the class group is taking shape. During the break, Giovanni/Gaia engages in a conversation about grades and favorite subjects with classmates, including Flavio. While distractedly listening, Professor Cardinale praises Christian for being on par with the curriculum and always well-prepared in all subjects. Shortly after this compliment, a notification pops up on the Pro-Social Network group from Flavio: “Hahaha, I’m always prepared too... in art. Here it is” (attaches a humiliating picture of a NERD + PROF drawing on a bathroom wall). Moments later, messages of approval and laughter flooded in.
- 2. The revenge:** Riccardo was one of the few who didn’t write anything in the group when Flavio humiliated Christian. He despises such cruel and arrogant behavior. He doesn’t explicitly express his emotions, preferring to think before acting, though he tends to take it somewhat “personally”. A few days after the bathroom drawing incident, Riccardo pulls you aside and asks for help to “teach a lesson” to Alessia, who had humiliated Christian along with Flavio, approving the latter’s messages with laughter: to avenge Christian, Riccardo wants to create a fake social profile solely to torment her daily, and he wants your help.
- 3. Christmas dinner:** Following the events of recent weeks, conflicts have arisen between Flavio’s group and Riccardo, leaving people like Christian constantly suffering. The Christmas holiday approaches, and some friends are deciding how to spend an evening together before the holidays. Alessia includes Giovanni/Gaia in a group with Flavio and others, but Riccardo isn’t added. Some classmates question whether excluding Riccardo is unfair, leading to a discussion. Eva refrains from participating, not wanting trouble, and your vote could be decisive in excluding or including Riccardo.
- 4. The professor’s project:** Professor Cardinale initiates an inclusive socialization project among classmates to address bullying. From February to Easter, Giovanni/Gaia and Riccardo participate, while Alessia and Flavio and his group back out, renouncing this opportunity because, in their opinion, it is boring and useless. Eva, who would like to participate, asks about the meaning of the project and how the sessions will take place. During the sessions, Flavio and the others disturb, publishing humiliating posts on the Pro-social Network about those participating in the initiative. One day, Eva contacts you privately to tell you that she will not participate in the project, claiming that Flavio and the others are forcing her not to participate, threatening to publish some humiliating things about her on the feed.
- 5. The last day of school:** The school year has been full of good and bad experiences. Every classmate has had positive and negative behavior towards others, and over time the consequences have shaped group relations. In the last days before the holidays, the teacher asks her students specific questions to collect their emotions

and any changes in their behaviors towards their classmates, before saying goodbye to them for the summer.

The collaboration between psychologists, researchers, and a team of computer scientists culminated in merging the different components, yielding a progressively developed SG. Multiple iterations and trials were conducted, refining both the graphical and functional aspects, leading to the final prototype of *Pro-Social Network*. The research team attributed preliminary scores ranging between -2 and +2 to the factors investigated by each decision-making moment within the Serious Game, following the illustrated criteria (Table 6).

Table 6: Preliminary scoring system for the Pro-Social Network Serious Game's decision-making moments

	- 2	- 1	0	+ 1	+ 2
Perspective-taking	Not empathic at all	Not empathic	Neutral	Partly empathic	Totally empathic
Moral disengagement	Not morally disengaged at all	Not morally disengaged	Neutral	Partly morally disengaged	Totally morally disengaged
Rumination	Not ruminative at all	Not ruminative	Neutral	Partly ruminative	Totally ruminative
Refocus on planning	Not refocusing at all	Not refocusing	Neutral	Partly refocusing	Totally refocusing
Coping	Extremely maladaptive strategy	Maladaptive strategy	Neutral	Adaptive strategy	Totally adaptive strategy

Throughout the storyline, the player encounters textual and visual introductions to specific chapters designed to explore various socio-behavioral aspects of cyberbullying. In each scenario, virtual characters send default messages, and the player is provided with a set of response options. These options allow the player to respond in a manner that reflects pro-social, conflictual, or morally disengaged attitudes. Within the dynamics of the game, there is the possibility to simulate everyday cyberbullying reaction behaviours, including online reporting, confrontation with the teacher, conflict with the bully, victimisation, complicity or indifference. The range of selectable behaviours is determined by the different ramifications provided for each decision-making moment. At the end of the SG, there is a feedback screen that includes some questions on the perceived usability, difficulty and realism of the tool. Unlike previous Serious Games, in *Pro-Social Network*, the player assumes an interchangeable role. Based on the evolution of the storyline and the decision-making choices, the player's avatar can dynamically shift roles in subsequent scenarios.

Translated and implemented in schools in Córdoba, Andalucía, *Pro-Social Network* represents a pioneering effort in *Media Education*, demonstrating the potential of SGs to

foster pro-social behavior and mitigate the impact of cyberbullying among preadolescents. The intervention based on the SG promoted in Italy and Spain has been carried out as presented in Table 7 and follows the described research-intervention steps.

Table 7: Description of the research activities

Research-intervention plan	Description
Preliminary phase: Discussion groups with students	Preliminary discussion groups with preadolescents to gather insights and perspectives on social media platforms use, cyberbullying, and related issues.
Research-intervention design	Research questions and hypotheses Participants and procedures: - Control group (CG) - Experimental group (EG)
Instruments	Methods: - Questionnaire “ <i>The use of social media at school</i> ” - Serious Game “ <i>Pro-Social Network</i> ”
Contexts	Calabria (Italy) Andalucia (Spain)
Research-intervention duration	CG: pre-test – post-test EG: pre-test – intervention – post-test
Intervention description	Weekly one-hour sessions focusing on socio-emotional education through the Serious Game activities and face-to-face discussions
Data collection	Pre-intervention assessment with questionnaire in CG – EG Post-intervention assessment with questionnaire in CG – EG Serious Game data collection
Comparative analysis	Longitudinal comparison in CG and EG Cross-national comparison in Italy and Spain Questionnaire – SG comparison

The procedures carried out to implement the research-intervention both follow the criteria of EBPs and the educational needs of psychology preventive actions. In the last section of the chapter, a focus on the ethical underpinnings of the data collection is dedicated.

4. CHAPTER 4

Results and a cross-national explorative study

The research-intervention yielded a diverse and extensive set of data, significantly contributing to the current scientific knowledge on preadolescence, cyberbullying, and its related risk and protective factors. Before delving into the results, highlighting that the primary focus of this research-intervention was to develop an innovative method to prevent cyberbullying within secondary school contexts is essential. True to developmental and educational psychology objectives, as well as to the principles of applied field research, this experimental intervention was driven by the practical urge to address the educational needs that shape the school climate and environment. This chapter presents findings from the research conducted in Italy and Spain throughout the doctoral years. The analysis includes both descriptive and inferential statistical approaches, with results detailed in the tables provided throughout the chapter. The structure of the chapter is designed to offer a comprehensive overview of the pre-test and post-test data collected over the course of doctoral study. Firstly, the chapter examines the results from the preliminary debate groups conducted with Italian preadolescents during the first year of the doctoral research (Section 4.1). This is followed by a detailed presentation of the research findings, highlighting distinctions and comparisons between the Italian and Spanish samples (Section 4.2). Next, the outcomes of the intervention are discussed, maintaining the same cross-national perspective (Section 4.3). Finally, preliminary reflections on the key implications of the research questions are explored (Section 4.4).

The study was conducted across two distinct time periods, first in Calabria (Italy) and subsequently in Andalucia (Spain), driven by specific scientific objectives and a cross-cultural perspective. The primary goal of the study was to observe the similarities and differences in cyberbullying and related socio-cognitive factors among Italian and Spanish preadolescents, exploring the motivations behind and consequences of engaging in problematic online social behaviors, particularly using ICTs and social media applications in two different educational environments. The second, and central, aim of the project was to evaluate how Italian and Spanish preadolescents interact on social media platforms, while also assessing how their social relationships can be positively influenced by the implementation of an evidence-based intervention. This intervention utilized a newly developed educational tool, the Serious Game *Pro-Social Network*, and included face-to-face classroom discussions aimed at preventing cyberbullying, suffering and perpetration. To ensure clarity and facilitate data presentation, tables in this chapter were carefully structured to provide consistent visibility to all key variables.

4.1 The preliminary debate groups: Italian students' representations

This paragraph presents results related to the qualitative study of the thesis: to explore Italian preadolescents' point of view on cyberbullying, social media use and online social interactions.

The discussion groups were organized and conducted during the first year of the doctoral project, through a semi-structured format (Liamputtong, 2011). During these groups, open-ended questions were employed to explore participants' perceptions of cyberbullying, their personal online and offline social experiences, and potential school preventive strategies adopting innovative tools. The conversations were audio-recorded and manually transcribed for subsequent identification of key themes. The feedback gathered underscored the dual nature of their social environments, characterized by the interplay between online and offline interactions. Following, a summary of the debate groups is presented:

- The first discussion group consisted of eight preadolescents (5 females) and was conducted in a school setting (M = 11.75 years).
- The second discussion group included nine preadolescents (4 females) and was also conducted in a school setting (M = 12.33 years).

Each discussion lasted ninety minutes and took place during school hours under the supervision of the researchers and teachers. The informal discussions generated valuable insights into key social themes relevant to preadolescents' current daily lives. These were transcribed and informally analyzed to identify the main topics raised by the participants. A thorough review of the transcriptions revealed five prominent themes consistently emphasized across the discussions.

1. **Back to school:** to begin with, the first question of the debate groups showed that the COVID-19 pandemic significantly amplified the role of social media platforms as a vital social context, particularly for preadolescents, in Italy. This theme encompassed students' emotions and experiences surrounding their return to school following extended breaks due to the COVID-19 pandemic, particularly during transitions between grades or schools. Participants discussed feelings of excitement, anxiety, and anticipation about reuniting with friends, meeting new classmates, and facing academic challenges. The return to school was recognized as a crucial period for social reintegration and the rebuilding of peer relationships, both of which are essential in preadolescence: *«when we were back to school, in a way it was exciting because the pandemic was over, and we could somehow resume what was normalcy and we were scared because anyway of what happened, but all in all it was very nice to come back and be able to have the social life we used to have back, and that's it.»*. Thus, the pandemic emerged as a unique event, which changed interactions, shaped by online specific features of social media platforms, which were necessary during the emergency.

2. **Social media platforms use:** after the opening questions, the debate groups opened up, revealing the prominent role that social media applications play in Italian preadolescents' daily lives. Participants described their social media platforms' use patterns, including the applications they frequently visit, the types of content they engage with, and the frequency of their online social interactions: « *I mainly use three socials, TikTok, Instagram and WhatsApp. WhatsApp for messaging with classmates etc., for school; Instagram I use but not much; TikTok as a leisure, so I also spend the afternoon.* ». The discussions revealed that while social media offers opportunities for connectivity and expression, there is also an awareness among students of the inherent advantages and disadvantages associated with its use. The perceived advantages and disadvantages of social media platforms were also addressed, such as staying connected with friends versus feeling pressure or being exposed to negative content.

3. **Online and offline social experiences:** this prominent theme examined preadolescent's fantasies about social media and cybertechnologies, the relationship between online interactions and face-to-face social experiences. Participants explained how their online activities might affect their offline relationships, and vice versa, with a specific focus on popularity, status and consequences on school lives: « *for me it's better to see people live, not only because I can make more friends, but also because it's nice to be together, etc. On WhatsApp, however, you never know who is hiding behind that screen, you never know if you can trust them or not, so in my opinion it's better to be at school and make friends in the school context and outside.* ». Particularly within the context of preadolescents' frequent use of social media platforms, the need for social support and status plays a pivotal role in the formation of their psychosocial well-being and the development of their interpersonal relationships. Participants also explored the influence of digital communication on their friendships, social skills, and emotional well-being. The dual nature of online interactions—as both an opportunity for self-expression and a source of social comparison—highlights the need for targeted interventions that promote healthy self-perception and social development during this critical phase

4. **Differences between bullying and cyberbullying:** the young participants demonstrated a clear comprehension of the differences between traditional bullying and cyberbullying, showing mature awareness about their negative impact on social development. They shared their experiences and observations of various forms of bullying, comparing physical and verbal aggression to expressions of digital harassment: « *on social media, it happened to me once, there was a boy who asked me for my number, in kindergarten we knew each other, we talked, but a few days later he wrote something to me and I was really hurt; so, in my opinion a lot of people before writing something should think about how they might react, because not everyone has a heart of cement, some have a fragile heart, I don't know how to say. Some people should think before they write or speak.* ». The participants demonstrated a nuanced understanding of both forms of aggression, noting key distinctions that

align with current research. The discussions highlighted the unique challenges posed by cyberbullying, including its pervasive nature, anonymity, and the difficulty in escaping online victimization. These points underscored the importance of addressing both traditional bullying and cyberbullying in prevention efforts.

- 5. Ideas about the Serious Game:** to conclude, participants provided feedback and suggestions regarding the educational Serious Game for the intervention. They expressed their thoughts on the design, storyline, and characters, offering valuable insights for improving its relevance and engagement. The discussions emphasized the potential of gamified interventions to combat cyberbullying, with participants highlighting the importance of realistic scenarios and interactive elements that reflect their everyday experiences: *«I imagine the game as a mixture of past and present, I imagine it with these kids, they go through these moments, there are solutions, but you have to fix them in quotes. I would also like there to be some fantasy in this game, like scenes and children.»*. Participants' reflections on the design, storyline, and characters provided valuable insights that can inform the iterative development of the SG, ensuring it remains an appealing and impactful tool for its target audience.

These preliminary debate groups not only provided a first point of contact with the schools involved in the study but also offered valuable insights into the social dynamics of the participants, the influence of digital interactions, and their perspectives on bullying and cyberbullying. By embedding these voices into the design and implementation of the intervention, the study aims to create a robust, evidence-based approach to cyberbullying prevention that acknowledges the evolving digital landscape in which preadolescents grow up. Such an approach holds promise for fostering a more empathetic, resilient, and informed student population, capable of navigating the complexities of their social environments with greater confidence and support. This comprehensive, participant-informed strategy lays the groundwork for developing interventions that are not only grounded in academic rigor but are also impactful and sustainable in real-world educational settings. These discussions provided a nuanced understanding of the challenges preadolescents face in both online and offline environments, informing the design of targeted interventions aimed at addressing their specific needs. By actively incorporating the voices and experiences of the participants, this research seeks to develop more effective and contextually relevant strategies for the prevention of cyberbullying, ensuring that interventions affect their lived realities.

4.2 Research: the survey

This paragraph focuses on the key findings emerged from the self-report surveys conducted in Italy, specifically in Cosenza, and in Córdoba, Spain, throughout the doctoral program. The results are related to the quantitative study of the thesis, regarding the cross-sectional survey administered both in Italy and Spain. The initial section presents the main results from the Italian sample, followed by the findings from the Spanish cross-sectional

research. Also, a comparative analysis of the two national contexts is provided to highlight both similarities and differences between the two countries, culminating in a synthesis of the cross-national data in a specific theoretical model.

To offer a clear description of the similarities and differences between the two countries, the results for Italy and Spain have been divided in separate paragraphs, to emphasize the average scores in the main variables of the quantitative study and to correspond to the first objective of the study (the comparison of scores between Italian and Spanish preadolescents).

4.2.1 Italy

The Italian self-report research questionnaire begins with targeted questions regarding smartphone and social media applications' use, and Internet usage habits of preadolescents. The results of these questions are presented in Table 8.

Table 8: Descriptive statistics of Internet-related behaviors and social media use in the Italian sample

Question	Min - Max	N	Mean score (SD)
1. Social media platforms daily time	1 - 5	489	2.51 (1.21)
2. Social media platforms leisure activities	1 - 5	489	2.6 (1.06)
3. Studying on the Internet	1 - 5	489	2.88 (1.17)
4. Searching information online	1 - 5	489	2.96 (1.12)
5. Listening to music	1 - 5	489	3.87 (1.23)
6. Watching movies	1 - 5	489	3.7 (1.23)
7. Sharing social media content	1 - 5	489	2.43 (1.15)
8. Multi-player online gaming	1 - 5	489	3.1 (1.46)
9. Single-player online gaming	1 - 5	489	3.07 (1.37)
10. Meeting new people	1 - 5	489	2.24 (1.25)
11. Talking to family members	1 - 5	489	4.1 (1.07)
12. Using SNSs	1 - 5	489	3.15 (1.48)
13. Online zapping	1 - 5	489	2.81 (1.44)
14. Vamping (no sleeping due to Internet)	1 - 5	489	1.92 (1.14)

These descriptive results show that Italian preadolescents predominantly utilized digital devices for leisure and social activities, including listening to music ($M = 3.87$, $SD = 1.23$), watching movies ($M = 3.7$, $SD = 1.23$), and engaging in both single-player ($M = 3.07$, $SD = 1.37$) and multiplayer video games ($M = 3.1$, $SD = 1.46$). They also used smartphones and social media platforms to communicate with family members ($M = 4.1$, $SD = 1.07$).

Table 9 presents the descriptive statistics for each of the variables investigated, indicating the range of scores between the minimum and maximum values.

Table 9: Descriptive statistics of the investigated variables in the Italian sample.

Variables	Min – Max	Mean score (SD)	Skewness	Kurtosis
1. Problematic social media use	6 - 30	13.64 (4.84)	0.62	0.08
2. Moral disengagement	24 - 120	53.3 (13.3)	0.74	0.77
3. Rumination	3 - 15	9.23 (3.31)	0.09	-0.99
4. Refocus on planning	3 - 15	11.74 (2.88)	-0.9	0.33
5. Perspective-taking	0 - 28	17.27 (4.6)	-0.09	-0.3
6. Cybervictimization	11 - 55	0.04 (0.9)	0.51	-0.53
7. Cyberbullying	11 - 55	0.06 (0.84)	0.81	-0.32
8. Satisfaction with life	5 - 35	24.81 (6.8)	-0.52	-0.46

For clarity and visualization, Table 10 presents the descriptive statistics for the subscales of the coping strategies related to cyberbullying.

Table 10: Descriptive statistics of coping sub-scales in the Italian sample.

Variables	Min – Max	Mean score (SD)	Skewness	Kurtosis
1. Technical coping	6 - 30	19.78 (4.24)	-0.92	0.89
2. Distal advice	5 - 25	13.48 (4.24)	0.03	-0.32
3. Helplessness	5 - 25	10.95 (4.07)	0.64	0.14
4. Retaliation	5 - 25	10.78 (5.2)	0.54	-0.81
5. Active ignoring	5 - 25	14.7 (4.15)	-0.21	-0.3
6. Close support	4 - 20	17.21 (3.95)	-0.96	1.15
7. Assertiveness	5 - 25	15.13 (4.37)	-0.31	-0.24

The rates of cybervictimization and cyberbullying within the Italian sample, differentiated by gender, are presented in Table 11. Additionally, scores from the *European Cyberbullying Intervention Project Questionnaire* (ECIPQ) were utilized to categorize participants into various roles related to cyberbullying. The classification criteria were as follows: (i) *Not Involved*: participants who scored equal to or lower than 1 (indicating once or twice) on all items across both dimensions, $n = 184$ (37.6%); (ii) *Cybervictims*: participants who scored equal to or higher than 2 (indicating at least once a month) on any item in the victimization dimension but equal to or lower than 1 on all items in the aggression dimension, $n = 157$ (32.1%); (iii) *Cyberbullies*: participants who scored equal to or higher than 2 on any of the 11 items in the aggression dimension but equal to or lower than 1 on all items in the victimization dimension, $n = 89$ (18.2%); (iv) *Cyberbully/Cybervictims*: participants who scored equal to or higher than 2 on any item in both the victimization and aggression dimensions, $n = 59$ (12.1%).

Table 11: Percentage frequencies in cybervictimization and cyberbullying in the Italian sample

Response options	<i>N</i>	Cybervictimization	Cyberbullying
------------------	----------	--------------------	---------------

		Females	Males	Females	Males
1. No	489	74.40%	72.90%	76%	72.50%
2. Yes, one or two times	489	19.10%	18.60%	16.70%	17.40%
3. Yes, once or twice a month	489	3.30%	4.70%	5.30%	7.60%
4. Yes, about once a week	489	1.20%	2.30%	0%	1.30%
5. Yes, more than once a week	489	2%	1.50%	2%	1.30%

Pearson correlation coefficients were utilized to assess the direction and strength of these associations, aiming to enhance our understanding of the behavioral and psychological dynamics among Italian preadolescents, through a bivariate correlation analysis among the main variables of the study (Table 12).

Table 12: Bivariate correlations among the variables in the Italian sample

Variables	1	2	3	4	5	6	7	8	9
1. Gender	1								
2. Problematic social media use	-.96*	1							
3. Moral disengagement	.231**	.267**	1						
4. Rumination	-.123**	.315**	.137**	1					
5. Refocus on planning	.075	-.063	-.3	-.15	1				
6. Perspective-taking	-.074	-.059	-.242**	.114*	.184**	1			
7. Cybervictimization	.026	.358**	.239**	.197**	-.086	-.151**	1		
8. Cyberbullying	.061	.301**	.305**	.052	-.06	-.227**	.573**	1	
9. Satisfaction with life	.149**	-.150**	-.28	-.112*	.323**	.162**	-.191**	-.140**	1

** p < .01

Note: Gender coding was computed as follows: 0 = female, 1 = male, 2 = prefer not to answer, 3 = other

Several significant relationships were identified among the variables. Specifically, problematic social media use exhibited a positive and significant correlation with both moral disengagement ($r = .267$, $p < .001$) and levels of cybervictimization ($r = .358$, $p < .001$) and cyberbullying ($r = .301$, $p < .001$). Additionally, moral disengagement was found to negatively correlate with perspective-taking ($r = .242$, $p < .001$), while showing a positive correlation with both cybervictimization ($r = .239$, $p < .001$) and cyberbullying ($r = .305$, $p < .001$). In contrast, satisfaction with life was negatively correlated with problematic social media use ($r = .150$, $p < .001$), rumination ($r = .112$, $p < .001$), cybervictimization ($r = .191$, $p < .001$), and cyberbullying perpetration ($r = .140$, $p < .001$), and positively associated with perspective-taking ($r = .162$, $p < .001$).

Another noteworthy finding is the significant correlation between cybervictimization and cyberbullying ($r = .573$, $p < .001$), suggesting that preadolescents who experience cyberbullying are likely to adopt less adaptive strategies when faced with such incidents. Conversely, a positive correlation was observed between perspective-taking and refocus on planning ($r = .184$, $p < .001$), indicating that adolescents with stronger empathic abilities may be more adept at cognitively readjusting in challenging situations.

A similar correlation matrix has been computed for the coping sub-scales in relation to gender, cybervictimization and cyberbullying, as shown in Table 13.

Table 13: Bivariate correlations among coping sub-scales, cybervictimization and cyberbullying in the Italian sample

Variables	1	2	3	4	5	6	7	8	9	10
1. Gender	1									
2. Technical coping	-.055	1								
3. Distal advice	-.036	.49**	1							
4. Helplessness	-.134**	.341**	.351**	1						
5. Retaliation	.260**	.075	.138**	.204**	1					
6. Active ignoring	.002	.503**	.312**	.37**	.088	1				
7. Close support	-.026	.609**	.419**	.298**	.084	.503**	1			
8. Assertiveness	.007	.421**	.443**	.341**	.179**	.45**	.498**	1		
9. Cybervictimization	.026	-.045	.01	.18**	.213**	.059	-.017	.027	1	
10. Cyberbullying	.061	-.105*	-.107*	.084	.343**	-.035	-.101*	-.049	.6**	1

**p < .01

Note: Gender coding was computed as follows: 0 = female, 1 = male, 2 = prefer not to answer, 3 = other

The correlation matrix reveals important insights into the most frequent coping strategies employed by preadolescents in response to cyberbullying and cybervictimization experiences. Adaptive coping strategies, such as technical coping and distal advice, are constructive approaches that help individuals manage stress and navigate challenging situations effectively. In contrast, maladaptive coping strategies, like retaliation, often involve less constructive responses that may exacerbate the situation and lead to further negative outcomes. From the correlation analysis, it is evident that distal advice negatively correlated with cyberbullying perpetration ($r = .107$, $p < .001$). This suggests that preadolescents who utilize these adaptive strategies are less likely to experience or engage in cyberbullying behaviors. Conversely, retaliation demonstrated strong positive correlations with both cybervictimization ($r = .213$, $p < .001$) and cyberbullying perpetration ($r = .343$, $p < .001$), indicating that those who resort to these less constructive approaches are more likely to become involved in cyberbullying situations.

The subsequent sections will delve into the comparative analysis with the Spanish sample and explore the implications of these results.

4.2.2 Spain

The Spanish self-report research questionnaire commenced with identical questions regarding the usage habits of smartphones, social media applications, and the Internet (Table 14).

Table 14: Descriptive statistics of Internet-related behaviors and social media use in the Spanish sample

Question	Min – Max	N	Mean score (SD)
1. Social media platforms daily time	1 - 5	406	2.64 (1.55)
2. Social media platforms leisure activities	1 - 5	406	2.45 (1.25)
3. Studying on the Internet	1 - 5	406	2.83 (1.02)
4. Searching information online	1 - 5	406	2.57 (1.1)
5. Listening to music	1 - 5	406	3.7 (1.15)
6. Watching movies	1 - 5	406	3.36 (1.23)
7. Sharing social media content	1 - 5	406	2.27 (1.3)
8. Multi-player online gaming	1 - 5	406	3.42 (1.34)
9. Single-player online gaming	1 - 5	406	3.19 (1.29)
10. Meeting new people	1 - 5	406	2.09 (1.27)
11. Talking to family members	1 - 5	406	3.86 (1.31)
12. Using SNSs	1 - 5	406	3.01 (1.48)
13. Online zapping	1 - 5	406	2.4 (1.5)
14. Vamping (no sleeping due to Internet)	1 - 5	406	1.69 (0.99)

The descriptive statistics reveal that Spanish preadolescents predominantly use digital devices for leisure and social activities, including listening to music, watching movies, and communicating with family members.

The following questions consisted of items from the Likert psychometric self-report tests introduced in the third chapter of this paper. Table 15 presents the descriptive statistics for each investigated variable, including the range of minimum and maximum scores. To address the excessive magnitudes of kurtosis and skewness for the cybervictimization and cyberbullying variables, a logarithmic transformation was applied. This transformation aimed to normalize the distribution and mitigate the impact of extreme values observed in these variables.

Table 15: Descriptive statistics of the investigated variables in the Spanish sample.

Variables	Min – Max	Mean score (SD)	Skewness	Kurtosis
1. Problematic social media use	6 - 30	11.56 (4.57)	0.85	-0.02

2. Moral disengagement	24 - 120	44.4 (11.85)	0.52	0.04
3. Rumination	3 - 15	8.23 (3.4)	0.29	-0.92
4. Refocus on planning	3 - 15	10.96 (3.15)	-0.65	-0.31
5. Perspective-taking	0 - 28	16.86 (4.16)	-0.25	0.05
6. Cybervictimization	11 - 55	0.07 (0.77)	1.18	0.25
7. Cyberbullying	11 - 55	0.07 (0.66)	2	2.7
8. Satisfaction with life	5 - 35	26.23 (6.73)	-0.98	0.83

The rates of cybervictimization and cyberbullying within the Spanish sample are presented below, with distinctions made between female and male participants (Table 16). Additionally, scores from the ECIPQ were utilized to categorize each participant into different roles related to cyberbullying (Del Rey et al., 2016). The following criteria were established: (i) *Not involved*: participants who scored 1 or lower (once or twice) on all items across both dimensions, $n = 281$ (69.2%); (ii) *Cybervictims*: those who scored 2 or higher (once a month) on any item related to victimization but scored 1 or lower on all aggression items, $n = 48$ (11.8%); (iii) *Cyberbullies*: participants who scored 2 or higher on any of the 11 aggression items while scoring 1 or lower on all victimization items, $n = 21$ (5.2%); and (iv) *Cyberbully/cybervictims*: those who scored 2 or higher on any item related to both victimization and aggression, $n = 56$ (13.8%).

Table 16: Percentage frequencies and roles in cybervictimization and cyberbullying in the Spanish sample

Response options	N	Cybervictimization		Cyberbullying	
		Females	Males	Females	Males
1. No	406	68.9%	60.90%	86.10%	77.70%
2. Yes, one or two times	406	20.10%	27.90%	11.90%	16.70%
3. Yes, once or twice a month	406	8.60%	7.50%	1%	3%
4. Yes, about once a week	406	1.40%	2.70%	0.5%	2.10%
5. Yes, more than once a week	406	1%	1%	0.5%	0.5%

Pearson correlations were employed to evaluate the direction and strength of these associations, aiming to deepen our understanding of the behavioral and psychological dynamics among Spanish preadolescents (Table 17).

Table 17: Bivariate correlations among the variables in the Spanish sample

Variables	1	2	3	4	5	6	7	8	9
1. Gender	1								
2. Problematic social media use	.088	1							
3. Moral disengagement	.115*	.415**	1						
4. Rumination	-.04	.273**	.196**	1					
5. Refocus on planning	-.001	.05	-.006	.422**	1				

6.	Perspective-taking	-.153**	-.071	-.022	.132**	.282**	1			
7.	Cybervictimization	.076	.355**	.227**	.188**	-.099*	.039	1		
8.	Cyberbullying	.118*	.397**	.275**	.096	-.033	-.078	.527**	1	
9.	Satisfaction with life	-.003	-.120**	.032	.055	.217**	.112*	-.114*	-.056	1

**p < .01

Note: Note: Gender coding was computed as follows: 0 = female, 1 = male, 2 = prefer not to answer, 3 = other

The table reveals several significant relationships among the primary variables of the study. Notably, problematic social media use exhibited a positive and significant correlation with moral disengagement ($r = .451, p < .001$), cybervictimization ($r = .355, p < .001$), and cyberbullying perpetration ($r = .397, p < .001$). Additionally, moral disengagement was positively correlated with both cybervictimization ($r = .227, p < .001$) and cyberbullying perpetration ($r = .275, p < .001$). Conversely, satisfaction with life showed a negative correlation with cybervictimization ($r = .114, p < .001$), while positively correlating with refocus on planning ($r = .217, p < .001$) and perspective-taking ($r = .112, p < .001$). Another key finding is the significant correlation between cybervictimization and cyberbullying, indicating that preadolescents who experience cyberbullying are likely to employ less adaptive strategies in response. Furthermore, the positive correlation between perspective-taking and refocus on planning ($r = .282, p < .001$) suggests that preadolescents with stronger empathic abilities are better equipped to cognitively adjust in challenging situations.

This matrix concludes the descriptive presentation of the survey results from the Spanish sample. The following section will delve into the analysis and discussion of these findings in relation to the broader context of cyberbullying and related behaviors in preadolescence, through a specific theoretical model examined to infer cross-cultural behaviors in Italian and Spanish students.

4.2.3 Results from the cross-national serial mediation model

In Table 18, descriptive statistics of the variables are reported both for Italian and Spanish preadolescents, showing low levels of cybervictimization and cyberbullying perpetration. An inferential analysis of the variables and their interrelationships was prioritized over a systematic comparison between countries. As a result, data from the Italian and Spanish samples are presented in a unified format, rather than being analyzed separately. The scientific rationale behind aggregating the sub-samples in the cross-national mediation model lies in the absence of statistically significant differences across key variables. Moreover, Italian and Spanish preadolescents share similar cultural, educational, and social backgrounds, which supports the decision to treat the two groups as a cohesive sample for the purposes of this model. This approach allowed for a clearer examination of the underlying psychological mechanisms relevant to cyberbullying and related factors.

First, a van der Waerden's data ranking transformation on the kurtosis and skewness values of cybervictimization and cyberbullying perpetration was applied, due to their excessively high magnitudes. This transformation aimed to normalize the distribution and mitigate the extreme values observed in these variables.

Table 19 summarizes the results of the independent samples t-test conducted on the investigated variables, categorized by gender.

Table 18: Descriptive statistics in the cross-national sample

Variables	Range	M (SD)	M (SD)
Problematic social media use	6 - 30	13.64 (4.84)	11.56 (4.77)
Moral disengagement	24 - 110	53.3 (13.29)	44.40 (11.84)
Cybervictimization	11 - 44	14.42 (4.97)	12.38 (3.37)
Cyberbullying	11 - 44	13.21 (4.29)	11.53 (1.62)
Age	9 - 14	11.90 (.783)	10.42 (.745)

Table 19: T-test results for independent samples and mean differences controlled for gender

Variables	Females (M ± SD)	Males (M ± SD)	t- value	df	p- value	Mean difference	Cohen's d	Effect size interpretation
Problematic social media use	12.74 ± 5.21	12.66 ± 4.62	0.253	886	0.8	0.08	0.01	Small
Moral disengagement	46.97 ± 12.9	51.51 ± 13.4	-5.15	886	0.000	-4.54	-0.34	Medium
Cybervictimization	0.02 ± 0.82	0.09 ± 0.86	-1.28	886	0.2	-0.07	-0.08	Small
Cyberbullying	0.005 ± 0.7	0.13 ± 0.82	-2.47	848.27	0.014	-0.127	-0.16	Small

The results indicate no statistically significant mean differences across the variables when comparing gender groups, with most effect sizes reflected by small to medium Cohen's d values. This suggests that, in general, gender did not play a significant role in differentiating levels of problematic social media use, cybervictimization, or cyberbullying. However, the analysis revealed that moral disengagement was the only variable to show a medium effect size (Cohen's d), hinting at some degree of gender-related variance. This finding may imply that males and females slightly differ in how they rationalize or justify aggressive behaviors online, warranting further investigation.

Table 20 summarizes the results from the bivariate correlations among the variables, indicating strong positive correlations between all investigated variables. Notably, PSMU presented strong correlations with MD, CV and CB, and CV presented a strong positive correlation with CB.

Table 20: Bivariate correlations among the variables in the whole sample

Variables	1	2	3	4	5
1. Social media addiction	1				
2. Moral disengagement	.373***	1			
3. Cybervictimization	.344***	.215***	1		
4. Cyberbullying	.327***	.274***	.573***	1	
5. Age	.175**	.373***	.344***	.327***	1

*** $p < .001$

Mediation model

Mediation analysis was performed to explore the serial mediating role of PSMU and MD in the association between cybervictimization and cyberbullying perpetration. The results (Table 21) reveal a significant total effect of CV on CB perpetration ($\beta = .071$, $SE = .013$, 95% CI [.045; .098]), indicating that higher levels of CV are associated with increased CB perpetration.

Furthermore, PSMU and MD serially mediate this relationship, showing strong positive associations. Specifically, CV significantly predicts PSMU ($\beta = .35$, 95% CI [1.68; 2.38]), which in turn predicts MD ($\beta = .28$, 95% CI [.59; .93]). MD subsequently predicts CB perpetration ($\beta = .14$, 95% CI [.004; .011]), demonstrating that PSMU and MD play crucial roles in the pathway from CV to CB.

The results highlight a significant indirect effect of PSMU and MD on the cybervictimization-cyberbullying perpetration link (H2: Problematic social media use and moral disengagement serially mediates the relationship between cybervictimization and cyberbullying, such that higher levels of cybervictimization lead to higher levels of problematic social media use and moral disengagement, which in turn lead to higher levels of cyberbullying perpetration, both in Italy and Spain).

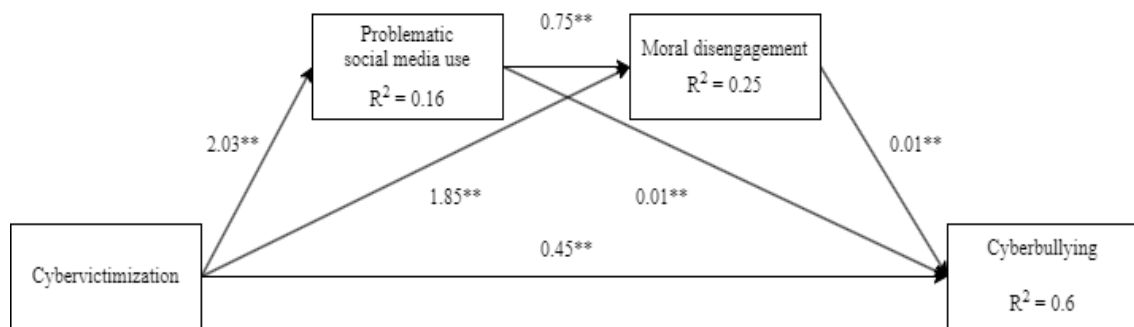
Table 21: Mediation and indirect effects with standardized estimates of cybervictimization (CV, independent variable), Problematic Social Media Use (PSMU), Moral Disengagement (MD) as serial mediators, and cyberbullying (CB) (outcome)

Pathway	β	SE	t	95% [CI]		p	F
				LL	UL		
CV -> CB							
Total effect	0.071	0.013		0.045	0.098	< .001	
Direct effect	0.499	0.026	17.28	0.401	0.503	< .001	85.47
Specific indirect effects							
CV-SMA-MD-CB	0.013	0.003		0.006	0.021	< .001	
CV-SMA -CB	0.041	0.012		0.016	0.067	< .001	44.58
CV-MD-CB	0.016	0.006		0.006	0.029	< .001	59.36

Note: CI = Confidence Interval; LL = lower limit; UL = upper limit.

In the mediation model, cybervictimization positively predicted PSMU, MD, and cyberbullying. Further, both PSMU and MD presented statistically significant indirect serial effects in the cybervictimization-cyberbullying association. The results show that PSMU and MD positively and partially mediated the relationship between cybervictimization and cyberbullying perpetration (see Fig. 3).

Figure 3: Non-standardized estimates results of the direct and indirect serial mediation effects, linking cybervictimization and cyberbullying through PSMU and MD



4.3 Research: the intervention

This section delves into the key findings from the research-intervention conducted in Cosenza (Italy) and Córdoba (Spain) during the doctoral program. The first part presents the Italian data, with a particular emphasis on the pre-test and post-test survey data. The second part focuses on the same data within the Spanish pre-test and post-test trials. For both countries, an overview of the data obtained through the prototypical SG *Pro-Social Network*, which was adopted in face-to-face 1-hour sessions in Italy and Spain across five weeks. These quantitative data, measured on the core risk and protective factors of cyberbullying identified throughout the doctoral program, represent the key elements illustrating the preliminary functioning of the educational SG.

4.3.1 Italy

The intervention, conducted in selected first-grade secondary school classrooms in the province of Cosenza, involved a division of the global sample into an experimental group (EG) and a control group (CG). The experimental group participated in both pre-test and post-test self-report survey administration and in the trial of the educational Serious Game

prototype, *Pro-Social Network*. In contrast, the control group only completed the research questionnaire at two separate time points.

It is important to highlight that *Pro-Social Network* is an experimental prototype in its validation phase. As a result, the internal scoring procedure, developed in collaboration with psychologists and computer engineers, remains in its preliminary stages. Therefore, the quantitative and qualitative findings presented here are of a speculative nature. Data collection for both the experimental and control groups took place two months apart, adhering to the criterion of methodological rigor based on evidence-based research practices.

The data presentation in this section will follow the outlined sequence:

1. Pre-test and post-test results from the Experimental Group (EG).
2. Pre-test and post-test results from the Control Group (CG).
3. Results from the Serious Game (SG) intervention.

The pre-test data for the Experimental Group (EG) were collected from a sample of $N = 36$ participants (30.6% female), aged 10 to 14 (Mean age = 11.54, $SD = 0.762$), drawn from two selected schools within the global dataset. The post-test sample consisted of 31 participants from the same group. Data collection for both pre-test and post-test phases was conducted with a two-month gap, before and after the Pro-Social Network SG intervention, to assess the short-term impact of the educational game.

In the subsequent sections, the key findings from the analyzed variables of the survey for both pre-test and post-test phases are presented (Table 22 and Table 23). These results provide insight into how the intervention may have influenced the participants' responses over time.

Table 22: Results from the investigated variables in the EG in Italy.

Variables (Min – Max)		Mean score PRE (SD)	Mean score POST (SD)	t-statistic	p-value	Skewness PRE	Skewness POST	Kurtosis PRE	Kurtosis POST
1.	Problematic social media use (6 – 30)	14 (4.87)	13.94 (4.25)	0.1	0.92	0.76	0.64	0.39	0.66
2.	Moral disengagement (24 – 120)	56.28 (16.03)	55.35 (11.65)	-1.54	0.13	1.13	-0.07	2.6	0.55
3.	Rumination (3 – 15)	8.61 (3.42)	9.19 (3.66)	-1.35	0.18	0.33	-0.05	-0.72	-1.35
4.	Refocus on planning (3 – 15)	11.78 (2.64)	11.32 (3.16)	1.64	0.11	-0.57	-0.82	-0.33	0.32
5.	Perspective-taking (0 – 28)	16.36 (3.65)	17.03 (5.79)	0.47	0.64	-0.06	-0.29	-1.2	-0.37
6.	Cybervictimization (11 – 55)	15.81 (7.28)	14.45 (4.41)	0.61	0.54	2.23	1.75	5.23	2.82

7. Cyberbullying (11 – 55)	14.53 (6.78)	14.45 (5.57)	0.49	0.62	2.95	2.66	8.92	8.58
8. Satisfaction with life (5 – 35)	24.56 (7.21)	24.32 (8.07)	0.38	0.71	-0.54	-0.72	-0.18	-0.11

Note: Pre-test (N = 36), Post-test (N = 31).

Independent samples' *t*-test for mean differences were run to identify potential statistically relevant differences across the EG pre-test and post-test scores. Since all *p*-values are greater than 0.05, the mean differences between the pre-test and post-test results are not statistically significant for any of the variables. This indicates that the intervention did not lead to immediate significant changes in the measures of problematic social media use, moral disengagement, rumination, refocus on planning, perspective-taking, cybervictimization, cyberbullying, or satisfaction with life in the Italian experimental group. This suggests that there was not enough variability between the pre-test and post-test scores for all these variables, possibly because the sample data were either very consistent or almost unchanged between the two time periods.

Table 23: Results from the coping sub-scales in the EG in Italy.

Variables (Min – Max)	Mean score PRE (SD)	Mean score POST (SD)	t-statistics	p-value	Skewness PRE	Skewness POST	Kurtosis PRE	Kurtosis POST
1. Technical coping (6 – 29)	19.39 (4.15)	20.19 (4.84)	-0.73	0.47	-0.83	-1.35	0.34	2.61
2. Distal advice (5 – 25)	13.81 (3.34)	12.58 (3.94)	1.5	0.14	0.19	-0.37	-0.46	-0.64
3. Helplessness (5 – 25)	11.78 (4.87)	10.71 (4.37)	0.94	0.35	0.79	1.33	0.45	2.7
4. Retaliation (5 – 25)	11.17 (5.39)	13.64 (5.43)	-1.86	0.06	0.49	0.17	-0.95	-0.73
5. Active ignoring (5 – 25)	15.03 (4.16)	16.1 (4.6)	-0.91	0.36	-0.43	-0.84	-0.29	0.8
6. Close support (5 – 25)	17.03 (3.6)	18.26 (4.5)	-1.24	0.22	-0.87	-1.06	1.16	2.02
7. Assertiveness (5 – 25)	15.92 (4.2)	15.9 (5.02)	0.02	0.98	-0.15	-0.02	-0.29	-0.53

Note: Pre-test (N = 36); Post-test (N = 31).

Independent samples' *t*-test for mean differences were run to identify potential statistically relevant differences across the EG pre-test and post-test coping sub-scores. Since

all *p-values* are greater than .05, the mean differences between the pre-test and post-test results are not statistically significant for any of the variables. This indicates that the intervention did not lead to immediate significant changes in the measures of multiple adaptive and maladaptive coping strategies in the Italian experimental group. This suggests that there was not enough variability between the pre-test and post-test scores for all these variables, possibly because the sample data were either very consistent or almost unchanged between the two time periods.

The pre-test CG was formed by 37 subjects (collected from the global dataset), while the post-test CG was constituted from N = 41 participants (36.6% females) aged from 10 to 12 (Mean score = 11.27, SD = 0.652). The following is an illustration of the main findings from the investigated variables of the survey which is presented (Table 24 and Table 25).

Table 24: Results from the investigated variables in the CG in Italy

Variables (Min – Max)	Mean score PRE (SD)	Mean score POST (SD)	t- statistics	p- value	Skewness PRE	Skewness POST	Kurtosis PRE	Kurtosis POST
1. Problematic social media use (6 – 30)	12.54 (4.35)	12.32 (4.47)	0.12	0.9	1.29	1.15	3.36	1.07
2. Moral disengagement (24 – 120)	54.14 (15.21)	52.8 (13.11)	0.41	0.67	0.51	0.42	0.22	-0.55
3. Rumination (3 – 15)	10.3 (3.55)	8.8 (3.56)	1.86	0.06	-0.4	0.06	-1.22	-0.8
4. Refocus on planning (3 – 15)	11.51 (3.34)	11.37 (3.04)	0.19	0.85	-0.99	-0.73	0.4	0.42
5. Perspective-taking (0 – 28)	16.78 (3.99)	17.78 (4.81)	-0.99	0.32	-0.13	-0.34	-1.14	-0.02
6. Cybervictimization (11 – 55)	13.49 (3.5)	15.17 (6.27)	-1.44	0.15	1.61	2.42	1.72	6.49
7. Cyberbullying (11 – 55)	12.41 (2.3)	13.59 (5.96)	-1.13	0.26	2.6	3.66	8.12	13.93
8. Satisfaction with life (5 – 35)	26.76 (5.9)	24.15 (6.81)	1.8	0.07	-0.5	-0.35	-0.65	-0.81

Note: Pre-test (N = 37); Post-test (N = 41).

Independent samples' *t-test* for mean differences were run in *SPSS 27.0* to identify potential statistically relevant differences across the CG pre-test and post-test scores. Since all *p-values* are greater than 0.05, the mean differences between the pre-test and post-test results are not statistically significant for any of the variables. This indicates that the intervention did not lead to immediate significant changes in the measures of problematic social media use, moral disengagement, rumination, refocus on planning, perspective-taking, cybervictimization, cyberbullying, or satisfaction with life in the Italian experimental group. This suggests that there was not enough variability between the pre-test and post-test scores

for all these variables, possibly because the sample data were either very consistent or almost unchanged between the two time periods.

Table 25: Results from the coping sub-scales in the CG in Italy

Variables (Min – Max)		Mean score PRE (SD)	Mean score POST (SD)	t-statistics	p-value	Skewness PRE	Skewness POST	Kurtosis PRE	Kurtosis POST
1.	Technical coping (6 – 29)	19.11 (3.9)	20.27 (5.71)	-1.03	0.3	-1.4	-0.75	2.23	0.57
2.	Distal advice (5 – 25)	13.27 (3.9)	13.9 (5.03)	-0.61	0.54	-0.18	-0.4	-0.57	-0.67
3.	Helplessness (5 – 25)	10.92 (4.32)	10.46 (5.01)	0.43	0.66	0.48	1.04	-0.51	0.72
4.	Retaliation (5 – 25)	11.35 (5.03)	12.24 (5.82)	-0.72	0.47	0.24	0.41	-0.73	-0.53
5.	Active ignoring (5 – 25)	14.38 (4.84)	15.29 (5)	-0.82	0.41	-0.29	0.09	-0.69	-0.25
6.	Close support (5 – 25)	17.22 (4)	17.34 (4.85)	-0.12	0.9	-1.6	-0.89	3.2	0.78
7.	Assertiveness (5 – 25)	15.22 (4.87)	15.63 (5.63)	-0.34	0.73	-0.37	-0.53	-0.19	-0.52

Note: Pre-test (N = 37); Post-test (N = 41)

Independent samples' *t-test* for mean differences were run to identify potential statistically relevant differences across the CG pre-test and post-test coping sub-scores. Since all *p-values* are greater than .05, the mean differences between the pre-test and post-test results are not statistically significant for any of the variables. This indicates that the intervention did not lead to immediate significant changes in the measures of multiple adaptive and maladaptive coping strategies in the Italian experimental group. This suggests that there was not enough variability between the pre-test and post-test scores for all these variables, possibly because the sample data were either very consistent or almost unchanged between the two time periods.

Subsequently, the main findings from the data collected through the SG *Pro-Social Network* are displayed. The intervention sessions were scheduled throughout five weeks, and each class meeting lasted one hour. The EG played the SG during school hours under the researchers' supervisions (Mean time = 11.01, SD = 2.26); specifically, after the simulation, debate groups were displayed with the students and the teachers, to build a shared knowledge of what social media platforms use is, of cyberbullying, cybervictimization and related factors. It is important to note that SG provided both quantitative and qualitative feedback, thus partial results from both are illustrated hereby (Table 26).

Table 26: Descriptive statistics from the investigated variables in the SG

Variables	N	Min	Max	Mean	SD
Perspective-taking (-32, 23)	36	-14	20	9.33	7.986
Moral disengagement (-27, 30)	36	-16	16	-6.00	6.702
Rumination (-25, 24)	36	-19	3	-6.56	4.76
Refocus on planning (-9, 33)	36	3	24	14.36	4.859
Coping (-19, 35)	36	1	23	12,22	6,146

Following, the SG's correlational matrix is illustrated, to highlight relationships between the variables within the educational storytelling (Table 27).

Table 27: Correlational matrix from the matrix investigated in the SG

Variables	1	2	3	4	5
1. Perspective-taking	1				
2. Moral disengagement	-.656**	1			
3. Rumination	.439**	.007	1		
4. Refocus on planning	.008	-.554**	-.437**	1	
5. Coping	-.226	-.336**	-.479**	.778**	1

*** p < 0.001

Significant correlations were observed across several variables, indicating meaningful relationships in the context of preadolescent behavior within the intervention.

Perspective-taking demonstrated a strong negative correlation with moral disengagement ($r = -.656$, $p < .001$), suggesting that higher levels of perspective-taking are associated with lower levels of moral disengagement, which aligns with previous research linking empathy-related skills to reduced moral disengagement. Additionally, rumination showed a moderate positive correlation with perspective-taking ($r = .439$, $p < .001$), implying that those with higher levels of perspective-taking may also experience more reflective or ruminative thinking patterns.

Refocus on planning had a significant negative correlation with moral disengagement ($r = -.554$, $p < 0.001$) and rumination ($r = -.437$, $p < 0.001$), indicating that preadolescents who engage in planning-based coping strategies tend to exhibit lower levels of both moral disengagement and rumination. Notably, refocus on planning also had a very strong positive correlation with coping ($r = .778$, $p < 0.001$), suggesting that it may be a key adaptive strategy in managing stress or challenging situations.

Lastly, coping showed significant negative correlations with both moral disengagement ($r = -.336$, $p < 0.001$) and rumination ($r = -.479$, $p < 0.001$), suggesting that higher adaptive coping is associated with lower moral disengagement and reduced tendencies toward rumination. These findings highlight the importance of adaptive coping strategies, such as planning, in promoting positive socio-emotional outcomes and reducing maladaptive traits among preadolescents.

4.3.2 Spain

The intervention, which was only offered in some of the first-grade secondary school classrooms in Córdoba in relation to the whole research, first involved the distinction of the sample into a control group and an experimental group.

The experimental group (EG) took part in the administration of a self-report survey, and in the testing of the educational Serious Game prototype *Pro-Social Network*. The control group (CG) consisted of participants that completed only the research questionnaire, which was administered at two separate time points throughout the visiting period of the research-intervention.

The necessary premise introducing this section of the dissertation results is to emphasize that *Pro-Social Network* is an experimental prototype in the validation phase, translated in Spanish from its Italian version with the help of the LAECОВI team at the University of Córdoba⁵. Therefore, since the SG's internal scoring procedure, shared by the two research teams involved, consisting of psychologists and computer engineers, is still at a preliminary stage, what are illustrated here are quantitative and qualitative results of a speculative nature. Data with the questionnaire was collected two months apart in both the EG and CG, respecting the evidence-based research criterion of methodological rigor. The presentation of data in this section will follow the subsequent order:

1. Presentation of pre and post-test EG data.
2. Presentation of pre and post-test CG data.
3. Presentation of the SG results.

The pre-test EG was formed by $N = 46$ subjects (39.1% females) aged from 10 to 12 (Mean score = 10.98, $SD = 0.447$) (collected from the global dataset in two selected schools), while the post-test EG was constituted from 107 participants. The following illustration of the main findings from the investigated variables of the survey is presented (Table 28).

⁵ [Laecovi](#)

Table 28: Results from the investigated variables in the EG in Spain

Variables (Min – Max)		Mean score PRE (SD)	Mean score POST (SD)	t- statistics	p- value	Skewness PRE	Skewness POST	Kurtosis PRE	Kurtosis POST
1.	Problematic social media use (6 – 30)	12.37 (4.9)	11.24 (4.03)	1.2	0.23	0.53	0.68	-0.9	-0.6
2.	Moral disengagement (24 – 120)	47.35 (14.09)	45.51 (10.6)	0.7	0.48	-0.21	0.09	-0.65	-0.45
3.	Rumination (3 – 15)	8.78 (2.9)	8.07 (3.35)	1.08	0.28	-0.01	0.18	-0.86	-0.67
4.	Refocus on planning (3 – 15)	11.17 (2.7)	10.42 (3.3)	1.19	0.24	-0.3	-0.42	-0.75	-0.57
5.	Perspective-taking (0 – 28)	16.8 (4.11)	16.13 (4.53)	0.74	0.46	-0.31	-0.39	0.38	0.27
6.	Cybervictimization (11 – 55)	12.3 (2.65)	11.84 (2.53)	0.85	0.4	2.73	5.19	8	30
7.	Cyberbullying (11 – 55)	11.76 (1.67)	11.78 (2.05)	-0.05	0.96	2.49	3.73	5.7	15
8.	Satisfaction with life (5 – 35)	24.65 (6.92)	25.78 (7.46)	-0.75	0.45	-0.57	-1.1	0	1.35

Note: Pre-test (N = 46); Post-test (N = 45).

Independent samples' *t*-test for mean differences were run to identify potential statistically relevant differences across the EG pre-test and post-test scores. Since all *p*-values are greater than 0.05, the mean differences between the pre-test and post-test results are not statistically significant for any of the variables. This indicates that the intervention with did not lead to immediate significant changes in the measures of problematic social media use, moral disengagement, rumination, refocus on planning, perspective-taking, cybervictimization, cyberbullying, or satisfaction with life in the Spanish experimental group. This suggests that there was not enough variability between the pre-test and post-test scores for all these variables, possibly because the sample data were either very consistent or almost unchanged between the two time periods.

The pre-test and post-test CG was formed by 31 subjects (collected from the global dataset, 44.7% females) aged from 10 to 12 (Mean score = 10.81, *SD* = 0.543). Following, an illustration of the main findings from the investigated variables of the survey is presented (Table 29).

Table 29: Results from the investigated variables in the CG in Spain

Variables (Min – Max)		Mean score PRE (SD)	Mean score POST (SD)	t- statistics	p- value	Skewness PRE	Skewness POST	Kurtosis PRE	Kurtosis POST
1.	Problematic social media use (6 – 30)	11.84 (6.19)	10.39 (4.7)	1.04	0.3	1.21	1.91	0.51	4.35
2.	Moral disengagement (24 – 120)	47.13 (11.67)	42.26 (10.52)	1.73	0.09	0.9	0.36	0.35	-0.57
3.	Rumination (3 – 15)	8.13 (3.7)	9.1 (3.7)	-1.03	0.3	0.45	0.18	-0.93	-1.17
4.	Refocus on planning (3 – 15)	10.35 (3.64)	10.71 (3.36)	-0.4	0.69	-0.29	-0.2	-0.97	13
5.	Perspective-taking (0 – 28)	18.23 (4.14)	17.05 (4.35)	1.09	0.28	0.4	0.53	0	1
6.	Cybervictimization (11 – 55)	12.77 (3.41)	11.9 (2.18)	1.2	0.23	3.32	2.7	13	7
7.	Cyberbullying (11 – 55)	11.78 (1.79)	11.29 (1.1)	1.3	0.2	3	5	9	26
8.	Satisfaction with life (5 – 35)	26.45 (6.51)	25.68 (6.53)	0.46	0.64	-1.21	-0.44	2.6	-0.45

Note: Pre-test (N = 31); Post-test (N = 31).

Independent samples' *t*-test for mean differences were run to identify potential statistically relevant differences across the CG pre-test and post-test scores. Since all *p*-values are greater than 0.05, the mean differences between the pre-test and post-test results are not statistically significant for any of the variables. This indicates that the intervention with did not lead to immediate significant changes in the measures of problematic social media use, moral disengagement, rumination, refocus on planning, perspective-taking, cybervictimization, cyberbullying, or satisfaction with life in the Italian experimental group. This suggests that there was not enough variability between the pre-test and post-test scores for all these variables, possibly because the sample data were either very consistent or almost unchanged between the two time periods.

Subsequently, the main findings from the real data collected through the SG *Pro-Social Network* are displayed. The intervention sessions were scheduled throughout five weeks, and each class meeting lasted one hour. The EG played the SG during school hours under the researchers' supervisions (Mean time = 13.39, *SD* = 3.52); specifically, after the simulation, debate groups were displayed with the students and the teachers, to build a shared knowledge of what social media platforms use is, of cyberbullying, cybervictimization and related factors. It is important to note that the SG provided both quantitative and qualitative feedback, thus partial results from both are illustrated hereby (Table 30).

Table 30: Descriptive statistics from the variables investigated in the SG

Variables	N	Min	Max	Mean	SD
Perspective-taking (-32, 23)	111	-17	22	9.47	8.151
Moral disengagement (-27, 30)	111	-17	15	-4.67	5.883
Rumination (-25, 24)	111	-14	4	-5.3	3.755
Refocus on planning (-9, 33)	111	4	26	13.71	4.008
Coping (-19, 35)	111	0	26	12.24	4.315

Following, the correlation between the measured variables within the SG' storytelling (Table 31).

Table 31: Correlational matrix from the investigated variables in the SG

Variables	1	2	3	4	5
1. Perspective-taking	1				
2. Moral disengagement	-.799**	1			
3. Rumination	.353*	-.016	1		
4. Refocus on planning	.300*	-.498**	-.226	1	
5. Coping	-.192	-.430**	-.148	.704**	1

*** p < 0.001

The results highlight several significant relationships, offering insight into the interplay of socio-emotional and cognitive factors in the context of preadolescent cyberbullying and coping behaviors.

Firstly, perspective-taking showed a strong negative correlation with moral disengagement ($r = -.799$, $p < 0.001$), suggesting that higher empathy (perspective-taking) is associated with lower moral disengagement. This aligns with prior research suggesting that the ability to understand others' viewpoints can reduce tendencies to morally disengage. Additionally, perspective-taking exhibited a moderate positive correlation with both rumination ($r = .353$, $p < 0.05$) and refocus on planning ($r = 0.300$, $p < 0.05$), indicating that those with greater empathic abilities might also engage more in reflective thinking and proactive planning.

Refocus on planning also showed a moderate negative correlation with moral disengagement ($r = -.498$, $p < 0.001$), reinforcing that preadolescents who use planning-based coping strategies may be less likely to morally disengage. There was also a strong

positive correlation between refocus on planning and overall coping ($r = .704, p < 0.001$), suggesting that planning is a central component of adaptive coping strategies.

Lastly, coping showed a moderate negative correlation with moral disengagement ($r = -.430, p < 0.001$), implying that stronger coping skills are associated with lower moral disengagement. However, it is worth noting that rumination had no significant correlations with refocus on planning or coping, suggesting it may operate more independently from other adaptive coping strategies in this sample.

Overall, these correlations suggest that adaptive skills like perspective-taking and planning may act as protective factors against moral disengagement and potentially cyberbullying behaviors, underscoring the importance of promoting socio-emotional competencies in interventions.

4.3.3 Comparison

The data from the EG and CG in Italy and Spain provide a comparative view on the effectiveness of the intervention across two different national contexts, which will be furtherly discussed throughout the subsequent sections of the dissertation. Across both the Italian and Spanish samples, neither the EG nor the control group CG exhibited statistically significant differences in the pre-test and post-test mean scores across all variables investigated.

While the mean differences were not statistically significant, there are subtle patterns worth noting in the Italian and Spanish EG and CG results: (i) both the Italian and Spanish EG showed a slight reduction in problematic social media use, though not statistically significant. The CG in Spain showed a more noticeable drop in mean scores compared to the Italian CG, which remained consistent; (ii) moral disengagement scores decreased slightly in both the EG and CG for Italy and Spain, but no statistical significance was reached; (iii) scores for rumination and refocus on planning showed slight fluctuations in both countries, with the Italian EG showing a slight increase in rumination post-intervention, while Spain saw a minor decrease; (iv) in both Italian and Spanish samples, various coping strategies, such as technical coping, distal advice, helplessness, retaliation, active ignoring, close support, and assertiveness, showed no statistically significant changes between pre-test and post-test phases. The lack of notable shifts suggests that short-term interventions may not be sufficient to alter established coping behaviors in preadolescents. However, both Italian and Spanish samples exhibited a slight increase in retaliation in the EG, suggesting that the intervention's focus on understanding cyberbullying might have inadvertently heightened preadolescents' awareness or consideration of retaliatory behaviors. Also, the scores for close support and assertiveness in coping strategies remained relatively stable, suggesting that these adaptive strategies are less susceptible to immediate influence from a short-term intervention and might require reinforcement over a prolonged period.

Regarding the SG, while the application *Pro-Social Network* provided both quantitative and qualitative data, neither country displayed statistically significant changes immediately

post-intervention in either the EG or CG, which may indicate the intervention's effects require a longitudinal follow-up. The lack of short-term impact also suggests that the complexity of behavioral, cognitive, and emotional outcomes related to cyberbullying and coping strategies may necessitate longer-term, more frequent interventions for measurable change. Additionally, the fact that neither country showed immediate change underscores the need for a refined and potentially extended intervention strategy to address the multi-layered nature of cyberbullying behaviors among preadolescents.

The descriptive statistics and correlation matrices from both sets of data in the Serious Game (SG) intervention (Italy $N = 36$ and Spain $N = 46$) reveal several interesting patterns and offer insights on preadolescents' relationships, socio-emotional and cognitive factors, especially regarding cyberbullying and coping behaviors. Below is a comparison between these two sets of findings.

- Perspective-Taking: Both samples exhibit similar mean scores for perspective-taking (9.33 in Italy and 9.47 in Spain), suggesting a comparable level of empathy or ability to understand others' viewpoints across both groups.

- Moral Disengagement: The mean level of moral disengagement in Italian preadolescents (-6.00) is slightly lower than in Spanish preadolescents (-4.67). Both scores indicate an inclination toward less morally disengaged thinking, with slight variability.

- Rumination: The mean rumination score is somewhat higher in the Italian EG (-6.56) compared to the Spanish EG (-5.3), though both means suggest that rumination tendencies may vary slightly between the groups.

- Refocus on Planning: The Italian sample ($M = 14.36$) showed slightly higher levels of planning-based coping strategies compared to the Spanish sample ($M = 13.71$).

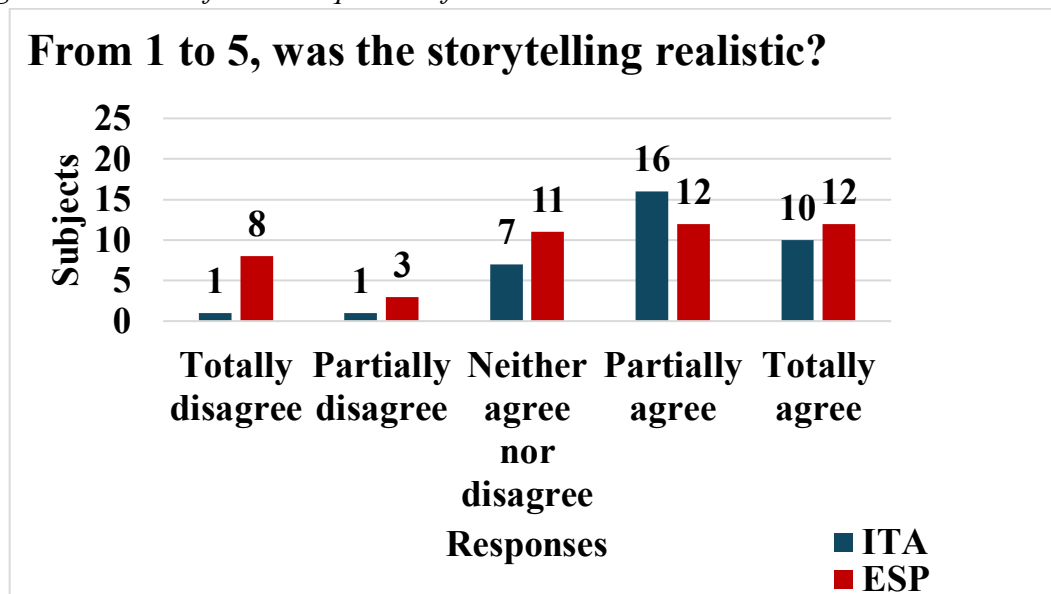
- Coping: The coping scores are similar across both samples (12.22 in the smaller sample and 12.24 in the larger), indicating consistency in the general coping abilities across the Italian and Spanish groups.

Overall, the descriptive statistics across both samples indicate stable levels of perspective-taking, moral disengagement, rumination, refocus on planning, and coping, with minor variations that could be expected in sample size differences.

Across both data sets, the relationships among these variables reveal some notable similarities and minor differences, particularly with moral disengagement and perspective-taking. Both samples exhibit a strong negative correlation between perspective-taking and moral disengagement ($r = -.656$ in Italy and $r = -.799$ in Spain, both significant at $p < 0.001$). This consistency across samples reinforces the idea that higher levels of empathy and perspective-taking are inversely associated with moral disengagement tendencies, suggesting that preadolescents with greater empathic skills are less likely to disengage morally. In both samples, perspective-taking has a positive correlation with rumination ($r = .439$ in Italy and $r = .353$ in Spain) and refocus on planning ($r = .008$ in Italy and $r = .300$ in Spain). This suggests that preadolescents who can take the perspective of others may engage more in reflective or planning-based coping strategies, though this relationship is stronger in the larger sample for planning. The correlation between refocus on planning and moral disengagement is consistently negative across both samples ($r = -.554$ in Italy and $r = -.498$ in Spain), supporting the idea that planning-based coping strategies can mitigate moral disengagement in preadolescents. A strong positive correlation exists between refocus on

planning and coping in both samples ($r = .778$ in Italy and $r = .704$ in Spain), highlighting that planning is a core component of adaptive coping. This suggests that the ability to refocus and plan is fundamental in building effective coping strategies. Both samples show a negative correlation between coping and moral disengagement ($r = -.336$ in the smaller sample and $r = -.430$ in the larger sample), suggesting that stronger coping skills may be associated with lower levels of moral disengagement. Lastly, at the end of the SG, some feedback questions were presented to collect information related to the individual perception of the storytelling. Hereby, the realism degree question of the SG is reported for a comparison between Italy and Spain (Fig. 4).

Figure 4: Realism feedback question from the SG



Generally, the SG was found to be realistic, with a slight difference showing that Spanish preadolescents reported a larger range of response options, compared to Italian preadolescents. More generally, SG was found to be educational, funny, entertaining and educational.

5 CHAPTER 5

Contribution of the project and conclusions: from a public health issue to psychological well-being promotion

The concluding chapter of this dissertation sums up a comprehensive discussion on cyberbullying experiences and socio-behavioral correlates in preadolescence and on prevention efforts in two European countries, revisiting the two research questions and the key results of the cross-national study. This chapter begins with a summary of the main findings of the research-intervention (Section 5.1), specifically highlighting the pivotal role of problematic social media use in shaping preadolescents' cyberbullying experiences. Subsequently, Section 5.2 elaborates on the primary contributions of this research to the academic field, with an emphasis on how the findings align with and reinforce national and European guidelines for preventing cyberbullying and addressing problematic Internet use among young people. Finally, Section 5.3 discusses the limitations of the study and offers potential future directions for the development of this prevention program, considering both the opportunities and challenges that ICTs present within educational settings. The chapter explores the potential of integrating Positive Technology and Edutainment approaches in innovative psychological research, including the use of Serious Games such as *Pro-Social Network*, to foster socio-emotional learning and resilience, thereby contributing to the consolidation of a safer and more inclusive digital environment for preadolescents.

The current project emphasized the potential of integrating Edutainment tools and face-to-face discussions as part of an evidence-based research-intervention, illustrating how collaborative efforts between researchers and schools in addressing cyberbullying perpetration and suffering in preadolescence could improve pro-social competences. With the aim of reconnecting the results with the research questions and situating the study within the wider landscape of cyberbullying research and prevention in school settings for preadolescents, the discussion addresses the role of socio-cognitive and emotional factors. This study contributes to the understanding of how multi-faceted prevention strategies for cyberbullying can be implemented in real-world educational environments. This chapter aims to synthesize the results, reflect on their implications for current practices, and propose future directions to advance collaborative, school-based interventions based on the significance of the current project.

5.1 Summary of Findings

The study aimed to address three research questions: (RQ1) to investigate how experiences of cyberbullying perpetration and cybervictimization, along with socio-behavioral correlates, differ or relate among Italian and Spanish preadolescents, to understand the impact of these factors on their social development; to test (RQ2) a cross-

national serial mediation model on the key role of problematic social media use and moral disengagement in the cybervictimization-cyberbullying perpetration link; and (RQ3) to evaluate the effectiveness of a newly developed Serious Game as part of an innovative evidence-based research intervention aimed at preventing cyberbullying within educational settings. The contribution will include an examination of the diverse implications of the study on the understanding of the social challenges that Italian and Spanish preadolescents face through social media platforms.

Specifically, it was hypothesized that (i) Italian and Spanish preadolescents will present no statistically significant differences on cyberbullying perpetration, cybervictimization levels and on socio-behavioral correlates, that (ii) problematic social media use and moral disengagement play a positive serial mediating action between cybervictimization and cyberbullying perpetration, and that (iii) the adoption of the educational SG within a school research-intervention has an impact on raising awareness about cyberbullying, and related behaviors, and contributes to lowering levels of negative correlates and increasing levels of pro-social variables in preadolescents. The objectives that the project set out to demonstrate were partially achieved during the doctoral course.

5.1.1 Discussion of findings in relation to research questions

The doctoral program represented a personal and professional journey, relevant social topics were studied and discussed, trying to enrich the knowledge of the protective and risk factors affecting developmental processes that influence negative or positive online social behaviors. The aim of this dissertation is to promote positive online social behaviors among preadolescents, thus encouraging the development of a sense of community and of a sense of shared social presence throughout this important life stage.

Addressing aggressive behaviors among preadolescents requires comprehensive prevention strategies that span both from offline and online settings (Aizenkot & Kashy-Rosenbaum, 2020). The literature has demonstrated that schools play a vital role in prevention and intervention efforts, implementing programs that promote empathy, conflict resolution skills, and digital citizenship (Chicote-Beato et al., 2024). The participants declared that social media platforms provided a space for compensatory experiences, enabling preadolescents who might struggle with social interactions in person to communicate more comfortably with peers online (Markey & Daniels, 2022; Rao & Kalyani, 2022). However, it also might change the quality of communication, leading to potential misunderstandings or fostering more intimate digital relationships (Mittmann et al., 2022). Throughout the debate groups, the importance of the online disinhibition effect (Suler, 2004; Wang et al., 2024) shows the role of analyzing cyberbullying perpetration, where the lack of

immediate social cues and perceived distance provided by digital communication reduces self-regulation and promotes aggressive behavior. Participants' input also underscores the importance of character development within the SG. Research suggests that well-developed characters can act as social models for players, guiding behavior through observational learning (Bandura, 1986). By including characters who experience the consequences of both victimization and bystander behaviors, the SG can illustrate the importance of empathy, accountability, and supportive peer interactions. This aligns with findings that SGs which include opportunities for players to engage in decision-making and experience different outcomes foster critical thinking and moral reasoning (Sardone & Devlin-Scherer, 2010). Interventions that incorporate digital literacy and socio-emotional learning have been recommended by researchers as effective means of equipping preadolescents with the skills to navigate and respond to both forms of bullying (Durlak et al., 2024). Additionally, the integration of educational tools, such as Serious Games and interactive discussions, can foster empathy and resilience, empowering students to recognize and report bullying in any form (Monks & O'Toole, 2021).

Theoretical frameworks in psychology have tried to explain the protective and risk factors in cybervictimization and cyberbullying (Espelage et al., 2012), often lacking empirical evidence (Emmery et al., 2021; Mehari et al., 2014). Some of the theories adopted to investigate cyberbullying are listed as follows: (a) the social identity theory (Tajfel, 1972; Tajfel & Turner, 1979), which deals with the way individuals engage in social groups, especially in youth (Iwasaki, 2016;); (b) the social-ecological approach (Espelage & Swearer, 2004), which reveals the relationships between individuals and society, describing reciprocal influences of multiple systems; (c) the general aggression model (Bushman & Anderson, 2020), referring to the personal, cognitive and situational factors involved in the perpetration of aggressive behaviors; (d) the Barlett Gentile cyberbullying model (Barlett et al., 2017), describing how personal perceptions and attitudes mediate the predisposition to perpetrate cyberaggression; (e) the cyclic process model (Den Hamer & Konijn, 2016), developed to uncover the relationships between victimization, problematic social media use, emotional regulation and cyberbullying.

Bullying and cyberbullying are complex social phenomena that take place in relational environments where daily encounters (online and offline) between peer group members are facilitated. Consequently, this project prioritizes the school context in which this 'cruel game' manifests itself (Vandebosch et al., 2014). Increasing awareness, empathy and accountability are desirable aims to focus studies on, but with respect to the general context of promoting psychological well-being in adolescence, the present research focuses on improving prosocial behavior, social-cognitive and affective skills surrounding peer relationships. In relation to the hypothesized research questions presented in chapter 3, the results explored the way in which levels of cyberbullying, cybervictimization and related factors vary in a cross-national comparison. Data informed about similarities and differences across Italy and Spain, both in the pre-test and in the post-test of the research-intervention, contributing to enrich the literature on mixed results in socio-behavioral correlates involved in cyberbullying perpetration and victimization. The similarity between the EG and CG pre and post-test values indicates that the intervention, although well-structured, did not produce

immediate changes in the key variables — problematic social media use, moral disengagement, rumination, refocus on planning, perspective-taking, cybervictimization, cyberbullying, and satisfaction with life (RQ1).

Considering the results, H1 was confirmed (Italy and Spain will present similar levels of socio-behavioral factors involved in cyberbullying, with no statistically significant differences). Nevertheless, it was necessary to normalize the scores for cyberbullying perpetration and victimization using the Van der Waerden transformation. This decision was guided by the observed levels of skewness and kurtosis, particularly in the Spanish sample, where cyberbullying showed high skewness (2.00) and kurtosis (2.7), and cybervictimization had skewness of 1.18 and kurtosis of 0.25. While the Italian data exhibited more moderate values (cybervictimization: skewness = 0.51, kurtosis = -0.53; cyberbullying: skewness = 0.81, kurtosis = -0.32), normalization was applied to both datasets to ensure consistent and comparable analysis across groups.

The Van der Waerden transformation converts ranked data into quantiles of a standard normal distribution (Z-scores), enabling the use of parametric statistical tests when original distributions deviate from normality. This approach helps to mitigate the effects of asymmetry and outliers, which may arise from the low prevalence of cyberbullying behaviors in general population samples. Importantly, the transformed scores should be interpreted according to the logic of quantiles: (1) $Z = 0$ corresponds to the median of the distribution; (2) $Z < 0$ indicates values below the median; (3) $Z > 0$ indicates values above the median. This transformation allowed for more accurate statistical testing and interpretation, improving the robustness of subsequent analyses such as mediation models and comparisons across groups. Furthermore, gender and age were included as covariates in the analyses because existing research, including the findings from this study, indicates that these demographic variables often play key roles in cyberbullying dynamics, influencing both risk and protective factors. For instance, gender differences are frequently observed, with boys and girls sometimes differing in the frequency, type, and impact of cyberbullying experiences. Age, on the other hand, is critical in understanding developmental changes in social behavior, digital competence, and susceptibility to peer influence, all of which may affect involvement in cyberbullying, either as perpetrators, victims, or bystanders. By controlling gender and age, the analyses aimed to isolate the effects of other psychological, behavioral, and contextual factors more accurately, thus enhancing the robustness of the findings.

Specifically, the differences between Italy and Spain in problematic social media use could suggest minor contextual differences in how social media is used or perceived by preadolescents in each country. Moreover, the slightly greater reduction in the Spanish CG compared to the Italian sample suggests that cultural differences might play a role in the manifestation and perception of moral disengagement behaviors over time, regardless of intervention. The differences in rumination and refocus on planning may point toward potential differences in cognitive-emotional regulation styles across cultures, though further investigation is required to validate this observation. Cultural factors may account for some observed patterns in coping strategies. The Italian sample's initial scores on several variables, such as moral disengagement and problematic social media use, were slightly

higher than those of the Spanish sample. These differences may be reflective of varied social media habits or the role of moral disengagement in peer interactions across Italy and Spain. Further, Spanish participants demonstrated a slightly higher satisfaction with life in the CG, which remained stable post-test, suggesting that preadolescents in Spain may have distinct cultural attitudes towards well-being, influenced by educational or familial contexts.

Regarding the intervention with the SG (RQ3), all variables presented comparable levels of measured variables, slightly contributing to enriching the knowledge surrounding education about cyberbullying. In both samples, rumination does not have a significant correlation with refocus on planning or coping, which suggests that rumination operates more independently as a cognitive process and may not directly enhance adaptive coping strategies. In summary, both datasets reveal strong, consistent patterns, particularly regarding the negative relationship between moral disengagement and perspective-taking and the strong positive correlation between refocus on planning and overall coping. These relationships highlight the importance of empathy (perspective-taking) and planning as protective factors, which can reduce moral disengagement and potentially mitigate cyberbullying behaviors among preadolescents. While there are minor variations in the strengths of some correlations, the overall patterns are stable across the two samples, suggesting robustness in these findings. These results underline the importance of enhancing adaptive coping strategies and empathy as part of cyberbullying prevention efforts. The consistency across samples further supports these variables as focal points for interventions aimed at promoting socio-emotional development and reducing aggressive behaviors in preadolescents.

Prior research that underscores the significant role that screens and social media play in shaping preadolescents' interactions and peer relationships (Pagano et al., 2023; Santos et al., 2023). This dual perspective reflects findings from previous studies that emphasize the balance between feelings of freedom and restriction in online environments (Bibizadeh et al., 2023). Furthermore, the participants' insights mirror broader research on the impact of social media, which explores how its positive and negative attributes influence the social behaviors, well-being, and overall lifestyles of young people (Weir, 2023). Consistent with existing literature, the need for popularity, social status, and the overall school climate were identified as key factors shaping their perceptions and interactions within these environments (Meeus et al., 2019; Timeo et al., 2020). Importantly, these findings underscore that online connectivity significantly contributes to identity and self-image development during preadolescence (Meeus et al., 2023). This period is marked by profound transformations in body self-perception and heightened sensitivity to peer feedback, both of which are influenced by interactions in digital and real-life settings. The interplay between online and offline experiences facilitates the emergence of complex identities as preadolescents navigate social expectations and personal aspirations, shaping how they present themselves and how they are perceived by others (Digennaro & Iannacone, 2023). The participants' responses reveal that social media applications act as both a mirror and a stage for their evolving self-concepts, reflecting broader theories and models of identity development discussed in the first chapter of this thesis (Charoensukmongkol, 2018).

The potential of gamified interventions in addressing cyberbullying has been widely recognized in contemporary educational psychology. Gamification leverages game mechanics—such as interactivity, storytelling, and rewards—to foster intrinsic motivation and engagement in learning processes (Deterding et al., 2011). By incorporating realistic scenarios and relatable characters, educational games can bridge the gap between theoretical knowledge and practical application, making lessons more memorable and impactful. In this regard, the participants' emphasis on realistic elements aligns with research indicating that simulations and role-playing activities enhance empathy and promote perspective-taking (Rosen et al., 2023). This can be particularly effective in addressing cyberbullying, as understanding the emotional impact of online harassment is a crucial step toward fostering empathy and prosocial behavior among students. Moreover, interactive elements that mirror the everyday experiences of preadolescents can make SGs more relatable and foster a deeper emotional connection to the content. Realism in digital learning tools has been shown to increase the transfer of learning, where students apply the skills and knowledge acquired during gameplay to real-world situations (Annetta et al., 2009). For example, scenarios that reflect common online interactions, such as group chats or social media posts, can help students identify harmful behaviors and develop appropriate coping strategies. This is supported by the work of Kahn et al. (2017), who found that realistic and contextually relevant games are more effective in changing attitudes and behaviors than abstract or overly simplified content.

The adoption of SGs to combat cyberbullying aligns with a growing body of evidence that supports the integration of digital tools and face-to-face discussions in EBPs interventions. A combined approach that incorporates digital experiences with classroom discussions can deepen students' understanding of complex social issues and reinforce the lessons learned during gameplay (Wright et al., 2019). This strategy aligns with the concept of blended learning, where digital and traditional learning methods complement each other to create a more comprehensive educational experience (Garrison & Vaughan, 2009). These debate groups revealed that digital interactions often exacerbate traditional challenges such as social comparison, peer pressure, and exclusion, while also introducing new issues such as anonymity and the permanence of online content (Zimmer-Gembeck et al., 2023). This further informed the intervention design by emphasizing the need to address the specific stressors and experiences that arise from digital communication. The voices of the participants highlighted the emotional and psychological dimensions of these challenges, such as feelings of isolation, fear of missing out (FOMO), and the pressure to maintain a certain image online (Franchina et al., 2018). The importance of contextually relevant approaches is well-supported in the literature, where research shows that interventions tailored to specific populations' needs are more effective than one-size-fits-all solutions (Smith et al., 2019).

5.1.2 The cross-national serial mediation model of cybervictimization and cyberbullying perpetration

The data derived from the survey research in Italy and Spain help to identify patterns and correlations to inform the development of targeted intervention programs and educational policies for cyberbullying prevention. Furthermore, understanding these underlying factors is essential for designing effective prevention strategies that resonate with the preadolescents' real-life experiences, ensuring that interventions are relevant, comprehensive, and capable of addressing the multifaceted nature of cyberbullying in different cultural and educational contexts. The proposed cross-national model aimed to examine the associations between CV, PSMU, MD and CB perpetration in a sample of Italian and Spanish preadolescents, and to examine the serial mediating action of PSMU and MD on the CV-CB perpetration link (RQ2).

In line with previous studies, the results reveal that the computed scores for the variables in the cross-national sample mirror established findings (Henares-Montiel et al., 2022). These results reinforce the understanding of cyberbullying as a potential global concern for preadolescents, emphasizing the significant roles of cybervictimization and problematic social media use both in Italy and Spain. The data reveal that preadolescents predominantly use digital devices for leisure activities, such as listening to music, watching movies, and engaging in online gaming. These findings align with existing research highlighting how digital platforms have become central to youth entertainment and peer interactions in recent years (Livingstone et al., 2017). Notably, they also reported a high level of communication with family members, which may reflect the cultural emphasis on family bonds and relationships (Martínez et al., 2020). This contrasts with more limited behaviors, such as meeting new people online, suggesting that preadolescents may use social media applications more to maintain existing relationships than to expand their social networks. The data also highlights lower engagement in riskier behaviors, such as online zapping and vamping, compared to leisure activities. However, a small subset of preadolescents may experience problematic online habits, such as using the Internet late into the night, which could negatively affect their emotional well-being and academic performance (Viner et al., 2019).

From the perspective of the General Aggression Model, various situational and individual factors, such as problematic social media use and moral disengagement, intensify negative online behaviors among preadolescents (Güler et al., 2022). The positive correlation between problematic social media use (PSMU) and both cybervictimization and cyberbullying perpetration underscores the double-edged nature of digital platforms in preadolescence. PSMU can amplify exposure to online risks, such as negative interactions, social comparison, and impulsive behaviors, while also serving as a medium for maintaining peer relationships and exploring identity. The findings suggest that excessive or unhealthy engagement with social media creates fertile ground for cyberbullying, as it increases both the opportunities for negative interactions and the emotional stakes involved in online

communication. This aligns with previous research linking PSMU to higher levels of interpersonal conflict and emotional distress in preadolescents (Nesi et al., 2018). Differently, moral disengagement emerged as a significant predictor of both cybervictimization and cyberbullying perpetration, consistent with Bandura's (1999) social cognitive theory. Preadolescents who scored higher on moral disengagement were more likely to justify or rationalize harmful behaviors, enabling them to engage in cyberbullying without experiencing guilt or remorse. This highlights the importance of addressing moral reasoning in interventions, as reducing moral disengagement could mitigate aggressive behaviors. These variables contribute to the exacerbation of aggressive tendencies, making them central to understanding the complex interplay between victimization and perpetration in online peer interactions (Verheijen et al., 2021).

By capturing these dynamics in both Italian and Spanish contexts, the study offers a robust cross-national perspective on the cyclical nature of online aggression, highlighting how these factors shape harmful social media interactions among preadolescents. Moreover, the significant positive correlations observed among the variables further underscore the risks associated with negative online engagement and the potential harm to preadolescents' online social relationships. The increasing integration of social media applications' use in preadolescents' daily life worldwide amplifies the likelihood of cybervictimization, especially among those heavily engaged with these platforms (Digennaro, 2023). These findings highlight the need for targeted prevention and intervention strategies to mitigate these risks. Through the General Aggression Model (GAM), these correlations emphasize the importance of situational factors, such as nationality and age, in shaping cyberbullying experiences. Addressing such issues requires early identification and tailored support, particularly in regions with heightened exposure to digital media.

The results from the mediation analysis provide empirical evidence supporting the serial mediation model, confirming H2 (problematic social media use and moral disengagement serially mediate the relationship between cybervictimization and cyberbullying, such that higher levels of cybervictimization lead to higher levels of problematic social media use and moral disengagement, which in turn lead to higher levels of cyberbullying, both in Italy and Spain). PSMU and MD serially mediate the relationship between CV and CB in both Italy and Spain. Specifically, the findings reveal that experiencing cybervictimization might promote a problematic engagement with social media applications in Italian and Spanish preadolescents, which in turn could increase moral disengagement tendencies, ultimately leading to higher levels of cyberbullying perpetration. This cyclical pathway underscores the role of PSMU in amplifying MD, illustrating that a broader negative engagement with social media platforms strengthens the risk of adopting morally disengaged behaviors that justify harmful online actions (Hamm et al., 2015). The model fitting within the GAM framework demonstrates that cybervictimization might act as a situational factor that might trigger self-regulatory cognitive and emotional changes in preadolescents, making them more likely to engage in maladaptive social media use (Yao et al., 2019). This increased social media platforms' use might provide fertile ground for developing MD mechanisms, where preadolescents may justify or excuse their own aggressive actions. Higher moral

disengagement levels correlate with a greater likelihood of engaging in cyberbullying perpetration, as cognitive mechanisms such as minimizing harm, shifting blame, or dehumanizing the victim may reduce the perpetrator's guilt. This finding aligns with previous studies emphasizing the role of moral disengagement in facilitating online aggression (e.g., DeSmet et al., 2018). This, in turn, perpetuates the cycle of cyberbullying, especially for those already victimized online (Pabian & Vandebosch, 2016). The stronger indirect effects at higher levels of PSMU further confirm that frequent and problematic use of social media strengthens aggressive scripts and attitudes, leading to a higher likelihood of cyberbullying (Tanrikulu & Erdur-Baker, 2021). The correlation between MD and PSMU also points to the role of social media features—such as asynchronicity, anonymity, and permanence—that may exacerbate disengaged reasoning. These features may diminish preadolescents' awareness of the immediate consequences of their actions, making it easier to engage in harmful behaviors without considering the impact on others (Nesi et al., 2021). The dynamic and constantly evolving relationship between ICTs, young individuals, and online aggressive experiences emphasizes the necessity for sustained global efforts involving rigorous research, increased awareness among policymakers, and educational initiatives (Digennaro & Tescione, 2024).

The study also demonstrated that problematic Internet and social media use was strongly related to cyberbullying perpetration and victimization during preadolescence. Nowadays, PSMU and cyberbullying have escalated into a global public health concern, necessitating urgent and innovative solutions (Colella et al., 2024). Over the past decades, the evolution of social media platforms and online communication technologies has introduced profound and often unexpected influences on the cognitive, emotional, behavioral, and social development of preadolescents (Digennaro, 2024). While the negative impacts of social media use and the experience of cyberbullying in preadolescence have been extensively discussed in previous chapters, the findings of this research highlight new considerations that call for further scientific investigation into this critical public health issue. The cross-national aspect of the study, involving Italian and Spanish preadolescents, highlights the generalizability of these findings across different contexts. Despite similarities between these countries, such as language and cultural values, variations like the policy differences in smartphone use at schools can affect the intensity and frequency of social media platforms engagement, and thus, online behaviors. The serial mediation link identified in both contexts reinforces that national variations do not diminish the robust effect of PSMU and MD on cyberbullying perpetration.

In this study, PSMU and MD might represent situational inputs and person-specific factors that influence the internal state of Italian and Spanish preadolescents, triggering aggressive responses like cyberbullying. The results from the study reinforce the GAM's premise that while situational factors (e.g., cybervictimization) are critical in initiating aggression, the long-term perpetuation of these behaviors is deeply rooted in personal and cognitive factors (e.g., moral disengagement) amplified by external stimuli (such as problematic engagement with social media) (Barlett, 2023). These results point to the importance of addressing both environmental (e.g., regulation of social media use) and

cognitive (e.g., moral reasoning) factors in intervention strategies, further supporting GAM's multifaceted approach to understanding aggression. According to the GAM, aggression is the result of a complex interaction between individual and situational variables (Bushman et al., 2020).

The findings of the study contribute to the literature on cyberpsychology, extending the knowledge on the risk factors connected to cyberbullying suffering and perpetration in European preadolescents. Specifically, our investigation of the serial mediating action played by both PSMU and MD in the association between cybervictimization and cyberbullying perpetration contributes to amplifying the scope of the mechanisms involved in this pervasive social problem. Also, the results underscore the need for a common European policy framework promoting guidance on responsible and pro-social digital literacy citizenship, to prevent cyberbullying and negative online social experiences in preadolescence. By providing research insights to inform tailored interventions, the study aims to promote a safer online environment and enhance the well-being of Italian and Spanish preadolescents. This research is cross-nationally significant, contributing to the understanding of cyberbullying within the Italian and Spanish context and guiding evidence-based strategies to address its impacts. The serial mediation model illuminates how PSMU and MD jointly mediate the pathway from cybervictimization to cyberbullying, offering a nuanced understanding of these dynamics. The cross-national nature of the sample strengthens the study's relevance, demonstrating that despite slight cultural variations, such as smartphone policies in schools, the core relationships between these variables persist across contexts. This research underscores the importance of culturally tailored intervention strategies targeting online behaviors and cognitive distortions early in preadolescence. Its findings can inform the development of preventive measures and policies in schools, both within Europe and internationally, thereby expanding the scope of cross-cultural cyberbullying research.

This research emphasizes the critical role of PSMU and MD in the cycle of cyberbullying, particularly for those who have experienced cybervictimization, and highlights how interventions targeting social media applications use and cognitive self-regulation could break the escalation of online aggression across different European contexts. This work moves the field of cyberpsychology forward by highlighting the need for comprehensive interventions that address behavioral and cognitive factors contributing to cyberaggression, stressing the critical period of preadolescence for prevention efforts. It also emphasizes the importance of cross-national research, showcasing how country-specific factors, such as school policies, shape online behaviors in distinct yet comparable ways. Through this, the study advocates for European policies to effectively address cyberbullying.

5.1.3 The intervention with Pro-Social Network

The current section presents the main findings of the experimentation with the educational SG Pro-Social Network, prototype administered both in Italy and Spain. Coherently aligned with the second objective of this doctoral project—to develop, implement, and evaluate a Serious Game as part of an evidence-based intervention, the SG allowed for a unique opportunity to observe preadolescents' behaviors in an interactive and immersive environment. This design provided a controlled yet dynamic platform to explore the nuances of their online social interactions, bridging theoretical constructs and real-world applications. The adoption of the SG highlights the potential of technology-enhanced interventions in addressing complex socio-emotional phenomena like cyberbullying. It sets a precedent for innovative, interdisciplinary approaches that leverage interactive technology to foster more profound educational and psychological insights, paving the way for future research and interventions in digital citizenship and online safety.

5.1.3.1 Comparison between Italy and Spain

The results of this intervention from the Italian sample provide meaningful insights into the complex relationships among socio-emotional and behavioral variables in the context of preadolescent cyberbullying prevention. The proposal to dialogue about real social behaviors from the events of immersive virtual reality gave rise to a very rich discussion that led pre-teens to realize that some of their online interactions can be potentially negative. Despite the lack of statistically significant differences between pre-test and post-test scores in both the Experimental Group (EG) and Control Group (CG) (H3 - the adoption of a SG in an innovative research-intervention, based on EBPs criteria and involving both traditional and innovative methods, contributes to maintain or lower levels of cyberbullying perpetration, cybervictimization and related factors among preadolescents), the correlational findings from the Serious Game (SG) intervention offer critical observations that inform the understanding of cyberbullying-related dynamics and the potential for future improvements in prevention programs. The lack of significant mean differences in both countries suggests that the intervention's impact may require a longer-term assessment to detect potential delayed effects on socio-emotional skills, coping strategies, and behaviors associated with cyberbullying perpetration.

The absence of statistically significant changes in the EG's pre-test and post-test results across most measured variables, including problematic social media use, moral disengagement, perspective-taking, and satisfaction with life, suggests that the short-term impact of the SG may have been limited in the two countries. This outcome could be attributed to several factors, including the relatively short intervention duration (five weeks)

and the limited sample size. Furthermore, the SG prototype remains in its validation phase, and refinements in its design and scoring mechanisms may be necessary to achieve stronger measurable outcomes.

In both Italy and Spain, the intervention's immediate impact was limited, with no significant differences across pre and post-test scores. This suggests the necessity of longer interventions or additional reinforcement strategies to instill behavioral and cognitive changes regarding cyberbullying, coping, and emotional regulation. The findings underscore the complexity of modifying socio-emotional competencies and coping behaviors in preadolescents, highlighting that effective prevention in these areas may require persistent and adaptive strategies tailored to cultural contexts. The sampling procedures adopted in both Italy and Spain were designed to reflect the socio-cultural contexts and developmental stages of preadolescents in each country. Given the complexity of cyberbullying dynamics and the influence of cultural and age-related factors on online behavior, particular attention was paid to selecting samples that would allow for meaningful cross-national comparisons. Participants were drawn from middle schools (first-grade secondary schools) in both countries, with ages ranging from 9 to 14, a critical developmental phase characterized by heightened sensitivity to peer relationships, identity formation, and increased use of digital technologies. However, some age-related considerations must be addressed. Although both samples aimed to capture preadolescents at a similar developmental stage, subtle differences in the school systems and curricula of Italy and Spain might have influenced students' experiences and exposure to social media and cyberbullying. For example, preadolescents in one country may be slightly more digitally literate or socially mature due to educational or cultural differences, which could, in turn, impact their behaviors and perceptions of cyberbullying. This variability may explain certain nuances observed in the results, such as differences in coping strategies, empathy, and moral disengagement.

Moreover, cultural differences between Italy and Spain may have subtly shaped the dynamics of cyberbullying and victimization. Research has shown that cultural norms, including attitudes toward authority, peer relationships, and digital interactions, can influence how cyberbullying is experienced and responded to. Considering these differences, it is essential to interpret the results with caution, acknowledging that cultural factors may mediate the effectiveness of interventions and the expression of risk and protective factors. The correlational matrix from the SG intervention highlights several significant relationships aligning with existing theories and provides valuable insights into preadolescent behaviors: the strong negative correlation between perspective-taking and moral disengagement underscores the protective role of empathy-related skills in reducing the likelihood of moral disengagement. This finding reinforces the importance of promoting perspective-taking as a core element of socio-emotional learning, as it may mitigate the cognitive mechanisms that facilitate aggressive behaviors online. The use of the SG in this research-intervention represented a significant educational innovation, both methodologically and operationally. Methodologically, it provided a novel approach to integrating technology with evidence-based practices in educational and developmental psychology. Operationally, it enabled the detection of parallels between preadolescents' interactions on social media platforms and their behaviors within immersive simulations, offering valuable insights into how these

interactions unfold in real and virtual contexts. The correlational results from the SG intervention reveal significant relationships between the measured variables, offering important insights into the socio-emotional and cognitive factors associated with cyberbullying and related behaviors. The data presented highlights the need to provide greater support to preadolescents during this critical developmental phase, with the goal of promoting healthy behaviors that positively influence psychological adjustment and well-being, even into later stages of life. For these reasons, preadolescence represents a pivotal period during which prevention efforts can have a profoundly significant impact on altering potentially maladaptive developmental trajectories. The data presented underscore the importance of providing stronger support to preadolescents during this transitional phase, with the aim of fostering “healthy” behaviors that contribute to psychological adjustment and overall well-being, both in the present and in later stages of life. To effectively address the unique needs of preadolescents, it is essential to design interventions that consider the intricate interplay between risk and protective factors. Only by doing so can we develop targeted, evidence-based programs that truly respond to the real challenges faced by preadolescents, empowering them to build resilience and thrive emotionally and socially as they navigate the complexities of both their online and offline worlds. By mirroring the complexities of preadolescent online interactions, the SG facilitated a deeper understanding of their social dynamics, including empathy, moral disengagement, and coping strategies. The immersive and interactive features of the SG served as a powerful lens to examine the challenges and opportunities preadolescents face in digital environments. Furthermore, the SG not only acted as a preventive educational tool but also established a model for future research aimed at analyzing the subtleties of cyberbullying, peer relationships, and online social behaviors in a safe yet realistic framework.

These findings reinforce the need for interdisciplinary approaches that integrate socio-emotional learning, empathy training, and adaptive coping strategies into school-based interventions. While the SG prototype did not lead to immediate measurable changes, its design provides a promising foundation for further refinement. The significant correlations identified through the SG suggest that targeted improvements, such as extending the intervention duration and incorporating more interactive and personalized elements, could enhance its effectiveness. Moreover, the results highlight the importance of addressing moral disengagement as a key factor in cyberbullying prevention. Strategies that foster empathy and cognitive regulation, while minimizing ruminative thinking, may be particularly effective in reducing both cyberbullying perpetration and victimization. In Spain, although the quantitative results indicate no statistically significant changes between the pre-test and post-test for either group, the correlational data offer critical observations on the dynamics of moral disengagement, perspective-taking, coping strategies, and other variables that play a role in online behaviors. The absence of significant differences across the EG’s pre-test and post-test scores indicates that the intervention with the SG Pro-Social Network did not produce short-term measurable changes in the targeted variables, such as problematic social media use, moral disengagement, rumination, and cyberbullying. This lack of immediate impact could be attributed to several factors.

The five-week duration of the intervention may have been insufficient to create meaningful behavioral or cognitive changes. Behavioral interventions, particularly those targeting entrenched patterns like problematic social media use or moral disengagement, often require longer exposure to achieve significant results. Also, the age range (10-12 years) and relatively small sample sizes could have limited the variability needed to detect statistically significant changes. Moreover, cultural and contextual factors, such as differences in the educational climate or preadolescents' digital habits, may have influenced the outcomes. As a prototype in the validation phase, the SG may not yet fully capture the complexities required to effectively influence variables such as moral disengagement or cyberbullying behaviors. Refinements to its narrative design, interactivity, and personalized feedback mechanisms could enhance its impact.

Future iterations of the SG intervention would likely benefit from being preceded by a structured educational face-to-face program or developed collaboratively with students to enhance engagement and effectiveness. Since cyberbullying is a complex social phenomenon rooted in both online and offline behaviors, integrating preparatory classroom discussions on empathy, perspective-taking, and responsible digital citizenship could provide a stronger foundation for the SG's impact. Additionally, co-developing SG with students may increase its relevance, tailoring the scenarios and challenges to their lived experiences. The two-month intervention period used in the current study, while valuable, proved relatively short to achieve significant behavioral changes, especially in addressing long-standing patterns of online aggression and moral disengagement. Longer-term interventions, combining game-based learning with ongoing teacher-led activities, could enhance both cognitive and emotional awareness, allowing for sustained changes in digital habits. This approach may be particularly effective across different cultural contexts, such as Italy and Spain, where variations in school environments and peer dynamics further underscore the importance of adaptive, context-specific strategies.

By addressing the unique challenges faced during this stage, tailored interventions can play a crucial role in fostering resilience and adaptive coping mechanisms. However, it is only by considering the complex interaction between risk and protective factors that targeted and effective interventions can be developed. Such interventions must address the genuine needs of preadolescents, empowering them to navigate the challenges of their online and offline lives while supporting their overall emotional and social development.

5.2 Contributions and Significance of the Study

As ICTs continue to evolve and shape communication, it is crucial to understand the impact on youth and develop strategies to foster a safe and respectful online environment. By focusing on the factors influencing cyberbullying, society can work towards protecting

psychological well-being and promoting the positive development of youth in the digital age (Maciej, 2023).

The research-intervention is innovative from several points of view: firstly, it envisaged the participation of Italian and Spanish preadolescents (in a cross-national perspective) not only in the design of the SG, but also in its experimentation; secondly, the strengths and weaknesses that emerged during its implementation, mainly due to the intrinsic characteristics of tools such as Serious Games, favored the participants' immersion and interaction, stimulating subsequent dialogues during face-to-face meetings. Consistent with the Edutainment paradigm and EBPs criteria, the study facilitated, through interaction within the virtual context of the SG, the recognition of the warning signs that characterize online peer interactions in pre-adolescence, anticipating the signs of cyberbullying episodes.

The theoretical and practical contribution of research-intervention, in the context of cyberbullying prevention programs at school, is especially relevant about the possibility of discussing the scenes proposed by the SG storytelling. This opportunity was valuable because it provides the ultimate measure of children's involvement in the project. The findings from the Italian and Spanish sample highlight important dynamics within cyberbullying perpetration and cybervictimization, as well as the role of coping strategies, problematic social media use, and socio-behavioral variables such as moral disengagement, rumination, and perspective-taking. These results align with previous studies on cyberbullying among preadolescents, providing critical insights into both the risk and protective factors influencing their online behaviors and responses to digital aggression.

Designing and developing cross-cultural interventions is essential in addressing global challenges like cyberbullying. Preadolescents worldwide interact within an increasingly interconnected digital environment, making it critical to consider cultural nuances that shape their online and offline behaviors. By incorporating diverse perspectives, such interventions can promote a more inclusive understanding of risk and protective factors, ensuring strategies are adaptable to varying socio-cultural contexts. Moving towards holistic, evidence-based models allows researchers and educators to address the shared yet context-specific realities of cyberbullying. This cross-cultural approach not only enhances intervention effectiveness but also fosters a collective commitment to creating safer and more empathetic digital ecosystems globally.

The exploration of how new technologies are utilized by both digital natives and digital immigrants highlights the need to delve deeper into the new realities these tools create. These emerging forms of social interaction, influenced by new technologies, whether in correlation or cause-effect relationships—raise pressing questions and illuminate what could be considered the new social emergency of our century. However, it is crucial to avoid focusing on the wrong issues. For scholars involved in cyberspace studies, it is particularly important to avoid the risk of pathologizing the use of new technologies. This requires an in-depth understanding of the lifestyles associated with digital tools, as well as the ability to comprehend the communication styles and language of these increasingly digitalized generations.

By studying the patterns of social media use, researchers have found common ground throughout the decades, identifying overlaps between certain preadolescent lifestyle trends and issues arising from excessive use of digital technologies and social media. Devices such

as computers, smartphones, tablets, and gaming consoles, all of which grant access to cyberspace, have shown to play a central role in shaping both opportunities and challenges in adolescent development.

This dynamic becomes particularly evident in the context of PSMU, which has been closely linked to both the experience of cyberbullying as a victim and its perpetration. As presented in the results, PSMU amplifies the risk of negative online interactions, as excessive or maladaptive engagement with digital platforms often blurs the boundaries between recreational and harmful behaviors. For preadolescents and adolescents, this hyperconnectivity not only exposes them to cyberbullying victimization but can also contribute to aggressive or maladaptive responses, fostering a cycle of harm within digital environments.

Understanding these interconnected phenomena is essential for developing interventions aimed at promoting healthy and balanced technology use. By addressing the nuances of PSMU within broader psychosocial contexts, professionals can work to mitigate its role in exacerbating cyberbullying and enhance strategies for fostering safer and more constructive online interactions. This perspective not only shifts the narrative from pathologizing technology use but also enables a more targeted and empathetic approach to supporting youth in navigating the challenges of the digital age.

Moreover, the presence of minimal levels of cyberbullying perpetration and cybervictimization throughout the study highlights the ongoing need for preventive measures, particularly as online interactions increase during preadolescence. The normalization of even low levels of cyberbullying behaviors can in fact have long-term negative effects on peer relationships and psychosocial development (Patchin & Hinduja, 2015). By studying PSMU in relation to other variables such as moral disengagement, rumination, and empathy deficits, these elements interact and contribute to the cycle of cyberbullying perpetration and suffering, coherently with theoretical models such as the General Aggression Model (Anderson & Bushman, 2022) or the Cyclic Process Model (Den Hamer et al., 2014). The findings on the relationship between problematic social media use and reactions to online aggressions underscore the cyclical nature of cyberbullying, where aggressive responses may perpetuate negative interactions and escalate conflicts. Retaliatory behaviors can entrench preadolescents in the role of both victim and perpetrator, exacerbating their psychological distress and reinforcing toxic online environments. These findings are consistent with previous research, which identifies maladaptive coping as a critical factor in the perpetuation of cyberbullying cycles (e.g., Machackova et al., 2018). Gender differences may also play a role in cyberbullying experiences, as prior research suggests that males are more likely to engage in direct forms of aggression, while females may engage in relational aggression or experience cybervictimization differently (Baldry et al., 2019). Although this study did not explicitly delve into gender-based differences, the data provides a foundation for future analyses to explore how gender influences these dynamics.

On a broader European policies level, research-intervention supports the United Nations 2030 Agenda for Sustainable Development, particularly Goal 3 (Good Health and Well-

being) and Goal 4 (Quality Education). Goal 3 emphasizes the promotion of mental health and well-being, while Goal 4 focuses on providing inclusive and safe learning environments. By targeting cyberbullying prevention, your work contributes to ensuring that preadolescents can learn and develop in a supportive environment free from online harassment, fostering both their mental and educational well-being.

Similarly, the European Union's Strategy on the Rights of the Child (2021-2024) underlines the necessity of safeguarding children in both offline and online environments. Your research aligns with the EU's commitment to combating violence against children, including forms of online abuse such as cyberbullying. This connection reinforces the significance of your research in contributing to a wider effort to create safer digital spaces for young people.

As proposed in the Council of Europe's Strategy for the Rights of the Child (2016-2021), such strategies highlight the importance of protecting children from violence and promoting their participation in safe digital environments. The study supports these objectives by providing evidence-based interventions that address cyberbullying and promote socio-emotional learning among preadolescents.

Also, UNICEF has consistently advocated for the safe and responsible use of digital technologies to protect children from online violence and promote digital literacy. The Better Internet for Kids (BIK) initiative by the European Commission focuses on creating a safer and more supportive online environment for children. Your research aligns with this framework by addressing the prevention of cyberbullying through innovative, educational approaches that encourage positive online behavior and resilience among preadolescents.

The findings of this research-intervention underscore the critical importance of adopting interdisciplinary approaches in designing effective school-based interventions to address cyberbullying and related socio-emotional challenges. These approaches must integrate socio-emotional learning, empathy training, and adaptive coping strategies to build resilience among preadolescents in increasingly complex digital and social environments. While the SG Pro-Social Network prototype did not result in immediate measurable changes across the investigated variables, its innovative design lays a promising foundation for further development and optimization.

Within this research-intervention, the SG Pro-Social Network focused on pivotal dimensions that mirror the dynamics of social interactions in real-life contexts. Core constructs such as perspective-taking, rumination, refocus on planning, and adaptive coping strategies were deliberately embedded into the Serious Game framework. By simulating real-world social dilemmas and interactions in an immersive digital environment, the SG sought to enhance participants' capacity to understand others' viewpoints, reduce overthinking about negative experiences, plan effective responses to challenges, and employ constructive coping mechanisms in both online and offline settings.

Perspective-taking, as a focal dimension of the SG, served as a key element in fostering empathy—a critical component in preventing both cyberbullying and victimization. The

game challenged preadolescents to place themselves in the shoes of others, promoting emotional understanding and reducing tendencies toward moral disengagement. Similarly, the inclusion of rumination and refocus on planning as dimensions of the SG emphasized the importance of addressing maladaptive thought patterns while encouraging proactive and goal-oriented problem-solving strategies. These skills are particularly vital in navigating the complexities of digital interactions, where impulsivity and miscommunication can often escalate conflicts.

Moreover, the integration of coping strategies within the SG, such as assertiveness, technical coping, and active ignoring, aimed to provide participants with practical tools to manage online aggression and navigate difficult social situations. These strategies, modeled through interactive scenarios, reflect realistic challenges that preadolescents encounter in their daily lives, making the intervention relevant and relatable.

Although immediate measurable changes were not observed, the significant correlations identified between the core dimensions within the SG highlight their potential for long-term impact. For instance, the observed relationships between perspective-taking and reduced moral disengagement, as well as between refocusing on planning and improved coping, suggest that targeted refinements could amplify SG's efficacy. Extending the intervention duration, incorporating more interactive and personalized elements, and aligning the game's scenarios even more closely with the lived realities of preadolescents could significantly enhance its ability to influence socio-emotional development and behavior.

This study highlights the promise of immersive educational tools like the SG Pro-Social Network in addressing critical aspects of preadolescents' social and emotional development. By combining interactive technology with evidence-based practices, this approach represents a progressive step toward fostering empathy, resilience, and adaptive social behaviors in youth. While further refinement and evaluation of the SG are necessary, this research provides a valuable blueprint for leveraging gamified interventions as part of holistic, interdisciplinary strategies to promote positive social interactions and prevent cyberbullying in educational contexts. Ultimately, such innovations not only address immediate challenges but also contribute to the long-term goal of shaping responsible, empathetic, and socially competent digital citizens.

The findings of this study have made it possible to describe the online and offline lifestyles of adolescents, raising new research questions and providing valuable insights for prevention and intervention policies. A key strength of this research lies in offering a snapshot of the lifestyles of the digital generation, highlighting the intricate interplay between online and offline life while integrating psychological and sociological perspectives.

During these transitional phases, risky behaviors for health often increase, and the frustrations arising from social integration difficulties may lead to self-isolation, increased solitary internet use, engagement in cyberbullying behaviors, decreased communication with parents, and a decline in psychosocial well-being. These challenges underline the urgency of equipping young people with the tools to navigate their developmental challenges through intervention programs that consider the complex interaction between their online and offline lifestyles. Evidence-based prevention strategies are essential for creating safer online

environments and mitigating cyberbullying risks. Programs grounded in empirical research can empower adolescents with the socio-emotional skills needed to maintain healthier digital habits, strengthen their capacity to handle challenges, and foster positive peer interactions. By addressing both the risks and opportunities presented by online spaces, such initiatives can promote well-being and resilience, ensuring that digital environments become spaces of connection and growth rather than harm.

5.3 Limitations and Recommendations

In line with previous studies in cyberpsychology, this thesis highlights how the use of ICTs and social media is profoundly transforming the lifestyles of preadolescents. These technologies present both opportunities and risks, offering pre-adolescents a novel horizon of action that remains largely uncharted by previous generations.

This contribution aspires to serve as a foundation for further research aimed at uncovering the intricate dynamics that influence the behaviors and attitudes of today's pre-adolescents. Recognizing the multifaceted interplay between technology, development, and education is critical for fostering interventions that not only mitigate risks but also harness the opportunities provided by ICTs and social media. By advancing this understanding, we can better equip pre-adolescents to navigate these spaces responsibly and adaptively, ensuring their psychosocial well-being and positive development in an increasingly digital world.

This project was guided by a dual vision—both theoretical and practical. The adoption of a research-intervention methodology reflected this approach, with the intention of first understanding and then intervening in specific contexts where cyberbullying represents a pressing social issue. To thoroughly explore the characteristics of this complex and significant phenomenon, the implementation of the questionnaire and the Serious Game was supported by rigorous methodological and conceptual frameworks.

Future investigations will need to explore how the various competencies examined in this study interact, such as how media use may contribute to cyberbullying dynamics, how involvement in cyberbullying episodes may alter perceived psychosocial well-being, or, conversely, how perceived well-being or distress may be associated with risky behaviors like self-isolation. The vast amount of data collected and analyzed suggests critical directions for action, including the need to design awareness and health promotion programs aimed at adolescents during the delicate transition from middle school to high school, and even more so during the highly sensitive period of choosing a university or career path. Future studies should consider harmonizing sampling procedures further, perhaps by increasing the sample size and including longitudinal data collection to explore long-term changes in behaviors and attitudes. Additionally, to enhance cross-cultural understanding, future interventions could be co-developed with students and educators from both countries to ensure that the programs are culturally sensitive, contextually relevant, and responsive to the specific needs

of preadolescents in each educational system. This approach could mitigate potential biases stemming from differences in age, cultural expectations, and digital literacy.

Through its exploration of literature and experimental components, this thesis has highlighted the potential of Serious Games as a valuable tool in social research and education. Video game-based interventions, by incorporating real-world elements into virtual environments, are engaging not only for learners but also for researchers. When participants take control of an avatar, engage in challenges, and learn simultaneously, the interaction between the user and the virtual system influences affective, cognitive, and behavioral states. This facilitates the development of new skills and reinforces existing ones. Features such as storytelling, feedback, and manipulation within Serious Games promote agency and identification, induce authentic emotional responses, and allow users to process negative experiences while reinforcing positive behaviors. These elements align with findings that Serious Games foster a range of competencies, including soft skills, and contribute to emotional, social, and cognitive growth.

In exploring the patterns of ICTs and social media overuse, we encounter entirely new ways of experiencing preadolescence, vastly different from those of twenty years ago. Concepts like cyberbullying or cyberaggression undergo profound transformations, shaped by the social realities in which they arise and evolve. This blurs the boundary—never entirely clear—between lifestyle choices and social emergencies. This boundary becomes even more fluid as we strive to connect with the experiences and needs of hyper-technological but perhaps “hyper-uncertain” preadolescents, who face a future that is hazy, turbulent, and more unpredictable than ever before in human history.

In this context, evidence-based practices (EBPs) are essential to counteract the negative interactions preadolescents face online. By grounding interventions in research, we can provide structured and effective tools to support preadolescents in navigating their digital environments. These practices not only address the risks of problematic online behavior but also foster resilience and equip young people with the skills to build healthier, more constructive interactions in both online and offline spaces.

Beyond specific risk behaviors exhibited online, it is evident that social media and screen-based technologies have a remarkable capacity to capture users’ attention, leading preadolescents to invest significant cognitive, emotional, and social energy into these virtual spaces daily. In turn, these interactions bring about notable behavioral changes, the processes and consequences of which demand further in-depth and meticulous exploration. Developmental and educational psychology, in its quest to find innovative tools and practices to mitigate the risks associated with the digital environment, must embrace interdisciplinary dialogue with other fields, including education, sociology, and philosophy, to analyze the cultural and technological spaces shaping modern life. Such an approach is essential to holistically understand the broader impact of these shifts.

Several limitations of the project should be addressed in future research. First, the decision to focus the research questions on specific aspects of cyberbullying reflects only a

fraction of the broader, multifaceted requirements needed to fully address this issue. Current literature suggests that a socio-ecological and systemic perspective, perhaps employing a whole-education approach, is essential for the long-term eradication of aggressive behaviors. Educational efforts aimed at reducing aggression and negative social interactions must adopt a collaborative and participatory approach involving all stakeholders. Second, while the use of self-report questionnaires provided valuable insights into the self-perceived attitudes and behaviors of preadolescents, it limited the study's capacity to achieve a broader, more objective perspective on cyberbullying within classroom dynamics. Incorporating a peer-report evaluation could have offered a more comprehensive view of the phenomenon by capturing additional perspectives and social dynamics. Third, although longitudinal data were collected in alignment with the evidence-based practices (EBPs) framework, the short interval between the pre-test and post-test limited the ability to measure sustained, long-term changes in attitudes and behaviors. A significant limitation was the lack of further follow-up data collection, which would have allowed for the monitoring of longer-term impacts and shifts in preadolescents' attitudes and behaviors.

By addressing these limitations in future studies, researchers can build upon this project's foundation to develop more robust, inclusive, and impactful approaches to combat cyberbullying effectively in educational settings. The potential applications of technology in social research and intervention are vast and thought-provoking. This study sought to emphasize the value of innovative tools, such as Serious Games and ICTs, which offer transformative opportunities to foster learning and competence development in interactive and engaging ways. The multi-disciplinary challenges inherent in today's formal and informal educational, cultural, and professional environments underscore the critical importance of the relationship between technology and human development. The philosophy guiding this research has been both innovative and speculative, aspiring to integrate ICTs meaningfully into the broader realm of the humanities and social sciences.

However, the dissemination of interdisciplinary research in the scientific community remains a complex endeavor. Contributions involving AI, education, psychology, and ICTs often face challenges ranging from linguistic and communicative barriers to epistemological and methodological differences between disciplines. Additionally, difficulties arise with the operational definitions of constructs, and venturing beyond one's immediate research area is often perceived as inconvenient or inefficient within Academia. Yet, embracing interdisciplinarity is crucial for addressing the complexity of social challenges, as reality itself is multi-layered and cannot be effectively tackled through siloed approaches. More collaborative and integrative academic practices would enable more nuanced, systemic, and impactful responses to societal problems.

As this work concludes, it becomes evident that preventing cyberbullying goes far beyond simply suppressing harmful behaviors. It involves empowering preadolescents to become conscientious, empathetic, and responsible digital citizens. This effort necessitates fostering respect, ethical decision-making, and a deeper understanding of online social dynamics, consistent with the principles of digital citizenship.

Moreover, the fight against all forms of violence and aggression—whether online or offline—must be paired with determination and perseverance to create programs that catalyze long-term cultural and social transformations. Through systemic and holistic interventions encompassing schools, families, and educational contexts, it becomes possible to instill positive individual and collective values. Such efforts can guide future generations toward more constructive interpersonal relationships, deeply rooted in empathy, equity, and democratic principles.

Regardless of the models, methods, and theoretical frameworks employed, it is essential for psychology to delve deeper into the underlying motivations driving these behaviors and attitudes. Understanding these motivations allows us to uncover the psychological, emotional, and social needs that shape how pre-adolescents interact with digital technologies and virtual environments. At the same time, psychology must actively engage with the values and principles that inform contemporary educational and cultural paradigms. This involves not only addressing the risks and challenges presented by digital spaces but also recognizing their potential to serve as platforms for creativity, collaboration, and learning. By exploring these deeper motivations and values, we can craft interventions that resonate with the lived realities of pre-adolescents, aligning psychological research and practice with their evolving needs and aspirations.

Ultimately, this approach emphasizes the need to bridge the gap between the theoretical understanding of digital behaviors and the practical application of solutions in real-world contexts. Psychology must seek to inspire educational frameworks that prioritize empathy, critical thinking, and ethical engagement with technology, ensuring that these tools are used to enrich development rather than hinder it. In doing so, we pave the way for a more holistic and values-driven approach to supporting pre-adolescents in their journey through the digital age. By addressing this issue holistically, we do not merely mitigate harm but also foster the development of responsible, civic-minded, and compassionate digital citizens. In doing so, we contribute to the broader goals of equity, peace, and sustainability articulated in the UN's 2030 Sustainable Development Agenda. More interdisciplinarity in Academia, alongside stronger partnerships between research and practice, will be pivotal in meeting the complex social challenges of our time with effectiveness and impact.

Conclusion

This doctoral research underscores the urgent need for innovative, interdisciplinary, and evidence-based approaches to combat cyberbullying among preadolescents in an increasingly digitalized world. By blending theoretical frameworks with applied methodologies, the study incorporates a Serious Game and structured face-to-face discussions designed to enhance socio-emotional skills and build resilience against online aggression. Guided by the principles of Positive Technology and Edutainment, the intervention showcases the potential of gamified educational tools to develop effective school-based prevention programs, addressing key risk and protective factors such as problematic social media use, moral disengagement, empathy, and coping strategies. The cross-national nature of this research offers a nuanced understanding of cultural influences on cyberbullying dynamics, while also identifying common challenges and solutions within the educational systems of Italy and Spain. While the short-term outcomes of the intervention reveal limited significant changes in the assessed variables, the findings emphasize the critical importance of sustained, school-based initiatives to tackle both the risks and opportunities associated with digital media during preadolescence. Notably, implementing evidence-based programs not only prevents bullying and cyberbullying but also has far-reaching benefits for teacher effectiveness and student well-being. This thesis lays a vital foundation for future research, interventions, and policy development aimed at fostering well-being, empathy, and inclusivity in digital and educational ecosystems. It highlights the need for long-term, collaborative efforts to ensure that preadolescents can navigate the complexities of the online world in a safe and supportive environment.

Conclusión

Esta investigación doctoral subraya la necesidad urgente de enfoques innovadores, interdisciplinarios y basados en la evidencia para combatir el ciberacoso entre los preadolescentes en un mundo cada vez más digitalizado. Combinando marcos teóricos con metodologías aplicadas, el estudio incorpora un juego serio y debates estructurados cara a cara, diseñados para mejorar las habilidades socioemocionales y fortalecer la resiliencia frente a la agresión en línea. Guiada por los principios de la Tecnología Positiva y el Edutainment, la intervención demuestra el potencial de las herramientas educativas gamificadas para desarrollar programas de prevención escolares efectivos, abordando factores clave de riesgo y protección como el uso problemático de las redes sociales, la desconexión moral, la empatía y las estrategias de afrontamiento. La naturaleza transnacional de esta investigación proporciona una comprensión matizada de las influencias culturales en las dinámicas del ciberacoso, al tiempo que identifica desafíos y soluciones comunes dentro de los sistemas educativos de Italia y España. Aunque los resultados a corto plazo de la intervención revelan cambios limitados significativos en las variables evaluadas, los hallazgos destacan la importancia crítica de las iniciativas escolares sostenidas para abordar tanto los riesgos como las oportunidades asociadas con los medios digitales durante la preadolescencia. En particular, la implementación de programas basados en evidencia no

solo previene el acoso y el ciberacoso, sino que también tiene beneficios de largo alcance en la efectividad de los docentes y el bienestar de los estudiantes. Esta tesis establece una base crucial para futuras investigaciones, intervenciones y desarrollos de políticas destinadas a promover el bienestar, la empatía y la inclusión en los ecosistemas digitales y educativos. Resalta la necesidad de esfuerzos colaborativos y sostenidos para garantizar que los preadolescentes puedan navegar por las complejidades del mundo en línea en un entorno seguro y de apoyo.

References

- Aaltola, E. (2014). Varieties of empathy and moral agency. *Topoi*, 33(1), 243-253. <https://doi.org/10.1007/s11245-013-9205-8>
- Aboujaoude, E., Savage, M. W., Starcevic, V., & Salame, W. O. (2015). Cyberbullying: Review of an old problem gone viral. *Journal of adolescent health*, 57(1), 10-18. <https://doi.org/10.1016/j.jadohealth.2015.04.011>
- Abt, C. C. (1987). *Serious games*. University press of America.
- Adair, J. G., & Vohra, N. (2003). The explosion of knowledge, references, and citations: Psychology's unique response to a crisis. *American Psychologist*, 58(1), 15.
- Aguilera, E., & de Roock, R. (2022). Digital game-based learning: Foundations, applications, and critical issues. In *Oxford Research Encyclopedia of Education*.
- Ahn, J. S., & Reeve, J. (2021). Developmental pathways of preadolescents' intrinsic and extrinsic values: The role of basic psychological needs satisfaction. *European Journal of Personality*, 35(2), 151-167. <https://doi.org/10.1002/per.2274>
- Ahrens, D. (2015). Serious games—A new perspective on workbased learning. *Procedia-Social and Behavioral Sciences*, 204, 277-281. <https://doi.org/10.1016/j.sbspro.2015.08.152>
- Aizenkot, D., & Kashy-Rosenbaum, G. (2020). The effectiveness of safe surfing, an anti-cyberbullying intervention program in reducing online and offline bullying and improving perceived popularity and self-esteem. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 14(3). <https://doi.org/10.5817/CP2020-3-6>
- Aksakal, N. (2015). Theoretical view to the approach of the edutainment. *Procedia-Social and Behavioral Sciences*, 186, 1232-1239. <https://doi.org/10.1016/j.sbspro.2015.04.081>
- Al-Garadi, M. A., Varathan, K. D., & Ravana, S. D. (2016). Cybercrime detection in online communications: The experimental case of cyberbullying detection in the Twitter network. *Computers in Human Behavior*, 63, 433-443. <https://doi.org/10.1016/j.chb.2016.05.051>
- Albiero, P. A. O. L. O., Ingoglia, S. O. N. I. A., & Lo Coco, A. (2006). Contributo all'adattamento italiano dell'Interpersonal Reactivity Index. *Testing Psicometria Metodologia*, 13(2), 107-125.
- Aldrich, C. (2009). *The complete guide to simulations and serious games: How the most valuable content will be created in the age beyond Gutenberg to Google*. John Wiley & Sons.
- Almeida, F., & Buzady, Z. (2022). Development of soft skills competencies through the use of FLIGBY. *Technology, Pedagogy and Education*, 31(4), 417-430. <https://doi.org/10.1080/1475939X.2022.2058600>
- Alrehaili, E. A., & Al Osman, H. (2022). A virtual reality role-playing serious game for experiential learning. *Interactive Learning Environments*, 30(5), 922-935. <https://doi.org/10.1080/10494820.2019.1703008>
- Álvarez-García, D., Pérez, J. C. N., González, A. D., & Pérez, C. R. (2015). Risk factors associated with cybervictimization in adolescence. *International Journal of clinical and health psychology*, 15(3), 226-235. <https://doi.org/10.1016/j.ijchp.2015.03.002>

- American Psychological Association. (2002). *Monitor on psychology* (Vol. 33). The Association.
- American Psychological Association. (2014). Guidelines for prevention in psychology. *The American Psychologist*, 69(3), 285-296. DOI: 10.1037/a0034569
- Amichai-Hamburger, Y., & Etgar, S. (2018). Internet and well-being. In *The Social Psychology of Living Well* (pp. 298-318). Routledge.
- Amir, D., & McAuliffe, K. (2020). Cross-cultural, developmental psychology: Integrating approaches and key insights. *Evolution and Human Behavior*, 41(5), 430-444. <https://doi.org/10.1016/j.evolhumbehav.2020.06.006>
- Anastasiadis, T., Lampropoulos, G., & Siakas, K. (2018). Digital game-based learning and serious games in education. *International Journal of Advances in Scientific Research and Engineering*, 4(12), 139-144. <http://doi.org/10.31695/IJASRE.2018.33016>
- Andreassen, C. S. (2015). Online social network site addiction: A comprehensive review. *Current Addiction Reports*, 2(2), 175–184. <https://doi.org/10.1007/s40429-015-0056-9>
- Anikina, O. V., & Yakimenko, E. V. (2015). Edutainment as a modern technology of education. *Procedia-Social and Behavioral Sciences*, 166, 475-479. <https://doi.org/10.1016/j.sbspro.2014.12.558>
- Annetta, L., Mangrum, J., Holmes, S., Collazo, K., & Cheng, M. T. (2009). Bridging reality to virtual reality: Investigating gender effect and student engagement on learning through video game play in an elementary school classroom. *International Journal of Science Education*, 31(8), 1091-1113. <https://doi.org/10.1080/09500690801968656>
- Ansary, N. S. (2020). Cyberbullying: Concepts, theories, and correlates informing evidence-based best practices for prevention. *Aggression and violent behavior*, 50, 101343. <https://doi.org/10.1016/j.avb.2019.101343>
- Ang, R. P. (2015). Adolescent cyberbullying: A review of characteristics, prevention and intervention strategies. *Aggression and violent behavior*, 25, 35-42. <https://doi.org/10.1016/j.avb.2015.07.011>
- Ang, R. P., & Goh, D. H. (2010). Cyberbullying among adolescents: The role of affective and cognitive empathy, and gender. *Child Psychiatry & Human Development*, 41(4), 387-397. <https://doi.org/10.1007/s10578-010-0176-3>
- Antoci, A., Sabatini, F., & Sodini, M. (2015). Online and offline social participation and social poverty traps: can social networks save human relations?. *The Journal of Mathematical Sociology*, 39(4), 229-256. <https://doi.org/10.1080/0022250X.2015.1022278>
- APA Presidential Task Force on Evidence-Based Practice. (2006). Evidence-based practice in psychology. *The American Psychologist*, 61(4), 271-285. DOI: 10.1037/0003-066X.61.4.271
- Appel, M., Marker, C., & Gnambs, T. (2020). Are social media ruining our lives? A review of metanalytic evidence. *Review of General Psychology*, 24(1), 60-74. <https://doi.org/10.1177/1089268019880891>
- Arató, N., Zsidó, A. N., Lénárd, K., & Lábadi, B. (2020). Cybervictimization and cyberbullying: The role of socio-emotional skills. *Frontiers in psychiatry*, 11, 248. <https://doi.org/10.3389/fpsy.2020.00248>
- Arató, N., Zsidó, A. N., Rivnyák, A., Péley, B., & Lábadi, B. (2022). Risk and protective factors in cyberbullying: the role of family, social support and emotion regulation. *International journal of bullying prevention*, 4(2), 160-173. <https://doi.org/10.1007/s42380-021-00097-4>

- Archambault, D., Gaudy, T., Miesenberger, K., Natkin, S., & Ossmann, R. (2008). Towards generalised accessibility of computer games. In *Technologies for E-Learning and Digital Entertainment: Third International Conference*, Edutainment 2008 Nanjing, China, June 25-27, 2008 Proceedings 3 (pp. 518-527). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-540-69736-7_55
- Argenton, L., Triberti, S., Serino, S., Muzio, M., & Riva, G. (2014). Serious games as positive technologies for individual and group flourishing. *Technologies of inclusive well-being: Serious games, alternative realities, and play therapy*, 221-244. https://doi.org/10.1007/978-3-642-45432-5_11
- Aswadi, A., Suriah, S., Stang, S., Jafar, N., Ibrahim, E., Amiruddin, R., & Syahrir, S. (2022). Edutainment as A Strategy of Child Sexual Abuse Prevention: Literature Review. *Open Access Macedonian Journal of Medical Sciences*, 10(F), 141-145. <https://doi.org/10.3889/oamjms.2022.7670>
- Athey, I. (2018). Contributions of play to development. In *Child's play* (pp. 8-28). Routledge.
- Baker, J. A., Bridger, R., & Evans, K. (1998). Models of underachievement among gifted preadolescents: The role of personal, family, and school factors. *Gifted Child Quarterly*, 42(1), 5-15.
- Bakker, T. P., & De Vreese, C. H. (2011). Good news for the future? Young people, Internet use, and political participation. *Communication research*, 38(4), 451-470. <https://doi.org/10.1177/0093650210381738>
- Baldry, A. C., Farrington, D. P., & Sorrentino, A. (2017). School bullying and cyberbullying among boys and girls: Roles and overlap. *Journal of Aggression, Maltreatment & Trauma*, 26(9), 937-951. <https://doi.org/10.1080/10926771.2017.1330793>
- Baldry, A. C., Sorrentino, A., & Farrington, D. P. (2019). Cyberbullying and cybervictimization versus parental supervision, monitoring and control of adolescents' online activities. *Children and Youth Services Review*, 96, 302-307. <https://doi.org/10.1016/j.childyouth.2018.11.058>
- Baird, J. (2021). Role-playing the Self–Trans Self-Expression, Exploration, and Embodiment in Live Action Role-Playing Games. *International Journal of Role-Playing*, (11), 94-113. <https://doi.org/10.33063/ijrp.vi11.285>
- Baldry, A. C., Sorrentino, A., & Farrington, D. P. (2019). Post-traumatic stress symptoms among Italian preadolescents involved in school and cyber bullying and victimization. *Journal of Child and Family Studies*, 28, 2358-2364. <https://doi.org/10.1007/s10826-018-1122-4>
- Bali, D., Pastore, M., Indrio, F., Giardino, I., Vural, M., Pettoello-Mantovani, C., ... & Pettoello-Mantovani, M. (2023). Bullying and cyberbullying increasing in preadolescent children. *The Journal of Pediatrics*, 261. <https://doi.org/10.1016/j.jpeds.2023.113565>
- Balzarotti, S., Biassoni, F., Villani, D., Prunas, A., & Velotti, P. (2016). Individual differences in cognitive emotion regulation: Implications for subjective and psychological well-being. *Journal of Happiness Studies*, 17, 125-143. <https://doi.org/10.1007/s10902-014-9587-3>
- Bandura, A., & Walters, R. H. (1977). *Social learning theory* (Vol. 1). Prentice Hall: Englewood cliffs.
- Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Mechanisms of moral disengagement in the exercise of moral agency. *Journal of personality and social psychology*, 71(2), 364.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual review of psychology*, 52(1), 1-26. <https://doi.org/10.1111/1467-839X.00024>

- Bandura, A. (2002). Selective moral disengagement in the exercise of moral agency. *Journal of moral education*, 31(2), 101-119. <https://doi.org/10.1080/0305724022014322>
- Bandura, A. (2016). *Moral Disengagement: How People Do Harm and Live with Themselves*, by Albert Bandura. New York: Macmillan, 2016. 544 pp. ISBN: 978-1.
- Bányai, F., Zsila, Á., Király, O., Maraz, A., Elekes, Z., Griffiths, M. D., ... & Demetrovics, Z. (2017). Social Media Addiction: Results from a large-scale nationally representative adolescent sample. *PloS one*, 12(1), e0169839. <https://doi.org/10.1371/journal.pone.0169839>
- Barends, E. G., & Briner, R. B. (2014). Teaching evidence-based practice: lessons from the pioneers: an interview with Amanda Burls and Gordon Guyatt. *Academy of Management Learning & Education*, 13(3), 476-483. <https://doi.org/10.5465/amle.2014.0136>
- Barlett, C. P. (2017). From theory to practice: Cyberbullying theory and its application to intervention. *Computers in Human Behavior*, 72, 269-275. <https://doi.org/10.1016/j.chb.2017.02.060>
- Barlett, C. P., Gentile, D. A., & Chew, C. (2016). Predicting cyberbullying from anonymity. *Psychology of Popular Media Culture*, 5(2), 171.
- Barlett, C., Chamberlin, K., & Witkower, Z. (2017). Predicting cyberbullying perpetration in emerging adults: A theoretical test of the Barlett Gentile Cyberbullying Model. *Aggressive behavior*, 43(2), 147-154. <https://doi.org/10.1002/ab.21670>
- Barlett CP, DeWitt CC, Maronna B, Johnson K (2018). Social media use as a tool to facilitate or reduce cyberbullying perpetration: a review focusing on anonymous and nonanonymous social media platforms. *Violence Gend*, 5:147–152, <https://doi.org/10.1089/vio.2017.0057>.
- Barlett, C. P. (2023). Cyberbullying as a learned behavior: theoretical and applied implications. *Children*, 10(2), 325. <https://doi.org/10.3390/children10020325>
- Barlow, J. H., & Ellard, D. R. (2006). The psychosocial well-being of children with chronic disease, their parents and siblings: An overview of the research evidence base. *Child: care, health and development*, 32(1), 19-31. <https://doi.org/10.1111/j.1365-2214.2006.00591.x>
- Baron, R. A., & Richardson, D. R. (1994). *Human aggression*. Springer Science & Business Media.
- Barnsteiner, J. H., Reeder, V. C., Palma, W. H., Preston, A. M., & Walton, M. K. (2010). Promoting evidence-based practice and translational research. *Nursing Administration Quarterly*, 34(3), 217-225. DOI: 10.1097/NAQ.0b013e3181e702f4
- Bartolo, M. G., Palermi, A. L., Servidio, R., Musso, P., & Costabile, A. (2019). Mediating processes in the relations of parental monitoring and school climate with cyberbullying: The role of moral disengagement. *Europe's Journal of Psychology*, 15(3), 568. <https://doi.org/10.5964/ejop.v15i3.1742>
- Bauman, S., Toomey, R. B., & Walker, J. L. (2013). Associations among bullying, cyberbullying, and suicide in high school students. *Journal of adolescence*, 36(2), 341-350. <https://doi.org/10.1016/j.adolescence.2012.12.001>
- Baumgartner, S. E., Sumter, S. R., Peter, J., & Valkenburg, P. M. (2012). Identifying teens at risk: Developmental pathways of online and offline sexual risk behavior. *Pediatrics*, 130(6), e1489-e1496. <https://doi.org/10.1542/peds.2012-0842>

- Bayraktar, F., Machackova, H., Dedkova, L., Cerna, A., & Ševčíková, A. (2015). Cyberbullying: The discriminant factors among cyberbullies, cybervictims, and cyberbully-victims in a Czech adolescent sample. *Journal of interpersonal violence*, 30(18), 3192-3216. <https://doi.org/10.1177/0886260514555006>
- Benjamin Jr, A. J. (2015). Definition of aggression. *Encyclopedia of mental health*, 1(2), 33-39.
- Bensalah, L., Caillies, S., & Anduze, M. (2016). Links among cognitive empathy, theory of mind, and affective perspective taking by young children. *The Journal of genetic psychology*, 177(1), 17-31. <https://doi.org/10.1080/00221325.2015.1106438>
- Berkowitz, L. (2012). A different view of anger: The cognitive-neoassociation conception of the relation of anger to aggression. *Aggressive behavior*, 38(4), 322-333. <https://doi.org/10.1002/ab.21432>
- Berne, S., Frisén, A., & Kling, J. (2014). Appearance-related cyberbullying: A qualitative investigation of characteristics, content, reasons, and effects. *Body image*, 11(4), 527-533. <https://doi.org/10.1016/j.bodyim.2014.08.006>
- Berne, S., Frisén, A., & Berne, J. (2019). Cyberbullying in childhood and adolescence: assessment, negative consequences and prevention strategies. Policing schools: *School violence and the juridification of youth*, 141-152. https://doi.org/10.1007/978-3-030-18605-0_10
- Bers, M., Doyle-Lynch, A., & Chau, C. (2012). Positive technological development: The multifaceted nature of youth technology use towards improving self and society. *Constructing the self in a digital world*, 110-136.
- Besier, G., & Stokłosa, K. (2014). *Neither good nor bad: Why human beings behave how they do*. Cambridge Scholars Publishing.
- Betts, L. R. (2016). *Cyberbullying: Approaches, consequences and interventions*. Springer.
- Betts, L. R., Spenser, K. A., & Gardner, S. E. (2017). Adolescents' involvement in cyber bullying and perceptions of school: The importance of perceived peer acceptance for female adolescents. *Sex roles*, 77, 471-481. <https://doi.org/10.1007/s11199-017-0742-2>
- Betts, L. R., Spenser, K. A., & Baguley, T. (2022). Describing disclosure of cybervictimization in adolescents from the united kingdom: the role of age, gender, involvement in cyberbullying, and time spent online. *The Journal of Genetic Psychology*, 183(1), 40-53. <https://doi.org/10.1080/00221325.2021.2001413>
- Bibizadeh, R. E., Procter, R., Girvan, C., Webb, H., & Jirotko, M. (2023). Digitally Un/Free: The everyday impact of social media on the lives of young people. *Learning, Media and Technology*, 1-14. <https://doi.org/10.1080/17439884.2023.2237883>
- Bittner IV, J. G., Khan, Z., Babu, M., & Hamed, O. (2011). Stress, burnout, and maladaptive coping. *Bulletin of the American College of Surgeons*, 96(8), 17-22.
- Błachnio, A., Przepiorka, A., & Pantic, I. (2016). Association between Facebook addiction, self-esteem and life satisfaction: A cross-sectional study. *Computers in Human Behavior*, 55, 701-705. <https://doi.org/10.1016/j.chb.2015.10.026>
- Boer, M., Stevens, G. W., Finkenauer, C., de Looze, M. E., & van den Eijnden, R. J. (2021). Social media use intensity, social media use problems, and mental health among adolescents: Investigating directionality

- and mediating processes. *Computers in Human Behavior*, 116, 106645. <https://doi.org/10.1016/j.chb.2020.106645>
- Bogaerts, A., Claes, L., Schwartz, S. J., Becht, A. I., Verschueren, M., Gandhi, A., & Luyckx, K. (2019). Identity structure and processes in adolescence: Examining the directionality of between-and within-person associations. *Journal of Youth and Adolescence*, 48, 891-907. <https://doi.org/10.1007/s10964-018-0931-5>
- Borca, G., Bina, M., Keller, P. S., Gilbert, L. R., & Begotti, T. (2015). Internet use and developmental tasks: Adolescents' point of view. *Computers in Human Behavior*, 52, 49-58. <https://doi.org/10.1016/j.chb.2015.05.029>
- Bornioli, A., Lewis-Smith, H., Smith, A., Slater, A., & Bray, I. (2019). Adolescent body dissatisfaction and disordered eating: Predictors of later risky health behaviours. *Social Science & Medicine*, 238, 112458. <https://doi.org/10.1016/j.socscimed.2019.112458>
- Bosacki, S., & Wilde Astington, J. (1999). Theory of mind in preadolescence: Relations between social understanding and social competence. *Social development*, 8(2), 237-255. <https://doi.org/10.1111/1467-9507.00093>
- Boyle, E. A., Hainey, T., Connolly, T. M., Gray, G., Earp, J., Ott, M., ... & Pereira, J. (2016). An update to the systematic literature review of empirical evidence of the impacts and outcomes of computer games and serious games. *Computers & Education*, 94, 178-192. <https://doi.org/10.1016/j.compedu.2015.11.003>
- Bradbury, S. L., Dubow, E. F., & Domoff, S. E. (2018). How do adolescents learn cyber-victimization coping skills? An examination of parent and peer coping socialization. *Journal of youth and adolescence*, 47, 1866-1879. <https://doi.org/10.1007/s10964-018-0812-y>
- Breuer, J., & Elson, M. (2017). *Frustration-aggression theory* (pp. 1-12). Wiley Blackwell. <https://nbn-resolving.org/urn:nbn:de:0168-ssoar-61070-4>
- Brighi, A., Ortega, R., Pyzalski, J., Scheithauer, H., Smith, P. K., Tsormpatzoudis, H., & Tsorbatzoudis, H. (2012). European Cyberbullying Intervention Project Questionnaire. *Computers in Human Behavior*. <https://psycnet.apa.org/doi/10.1037/t66195-000>
- Brighi, A., Menin, D., Skrzypiec, G., & Guarini, A. (2019). Young, bullying, and connected. Common pathways to cyberbullying and problematic internet use in adolescence. *Frontiers in Psychology*, 10, 1467. <https://doi.org/10.3389/fpsyg.2019.01467>
- Brighi, A., Mameli, C., Menin, D., Guarini, A., Carpani, F., & Slee, P. T. (2019). Coping with cybervictimization: The role of direct confrontation and resilience on adolescent wellbeing. *International journal of environmental research and public health*, 16(24), 4893. <https://doi.org/10.3390/ijerph16244893>
- Brochado, S., Soares, S., & Fraga, S. (2017). A scoping review on studies of cyberbullying prevalence among adolescents. *Trauma, Violence, & Abuse*, 18(5), 523-531. <https://doi.org/10.1177/1524838016641668>
- Bronfenbrenner, U., & Morris, P. A. (1998). *The ecology of developmental processes*.
- Brown, B. B., & Larson, J. (2009). *Peer relationships in adolescence*.
- Brown, C. F., Demaray, M. K., & Secord, S. M. (2014). Cyber victimization in middle school and relations to social emotional outcomes. *Computers in human behavior*, 35, 12-21. <https://doi.org/10.1016/j.chb.2014.02.014>

- Brownson, R. C., Fielding, J. E., & Maylahn, C. M. (2009). Evidence-based public health: a fundamental concept for public health practice. *Annual review of public health*, 30, 175-201. <https://doi.org/10.1146/annurev.publhealth.031308.100134>
- Bruggeman, H., Van Hiel, A., Van Hal, G., & Van Dongen, S. (2019). Does the use of digital media affect psychological well-being? An empirical test among children aged 9 to 12. *Computers in Human Behavior*, 101, 104-113. <https://doi.org/10.1016/j.chb.2019.07.015>
- Bruni, O., Sette, S., Fontanesi, L., Baiocco, R., Laghi, F., & Baumgartner, E. (2015). Technology use and sleep quality in preadolescence and adolescence. *Journal of clinical sleep medicine*, 11(12), 1433-1441. <https://doi.org/10.5664/jcsm.5282>
- Buchanan, C. M., & McDougall, P. (2021). Predicting psychosocial maladjustment in emerging adulthood from high school experiences of peer victimization. *Journal of interpersonal violence*, 36(3-4), NP1810-1832NP. <https://doi.org/10.1177/0886260518756115>
- Buckingham, D. (2007). Media education goes digital: an introduction. *Learning, Media and technology*, 32(2), 111-119. <https://doi.org/10.1080/17439880701343006>
- Buelga, S., Martínez-Ferrer, B., & Cava, M. J. (2017). Differences in family climate and family communication among cyberbullies, cybervictims, and cyber bully-victims in adolescents. *Computers in Human Behavior*, 76, 164-173. <https://doi.org/10.1016/j.chb.2017.07.017>
- Bukit, S., Marcela, E. D., & Ernawati, E. (2023). Teacher's Strategy to Create Fun Learning in Elementary School. *Journal Corner of Education, Linguistics, and Literature*, 2(3), 244-249. <https://doi.org/10.54012/jcell.v2i3.129>
- Burbules, N. C., Fan, G., & Repp, P. (2020). Five trends of education and technology in a sustainable future. *Geography and Sustainability*, 1(2), 93-97. <https://doi.org/10.1016/j.geosus.2020.05.001>
- Burnett, S., & Blakemore, S. J. (2009). The development of adolescent social cognition. *Annals of the New York Academy of Sciences*, 1167(1), 51-56. <https://doi.org/10.1111/j.1749-6632.2009.04509.x>
- Burns, J., Hull, G., Lefko-Everett, K., & Njozela, L. (2018). *Defining social cohesion*. <http://hdl.handle.net/11090/903>
- Bushman, B. J., & Anderson, C. A. (2020). General aggression model. *The International Encyclopedia of Media Psychology*, 1-9. <https://doi.org/10.1002/9781119011071.iemp0154>
- Bushman, B. J., & Huesmann, L. R. (2006). Short-term and long-term effects of violent media on aggression in children and adults. *Archives of pediatrics & adolescent medicine*, 160(4), 348-352. DOI: 10.1001/archpedi.160.4.348
- Butler, D., Kift, S., & Campbell, M. (2009). Cyber bullying in schools and the law: Is there an effective means of addressing the power imbalance. *eLaw J.*, 16, 84.
- Byers, D. S. (2013). "Do they see nothing wrong with this?": Bullying, bystander complicity, and the role of homophobic bias in the Tyler Clementi case. *Families in Society*, 94(4), 251-258. <https://doi.org/10.1606/1044-3894.4325>
- Bywater, T., & Sharples, J. (2017). Effective evidence-based interventions for emotional well-being: Lessons for policy and practice. In *Emotional Well-Being in Educational Policy and Practice* (pp. 7-26). Routledge.

- Calderón, A., & Ruiz, M. (2015). A systematic literature review on serious games evaluation: An application to software project management. *Computers & Education*, 87, 396-422. <https://doi.org/10.1016/j.compedu.2015.07.011>
- Calvete, E., Cortazar, N., Fernández-González, L., Echezarraga, A., Beranuy, M., León, A., ... & Orue, I. (2021). Effects of a brief preventive intervention in cyberbullying and grooming in adolescents. *Psychosocial intervention*, 30(2), 75-84. <https://doi.org/10.5093/pi2020a22>
- Calvo-Morata, A., Alonso-Fernández, C., Freire, M., Martínez-Ortiz, I., & Fernández-Manjón, B. (2020). Serious games to prevent and detect bullying and cyberbullying: A systematic serious games and literature review. *Computers & Education*, 157, 103958. <https://doi.org/10.1016/j.compedu.2020.103958>
- Calvo-Morata, A., Alonso-Fernández, C., Freire, M., Martínez-Ortiz, I., & Fernández-Manjón, B. (2021). Creating awareness on bullying and cyberbullying among young people: Validating the effectiveness and design of the serious game Conectado. *Telematics and Informatics*, 60, 101568. <https://doi.org/10.1016/j.tele.2021.101568>
- Campbell, M. A., Slee, P. T., Spears, B., Butler, D., & Kift, S. (2013). Do cyberbullies suffer too? Cyberbullies' perceptions of the harm they cause to others and to their own mental health. *School Psychology International*, 34(6), 613-629. <https://doi.org/10.1177/0143034313479698>
- Cañas, E., Estévez, E., León-Moreno, C., & Musitu, G. (2020). Loneliness, family communication, and school adjustment in a sample of cybervictimized adolescents. *International journal of environmental research and public health*, 17(1), 335. <https://doi.org/10.3390/ijerph17010335>
- Cantone, E., Piras, A. P., Vellante, M., Preti, A., Daniélsdóttir, S., D'Aloja, E., ... & Bhugra, D. (2015). Interventions on bullying and cyberbullying in schools: A systematic review. *Clinical practice and epidemiology in mental health: CP & EMH*, 11(Suppl 1 M4), 58. DOI: 10.2174/1745017901511010058
- Cao, X., Gong, M., Yu, L., & Dai, B. (2020). Exploring the mechanism of social media addiction: An empirical study from WeChat users. *Internet Research*, 30(4), 1305-1328. <https://doi.org/10.1108/INTR-08-2019-0347>
- Cao, X., Khan, A. N., Ali, A., & Khan, N. A. (2020). Consequences of cyberbullying and social overload while using SNSs: A study of users' discontinuous usage behavior in SNSs. *Information Systems Frontiers*, 22, 1343-1356. <https://doi.org/10.1007/s10796-019-09936-8>
- Caplan, S. E. (2010). Theory and measurement of generalized problematic Internet use: A two-step approach. *Computers in human behavior*, 26(5), 1089-1097. <https://doi.org/10.1016/j.chb.2010.03.012>
- Cappadocia, M. C., Craig, W. M., & Pepler, D. (2013). Cyberbullying: Prevalence, stability, and risk factors during adolescence. *Canadian Journal of School Psychology*, 28(2), 171-192. <https://doi.org/10.1177/0829573513491212>
- Carissoli, C., & Villani, D. (2019). Can videogames be used to promote emotional intelligence in teenagers? Results from EmotivaMente, a school program. *Games for health journal*, 8(6), 407-413. <https://doi.org/10.1089/g4h.2018.0148>
- Carvalho, M., Branquinho, C., & de Matos, M. G. (2018). Emotional symptoms and risk behaviors in adolescents: Relationships with cyberbullying and implications on well-being. *Violence and victims*, 33(5), 871-885. <https://doi.org/10.1891/0886-6708.vv-d-16-00204>
- Carr, D., Oliver, M., & Burn, A. (2010). Learning, teaching and ambiguity in virtual worlds. In *Researching learning in virtual worlds* (pp. 17-30). Springer, London. https://doi.org/10.1007/978-1-84996-047-2_2

- Casale, S., Rugai, L., & Fioravanti, G. (2018). Exploring the role of positive metacognitions in explaining the association between the fear of missing out and social media addiction. *Addictive behaviors*, 85, 83-87. <https://doi.org/10.1016/j.addbeh.2018.05.020>
- Cassidy, J., & Asher, S. R. (1992). Loneliness and peer relations in young children. *Child development*, 63(2), 350-365. <https://doi.org/10.1111/j.1467-8624.1992.tb01632.x>
- Castellacci, F., & Tveito, V. (2018). Internet use and well-being: A survey and a theoretical framework. *Research policy*, 47(1), 308-325. <https://doi.org/10.1016/j.respol.2017.11.007>
- Castillo-Abdul, B., Romero-Rodríguez, L. M., & Larrea-Ayala, A. (2020). Kid influencers in Spain: understanding the themes they address and preteens' engagement with their YouTube channels. *Heliyon*, 6(9).
- Chambless, D. L., & Hollon, S. D. (1998). Defining empirically supported therapies. *Journal of consulting and clinical psychology*, 66(1), 7.
- Chan, H. C. O., & Wong, D. S. (2015). Traditional school bullying and cyberbullying in Chinese societies: Prevalence and a review of the whole-school intervention approach. *Aggression and Violent Behavior*, 23, 98-108. <https://doi.org/10.1016/j.avb.2015.05.010>
- Chan TKH, Cheung CMK, Lee ZWY (2021). Cyberbullying on social networking sites: a literature review and future research directions. *Inf Manag*, 58, <https://doi.org/10.1016/j.im.2020.103411>.
- Chan, C. K., Leung, T. H. D., & Ip, K. T. V. (2022, June). Exploring the Roles of Cognitive and Affect Empathy in Enhancing Prosocial Bystander Behavior in Simulated Cyberbullying Context. In *Annual conference of Hong Kong Association for Educational, Communications and Technology* (pp. 196-215). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-19-9217-9_13
- Chan, T. K., Cheung, C. M., Benbasat, I., Xiao, B., & Lee, Z. W. (2023). Bystanders join in cyberbullying on social networking sites: the deindividuation and moral disengagement perspectives. *Information Systems Research*, 34(3), 828-846. <https://doi.org/10.1287/isre.2022.1161>
- Charoensukmongkol, P. (2018). The impact of social media on social comparison and envy in teenagers: The moderating role of the parent comparing children and in-group competition among friends. *Journal of Child and Family Studies*, 27(1), 69-79. <https://doi.org/10.1007/s10826-017-0872-8>
- Chen, L., Ho, S. S., & Lwin, M. O. (2017). A meta-analysis of factors predicting cyberbullying perpetration and victimization: From the social cognitive and media effects approach. *New Media & Society*, 19(8), 1194-1213. <https://doi.org/10.1177/1461444816634037>.
- Cheng, C., & Li, A. Y. L. (2014). Internet addiction prevalence and quality of (real) life: A meta-analysis of 31 nations across seven world regions. *Cyberpsychology, behavior, and social networking*, 17(12), 755-760. <https://doi.org/10.1089/cyber.2014.0317>
- Cheung, C. M., Wong, R. Y. M., & Chan, T. K. (2021). Online disinhibition: conceptualization, measurement, and implications for online deviant behavior. *Industrial Management & Data Systems*, 121(1), 48-64. <https://doi.org/10.1108/IMDS-08-2020-0509>
- Chicote-Beato, M., González-Víllora, S., Bodoque-Osma, A. R., & Olivas, R. N. (2024). Cyberbullying intervention and prevention programmes in Primary Education (6 to 12 years): A systematic review. *Aggression and Violent Behavior*, 101938. <https://doi.org/10.1016/j.avb.2024.101938>

- Choudhury, S., Blakemore, S. J., & Charman, T. (2006). Social cognitive development during adolescence. *Social cognitive and affective neuroscience*, 1(3), 165.
- Clark, M., & Bussey, K. (2020). The role of self-efficacy in defending cyberbullying victims. *Computers in Human Behavior*, 109, 106340. <https://doi.org/10.1016/j.chb.2020.106340>
- Cohen-Almagor, R. (2020). Cyberbullying, moral responsibility, and social networking: Lessons from the Megan Meier tragedy. *European Journal of Analytic Philosophy*, 16(1), 75-98. <https://hrcak.srce.hr/240862>
- Colella, G. M., Palermi, A. L., Bartolo, M. G., Servidio, R. C., & Costabile, A. (2024). Problematic Social Media Use, Retaliation, and Moral Disengagement in Cyberbullying and Cybervictimization Among Italian Preadolescents: A Moderated Mediation Model. *International Journal of Bullying Prevention*, 1-16. <https://doi.org/10.1007/s42380-024-00265-2>
- Cook, T. D., & Campbell, D. T. (1979). *Quasi-Experimentation: Design & Analysis Issues for Field Settings*. Houghton Mifflin. https://doi.org/10.1207/s15327752jpa4601_16
- Cooper, B. (2004). Empathy, interaction and caring: Teachers' roles in a constrained environment. *Pastoral Care in Education*, 22(3), 12-21. <https://doi.org/10.1111/j.0264-3944.2004.00299.x>
- Connell, N. M., Schell-Busey, N. M., Pearce, A. N., & Negro, P. (2014). Badgrlz? Exploring sex differences in cyberbullying behaviors. *Youth violence and juvenile justice*, 12(3), 209-228. <https://doi.org/10.1177/1541204013503889>
- Connor, D. F. (2004). *Aggression and antisocial behavior in children and adolescents: Research and treatment*. Guilford Press.
- Cook, C. R., Williams, K. R., Guerra, N. G., Kim, T. E., & Sadek, S. (2010). Predictors of bullying and victimization in childhood and adolescence: A meta-analytic investigation. *School psychology quarterly*, 25(2), 65. <https://psycnet.apa.org/doi/10.1037/a0020149>
- Cook, B. G., & Odom, S. L. (2013). Evidence-based practices and implementation science in special education. *Exceptional children*, 79(2), 135-144. <https://doi.org/10.1177/001440291307900201>
- Copez-Lonzoy, A., Vallejos-Flores, M., Capa-Luque, W., Salas-Blas, E., Doig, A. M. M., Dias, P. C., & Bazo-Alvarez, J. C. (2023). Adaptation of the bergen social media addiction scale (BSMAS) in Spanish. *Acta Psychologica*, 241, 104072. <https://doi.org/10.1016/j.actpsy.2023.104072>
- Corcoran, L., Mc Guckin, C., & Prentice, G. (2015). Cyberbullying or cyber aggression?: A review of existing definitions of cyber-based peer-to-peer aggression. *Societies*, 5(2), 245-255. <http://dx.doi.org/10.3390/soc5020245>
- Cortés-Pascual, A., Cano-Escorianza, J., Elboj-Saso, C., & Íñiguez-Berrozpe, T. (2020). Positive relationships for the prevention of bullying and cyberbullying: a study in Aragón (Spain). *International Journal of Adolescence and youth*, 25(1), 182-199. <https://doi.org/10.1080/02673843.2019.1602064>
- Corti, K. (2006). Games-based Learning; a serious business application. *Informe de PixelLearning*, 34(6), 1-20.
- Cosma, A., Walsh, S. D., Chester, K. L., Callaghan, M., Molcho, M., Craig, W., & Pickett, W. (2020). Bullying victimization: Time trends and the overlap between traditional and cyberbullying across countries in Europe and North America. *International journal of public health*, 65, 75-85. <https://doi.org/10.1007/s00038-019-01320-2>

- Costley, K. C. (2014). *The positive effects of technology on teaching and student learning*. Online submission.
- Côté, S., Vaillancourt, T., LeBlanc, J. C., Nagin, D. S., & Tremblay, R. E. (2006). The development of physical aggression from toddlerhood to pre-adolescence: A nation wide longitudinal study of Canadian children. *Journal of abnormal child psychology*, 34, 68-82. <https://doi.org/10.1007/s10802-005-9001-z>
- Craig, W. M. (1998). The relationship among bullying, victimization, depression, anxiety, and aggression in elementary school children. *Personality and individual differences*, 24(1), 123-130. [https://doi.org/10.1016/S0191-8869\(97\)00145-1](https://doi.org/10.1016/S0191-8869(97)00145-1)
- Craig, W., Boniel-Nissim, M., King, N., Walsh, S. D., Boer, M., Donnelly, P. D., ... & Pickett, W. (2020). Social media use and cyber-bullying: A cross-national analysis of young people in 42 countries. *Journal of Adolescent Health*, 66(6), S100-S108. <https://doi.org/10.1016/j.jadohealth.2020.03.006>
- Crawford, A. M., & Manassis, K. (2011). Anxiety, social skills, friendship quality, and peer victimization: An integrated model. *Journal of anxiety disorders*, 25(7), 924-931. <https://doi.org/10.1016/j.janxdis.2011.05.005>
- Crick, N. R. (1995). Relational aggression: The role of intent attributions, feelings of distress, and provocation type. *Development and psychopathology*, 7(2), 313-322. <https://doi.org/10.1017/S0954579400006520>
- Crocetti, G. (2018). *Identità sfidate: i Sé identitari ed i processi di orientamento e di identificazione psicosessuale*. 16-28.
- Cross, D., Barnes, A., Papageorgiou, A., Hadwen, K., Hearn, L., & Lester, L. (2015). A social–ecological framework for understanding and reducing cyberbullying behaviours. *Aggression and Violent Behavior*, 23, 109-117. <https://doi.org/10.1016/j.avb.2015.05.016>
- Crosslin, K., & Crosslin, M. (2014). Cyberbullying at a Texas University-A Mixed Methods Approach to Examining Online Aggression. *Texas Public Health Journal*, 66(3).
- Cuesta Medina, L., Hennig Manzuoli, C., Duque, L. A., & Malfasi, S. (2020). Cyberbullying: Tackling the silent enemy. *International Journal of Inclusive Education*, 24(9), 936-947. <https://doi.org/10.1080/13603116.2018.1500648>
- Cuff, B. M., Brown, S. J., Taylor, L., & Howat, D. J. (2016). *Empathy: A review of the concept*. *Emotion review*, 8(2), 144-153. <https://doi.org/10.1177/1754073914558466>
- Dalibert, M., & De Iulio, S. (2015). The Representational Intertwinement of Gender, Age and Uses of Information and Communication Technology: A Comparison Between German and French Preteen Magazines. *Connecting Women: Women, Gender and ICT in Europe in the Nineteenth and Twentieth Century*, 89-100. https://doi.org/10.1007/978-3-319-20837-4_6
- Damon, W., & Gregory, A. (1997). The youth charter: Towards the formation of adolescent moral identity. *Journal of Moral Education*, 26(2), 117-130. <https://doi.org/10.1080/0305724970260201>
- Darling, N. (2007). Ecological systems theory: The person in the center of the circles. *Research in human development*, 4(3-4), 203-217. <https://doi.org/10.1080/15427600701663023>
- David-Ferdon, C., & Hertz, M. F. (2007). Electronic media, violence, and adolescents: An emerging public health problem. *Journal of Adolescent Health*, 41(6), S1-S5. <https://doi.org/10.1016/j.jadohealth.2007.08.020>

- Davies, P. (2012). The state of evidence-based policy evaluation and its role in policy formation. *National Institute Economic Review*, 219(1), R41-R52. <https://doi.org/10.1177/002795011221900105>
- Davis, C. M. (1990). What is empathy, and can empathy be taught?. *Physical therapy*, 70(11), 707-711. <https://doi.org/10.1093/ptj/70.11.707>
- Davis, K., & Koepke, L. (2016). Risk and protective factors associated with cyberbullying: Are relationships or rules more protective?. *Learning, Media and Technology*, 41(4), 521-545. <https://doi.org/10.1080/17439884.2014.994219>
- Davis, J. L., & Love, T. P. (2017). Self-in-self, mind-in-mind, heart-in-heart: The future of role-taking, perspective taking, and empathy. In *Advances in group processes* (pp. 151-174). Emerald Publishing Limited. <https://doi.org/10.1108/S0882-614520170000034007>
- Davis, N., Hsiao, C. P., Singh, K. Y., Lin, B., & Magerko, B. (2017, June). Creative sense-making: Quantifying interaction dynamics in co-creation. In *Proceedings of the 2017 ACM SIGCHI Conference on Creativity and Cognition* (pp. 356-366). <https://doi.org/10.1145/3059454.3059478>
- Decker, S. A., & Gay, J. N. (2011). Cognitive-bias toward gaming-related words and disinhibition in World of Warcraft gamers. *Computers in Human Behavior*, 27(2), 798-810. <https://doi.org/10.1016/j.chb.2010.11.005>
- Denmark, J. S. (2014). *Cyberbullying as a Peer Group Process: Perspectives From the Preteen Student*. Walden University.
- Del Rey, R., Casas, J. A., & Ortega, R. (2012). El programa ConRed, una práctica basada en la evidencia. *Comunicar*, 39(20), 129-138. DOI: 10.3916/C39-2012-03-03
- Del Rey, R., Casas, J. A., Ortega-Ruiz, R., Schultze-Krumbholz, A., Scheithauer, H., Smith, P., ... & Plichta, P. (2015). Structural validation and cross-cultural robustness of the European Cyberbullying Intervention Project Questionnaire. *Computers in human behavior*, 50, 141-147. <https://doi.org/10.1016/j.chb.2015.03.065>
- Del Rey, R., Casas, J. A., & Ortega, R. (2016). Impact of the ConRed program on different cyberbullying roles. *Aggressive behavior*, 42(2), 123-135. <https://doi.org/10.1002/ab.21608>
- Dell'Aquila, E., Marocco, D., Ponticorvo, M., Di Ferdinando, A., Schembri, M., Miglino, O., ... & Miglino, O. (2017). *Learn to lead: An educational game for leaders to be. Educational Games for Soft-Skills Training in Digital Environments: New Perspectives*, 123-140. https://doi.org/10.1007/978-3-319-06311-9_2
- Dell'Aquila, E., Marocco, D., Ponticorvo, M., Di Ferdinando, A., Schembri, M., Miglino, O., ... & Miglino, O. (2017a). ENACT: virtual experiences of negotiation. *Educational Games for Soft-Skills Training in Digital Environments. New Perspectives*, 89-103. https://doi.org/10.1007/978-3-319-06311-9_5
- Dell'Aquila, E., Marocco, D., Ponticorvo, M., Di Ferdinando, A., Schembri, M., Miglino, O., ... & Miglino, O. (2017b). Methodology and design of technologically enhanced educational role-playing games for soft skills training. *Educational Games for Soft-Skills Training in Digital Environments. New Perspectives*, 39-61. https://doi.org/10.1007/978-3-319-06311-9_3
- Dell'Aquila, E., Vallone, F., Zurlo, M. C., & Marocco, D. (2022). SG-ACCORD: Designing Virtual Agents for Soft Skills Training in the School Context. *Education Sciences*, 12(3), 174. <https://doi.org/10.3390/educsci12030174>

- Den Hamer, A., Konijn, E. A., & Keijer, M. G. (2014). Cyberbullying behavior and adolescents' use of media with antisocial content: A cyclic process model. *Cyberpsychology, Behavior, and Social Networking*, 17(2), 74-81. <https://doi.org/10.1089/cyber.2012.0307>
- den Hamer, A. H., & Konijn, E. A. (2015). Adolescents' media exposure may increase their cyberbullying behavior: a longitudinal study. *Journal of Adolescent Health*, 56(2), 203-208. <https://doi.org/10.1016/j.jadohealth.2014.09.016>
- Den Hamer, A. H., & Konijn, E. A. (2016). Can emotion regulation serve as a tool in combating cyberbullying?. *Personality and Individual Differences*, 102, 1-6. <https://doi.org/10.1016/j.paid.2016.06.033>
- DeSmet, A., Veldeman, C., Poels, K., Bastiaensens, S., Van Cleemput, K., Vandebosch, H., & De Bourdeaudhuij, I. (2014). Determinants of self-reported bystander behavior in cyberbullying incidents amongst adolescents. *Cyberpsychology, Behavior & Social Networking*, 17(4), 207-215. <https://doi.org/10.1089/cyber.2013.0027>
- DeSmet, A., Aelterman, N., Bastiaensens, S., Van Cleemput, K., Poels, K., Vandebosch, H., Cardon, G., & De Bourdeaudhuij, I. (2015). Secondary school educators' perceptions and practices in handling cyberbullying among adolescents: A cluster analysis. *Computers & Education*, 88, 192-201. <https://doi.org/10.1016/j.compedu.2015.05.006>
- DeSmet, A., Bastiaensens, S., Van Cleemput, K., Poels, K., Vandebosch, H., Cardon, G., & De Bourdeaudhuij, I. (2016). Deciding whether to look after them, to like it, or leave it: A multidimensional analysis of predictors of positive and negative bystander behavior in cyberbullying among adolescents. *Computers in Human Behavior*, 57, 398-415. <https://doi.org/10.1016/j.chb.2015.12.051>
- DeSmet, A., Rodelli, M., Walrave, M., Soenens, B., Cardon, G., & De Bourdeaudhuij, I. (2018). Cyberbullying and traditional bullying involvement among heterosexual and non-heterosexual adolescents, and their associations with age and gender. *Computers in Human Behavior*, 83, 254-261. <https://doi.org/10.1016/j.chb.2018.02.010>
- DeSmet, A., Bastiaensens, S., Van Cleemput, K., Poels, K., Vandebosch, H., Deboutte, G., ... & De Bourdeaudhuij, I. (2018). The efficacy of the Friendly Attac serious digital game to promote prosocial bystander behavior in cyberbullying among young adolescents: A cluster-randomized controlled trial. *Computers in Human Behavior*, 78, 336-347. <https://doi.org/10.1016/j.chb.2017.10.011>
- Deterding, S., Sicart, M., Nacke, L., O'Hara, K., & Dixon, D. (2011). Gamification. using game-design elements in non-gaming contexts. In *CHI'11 extended abstracts on human factors in computing systems* (pp. 2425-2428). <https://doi.org/10.1145/1979742.1979575>
- Dewey, J. (1998). *The essential Dewey, volume 1: pragmatism, education, democracy (Vol. 1)*. Indiana University Press.
- Di Fabio, A., & Gori, A. (2016). Measuring adolescent life satisfaction: psychometric properties of the satisfaction with life scale in a sample of Italian adolescents and young adults. *Journal of Psychoeducational Assessment*, 34(5), 501-506. <https://doi.org/10.1177/0734282915621223>
- Dias, J. D., Mekaro, M. S., Cheng Lu, J. K., Otsuka, J. L., Fonseca, L. M. M., & Zem-Mascarenhas, S. H. (2016). Serious game development as a strategy for health promotion and tackling childhood obesity. *Revista latino-americana de enfermagem*, 24. <https://doi.org/10.1590/1518-8345.1015.2759>
- Digennaro, S. (2023). The use of social media among preadolescents: habits and consequences. *J Health Educ Sports Inklus Didactics*, 7. <https://doi.org/10.32043/gsd.v7i1.793>

- Digennaro, S. (2024, April). The syndrome of multiple bodies: the transformative impact of the onlife existence on preadolescents. In *Frontiers in Education* (Vol. 9, p. 1362448). Frontiers Media SA. <https://doi.org/10.3389/feduc.2024.1362448>
- Digennaro, S., & Iannaccone, A. (2023). Check your likes but move your body! How the use of social media is influencing pre-teens body and the role of active lifestyles. *Sustainability*, 15(4), 3046. <https://doi.org/10.3390/su15043046>
- Digennaro, S., & Tescione, A. (2024, April). Scrolls and self-perception, navigating the link between social networks and body dissatisfaction in preadolescents and adolescents: a systematic review. In *Frontiers in Education* (Vol. 9, p. 1390583). Frontiers Media SA. <https://doi.org/10.3389/feduc.2024.1390583>
- Dijkstra, J. K., Lindenberg, S., & Veenstra, R. (2007). Same-gender and cross-gender peer acceptance and peer rejection and their relation to bullying and helping among preadolescents: comparing predictions from gender-homophily and goal-framing approaches. *Developmental psychology*, 43(6), 1377. <https://psycnet.apa.org/doi/10.1037/0012-1649.43.6.1377>
- Dodge, K. A., Bates, J. E., & Pettit, G. S. (1990). Mechanisms in the cycle of violence. *Science*, 250(4988), 1678-1683. <https://doi.org/10.1126/science.2270481>
- Donegan, R. (2012). Bullying and cyberbullying: History, statistics, law, prevention and analysis. *The Elon Journal of Undergraduate Research in Communications*, 3(1), 33-42.
- Dorn, L. D., & Biro, F. M. (2011). Puberty and its measurement: A decade in review. *Journal of research on adolescence*, 21(1), 180-195. <https://doi.org/10.1111/j.1532-7795.2010.00722.x>
- Dorol, O., & Mishara, B. L. (2021). Systematic review of risk and protective factors for suicidal and self-harm behaviors among children and adolescents involved with cyberbullying. *Preventive medicine*, 152, 106684. <https://doi.org/10.1016/j.ypmed.2021.106684>
- Doswell, W. M., Millor, G. K., & Thompson, H. (1998). Self-image and self-esteem in African-American preteen girls: Implications for mental health. *Issues in Mental Health Nursing*, 19(1), 71-94. <https://doi.org/10.1080/016128498249222>
- Dracic, S. (2009). Bullying and peer victimization. *Materia Socio-Medica*, 21(4), 216.
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child development*, 82(1), 405-432. <https://doi.org/10.1111/j.1467-8624.2010.01564.x>
- Durlak, J. A., Domitrovich, C. E., & Mahoney, J. L. (Eds.). (2024). *Handbook of social and emotional learning*. Guilford Publications.
- Eady, M., & Lockyer, L. (2013). Tools for learning: Technology and teaching. *Learning to teach in the primary school*, 71.
- Earnshaw, V. A., Reisner, S. L., Menino, D. D., Poteat, V. P., Bogart, L. M., Barnes, T. N., & Schuster, M. A. (2018). Stigma-based bullying interventions: A systematic review. *Developmental review*, 48, 178-200. <https://doi.org/10.1016/j.dr.2018.02.001>
- Eichenberg, C., & Schott, M. (2017). Serious games for psychotherapy: A systematic review. *Games for health journal*, 6(3), 127-135. <https://doi.org/10.1089/g4h.2016.0068>

- Eisenberg, N., Spinrad, T., & Sadovsky, A. (2006). Empathy-related responding in children. In *Handbook of moral development* (pp. 535-568). Psychology Press.
- Eisner, M., & Malti, T. (2012). The future of research on evidence-based developmental violence prevention in Europe—Introduction to the focus section. *International Journal of Conflict and Violence (IJCIV)*, 6(2), 166-175. <https://doi.org/10.4119/ijcv-2909>
- Eisner, M. P., & Malti, T. (2015). Aggressive and violent behavior. *Handbook of child psychology and developmental science: Socioemotional processes*, 3, 794-841.
- Ellickson, P. L., & McGuigan, K. A. (2000). Early predictors of adolescent violence. *American journal of public health*, 90(4), 566. DOI: 10.2105/ajph.90.4.566
- Emejulu, A., & McGregor, C. (2019). Towards a radical digital citizenship in digital education. *Critical Studies in Education*, 60(1), 131-147. <https://doi.org/10.1080/17508487.2016.1234494>
- Ennett, S. T., Haws, S., Ringwalt, C. L., Vincus, A. A., Hanley, S., Bowling, J. M., & Rohrbach, L. A. (2011). Evidence-based practice in school substance use prevention: fidelity of implementation under real-world conditions. *Health Education Research*, 26(2), 361-371. <https://doi.org/10.1093/her/cyr013>
- Erath, S. A., & Tu, K. M. (2014). Peer stress in preadolescence: Linking physiological and coping responses with social competence. *Journal of Research on Adolescence*, 24(4), 757-771. <https://doi.org/10.1111/jora.12085>
- Erdur-Baker, Ö. (2010). Cyberbullying and its correlation to traditional bullying, gender and frequent and risky usage of internet-mediated communication tools. *New media & society*, 12(1), 109-125. <https://doi.org/10.1177/1461444809341260>
- Emmery, C., Verhoeven, B., De Pauw, G., Jacobs, G., Van Hee, C., Lefever, E., ... & Daelemans, W. (2021). Current limitations in cyberbullying detection: On evaluation criteria, reproducibility, and data scarcity. *Language Resources and Evaluation*, 55, 597-633. <https://doi.org/10.1007/s10579-020-09509-1>
- Emond, A., Ormel, J., Veenstra, R., & Oldehinkel, A. J. (2007). Preschool behavioral and social-cognitive problems as predictors of (pre) adolescent disruptive behavior. *Child psychiatry and human development*, 38, 221-236. <https://doi.org/10.1007/s10578-007-0058-5>
- Escortell, R., Aparisi, D., Martínez-Monteagudo, M. C., & Delgado, B. (2020). Personality traits and aggression as explanatory variables of cyberbullying in Spanish preadolescents. *International journal of environmental research and public health*, 17(16), 5705. <https://doi.org/10.3390/ijerph17165705>
- Escortell, R., Delgado, B., Baquero, A., & Martínez-Monteagudo, M. C. (2023). Child protection in the digital age. Latent profiles in cyberbullying and the relationship with self-concept and achievement goals in preadolescence. *Child & Family Social Work*. <https://doi.org/10.1111/cfs.13024>
- Espelage, D. L., & Swearer, S. M. (Eds.). (2004). *Bullying in American schools: A social-ecological perspective on prevention and intervention*. routledge.
- Espelage, D. L., Rao, M. A., & Craven, R. G. (2012). Theories of cyberbullying. *Principles of cyberbullying research: Definitions, measures, and methodology*, 49-67.
- Espelage, D. L., & Holt, M. K. (2013). Bullying and victimization during early adolescence: Peer influences and psychosocial correlates. In *Bullying Behavior* (pp. 123-142). Routledge.

- Espelege, D. L., & Hong, J. S. (2017). Cyberbullying prevention and intervention efforts: current knowledge and future directions. *The Canadian Journal of Psychiatry*, 62(6), 374-380. <https://doi.org/10.1177/0706743716684793>
- Espey, K., McGuckin, C., & Duffy, J. (2013). *A mixed methods approach to understanding cyberbullying: A role for both quantitative and qualitative research*. <http://hdl.handle.net/10147/299947>
- Estévez, J. F., Cañas, E., & Estévez, E. (2020). The impact of cybervictimization on psychological adjustment in adolescence: Analyzing the role of emotional intelligence. *International journal of environmental research and public health*, 17(10), 3693. <https://doi.org/10.3390/ijerph17103693>
- Falla, D., Ortega-Ruiz, R., Runions, K., & Romera, E. M. (2022). Why do victims become perpetrators of peer bullying? Moral disengagement in the cycle of violence. *Youth & Society*, 54(3), 397-418. <https://doi.org/10.1177/0044118X20973702>
- Fanti, K. A., Demetriou, A. G., & Hawa, V. V. (2012). A longitudinal study of cyberbullying: Examining risk and protective factors. *European Journal of Developmental Psychology*, 9(2), 168-181. <https://doi.org/10.1080/17405629.2011.643169>
- Faris, R., & Ennett, S. (2012). Adolescent aggression: The role of peer group status motives, peer aggression, and group characteristics. *Social networks*, 34(4), 371-378. <https://doi.org/10.1016/j.socnet.2010.06.003>
- Feenstra, F., Muzellec, L., de Faultrier, B., & Boulay, J. (2015). Edutainment experiences for children in retail stores, from a child's perspective. *Journal of Retailing and Consumer Services*, 26, 47-56. <https://doi.org/10.1016/j.jretconser.2015.05.004>
- Fernandez-Montalvo, J., Penalva, A., & Irazabal, I. (2015). Internet use habits and risk behaviours in preadolescence. *Comunicar: Revista Científica de Comunicación y Educación*, 22(44), 113-120. <https://doi.org/10.3916/C44-2015-12>
- Ferreira, P. C., Simão, A. M. V., Paiva, A., Martinho, C., Prada, R., Ferreira, A., & Santos, F. (2021). Exploring empathy in cyberbullying with serious games. *Computers & Education*, 166, 104155. <https://doi.org/10.1016/j.compedu.2021.104155>
- Fischer, R., Scheunemann, J., & Moritz, S. (2021). Coping strategies and subjective well-being: context matters. *Journal of Happiness Studies*, 1-22. <https://doi.org/10.1007/s10902-021-00372-7>
- Fisher, B. W., Gardella, J. H., & Teurbe-Tolon, A. R. (2016). Peer cybervictimization among adolescents and the associated internalizing and externalizing problems: A meta-analysis. *Journal of youth and adolescence*, 45, 1727-1743. <https://doi.org/10.1007/s10964-016-0541-z>
- Fishman, B., Dede, C., & Means, B. (2016). Teaching and technology: New tools for new times. *Handbook of research on teaching*, 5, 1269-1334.
- Flack, T. (2020). Relational aggression and relational inclusion in adolescents: the role of empathic concern for victims of relational aggression and perspective taking. *Emotional and Behavioural Difficulties*, 25(3-4), 201-214. <https://doi.org/10.1080/13632752.2020.1790798>
- Flay, B. R., Biglan, A., Boruch, R. F., Castro, F. G., Gottfredson, D., Kellam, S., ... & Ji, P. (2005). Standards of evidence: Criteria for efficacy, effectiveness and dissemination. *Prevention science*, 6, 151-175. <https://doi.org/10.1007/s11121-005-5553-y>
- Florea, N. M., & Hurjui, E. (2015). Critical thinking in elementary school children. *Procedia-Social and behavioral sciences*, 180, 565-572. <https://doi.org/10.1016/j.sbspro.2015.02.161>

- Floridi, L. (2015). *The onlife manifesto: Being human in a hyperconnected era* (p. 264). Springer Nature. DOI: 10.1007/978-3-319-04093-6
- Foley, J. E., & Weinraub, M. (2017). Sleep, affect, and social competence from preschool to preadolescence: distinct pathways to emotional and social adjustment for boys and for girls. *Frontiers in psychology*, 8, 711. <https://doi.org/10.3389/fpsyg.2017.00711>
- Fonagy, P. (2003). The research agenda: the vital need for empirical research in child psychotherapy. *Journal of child psychotherapy*, 29(2), 129-136. <https://doi.org/10.1080/0075417031000138406>
- Fossum, S., Skokauskas, N., Handegård, B. H., Hansen, K. L., & Kyrrestad, H. (2023). The significance of traditional bullying, cyberbullying, and mental health problems for middle school students feeling unsafe in the school environment. *Scandinavian Journal of Educational Research*, 67(2), 281-293. <https://doi.org/10.1080/00313831.2021.2006305>
- Franchina, V., Vanden Abeele, M., Van Rooij, A. J., Lo Coco, G., & De Marez, L. (2018). Fear of missing out as a predictor of problematic social media use and phubbing behavior among Flemish adolescents. *International journal of environmental research and public health*, 15(10), 2319. <https://doi.org/10.3390/ijerph15102319>
- Fraser, M. W. (1996). Aggressive behavior in childhood and early adolescence: An ecological-developmental perspective on youth violence. *Social work*, 41(4), 347-361. <https://doi.org/10.1093/sw/41.4.347>
- Frissen, V., Lammes, S., De Lange, M., De Mul, J., & Raessens, J. (2015). *Homo ludens 2.0: Play, media, and identity*.
- Frydenberg, E. (2014). Coping research: Historical background, links with emotion, and new research directions on adaptive processes. *Australian Journal of Psychology*, 66(2), 82-92. <https://doi.org/10.1111/ajpy.12051>
- Funkenstein, D. H., King, S. H., & Drolette, M. E. (1957). *Mastery of stress*. Harvard University Press. <https://doi.org/10.4159/harvard.9780674332911>
- Gaffney, H., Farrington, D. P., Espelage, D. L., & Ttofi, M. M. (2019). Are cyberbullying intervention and prevention programs effective? A systematic and meta-analytical review. *Aggression and violent behavior*, 45, 134-153. <https://doi.org/10.1016/j.avb.2018.07.002>
- Galán, C. A., Stokes, L. R., Szoko, N., Abebe, K. Z., & Culyba, A. J. (2021). Exploration of experiences and perpetration of identity-based bullying among adolescents by race/ethnicity and other marginalized identities. *JAMA network open*, 4(7), e2116364-e2116364. DOI: 10.1001/jamanetworkopen.2021.16364
- Gámez Guadix, M., Wachs, S., & Wright, M. (2020). "Haters back off!" Psychometric properties of the coping with cyberhate questionnaire and relationship with well-being in Spanish adolescents. *Psicothema*. <https://hdl.handle.net/11162/203157>
- Gamito, P., Oliveira, J., Coelho, C., Morais, D., Lopes, P., Pacheco, J., ... & Barata, A. F. (2017). Cognitive training on stroke patients via virtual reality-based serious games. *Disability and rehabilitation*, 39(4), 385-388. <https://doi.org/10.3109/09638288.2014.934925>
- Gao, M. M., & Cummings, E. M. (2019). Understanding parent-child relationship as a developmental process: Fluctuations across days and changes over years. *Developmental psychology*, 55(5), 1046. <https://psycnet.apa.org/doi/10.1037/dev0000680>

- Gabrielli, S., Rizzi, S., Carbone, S., & Piras, E. M. (2021). School interventions for bullying–cyberbullying prevention in adolescents: Insights from the UPRIGHT and CREEP projects. *International journal of environmental research and public health*, 18(21), 11697. <https://doi.org/10.3390/ijerph182111697>
- Garaigordobil, M., & Machimbarrena, J. M. (2019). Victimization and perpetration of bullying/cyberbullying: Connections with emotional and behavioral problems and childhood stress. *Psychosocial Intervention*, 28(2), 67-73. <https://doi.org/10.5093/pi2019a3>
- Gardella, J. H., Fisher, B. W., & Teurbe-Tolon, A. R. (2017). A systematic review and meta-analysis of cyber-victimization and educational outcomes for adolescents. *Review of Educational Research*, 87(2), 283-308. <https://doi.org/10.3102/0034654316689136>
- Garnefski, N., Kraaij, V., & Spinhoven, P. (2001). Negative life events, cognitive emotion regulation and emotional problems. *Personality and Individual differences*, 30(8), 1311-1327. [https://doi.org/10.1016/S0191-8869\(00\)00113-6](https://doi.org/10.1016/S0191-8869(00)00113-6)
- Garrison, D. R., & Vaughan, N. D. (2009). Blended learning in higher education. *Canadian Journal of University Continuing Education*, 35(2), 109-123.
- Ghaiumy Anaraky, R., Freeman, G., Aragón, O. R., Knijnenburg, B. P., & Tallapragada, M. (2019, November). The dark side of social media: What makes some users more vulnerable than others?. In *Conference companion publication of the 2019 on computer supported cooperative work and social computing* (pp. 185-189). <https://doi.org/10.1145/3311957.3359493>
- Geith, C., & Vignare, K. (2008). Access to Education with Online Learning and Open Educational Resources: Can They Close the Gap?. *Journal of asynchronous learning networks*, 12(1), 105-126.
- Genta, M. L., Smith, P. K., Ortega, R., Brighi, A., Guarini, A., Thompson, F., & Calmaestra, J. (2012). Comparative aspects of cyberbullying in Italy, England, and Spain. *Cyberbullying in the global playground: Research from international perspectives*, 15-31. DOI:10.1002/9781119954484
- Gesser-Edelsburg, A., Fridman, T., & Lev-Wiesel, R. (2017). Edutainment as a strategy for parental discussion with Israeli children: the potential of a children's play in preventing sexual abuse. *Journal of child sexual abuse*, 26(5), 553-572. <https://doi.org/10.1080/10538712.2017.1319003>
- Gibbs, A. (1997). Focus groups. *Social research update*, 19(8), 1-8.
- Gini, G., Pozzoli, T., & Hymel, S. (2014). Moral disengagement among children and youth: A meta-analytic review of links to aggressive behavior. *Aggressive behavior*, 40(1), 56-68. <https://doi.org/10.1002/ab.21502>
- Gini, G., Pozzoli, T., & Bussey, K. (2015). The role of individual and collective moral disengagement in peer aggression and bystanding: A multilevel analysis. *Journal of abnormal child psychology*, 43, 441-452. <https://doi.org/10.1007/s10802-014-9920-7>
- Giordano, A. L., Prosek, E. A., & Watson, J. C. (2021). Understanding adolescent cyberbullies: exploring social media addiction and psychological factors. *Journal of child and adolescent counseling*, 7(1), 42-55. <https://doi.org/10.1080/23727810.2020.1835420>
- Gori, A., & Topino, E. (2023). The association between alexithymia and social media addiction: Exploring the role of dysmorphic symptoms, symptoms interference, and self-esteem, controlling for age and gender. *Journal of personalized medicine*, 13(1), 152. <https://doi.org/10.3390/jpm13010152>

- Glüer, M., & Lohaus, A. (2016). Participation in social network sites: Associations with the quality of offline and online friendships in German preadolescents and adolescents. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 10(2). <https://doi.org/10.5817/CP2016-2-2>
- Goleman, D. (2001). Emotional intelligence: Issues in paradigm building. *The emotionally intelligent workplace*, 13, 26.
- Grading, P., Strohmeier, D., & Spiel, C. (2009). Traditional bullying and cyberbullying: Identification of risk groups for adjustment problems. *Zeitschrift für Psychologie/Journal of Psychology*, 217(4), 205-213. <https://doi.org/10.1027/0044-3409.217.4.205>
- Grading, P., Strohmeier, D., Schiller, E. M., Stefanek, E., & Spiel, C. (2012). Cyber-victimization and popularity in early adolescence: Stability and predictive associations. *European Journal of Developmental Psychology*, 9(2), 228-243. <https://doi.org/10.1080/17405629.2011.643171>
- Grading, P., Yanagida, T., Strohmeier, D., & Spiel, C. (2016). Effectiveness and sustainability of the ViSC Social Competence Program to prevent cyberbullying and cyber-victimization: Class and individual level moderators. *Aggressive behavior*, 42(2), 181-193. <https://doi.org/10.1002/ab.21631>
- Graf, D., Yanagida, T., Runions, K., & Spiel, C. (2022). Why did you do that? Differential types of aggression in offline and in cyberbullying. *Computers in Human Behavior*, 128, 107107. <https://doi.org/10.1016/j.chb.2021.107107>
- Graham, S., & Harris, K. R. (2017). Evidence-based writing practices: A meta-analysis of existing meta-analyses. In *Design principles for teaching effective writing* (pp. 13-37). Brill. https://doi.org/10.1163/9789004270480_003
- Grant, A. M., & Berry, J. W. (2011). The necessity of others is the mother of invention: Intrinsic and prosocial motivations, perspective taking, and creativity. *Academy of management journal*, 54(1), 73-96. <https://doi.org/10.5465/amj.2011.59215085>
- Green, M., & McNeese, M. N. (2007). Using edutainment software to enhance online learning. *International Journal on E-learning*, 6(1), 5-16. <https://www.learntechlib.org/primary/p/6317/>
- Greenberg, J., & Cohen, R. L. (Eds.). (2014). *Equity and justice in social behavior*. Academic Press.
- Greenfield, P., & Yan, Z. (2006). Children, adolescents, and the Internet: A new field of inquiry in developmental psychology. *Developmental psychology*, 42(3), 391. <https://psycnet.apa.org/doi/10.1037/0012-1649.42.3.391>
- Grigg, D. W. (2010). Cyber-aggression: Definition and concept of cyberbullying. *Journal of Psychologists and Counsellors in Schools*, 20(2), 143-156. DOI: 10.1375/ajgc.20.2.143
- Gross, J. J. (2002). Emotion regulation: Affective, cognitive, and social consequences. *Psychophysiology*, 39(3), 281-291. DOI: 10.1017/S0048577201393198
- Gualberto, C., & Kress, G. (2019). Contemporary landscapes of visual and digital communication: The interplay of social, semiotic, and technological change. *The Sage handbook of visual research methods*, 574-590.
- Guardo, C. J., & Bohan, J. B. (1981). Development of a sense of self-identity in children. In *The Life Cycle: Readings in Human Development* (pp. 118-132). Columbia University Press. <https://doi.org/10.7312/stei93738-011>

- Guarini, A., Passini, S., Melotti, G., & Brighi, A. (2012). *Protective factors on perpetration of bullying and cyberbullying*.
- Güler, H., Öztay, O. H., & Özkoçak, V. (2022). Evaluation of the relationship between social media addiction and aggression. *Gaziantep University Journal of Social Sciences*, 21(3), 1350-1366. <https://doi.org/10.21547/jss.1109602>
- Hamid, M. S. (2012). *Metode edutainment*.
- Hamid, B. A., Ismail, H., & Shamsuddin, C. M. (2018). Haters Will Hate, But How? The Language of Body Shaming Cyberbullies in Instagram. *Stop Cyberbullying. Penerbit University Kebangsaan Malaysia*, 80-101.
- Hamm, M. P., Newton, A. S., Chisholm, A., Shulhan, J., Milne, A., Sundar, P., ... & Hartling, L. (2015). Prevalence and effect of cyberbullying on children and young people: A scoping review of social media studies. *JAMA pediatrics*, 169(8), 770-777. DOI: 10.1001/jamapediatrics.2015.0944
- Hall, J. A., & Schwartz, R. (2019). Empathy present and future. *The Journal of social psychology*, 159(3), 225-243. <https://doi.org/10.1080/00224545.2018.1477442>
- Hall-Lande, J. A., Eisenberg, M. E., Christenson, S. L., & Neumark-Sztainer, D. (2007). Social isolation, psychological health, and protective factors in adolescence. *Adolescence*, 42(166).
- Halliwell, E., Jarman, H., Tylka, T. L., & Slater, A. (2018). Evaluating the impact of a brief yoga intervention on preadolescents' body image and mood. *Body image*, 27, 196-201. <https://doi.org/10.1016/j.bodyim.2018.10.003>
- Hantrais, L., & Mangen, S. P. (Eds.). (1996). *Cross national research methods*. A&C Black.
- Harrison, T. (2015). Virtuous reality: moral theory and research into cyber-bullying. *Ethics and Information Technology*, 17(4), 275-283. <https://doi.org/10.1007/s10676-015-9382-9>
- Harter, S. (1990). Developmental differences in the nature of self-representations: Implications for the understanding, assessment, and treatment of maladaptive behavior. *Cognitive therapy and research*, 14, 113-142. <https://doi.org/10.1007/BF01176205>
- Hassan, A., Pinkwart, N., & Shafi, M. (2021). Serious games to improve social and emotional intelligence in children with autism. *Entertainment computing*, 38, 100417. <https://doi.org/10.1016/j.entcom.2021.100417>
- Havighurst, R. J. (1952). Social and psychological needs of the aging. *The Annals of the American Academy of Political and Social Science*, 279(1), 11-17. <https://doi.org/10.1177/000271625227900102>
- Hawi, N. S., & Samaha, M. (2017). The relations among social media addiction, self-esteem, and life satisfaction in university students. *Social Science Computer Review*, 35(5), 576-586. <https://doi.org/10.1177/0894439316660340>
- Hawkins, B. (2002). Children's drawing, self expression, identity and the imagination. *International Journal of Art & Design Education*, 21(3), 209-219. <https://doi.org/10.1111/1468-5949.00318>
- Hayes, M. V. (1992). On the epistemology of risk: language, logic and social science. *Social science & medicine*, 35(4), 401-407. [https://doi.org/10.1016/0277-9536\(92\)90332-K](https://doi.org/10.1016/0277-9536(92)90332-K)

- Hayes, A. F. (2013). *Mediation, moderation, and conditional process analysis. Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*, 1(6), 12-20.
- Heeks, R. (2016). Seeking a new link between ICTs and human development. *Information Technologies & International Development*, 12(1), pp-51.
- Heiman, T., & Olenik-Shemesh, D. (2022). Cyber-victimization experience among higher education students: Effects of Social Support, loneliness, and self-efficacy. *International journal of environmental research and public health*, 19(12), 7395. <https://doi.org/10.3390/ijerph19127395>
- Hemphill, S. A., Tollit, M., Kotevski, A., & Florent, A. (2015). Bullying in schools: Rates, correlates, and impact on mental health. *Violence and mental health: Its manifold faces*, 185-205. https://doi.org/10.1007/978-94-017-8999-8_9
- Henares-Montiel, J., Benítez-Hidalgo, V., Ruiz-Perez, I., Pastor-Moreno, G., & Rodríguez-Barranco, M. (2022). Cyberbullying and associated factors in member countries of the European Union: a systematic review and meta-analysis of studies with representative population samples. *International journal of environmental research and public health*, 19(12), 7364. <https://doi.org/10.3390/ijerph19127364>
- Henricks, T. S. (2023). *Play reconsidered: Sociological perspectives on human expression*. University of Illinois Press.
- Hernandez, R. M. (2017). Impact of ICT on Education: Challenges and Perspectives. *Journal of Educational Psychology-Propósitos y Representaciones*, 5(1), 337-347.
- Hernández-Martín, A., Martín-del-Pozo, M., & Iglesias-Rodríguez, A. (2021). Pre-adolescents' digital competences in the area of safety. Does frequency of social media use mean safer and more knowledgeable digital usage?. *Education and Information Technologies*, 26(1), 1043-1067. <https://doi.org/10.1007/s10639-020-10302-4>
- Hinduja, S., & Patchin, J. (2007) Offline consequences of online victimization: school violence and delinquency. *J Sch Violence*. 6(3): 89–112. https://doi.org/10.1300/J202v06n03_06
- Hinduja, S., & Patchin, J. W. (2008). Cyberbullying: An exploratory analysis of factors related to offending and victimization. *Deviant behavior*, 29(2), 129-156. <https://doi.org/10.1080/01639620701457816>
- Hinduja, S., & Patchin, J. W. (2010). Bullying, cyberbullying, and suicide. *Archives of suicide research*, 14(3), 206-221. <https://doi.org/10.1080/13811118.2010.494133>
- Hinduja, S., & Patchin, J. W. (2012). *School climate 2.0: Preventing cyberbullying and sexting one classroom at a time*. Corwin Press.
- Hinduja, S., & Patchin, J. W. (2013). Social influences on cyberbullying behaviors among middle and high school students. *Journal of youth and adolescence*, 42, 711-722. <https://doi.org/10.1007/s10964-012-9902-4>
- Holfeld, B., & Sukhawathanakul, P. (2017). Associations between internet attachment, cyber victimization, and internalizing symptoms among adolescents. *Cyberpsychology, Behavior, and Social Networking*, 20(2), 91-96. <https://doi.org/10.1089/cyber.2016.0194>
- Holt, M. K., Raczynski, K., Frey, K. S., Hymel, S., & Limber, S. P. (2013). School and community-based approaches for preventing bullying. *Journal of School Violence*, 12(3), 238-252. <https://doi.org/10.1080/15388220.2013.792271>

- Hong, J. S., Lee, C. H., Lee, J., Lee, N. Y., & Garbarino, J. (2014). A review of bullying prevention and intervention in South Korean schools: An application of the social–ecological framework. *Child Psychiatry & Human Development*, 45, 433-442. <https://doi.org/10.1007/s10578-013-0413-7>
- Hong, J. S., Zhang, S., Wright, M. F., & Wachs, S. (2023). Racial and ethnic differences in the antecedents of cyberbullying victimization in early adolescence: an ecological systems framework. *The Journal of Early Adolescence*, 43(1), 59-89. <https://doi.org/10.1177/02724316211042939>
- Huesmann, L. R., & Guerra, N. G. (1997). Children's normative beliefs about aggression and aggressive behavior. *Journal of personality and social psychology*, 72(2), 408. <https://psycnet.apa.org/doi/10.1037/0022-3514.72.2.408>
- Huesmann, L. R., Dubow, E. F., & Boxer, P. (2009). Continuity of aggression from childhood to early adulthood as a predictor of life outcomes: Implications for the adolescent-limited and life-course-persistent models. *Aggressive Behavior: Official Journal of the International Society for Research on Aggression*, 35(2), 136-149. <https://doi.org/10.1002/ab.20300>
- Hussain, Z., Kircaburun, K., Savcı, M., & Griffiths, M. D. (2023). The role of aggression in the association of cyberbullying victimization with cyberbullying perpetration and problematic social media use among adolescents. *Journal of Concurrent Disorders*. <https://doi.org/10.54127/AOJW5819>
- Hutson, E., Kelly, S., & Militello, L. K. (2018). Systematic review of cyberbullying interventions for youth and parents with implications for evidence-based practice. *Worldviews on evidence-based nursing*, 15(1), 72-79. <https://doi.org/10.1111/wvn.12257>
- Hutzell, K. L., & Payne, A. A. (2012). The impact of bullying victimization on school avoidance. *Youth Violence and Juvenile Justice*, 10(4), 370-385. <https://doi.org/10.1177/1541204012438926>
- Imtiaz, R., Yasin, G., & Yaseen, A. (2010). Sociological study of the factors affecting the aggressive behavior among youth. *Pakistan Journal of Social Sciences*, 30(1), 99-108.
- Iwasaki, Y. (2016). The role of youth engagement in positive youth development and social justice youth development for high-risk, marginalised youth. *International Journal of Adolescence and Youth*, 21(3), 267-278. <https://doi.org/10.1080/02673843.2015.1067893>
- Jacobs, M. (1995). DW Winnicott. *DW Winnicott*, 1-176.
- Jenkins, E. L., Ilicic, J., Barklamb, A. M., & McCaffrey, T. A. (2020). Assessing the credibility and authenticity of social media content for applications in health communication: scoping review. *Journal of medical Internet research*, 22(7), e17296. DOI: 10.2196/17296
- Jennings, W. G., & Reingle, J. M. (2012). On the number and shape of developmental/life-course violence, aggression, and delinquency trajectories: A state-of-the-art review. *Journal of criminal justice*, 40(6), 472-489. <https://doi.org/10.1016/j.jcrimjus.2012.07.001>
- Jensen, C. D., & Steele, R. G. (2009). Brief report: Body dissatisfaction, weight criticism, and self-reported physical activity in preadolescent children. *Journal of pediatric psychology*, 34(8), 822-826. <https://doi.org/10.1093/jpepsy/jsn131>
- Jones, L. M., & Mitchell, K. J. (2016). Defining and measuring youth digital citizenship. *New media & society*, 18(9), 2063-2079. <https://doi.org/10.1177/1461444815577797>

- Joshi, S. C., & Rose, G. (2018, December). Information technology, internet use, and adolescent cognitive development. In *2018 3rd International Conference on Computational Systems and Information Technology for Sustainable Solutions (CSITSS)* (pp. 22-28). IEEE. DOI: 10.1109/CSITSS.2018.8768780.
- Kader, Z., & Roman, N. V. (2018). The effects of family conflict on the psychological needs and externalising behaviour of preadolescents. *Social Work*, 54(1), 37-52. <http://dx.doi.org/10.15270/54-1-613>
- Kalogeras, S. (2013). Media-education convergence: Applying transmedia storytelling edutainment in e-learning environments. *International Journal of Information and Communication Technology Education (IJICTE)*, 9(2), 1-11. <https://doi.org/10.4018/jicte.2013040101>
- Kaluarachchi, C., Warren, M., & Jiang, F. (2020). *Responsible use of technology to combat cyberbullying among young people*. <https://doi.org/10.3127/AJIS.V24I0.2791>
- Kapatzia, A., & Syngollitou, E. (2007). *Cyberbullying in middle and high schools: prevalence, gender and age differences*. Unpublished manuscript based on MSc Thesis of A. Kaptazia, University of Thessaloniki.
- Kapp, K. M. (2012). What is gamification. *The gamification of learning and instruction: game-based methods and strategies for training and education*, 1-23.
- Kashy-Rosenbaum, G., & Aizenkot, D. (2020). Exposure to cyberbullying in WhatsApp classmates 'groups and classroom climate as predictors of students 'sense of belonging: A multi-level analysis of elementary, middle and high schools. *Children and youth services review*, 108, 104614. <https://doi.org/10.1016/j.childyouth.2019.104614>
- Katz, I., Lemish, D., Cohen, R., & Arden, A. (2019). When parents are inconsistent: Parenting style and adolescents' involvement in cyberbullying. *Journal of adolescence*, 74, 1-12. <https://doi.org/10.1016/j.adolescence.2019.04.006>
- Kazdin, A. E. (2003). *Research Design in Clinical Psychology*. Allyn & Bacon.
- Keengwe, J., Onchwari, G., & Wachira, P. (2008). Computer technology integration and student learning: Barriers and promise. *Journal of science education and technology*, 17, 560-565. <https://doi.org/10.1007/s10956-008-9123-5>
- Kellam, S. G., & Langevin, D. J. (2003). A framework for understanding "evidence" in prevention research and programs. *Prevention Science*, 4, 137-153. <https://doi.org/10.1023/A:1024693321963>
- Keyes, C. L. M. (1998). Social well-being. *Social Psychology Quarterly*, 121-140. <https://doi.org/10.2307/2787065>
- Khan, A., Ahmad, F. H., & Malik, M. M. (2017). Use of digital game based learning and gamification in secondary school science: The effect on student engagement, learning and gender difference. *Education and Information Technologies*, 22, 2767-2804. <https://doi.org/10.1007/s10639-017-9622-1>
- Kim, S., Song, K., Lockee, B., & Burton, J. (2017). What is gamification in learning and education?. In *Gamification in learning and education: Enjoy learning like gaming* (pp. 25-38). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-47283-6_4
- Kim, M., & Choi, D. (2018). Development of youth digital citizenship scale and implication for educational setting. *Journal of Educational Technology & Society*, 21(1), 155-171. <https://www.jstor.org/stable/26273877>

- Kim, S., Colwell, S. R., Kata, A., Boyle, M. H., & Georgiades, K. (2018). Cyberbullying victimization and adolescent mental health: Evidence of differential effects by sex and mental health problem type. *Journal of youth and adolescence*, 47, 661-672. <https://doi.org/10.1007/s10964-017-0678-4>
- Kim, S., Kimber, M., Boyle, M. H., & Georgiades, K. (2019). Sex differences in the association between cyberbullying victimization and mental health, substance use, and suicidal ideation in adolescents. *The Canadian Journal of Psychiatry*, 64(2), 126-135. <https://doi.org/10.1177/0706743718777397>
- Kim, J., Walsh, E., Pike, K., & Thompson, E. A. (2020). Cyberbullying and victimization and youth suicide risk: the buffering effects of school connectedness. *The journal of school nursing*, 36(4), 251-257. <https://doi.org/10.1177/1059840518824395>
- King, K. M., Lengua, L. J., & Monahan, K. C. (2013). Individual differences in the development of self-regulation during pre-adolescence: Connections to context and adjustment. *Journal of abnormal child psychology*, 41, 57-69. <https://doi.org/10.1007/s10802-012-9665-0>
- Kırcaburun, K., Kokkinos, C. M., Demetrovics, Z., Király, O., Griffiths, M. D., & Çolak, T. S. (2019). Problematic online behaviors among adolescents and emerging adults: Associations between cyberbullying perpetration, problematic social media use, and psychosocial factors. *International Journal of Mental Health and Addiction*, 17, 891-908. <https://doi.org/10.1007/s11469-018-9894-8>
- Kırcaburun, K., Jonason, P., Griffiths, M. D., Aslanargun, E., Emirtekin, E., Tosuntaş, Ş. B., & Billieux, J. (2021). Childhood emotional abuse and cyberbullying perpetration: The role of dark personality traits. *Journal of interpersonal violence*, 36(21-22), NP11877-NP11893. <https://doi.org/10.1177/0886260519889930>
- Kitzinger, J. (1995). Qualitative research: introducing focus groups. *Bmj*, 311(7000), 299-302. <https://doi.org/10.1136/bmj.311.7000.299>
- Klainin-Yobas, P., Vongsirimas, N., Ramirez, D. Q., Sarmiento, J., & Fernandez, Z. (2021). Evaluating the relationships among stress, resilience and psychological well-being among young adults: a structural equation modelling approach. *BMC Nursing*, 20, 1-10. <https://doi.org/10.1186/s12912-021-00645-9>
- Kljakovic, M., & Hunt, C. (2016). A meta-analysis of predictors of bullying and victimisation in adolescence. *Journal of adolescence*, 49, 134-145. <https://doi.org/10.1016/j.adolescence.2016.03.002>
- Kleftodimos, A., Lappas, G., & Evangelidis, G. (2020). Edutainment and practice in video-based learning: enriching educational videos with interactive activities and games. *International Journal of Entertainment Technology and Management*, 1(1), 5-33. <https://doi.org/10.1504/IJENTTM.2020.105689>
- Kling, J., Kwakkenbos, L., Diedrichs, P. C., Rumsey, N., Frisen, A., Brandao, M. P., ... & Fitzgerald, A. (2019). Systematic review of body image measures. *Body image*, 30, 170-211. <https://doi.org/10.1016/j.bodyim.2019.06.006>
- Koc, M., & Gulyagci, S. (2013). Facebook addiction among Turkish college students: The role of psychological health, demographic, and usage characteristics. *Cyberpsychology, Behavior, and Social Networking*, 16(4), 279-284. <https://doi.org/10.1089/cyber.2012.0249>
- Kohatsu, N. D., Robinson, J. G., & Torner, J. C. (2004). Evidence-based public health: an evolving concept. *American journal of preventive medicine*, 27(5), 417-421. <https://doi.org/10.1016/j.amepre.2004.07.019>
- Kohlberg L. (1984). *The psychology of moral development: The nature and validity of moral stages*. B. Y.: Holt, Rinehart and Winston. DOI: 10.1086/292850

- Kohlwes, R. J., Shunk, R. L., Avins, A., Garber, J., Bent, S., & Shlipak, M. G. (2006). The PRIME curriculum: Clinical research training during residency. *Journal of general internal medicine*, 21, 506-509. <https://doi.org/10.1111/j.1525-1497.2006.00438.x>
- Kokkinos, C. M., Antoniadou, N., Dalara, E., Koufogazou, A., & Papatziki, A. (2013). Cyber-bullying, personality and coping among pre-adolescents. *International Journal of Cyber Behavior, Psychology and Learning (IJCBL)*, 3(4), 55-69. DOI: 10.4018/978-1-4666-5942-1.ch066
- Kokkinos, C. M., Antoniadou, N., Asdre, A., & Voulgaridou, K. (2016). Parenting and Internet behavior predictors of cyber-bullying and cyber-victimization among preadolescents. *Deviant Behavior*, 37(4), 439-455. <https://doi.org/10.1080/01639625.2015.1060087>
- Kokkinos, C. M., & Panayiotou, G. (2004). Predicting bullying and victimization among early adolescents: Associations with disruptive behavior disorders. *Aggressive Behavior: Official Journal of the International Society for Research on Aggression*, 30(6), 520-533. <https://doi.org/10.1002/ab.20055>
- Kokkinos, C. M., & Voulgaridou, I. (2017). Links between relational aggression, parenting and personality among adolescents. *European Journal of Developmental Psychology*, 14(3), 249-264. <https://doi.org/10.1080/17405629.2016.1194265>
- Korkmaz, Ş. Ç. (2013). Language games as a part of edutainment. *Procedia-Social and Behavioral Sciences*, 93, 1249-1253. <https://doi.org/10.1016/j.sbspro.2013.10.023>
- Kowalski, R. M., & Limber, S. P. (2007). Electronic bullying among middle school students. *Journal of adolescent health*, 41(6), S22-S30. <https://doi.org/10.1016/j.jadohealth.2007.08.017>
- Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., & Lattanner, M. R. (2014). Bullying in the digital age: a critical review and meta-analysis of cyberbullying research among youth. *Psychological bulletin*, 140(4), 1073.
- Kowalski, R. M., Limber, S. P., & McCord, A. (2019). A developmental approach to cyberbullying: Prevalence and protective factors. *Aggression and violent behavior*, 45, 20-32. <https://doi.org/10.1016/j.avb.2018.02.009>
- Kowalski, R. M., Dillon, E., Macbeth, J., Franchi, M., & Bush, M. (2020). Racial differences in cyberbullying from the perspective of victims and perpetrators. *American journal of orthopsychiatry*, 90(5), 644. <https://psycnet.apa.org/doi/10.1037/ort0000492>
- Kraemer, H. C., Stice, E., Kazdin, A., Offord, D., & Kupfer, D. (2001). How do risk factors work together? Mediators, moderators, and independent, overlapping, and proxy risk factors. *American journal of psychiatry*, 158(6), 848-856. <https://doi.org/10.1176/appi.ajp.158.6.848>
- Kratochwill, T. R., & Shernoff, E. S. (2004). Evidence-based practice: Promoting evidence-based interventions in school psychology. *School Psychology Review*, 33(1), 34-48. <https://doi.org/10.1080/02796015.2004.12086229>
- Kratochwill, T. R. (2007). Preparing psychologists for evidence-based school practice: Lessons learned and challenges ahead. *American Psychologist*, 62(8), 829. <https://psycnet.apa.org/doi/10.1037/0003-066X.62.8.829>
- Kuin, N., Masthoff, E., Kramer, M., & Scherder, E. (2015). The role of risky decision-making in aggression: A systematic review. *Aggression and violent behavior*, 25, 159-172. <https://doi.org/10.1016/j.avb.2015.07.018>

- Kuss, D. J., D Griffiths, M., Karila, L., & Billieux, J. (2014). Internet addiction: A systematic review of epidemiological research for the last decade. *Current pharmaceutical design*, 20(25), 4026-4052.
- Kuss, D. J., & Griffiths, M. D. (2017). Social networking sites and addiction: Ten lessons learned. *International journal of environmental research and public health*, 14(3), 311. <https://doi.org/10.3390/ijerph14030311>
- Küter-Luks, T., Heuvelman, A., & Peters, O. (2011). Making Dutch pupils media conscious: preadolescents' self-assessment of possible media risks and the need for media education. *Learning, Media and Technology*, 36(3), 295-313. <https://doi.org/10.1080/17439884.2010.549826>
- Laamarti, F., Eid, M., & Saddik, A. E. (2014). An overview of serious games. *International Journal of Computer Games Technology*, 2014, 11-11. <https://doi.org/10.1155/2014/358152>
- Lan, M., Law, N., & Pan, Q. (2022). Effectiveness of anti-cyberbullying educational programs: A socio-ecologically grounded systematic review and meta-analysis. *Computers in Human Behavior*, 130, 107200. <https://doi.org/10.1016/j.chb.2022.107200>
- Landers, R. N., & Callan, R. C. (2011). Casual social games as serious games: The psychology of gamification in undergraduate education and employee training. *Serious games and edutainment applications*, 399-423. https://doi.org/10.1007/978-1-4471-2161-9_20
- Langos, C. (2012). Cyberbullying: The challenge to define. *Cyberpsychology, behavior, and social networking*, 15(6), 285-289. <https://doi.org/10.1089/cyber.2011.0588>
- Lapidot-Lefler, N., & Barak, A. (2012). Effects of anonymity, invisibility, and lack of eye-contact on toxic online disinhibition. *Computers in human behavior*, 28(2), 434-443. <https://doi.org/10.1016/j.chb.2011.10.014>
- LaRose, R., Mastro, D., & Eastin, M. S. (2001). Understanding Internet usage: A social-cognitive approach to uses and gratifications. *Social science computer review*, 19(4), 395-413. <https://doi.org/10.1177/089443930101900401>
- LaRose, R., & Eastin, M. S. (2004). A social cognitive theory of Internet uses and gratifications: Toward a new model of media attendance. *Journal of broadcasting & electronic media*, 48(3), 358-377. https://doi.org/10.1207/s15506878jobem4803_2
- Lau, K. S., & Marsee, M. A. (2013). Exploring narcissism, psychopathy, and Machiavellianism in youth: Examination of associations with antisocial behavior and aggression. *Journal of Child and Family studies*, 22, 355-367. <https://doi.org/10.1007/s10826-012-9586-0>
- Laursen, B., Finkelstein, B. D., & Betts, N. T. (2001). A developmental meta-analysis of peer conflict resolution. *Developmental review*, 21(4), 423-449. <https://doi.org/10.1006/drev.2000.0531>
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer publishing company.
- Lazuras, L., Pyżalski, J., Barkoukis, V., & Tsorbatzoudis, H. (2012). *Empathy and moral disengagement in adolescent cyberbullying: Implications for educational intervention and pedagogical practice*.
- Leeper, T. J., Arnold, J., & Arel-Bundock, V. (2018). Margins: Marginal effects for model objects. *R package version 0.3*, 23, 2018.
- Leff, S. S., Angelucci, J., Goldstein, A. B., Cardaciotto, L., Paskewich, B., & Grossman, M. B. (2014). Using a participatory action research model to create a school-based intervention program for relationally

- aggressive girls—The Friend to Friend Program. In *Bullying, victimization, and peer harassment* (pp. 199-218). Routledge.
- Lemos, V., Valega, M., & Serppe, M. (2021). Cognitive emotional regulation questionnaire: A factorial validation study in Spanish for children (CERQ-k). *International Journal of Psychological Research*, 14(2), 61-81. <https://doi.org/10.21500/20112084.5234>
- Lennings, C. J., Amon, K. L., Brummert, H., & Lennings, N. J. (2010). Grooming for terror: The Internet and young people. *Psychiatry, Psychology and Law*, 17(3), 424-437. <https://doi.org/10.1080/13218710903566979>
- Lerner, R. M. (2011). Structure and process in relational, developmental systems theories: A commentary on contemporary changes in the understanding of developmental change across the life span. *Human Development*, 54(1), 34-43. <https://doi.org/10.1159/000324866>
- Levin, J. R., & Kratochwill, T. R. (2012). Educational/psychological intervention research circa 2012. IB Weiner (Series Ed.) and WM Reynolds & GE Miller (Vol. Eds.), *Handbook of Psychology*, 7, 465-492.
- Levinson, M. P. (2005). The role of play in the formation and maintenance of cultural identity: Gypsy children in home and school contexts. *Journal of Contemporary Ethnography*, 34(5), 499-532. <https://doi.org/10.1177/0891241605279018>
- Li, Q. (2007). Bullying in the new playground: Research into cyberbullying and cyber victimisation. *Australasian Journal of Educational Technology*, 23(4). <https://doi.org/10.14742/ajet.1245>
- Li, C., Wang, P., Martin-Moratinos, M., Bella-Fernández, M., & Blasco-Fontecilla, H. (2022). Traditional bullying and cyberbullying in the digital age and its associated mental health problems in children and adolescents: a meta-analysis. *European Child & Adolescent Psychiatry*, 1-15. <https://doi.org/10.1007/s00787-022-02128-x>
- Liamputtong, P. (2011). Focus group methodology: Principle and practice. *Focus Group Methodology*, 1-224.
- Lieberman, A., & Schroeder, J. (2020). Two social lives: How differences between online and offline interaction influence social outcomes. *Current opinion in psychology*, 31, 16-21. <https://doi.org/10.1016/j.copsyc.2019.06.022>
- Lim, R. B. T., Tham, D. K. T., Cheung, O. N., Adaikan, P. G., & Wong, M. L. (2019). A public health communication intervention using edutainment and communication technology to promote safer sex among heterosexual men patronizing entertainment establishments. *Journal of health communication*, 24(1), 47-64. <https://doi.org/10.1080/10810730.2019.1572839>
- Livingstone, S., & Brake, D. R. (2010). On the rapid rise of social networking sites: New findings and policy implications. *Children & society*, 24(1), 75-83. <https://doi.org/10.1111/j.1099-0860.2009.00243.x>
- Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2011). Risks and safety on the internet. The perspective of European children. *Full findings and policy implications from the EU Kids Online survey of*, 26.
- Livingstone, S., & Smith, P. K. (2014). Annual research review: Harms experienced by child users of online and mobile technologies: The nature, prevalence and management of sexual and aggressive risks in the digital age. *Journal of child psychology and psychiatry*, 55(6), 635-654. <https://doi.org/10.1111/jcpp.12197>

- Livingstone, S., & Third, A. (2017). Children and young people's rights in the digital age: An emerging agenda. *New media & society*, 19(5), 657-670. <https://doi.org/10.1177/1461444816686318>
- Livingstone, S. (2019). *EU kids online. The international encyclopedia of media literacy*, 1-17. <https://doi.org/10.1002/9781118978238.ieml0065>
- Lo Cricchio, M. G., García-Poole, C., te Brinke, L. W., Bianchi, D., & Menesini, E. (2021). Moral disengagement and cyberbullying involvement: A systematic review. *European Journal of Developmental Psychology*, 18(2), 271-311. <https://doi.org/10.1080/17405629.2020.1782186>
- Lobe, B., Livingstone, S., Ólafsson, K., & Vodeb, H. (2011). *Cross-national comparison of risks and safety on the internet: Initial analysis from the EU Kids Online survey of European children*.
- Lockard, A. J., Hayes, J. A., Graceffo, J. M., & Locke, B. D. (2013). Effective counseling for racial/ethnic minority clients: Examining changes using a practice research network. *Journal of College Counseling*, 16(3), 243-257. <https://doi.org/10.1002/j.2161-1882.2013.00040.x>
- Logan, K., Cuff, S., LaBella, C. R., Brooks, M. A., Canty, G., Diamond, A. B., ... & Stricker, P. R. (2019). Organized sports for children, preadolescents, and adolescents. *Pediatrics*, 143(6). <https://doi.org/10.1542/peds.2019-0997>
- Long, J. A. (2024). jtools: Analysis and presentation of social scientific data. *Journal of Open Source Software*, 9(101), 6610. <https://doi.org/10.21105/joss.06610>
- Longmore, M. A., Manning, W. D., & Giordano, P. C. (2001). Preadolescent parenting strategies and teens' dating and sexual initiation: A longitudinal analysis. *Journal of marriage and family*, 63(2), 322-335. <https://doi.org/10.1111/j.1741-3737.2001.00322.x>
- Longobardi, C., Settanni, M., Fabris, M. A., & Marengo, D. (2020). Follow or be followed: Exploring the links between Instagram popularity, social media addiction, cyber victimization, and subjective happiness in Italian adolescents. *Children and youth services review*, 113, 104955. <https://doi.org/10.1016/j.childyouth.2020.104955>
- Lopes, A. R., & Nihei, O. K. (2021). Depression, anxiety and stress symptoms in Brazilian university students during the COVID-19 pandemic: Predictors and association with life satisfaction, psychological well-being and coping strategies. *PLoS One*, 16(10), e0258493. <https://doi.org/10.1371/journal.pone.0258493>
- Losoya, S. H., & Eisenberg, N. (2001). *Affective empathy. Interpersonal sensitivity: Theory and measurement*, 21-43.
- Lucas-Molina, B., Pérez-Albéniz, A., Solbes-Canales, I., Ortuño-Sierra, J., & Fonseca-Pedrero, E. (2022). Bullying, cyberbullying and mental health: The role of student connectedness as a school protective factor. *Psychosocial Intervention*, 31(1), 33. DOI: 10.5093/pi2022a1
- Luengo Kanacri, B. P., Zuffiano, A., Pastorelli, C., Jiménez-Moya, G., Tirado, L. U., Thartori, E., ... & Martínez, M. L. (2020). Cross-national evidences of a school-based universal programme for promoting prosocial behaviours in peer interactions: Main theoretical communalities and local unicity. *International Journal of Psychology*, 55, 48-59. <https://doi.org/10.1002/ijop.12579>
- Lukas, B. A., & Yunus, M. M. (2021). ESL Teachers' Challenges in Implementing E-learning during COVID-19. *International Journal of Learning. Teaching and Educational Research*, 20(2), 330-348. <https://doi.org/10.26803/ijlter.20.2.18>

- Lusk, B. (2010). Digital natives and social media behavior: an overview. *The prevention researcher*, 17(S1), 3-7.
- Machackova, H., Cerna, A., Sevcikova, A., Dedkova, L., & Daneback, K. (2013). Effectiveness of coping strategies for victims of cyberbullying. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 7(3), 1-12. DOI: 10.5817/CP2013-3-5
- Machackova, H. (2020). Bystander reactions to cyberbullying and cyberaggression: individual, contextual, and social factors. *Current opinion in psychology*, 36, 130-134. <https://doi.org/10.1016/j.copsyc.2020.06.003>
- Maciej, P. (2023). Philosophical Futurism and the Evolution of Education: Analyzing Personality Consciousness, ICT, and Forward-Thinking Pedagogical Strategies. *Futurity Philosophy*, 2(2), 4-16. <https://doi.org/10.57125/FP.2023.06.30.01>
- Machimbarrena, J. M., Calvete, E., Fernández-González, L., Álvarez-Bardón, A., Álvarez-Fernández, L., & González-Cabrera, J. (2018). Internet risks: An overview of victimization in cyberbullying, cyber dating abuse, sexting, online grooming and problematic internet use. *International journal of environmental research and public health*, 15(11), 2471. <https://doi.org/10.3390/ijerph15112471>
- Machimbarrena, J., González-Cabrera, J., Ortega-Barón, J., Beranuy-Fargues, M., Álvarez-Bardón, A., and Tejero, B. (2019). Profiles of problematic internet use and its impact on Adolescents' health-related quality of life. *Int. J. Environ. Res. Public Health* 16, 3877. DOI: 10.3390/ijerph16203877
- Malina, R. M., & Katzmarzyk, P. T. (2006). Physical activity and fitness in an international growth standard for preadolescent and adolescent children. *Food and Nutrition Bulletin*, 27(4_suppl5), S295-S313. <https://doi.org/10.1177/15648265060274S511>
- Mancinelli, E., Liberska, H. D., Li, J. B., Espada, J. P., Delvecchio, E., Mazzeschi, C., ... & Salcuni, S. (2021). A cross-cultural study on attachment and adjustment difficulties in adolescence: the mediating role of self-control in Italy, Spain, China, and Poland. *International Journal of Environmental Research and Public Health*, 18(16), 8827. <https://doi.org/10.3390/ijerph18168827>
- Marcia, J. E. (1980). Identity in adolescence. *Handbook of adolescent psychology*, 9(11), 159-187.
- Marin-Lopez, I., Zych, I., Ortega-Ruiz, R., Monks, C. P., & Llorent, V. J. (2020). Empathy online and moral disengagement through technology as longitudinal predictors of cyberbullying victimization and perpetration. *Children and Youth Services Review*, 116, 105144. <https://doi.org/10.1016/j.childyouth.2020.105144>
- Marino, C., Gini, G., Vieno, A., & Spada, M. M. (2018). The associations between problematic Facebook use, psychological distress and well-being among adolescents and young adults: A systematic review and meta-analysis. *Journal of affective disorders*, 226, 274-281. <https://doi.org/10.1016/j.jad.2017.10.007>
- Markey, C. H., & Daniels, E. A. (2022). An examination of preadolescent girls' social media use and body image: Type of engagement may matter most. *Body image*, 42, 145-149. <https://doi.org/10.1016/j.bodyim.2022.05.005>
- Marsh, H. W., Nagengast, B., Morin, A. J., Parada, R. H., Craven, R. G., & Hamilton, L. R. (2011). Construct validity of the multidimensional structure of bullying and victimization: An application of exploratory structural equation modeling. *Journal of Educational Psychology*, 103(3), 701.
- Martínez-Ferrer, M. F., León-Moreno, C., Suárez-Relinque, C., Del Moral-Arroyo, G., & Musitu-Ochoa, G. (2021). Cybervictimization, offline victimization, and cyberbullying: The mediating role of the

- problematic use of social networking sites in boys and girls. *Psychosocial intervention*, 30(3), 155-162. <https://doi.org/10.7440/res64.2018.03>
- Martins, M. J. D., Simão, A. M. V., Freire, I., Caetano, A. P., & Matos, A. (2017). Cyber-victimization and cyber-aggression among Portuguese adolescents: The relation to family support and family rules. In *Violence and society: Breakthroughs in research and practice* (pp. 134-149). IGI Global. DOI: 10.4018/978-1-5225-0988-2.ch008
- Martins, N., & Weaver, A. (2019). The role of media exposure on relational aggression: A meta-analysis. *Aggression and violent behavior*, 47, 90-99. <https://doi.org/10.1016/j.avb.2019.03.001>
- Marwick, A., & Boyd, D. (2014). 'It's just drama': Teen perspectives on conflict and aggression in a networked era. *Journal of youth studies*, 17(9), 1187-1204. <https://doi.org/10.1080/13676261.2014.901493>
- Martínez, G., Casado, M. Á., & Garitaonandia, C. (2020). Online Parental Mediation Strategies in Family Contexts of Spain. *Comunicar: Media Education Research Journal*, 28(65), 65-73.
- Mascheroni, G., & Cuman, A. (2014). *Net children go mobile*. Milano: Educatt. <https://hdl.handle.net/10807/61932>
- Mascia, M. L., Agus, M., Zanetti, M. A., Pedditzi, M. L., Rollo, D., Lasio, M., & Penna, M. P. (2021). Moral disengagement, empathy, and cybervictim's representation as predictive factors of cyberbullying among Italian adolescents. *International journal of environmental research and public health*, 18(3), 1266. <https://doi.org/10.3390/ijerph18031266>
- Mascia, M. L., Langiu, G., Bonfiglio, N. S., Penna, M. P., & Cataudella, S. (2023). Challenges of Preadolescence in the School Context: A Systematic Review of Protective/Risk Factors and Intervention Programmes. *Education Sciences*, 13(2), 130. <https://doi.org/10.3390/educsci13020130>
- Masood, A., Luqman, A., Feng, Y., & Ali, A. (2020). Adverse consequences of excessive social networking site use on academic performance: Explaining underlying mechanism from stress perspective. *Computers in human behavior*, 113, 106476. <https://doi.org/10.1016/j.chb.2020.106476>
- Mata, S., Gómez-Pérez, M. M., Molinero, C., & Calero, M. D. (2017). Interpersonal problem-solving skills, executive function and learning potential in preadolescents with high/low family risk. *The Spanish Journal of Psychology*, 20, E56. DOI: 10.1017/sjp.2017.54
- Matallaoui, A., Koivisto, J., Hamari, J., & Zarnekow, R. (2017). *How effective is "exergamification"? A systematic review on the effectiveness of gamification features in exergames*.
- Maushak, N. J., Chen, H. H., & Lai, H. S. (2001). *Utilizing Edutainment to Actively Engage K-12 Learners and Promote Students' Learning: An Emergent Phenomenon*.
- McRae, K. (2016). Cognitive emotion regulation: A review of theory and scientific findings. *Current Opinion in Behavioral Sciences*, 10, 119-124. <https://doi.org/10.1016/j.cobeha.2016.06.004>
- Meeus, A., Beullens, K., & Eggermont, S. (2019). Like me (please?): Connecting online self-presentation to pre-and early adolescents' self-esteem. *New Media & Society*, 21(11-12), 2386-2403. <https://doi.org/10.1177/1461444819847447>
- Meeus, A., Beullens, K., & Eggermont, S. (2022). Social media, unsocial distraction? Testing the associations between preadolescents' SNS use and belonging via two pathways. *Media Psychology*, 1-25. <https://doi.org/10.1080/15213269.2022.2147084>

- Meeus, A., Everaert, G., Eggermont, S., & Beullens, K. (2023). Filtering the I From the Ideal: Examining Preadolescents' Online Self-Presentation in Relation to Their Perceived Attractiveness. *Social Media+ Society*, 9(4), 20563051231205598. <https://doi.org/10.1177/20563051231205598>
- Mehari, K. R., Farrell, A. D., & Le, A. T. H. (2014). Cyberbullying among adolescents: Measures in search of a construct. *Psychology of Violence*, 4(4), 399. <https://psycnet.apa.org/doi/10.1037/a0037521>
- Melnyk, B. M., Fineout-Overholt, E., Gallagher-Ford, L., & Stillwell, S. B. (2011). Evidence-based practice, step by step: sustaining evidence-based practice through organizational policies and an innovative model. *AJN The American Journal of Nursing*, 111(9), 57-60. DOI: 10.1097/01.NAJ.0000405063.97774.0e
- Menabò, L., Skrzypiec, G., Slee, P., & Guarini, A. (2024). Victimization and cybervictimization: The role of school factors. *Journal of Adolescence*. <https://doi.org/10.1002/jad.12284>
- Menesini, E., Nocentini, A., & Palladino, B. E. (2012). Empowering students against bullying and cyberbullying: Evaluation of an Italian peer-led model. *International Journal of Conflict and Violence (IJCIV)*, 6(2), 313-320. <https://doi.org/10.4119/ijcv-2922>
- Menesini, E., Nocentini, A., Palladino, B. E., Frisén, A., Berne, S., Ortega-Ruiz, R., ... & Smith, P. K. (2012). Cyberbullying definition among adolescents: A comparison across six European countries. *Cyberpsychology, behavior, and social networking*, 15(9), 455-463. <https://doi.org/10.1089/cyber.2012.0040>
- Menesini, E., & Nocentini, A. (2013). Definitions of cyberbullying. In *Cyberbullying through the new media* (pp. 41-54). Psychology Press.
- Menesini, E., Nocentini, A., & Camodeca, M. (2013). Morality, values, traditional bullying, and cyberbullying in adolescence. *British Journal of Developmental Psychology*, 31(1), 1-14. <https://psycnet.apa.org/doi/10.1111/j.2044-835X.2011.02066.x>
- Menesini, E., & Salmivalli, C. (2017). Bullying in schools: the state of knowledge and effective interventions. *Psychology, health & medicine*, 22(sup1), 240-253. <https://doi.org/10.1080/13548506.2017.1279740>
- Menesini, E., De Luca, L., Palladino, B. E., & Nocentini, A. (2021). Evidence-Based Programs in Europe against Bullying and Cyberbullying: A Balance between Broader and Specific Approaches. *The Wiley Blackwell Handbook of bullying: A comprehensive and international review of research and intervention*, 2, 469-489. <https://doi.org/10.1002/9781118482650.ch59>
- Menken, M. S., Isaiah, A., Liang, H., Rivera, P. R., Cloak, C. C., Reeves, G., ... & Chang, L. (2022). Peer victimization (bullying) on mental health, behavioral problems, cognition, and academic performance in preadolescent children in the ABCD Study. *Frontiers in psychology*, 13, 925727. <https://doi.org/10.3389/fpsyg.2022.925727>
- Merrell, K. W., Buchanan, R., & Tran, O. K. (2006). Relational aggression in children and adolescents: A review with implications for school settings. *Psychology in the Schools*, 43(3), 345-360. <https://doi.org/10.1002/pits.20145>
- Mesch, G. S. (2009). Parental mediation, online activities, and cyberbullying. *Cyberpsychology & behavior*, 12(4), 387-393. <https://doi.org/10.1089/cpb.2009.0068>
- Michael, D. R., & Chen, S. L. (2005). *Serious games: Games that educate, train, and inform*. Muska & Lipman/Premier-Trade.

- Miller, K. (2016). Cyberbullying and its consequences: How cyberbullying is contorting the minds of victims and bullies alike, and the law's limited available redress. *S. Cal. Interdisc. LJ*, 26, 379.
- Mills, L., McLoughlin, L. T., Driver, C., Boyes, A., Sacks, D. D., Wood, A., ... & Hermens, D. F. (2023). Social Connectedness and Impulsivity as Predictors of Cyberbullying Behaviors in Early Adolescence. *Journal of Aggression, Maltreatment & Trauma*, 32(5), 726-744. <https://doi.org/10.1080/10926771.2022.2164535>
- Mishna, F., Cook, C., Gadalla, T., Daciuk, J., & Solomon, S. (2010). Cyber bullying behaviors among middle and high school students. *American journal of orthopsychiatry*, 80(3), 362-374. <https://doi.org/10.1111/j.1939-0025.2010.01040.x>
- Mishna, F., Cook, C., Saini, M., Wu, M. J., & MacFadden, R. (2011). Interventions to prevent and reduce cyber abuse of youth: A systematic review. *Research on Social Work Practice*, 21(1), 5-14. <https://doi.org/10.1177/1049731509351988>
- Mishna, F., Khoury-Kassabri, M., Gadalla, T., & Daciuk, J. (2012). Risk factors for involvement in cyber bullying: Victims, bullies and bully-victims. *Children and Youth Services Review*, 34(1), 63-70. <https://doi.org/10.1016/j.childyouth.2011.08.032>
- Mishna, F., Regehr, C., Lacombe-Duncan, A., Daciuk, J., Fearing, G., & Van Wert, M. (2018). Social media, cyber-aggression and student mental health on a university campus. *Journal of mental health*, 27(3), 222-229. <https://doi.org/10.1080/09638237.2018.1437607>
- Mittmann, G., Woodcock, K., Dörfler, S., Krammer, I., Pollak, I., & Schrank, B. (2022). "TikTok is my life and snapchat is my ventricle": a mixed-methods study on the role of online communication tools for friendships in early adolescents. *The Journal of Early Adolescence*, 42(2), 172-203. <https://doi.org/10.1177/02724316211020368>
- Modecki, K. L., Minchin, J., Harbaugh, A. G., Guerra, N. G., & Runions, K. C. (2014). Bullying prevalence across contexts: A meta-analysis measuring cyber and traditional bullying. *Journal of Adolescent Health*, 55(5), 602-611. <https://doi.org/10.1016/j.jadohealth.2014.06.007>
- Mohseny, M., Zamani, Z., Basti, S. A., Sohrabi, M. R., Najafi, A., & Tajdini, F. (2020). Exposure to cyberbullying, cybervictimization, and related factors among junior high school students. *Iranian Journal of Psychiatry and Behavioral Sciences*, 14(4). <https://doi.org/10.5812/ijpbs.99357>
- Monacis, L., De Palo, V., Griffiths, M. D., & Sinatra, M. (2017b). Social networking addiction, attachment style, and validation of the Italian version of the Bergen Problematic social media use Scale. *Journal of behavioral addictions*, 6(2), 178-186. <https://akjournals.com/view/journals/2006/6/2/article-p178.xml>
- Mondi, C. F., Giovanelli, A., & Reynolds, A. J. (2021). Fostering socio-emotional learning through early childhood intervention. *International Journal of Child Care and Education Policy*, 15(1), 1-43. <https://doi.org/10.1186/s40723-021-00084-8>
- Monks CP, Palermiti A, Ortega R, Costabile A. A Cross-National Comparison of Aggressors, Victims and Defenders in Preschools in England, Spain and Italy. *The Spanish journal of psychology*. 2011;14(1):133-144. DOI: 10.5209/rev_SJOP.2011.v14.n1.11
- Monks, C. P., & O'Toole, S. (2021). *Bullying in preschool and infant school*. The Wiley Blackwell handbook of bullying: A comprehensive and international review of research and intervention, 2, 2-19. <https://doi.org/10.1002/9781118482650.ch35>

- Moola, S., & Cilliers, C. P. (2019). "Soul Buddyz Clubs are for Children, about Children and by Children": Youth Empowerment through Edutainment. *Commonwealth Youth & Development*, 17(1). <https://hdl.handle.net/10520/ejc-cydev-v17-n1-a3>
- Moore, M. J., Nakano, T., Enomoto, A., & Suda, T. (2012). Anonymity and roles associated with aggressive posts in an online forum. *Computers in Human Behavior*, 28(3), 861-867. <https://doi.org/10.1016/j.chb.2011.12.005>
- Moore, C. (2015). Moral disengagement. *Current Opinion in Psychology*, 6, 199-204. <https://doi.org/10.1016/j.copsyc.2015.07.018>
- Moore, S. E., Norman, R. E., Suetani, S., Thomas, H. J., Sly, P. D., & Scott, J. G. (2017). Consequences of bullying victimization in childhood and adolescence: A systematic review and meta-analysis. *World journal of psychiatry*, 7(1), 60. DOI: 10.5498/wjp.v7.i1.60
- Morata, A. C., Morán, M. F., Ortiz, I. M., & Manjón, B. F. (2018). *Conectado: A serious game to raise awareness of bullying and cyberbullying in high schools*.
- Morgan, D. L. (1996). Focus groups. *Annual review of sociology*, 22(1), 129-152. <https://doi.org/10.1146/annurev.soc.22.1.129>
- Morgan, J. R. (2021). Evidence-Based Practice in Mission: A Method for Establishing Best Practices and Achieving Desired Goals. *International bulletin of mission research*, 45(1), 26-41. <https://doi.org/10.1177/2396939320908353>
- Müller, C. R., Pfetsch, J., & Ittel, A. (2014). Ethical media competence as a protective factor against cyberbullying and cybervictimization among German school students. *Cyberpsychology, Behavior, and Social Networking*, 17(10), 644-651. <https://doi.org/10.1089/cyber.2014.0168>
- Müller, K. W., Dreier, M., Beutel, M. E., Duven, E., Giralt, S., & Wölfling, K. (2016). A hidden type of internet addiction? Intense and addictive use of social networking sites in adolescents. *Computers in Human Behavior*, 55, 172-177. <https://doi.org/10.1016/j.chb.2015.09.007>
- Myers, C. A., & Cowie, H. (2019). Cyberbullying across the lifespan of education: Issues and interventions from school to university. *International journal of environmental research and public health*, 16(7), 1217. <https://doi.org/10.3390/ijerph16071217>
- Navarro, R., Yubero, S., & Larrañaga, E. (Eds.). (2015). *Cyberbullying across the globe: Gender, family, and mental health*. Springer. DOI: 10.1007/978-3-319-25552-1
- Navarro, R., Larrañaga, E., & Yubero, S. (2018). Differences between preadolescent victims and non-victims of cyberbullying in cyber-relationship motives and coping strategies for handling problems with peers. *Current Psychology*, 37, 116-127. <https://doi.org/10.1007/s12144-016-9495-2>
- Navarro-Pérez, J. J., Carbonell, Á., & Oliver, A. (2019). The effectiveness of a psycho-educational app to reduce sexist attitudes in adolescents. *Revista de Psicodidáctica* (English ed.), 24(1), 9-16. <https://doi.org/10.1016/j.psicoe.2018.07.002>
- Neil, A. L., & Christensen, H. (2009). Efficacy and effectiveness of school-based prevention and early intervention programs for anxiety. *Clinical psychology review*, 29(3), 208-215. <https://doi.org/10.1016/j.cpr.2009.01.002>
- Neiman, S., Robers, B., & Robers, S. (2012). Bullying: A state of affairs. *JL & Educ.*, 41, 603.

- Nelson, H. J., Burns, S. K., Kendall, G. E., & Schonert-Reichl, K. A. (2019). Preadolescent children's perception of power imbalance in bullying: A thematic analysis. *PLoS one*, 14(3), e0211124. <https://doi.org/10.1371/journal.pone.0211124>
- Neo, H. F., Teo, C. C., & Boon, J. L. H. (2018, October). Mobile Edutainment Learning Approach: #StopBully. In *Proceedings of the 2nd International Conference on Digital Technology in Education* (pp. 6-10). <https://doi.org/10.1145/3284497.3284500>
- Nesi, J., Choukas-Bradley, S., & Prinstein, M. J. (2018). Transformation of adolescent peer relations in the social media context: Part 1—A theoretical framework and application to dyadic peer relationships. *Clinical child and family psychology review*, 21, 267-294. <https://doi.org/10.1007/s10567-018-0261-x>
- Nesi, J., Burke, T. A., Bettis, A. H., Kudinova, A. Y., Thompson, E. C., MacPherson, H. A., ... & Liu, R. T. (2021). Social media use and self-injurious thoughts and behaviors: A systematic review and meta-analysis. *Clinical psychology review*, 87, 102038. <https://doi.org/10.1016/j.cpr.2021.102038>
- Ng, E. D., Chua, J. Y. X., & Shorey, S. (2022). The effectiveness of educational interventions on traditional bullying and cyberbullying among adolescents: A systematic review and meta-analysis. *Trauma, Violence, & Abuse*, 23(1), 132-151. <https://doi.org/10.1177/1524838020933867>
- Nguyen, T. T. H., Ishmatova, D., Tapanainen, T., Liukkonen, T. N., Katajapuu, N., Makila, T., & Luimula, M. (2017). *Impact of serious games on health and well-being of elderly: a systematic review*.
- Nocentini, A., Zambuto, V., & Menesini, E. (2015). Anti-bullying programs and Information and Communication Technologies (ICTs): A systematic review. *Aggression and Violent Behavior*, 23, 52–60. <https://doi.org/10.1016/j.avb.2015.05.012>
- Notar, C. E., Padgett, S., & Roden, J. (2013a). Cyberbullying: A review of the literature. *Universal journal of educational research*, 1(1), 1-9.
- Notar, C. E., Padgett, S., & Roden, J. (2013b). Cyberbullying: Resources for Intervention and Prevention. *Universal Journal of Educational Research*, 1(3), 133-145.
- O'Higgins Norman, J., & Connolly, J. (2011). Mimetic theory and scapegoating in the age of cyberbullying: The case of Phoebe Prince. *Pastoral Care in Education*, 29(4), 287-300. <https://doi.org/10.1080/02643944.2011.626069>
- O'Neill, B., & Dinh, T. (2015). Mobile technologies and the incidence of cyberbullying in seven European countries: Findings from Net Children Go Mobile. *Societies*, 5(2), 384-398. <https://doi.org/10.3390/soc5020384>
- Ojanen, T., & Kiefer, S. (2013). Instrumental and reactive functions and overt and relational forms of aggression: Developmental trajectories and prospective associations during middle school. *International Journal of Behavioral Development*, 37(6), 514-517. <https://doi.org/10.1177/0165025413503423>
- Olweus, D. (1987). *Bully/victim problems among schoolchildren in Scandinavia*.
- Olweus, D., & Limber, S. P. (2010). Bullying in school: evaluation and dissemination of the Olweus Bullying Prevention Program. *American journal of Orthopsychiatry*, 80(1), 124.
- Olweus, D. (2013). School bullying: Development and some important challenges. *Annual review of clinical psychology*, 9, 751-780. <https://doi.org/10.1146/annurev-clinpsy-050212-185516>

- Olweus, D., & Limber, S. P. (2018). Some problems with cyberbullying research. *Current opinion in psychology*, 19, 139-143. <https://doi.org/10.1016/j.copsyc.2017.04.012>
- Ortega-Barón, J., Machimbarrena, J. M., Montiel, I., & González-Cabrera, J. (2023). Viral internet challenges scale in preadolescents: An exploratory study. *Current Psychology*, 42(15), 12530-12540. <https://doi.org/10.1007/s12144-021-02692-6>
- Ortega Ruiz, R., Sánchez Jiménez, V., & Menesini, E. (2002). Violencia entre iguales y desconexión moral: un análisis transcultural. *Psicothema*, 14 (Extra 1), 37-49.
- Ortega-Ruiz, R., & Núñez Pérez, J. C. (2012). Bullying and cyberbullying: Research and intervention at school and social contexts. *Psicothema*.
- Ortega Ruiz, R., Rey Alamillo, R. D., & Casas Bolaños, J. A. (2012). Knowing, building and living together on internet and social networks: The ConRed cyberbullying prevention program. *International Journal of Conflict and Violence*, 6 (2), 302-312. <https://doi.org/10.4119/ijcv-2921>
- Ortega, R., Elipe, P., Mora-Merchán, J. A., Genta, M. L., Brighi, A., Guarini, A., ... & Tippet, N. (2012). The emotional impact of bullying and cyberbullying on victims: A European cross-national study. *Aggressive behavior*, 38(5), 342-356. <https://doi.org/10.1002/ab.21440>
- Ortega-Ruiz, R., Del Rey, R., & Casas, J. A. (2016). Evaluar el bullying y el cyberbullying validación española del EBIP-Q y del ECIP-Q. *Psicología educativa*, 22(1), 71-79. <https://doi.org/10.1016/j.pse.2016.01.004>
- Ostrov, J. M., Gentile, D. A., & Crick, N. R. (2006). Media exposure, aggression and prosocial behavior during early childhood: A longitudinal study. *Social Development*, 15(4), 612-627. <https://doi.org/10.1111/j.1467-9507.2006.00360.x>
- Paakkari, L., Tynjälä, J., Lahti, H., Ojala, K., & Lyyra, N. (2021). Problematic social media use and health among adolescents. *International journal of environmental research and public health*, 18(4), 1885. <https://doi.org/10.3390/ijerph18041885>
- Pabian, S., & Vandebosch, H. (2016). (Cyber) bullying perpetration as an impulsive, angry reaction following (cyber) bullying victimisation?. *Youth 2.0: Social Media and Adolescence: Connecting, Sharing and Empowering*, 193-209. https://doi.org/10.1007/978-3-319-27893-3_11
- Pagano, M., Bacaro, V., & Crocetti, E. (2023). "Using digital media or sleeping... that is the question". A meta-analysis on digital media use and unhealthy sleep in adolescence. *Computers in Human Behavior*, 146, 107813. <https://doi.org/10.1016/j.chb.2023.107813>
- Palermi, A. L., Servidio, R., Bartolo, M. G., & Costabile, A. (2017). Cyberbullying and self-esteem: An Italian study. *Computers in Human Behavior*, 69, 136-141. <https://doi.org/10.1016/j.chb.2016.12.026>
- Palinkas, L. A., Aarons, G. A., Horwitz, S., Chamberlain, P., Hurlburt, M., & Landsverk, J. (2011). Mixed method designs in implementation research. *Administration and Policy in Mental Health and Mental Health Services Research*, 38, 44-53. <https://doi.org/10.1007/s10488-010-0314-z>
- Palladino, B. E. (2014). *Evidence-based intervention against bullying and cyberbullying: measurement of the constructs, evaluation of efficacy and mediation processes*. <https://hdl.handle.net/2158/856713>
- Palladino, B. E., Nocentini, A., & Menesini, E. (2016). Evidence-based intervention against bullying and cyberbullying: Evaluation of the NoTrap! program in two independent trials. *Aggressive behavior*, 42(2), 194-206. <https://doi.org/10.1002/ab.21636>

- Palladino, B. E., Menesini, E., Nocentini, A., Luik, P., Naruskov, K., Ucanok, Z., Dogan, A., Schultze-Krumbholz, A., Hess, M., & Scheithauer, H. (2017). Perceived severity of cyberbullying: Differences and similarities across four countries. *Frontiers in Psychology*, 8, 1524. <https://doi.org/10.3389/fpsyg.2017.01524>
- Pantic, I. (2014). Online social networking and mental health. *Cyberpsychology, Behavior, and Social Networking*, 17(10), 652-657. <https://doi.org/10.1089/cyber.2014.0070>
- Patchin, J. W., & Hinduja, S. (2006). Bullies move beyond the schoolyard: A preliminary look at cyberbullying. *Youth violence and juvenile justice*, 4(2), 148-169. <https://doi.org/10.1177/1541204006286288>
- Patchin, J. W., & Hinduja, S. (2010). Cyberbullying and self-esteem. *Journal of school health*, 80(12), 614-621. <https://doi.org/10.1111/j.1746-1561.2010.00548.x>
- Patchin, J. W., & Hinduja, S. (2015). Measuring cyberbullying: Implications for research. *Aggression and violent behavior*, 23, 69-74. <https://doi.org/10.1016/j.avb.2015.05.013>
- Pe, M. L., Raes, F., & Kuppens, P. (2013). The cognitive building blocks of emotion regulation: Ability to update working memory moderates the efficacy of rumination and reappraisal on emotion. *PLOS one*, 8(7), e69071. <https://doi.org/10.1371/journal.pone.0069071>
- Pecorini, A., Nocentini, A., & Menesini, E. (2016). Una rassegna sistematica dei nuovi programmi sviluppati in ambiente virtuale per la prevenzione del bullismo a scuola. *Psicologia clinica dello sviluppo*, 20(1), 27-54. DOI: 10.1449/83129
- Peker, A. (2017). An examination of the relationship between self-control and cyber victimization in adolescents. *Eurasian Journal of Educational Research*, 16(67).
- Pellegrini, A. D. (2009). *The role of play in human development*. Oxford University Press, USA.
- Pérez-Albéniz, A., De Paúl, J., Etxeberria, J., Montes, M. P., & Torres, E. (2003). Adaptación de interpersonal reactivity index (IRI) al español. *Psicothema*, 267-272.
- Perren, S., Dooley, J., Shaw, T., & Cross, D. (2010). Bullying in school and cyberspace: Associations with depressive symptoms in Swiss and Australian adolescents. *Child and adolescent psychiatry and mental health*, 4, 1-10. <https://doi.org/10.1186/1753-2000-4-28>
- Petrides, K. V., Sangareau, Y., Furnham, A., & Frederickson, N. (2006). Trait emotional intelligence and children's peer relations at school. *Social Development*, 15(3), 537-547. <https://doi.org/10.1111/j.1467-9507.2006.00355.x>
- Pichel, R., Foody, M., O'Higgins Norman, J., Feijóo, S., Varela, J., & Rial, A. (2021). Bullying, cyberbullying and the overlap: What does age have to do with it?. *Sustainability*, 13(15), 8527. <https://doi.org/10.3390/su13158527>
- Pieschl, S., Porsch, T., Kahl, T., & Klockenbusch, R. (2013). Relevant dimensions of cyberbullying—Results from two experimental studies. *Journal of applied developmental psychology*, 34(5), 241-252. <https://doi.org/10.1016/j.appdev.2013.04.002>
- Piko, B. F., Keresztes, N., & Pluhar, Z. F. (2006). Aggressive behavior and psychosocial health among children. *Personality and Individual Differences*, 40(5), 885-895. <https://doi.org/10.1016/j.paid.2005.08.012>

- Plester, B., & Wood, C. (2009). Exploring relationships between traditional and new media literacies: British preteen texters at school. *Journal of Computer-Mediated Communication*, 14(4), 1108-1129. <https://doi.org/10.1111/j.1083-6101.2009.01483.x>
- Polanin, J. R., Espelage, D. L., Grotzinger, J. K., Spinney, E., Ingram, K. M., Valido, A., ... & Robinson, L. (2021). A meta-analysis of longitudinal partial correlations between school violence and mental health, school performance, and criminal or delinquent acts. *Psychological bulletin*, 147(2), 115.
- Pornari, C. D., & Wood, J. (2010). Peer and cyber aggression in secondary school students: The role of moral disengagement, hostile attribution bias, and outcome expectancies. *Aggressive Behavior: Official Journal of the International Society for Research on Aggression*, 36(2), 81-94. <https://doi.org/10.1002/ab.20336>
- Powell, H., Mihalas, S., Onwuegbuzie, A. J., Suldo, S., & Daley, C. E. (2008). Mixed methods research in school psychology: A mixed methods investigation of trends in the literature. *Psychology in the Schools*, 45(4), 291-309. <https://doi.org/10.1002/pits.20296>
- Powell, P. A. (2018). Individual differences in emotion regulation moderate the associations between empathy and affective distress. *Motivation and emotion*, 42(4), 602-613. <https://doi.org/10.1007/s11031-018-9684-4>
- Prensky, M. (2001). Digital natives, digital immigrants part 2: Do they really think differently?. *On the horizon*, 9(6), 1-6. <https://doi.org/10.1108/10748120110424843>
- Pressley, T. (2021). Factors contributing to teacher burnout during COVID-19. *Educational Researcher*, 50(5), 325-327. <https://doi.org/10.3102/0013189X211004138>
- Pressley, T., & Ha, C. (2021). Teaching during a pandemic: United States teachers' self-efficacy during COVID-19. *Teaching and Teacher Education*, 106, 103465. <https://doi.org/10.1016/j.tate.2021.103465>
- Purnama, S., Ulfah, M., Machali, I., Wibowo, A., & Narmaditya, B. S. (2021). Does digital literacy influence students' online risk? Evidence from Covid-19. *Heliyon*, 7(6).
- Quinn, S., & Oldmeadow, J. A. (2013). Is the i-generation a 'we'-generation? Social networking use among 9-to 13-year-olds and belonging. *British journal of developmental psychology*, 31(1), 136-142. <https://doi.org/10.1111/bjdp.12007>
- Rabah, J., Cassidy, R., & Beauchemin, R. (2018, November). Gamification in education: Real benefits or edutainment. In *17th European Conference on e-Learning*, Athens, Greece (pp. 489-497).
- Ragni, B., Toto, G. A., di Furia, M., Lavanga, A., & Limone, P. (2023, May). The use of Digital Game-Based Learning (DGBL) in teachers' training: a scoping review. In *Frontiers in Education* (Vol. 8, p. 1092022). Frontiers. <https://doi.org/10.3389/feduc.2023.1092022>
- Ramos Salazar, L. (2021). Cyberbullying victimization as a predictor of cyberbullying perpetration, body image dissatisfaction, healthy eating and dieting behaviors, and life satisfaction. *Journal of interpersonal violence*, 36(1-2), 354-380. <https://doi.org/10.1177/0886260517725737>
- Rao, B. N., & Kalyani, V. (2022). A study on positive and negative effects of social media on society. *Journal of Science & Technology (JST)*, 7(10), 46-54. <https://doi.org/10.46243/jst.2022.v7.i10.pp46-54>
- Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2021). Balancing technology, pedagogy and the new normal: Post-pandemic challenges for higher education. *Postdigital Science and Education*, 3(3), 715-742. <https://doi.org/10.1007/s42438-021-00249-1>

- Raskauskas, J., & Huynh, A. (2015). The process of coping with cyberbullying: A systematic review. *Aggression and violent behavior*, 23, 118-125. <https://doi.org/10.1016/j.avb.2015.05.019>
- Ratan, R. A., & Ritterfeld, U. (2009). Classifying serious games. In *Serious games* (pp. 32-46). Routledge.
- Rathvon, N. (2008). *Effective school interventions: Evidence-based strategies for improving student outcomes*. Guilford Press.
- Ravenscroft, A., Lindstaedt, S., Delgado Kloos, C., & Hernández-Leo, D. (2012, September). 21st century learning for 21st century skills. In *Proceedings of 7th European conference on technology enhanced learning*, EC-TEL. <https://doi.org/10.1007/978-3-642-33263-0>
- Rego, P. A., Rocha, R., Faria, B. M., Reis, L. P., & Moreira, P. M. (2017). A serious games platform for cognitive rehabilitation with preliminary evaluation. *Journal of medical systems*, 41, 1-15. <https://doi.org/10.1007/s10916-016-0656-5>
- Reich, S. M., Subrahmanyam, K., & Espinoza, G. (2012). Friending, IMing, and hanging out face-to-face: overlap in adolescents' online and offline social networks. *Developmental psychology*, 48(2), 356. <https://psycnet.apa.org/doi/10.1037/a0026980>
- Reiner, I., Tibubos, A. N., Hardt, J., Müller, K., Wölfling, K., & Beutel, M. E. (2017). Peer attachment, specific patterns of internet use and problematic internet use in male and female adolescents. *European child & adolescent psychiatry*, 26(10), 1257-1268. <https://doi.org/10.1007/s00787-017-0984-0>
- Rettew, D. C., & Pawlowski, S. (2016). Bullying. *Child and Adolescent Psychiatric Clinics*, 25(2), 235-242. <https://doi.org/10.1016/j.chc.2015.12.002>
- Rice, E., Petering, R., Rhoades, H., Winetrobe, H., Goldbach, J., Plant, A., ... & Kordic, T. (2015). Cyberbullying perpetration and victimization among middle-school students. *American journal of public health*, 105(3), e66-e72.
- Richards, D., Caldwell, P. H., & Go, H. (2015). Impact of social media on the health of children and young people. *Journal of paediatrics and child health*, 51(12), 1152-1157. <https://doi.org/10.1111/jpc.13023>
- Riebel, J. R. S. J., Jäger, R. S., & Fischer, U. C. (2009). Cyberbullying in Germany—an exploration of prevalence, overlapping with real life bullying and coping strategies. *Psychology science quarterly*, 51(3), 298-314.
- Rieffe, C., & Camodeca, M. (2016). Empathy in adolescence: Relations with emotion awareness and social roles. *British journal of developmental psychology*, 34(3), 340-353. <https://doi.org/10.1111/bjdp.12133>
- Rigby, K. (2003). Consequences of bullying in schools. *The Canadian journal of psychiatry*, 48(9), 583-590. <https://doi.org/10.1177/070674370304800904>
- Riley, T. N., Thompson, H. M., Howard, J., Lorenzo-Luaces, L., & Rutter, L. A. (2022). Seeking connectedness through social media use: Associations with adolescent empathic understanding and perspective-taking. *Current Psychology*, 1-13. <https://doi.org/10.1007/s12144-022-04096-6>
- Riva, G., Baños, R. M., Botella, C., Wiederhold, B. K., & Gaggioli, A. (2012). Positive technology: using interactive technologies to promote positive functioning. *Cyberpsychology, Behavior, and Social Networking*, 15(2), 69-77. <https://doi.org/10.1089/cyber.2011.0139>
- Riva, G., & Gaggioli, A. (2019). *Realtà virtuali: gli aspetti psicologici delle tecnologie simulate e il loro impatto sull'esperienza umana*. Giunti Psychometrics. <https://hdl.handle.net/10807/147057>

- Robertson, T., Daffern, M., & Bucks, R. S. (2012). Emotion regulation and aggression. *Aggression and violent behavior*, 17(1), 72-82. <https://doi.org/10.1016/j.avb.2011.09.006>
- Robinson, L. R., Leeb, R. T., Merrick, M. T., & Forbes, L. W. (2016). Conceptualizing and measuring safe, stable, nurturing relationships and environments in educational settings. *Journal of child and family studies*, 25, 1488-1504. <https://doi.org/10.1007/s10826-015-0332-2>
- Robinson, Y., & Petherick, W. (2017). Circumscribing cyberbullying: Toward a mutual definition and characterizations of aggression, assault, and recklessness via telecommunications technology. In *The Psychology of Criminal and Antisocial Behavior* (pp. 321-342). Academic Press. <https://doi.org/10.1016/B978-0-12-809287-3.00010-9>
- Robinson, A., Bonnette, A., Howard, K., Ceballos, N., Dailey, S., Lu, Y., & Grimes, T. (2019). Social comparisons, problematic social media use, and social interaction: An examination of specific social media behaviors related to major depressive disorder in a millennial population. *Journal of Applied Biobehavioral Research*, 24(1), e12158. <https://doi.org/10.1111/jabr.12158>
- Romera, E. M., Herrera-López, M., Ortega-Ruiz, R., & Camacho, A. (2023). The moral disengagement scale-24: Factorial structure and cross-cultural comparison in Spanish and Colombian adolescents. *Psychology of violence*, 13(1), 13. <https://psycnet.apa.org/doi/10.1037/vio0000428>
- Romero, M., Usart, M., & Ott, M. (2015). Can serious games contribute to developing and sustaining 21st century skills?. *Games and culture*, 10(2), 148-177. <https://doi.org/10.1177/1555412014548919>
- Rosa, E. M., & Tudge, J. (2013). Urie Bronfenbrenner's theory of human development: Its evolution from ecology to bioecology. *Journal of family theory & review*, 5(4), 243-258. <https://doi.org/10.1111/jftr.12022>
- Rosen, L. H., Scott, S. R., & Higgins, M. G. (2023). Books and bullies: responses to bullying in preschool students. *International Journal of Bullying Prevention*, 1-12. <https://doi.org/10.1007/s42380-023-00171-z>
- Rubin, K. H., Chen, X., & Hymel, S. (1993). *Socioemotional characteristics of withdrawn and aggressive children*. Merrill-Palmer Quarterly (1982-), 518-534. <https://www.jstor.org/stable/23087247>
- Rubin, K. H., & Mills, R. S. (1988). The many faces of social isolation in childhood. *Journal of consulting and clinical psychology*, 56(6), 916. <https://psycnet.apa.org/doi/10.1037/0022-006X.56.6.916>
- Runions, K. C., & Bak, M. (2015). Online moral disengagement, cyberbullying, and cyber-aggression. *Cyberpsychology, Behavior, and Social Networking*, 18(7), 400-405. <https://doi.org/10.1089/cyber.2014.0670>
- Ryalls, E. (2012). Demonizing “mean girls” in the news: Was Phoebe Prince “bullied to death?”. *Communication, Culture & Critique*, 5(3), 463-481. <https://doi.org/10.1111/j.1753-9137.2012.01127.x>
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069.
- Sacchi, L., & Dan-Glauser, E. (2021). Never too late to plan: “Refocus on planning” as an effective way to lower symptoms and difficulties in emotion regulation during the COVID-19 first lockdown. *Emotion*, 21(7), 1483.
- Sagone, E., De Caroli, M. E., & Indiana, M. L. (2018). Psychological well-being and self-efficacy in life skills among Italian preadolescents with positive body esteem: Preliminary results of an intervention

- project. *Psychology*, 9(06), 1383.
<http://www.scirp.org/journal/PaperInformation.aspx?PaperID=857111&#abstract>
- Saleme, P., Pang, B., Dietrich, T., & Parkinson, J. (2020). Prosocial digital games for youth: A systematic review of interventions. *Computers in Human Behavior Reports*, 2, 100039.
<https://doi.org/10.1016/j.chbr.2020.100039>
- Salmivalli, C. (2004). Consequences of school bullying and violence. *Taking fear out of schools*, 12(1), 29-35.
- Salmivalli, C., Poskiparta, E., Ahtola, A., & Haataja, A. (2013). The implementation and effectiveness of the KiVa antibullying program in Finland. *European Psychologist*. <https://doi.org/10.1027/1016-9040/a000140>
- Salo, J., Mäntymäki, M., & Islam, A. N. (2018). The dark side of social media—and Fifty Shades of Grey introduction to the special issue: the dark side of social media. *Internet Research*, 28(5), 1166-1168.
<https://doi.org/10.1108/IntR-10-2018-442>
- Sampasa-Kanyinga, H., & Hamilton, H. A. (2015). Use of social networking sites and risk of cyberbullying victimization: A population-level study of adolescents. *Cyberpsychology, Behavior, and Social Networking*, 18(12), 704-710. <https://doi.org/10.1089/cyber.2015.0145>
- Samuel, A. B., & Rahman, M. M. (2018). Innovative teaching methods and entrepreneurship education: A review of literature. *Journal of Research in Business, Economics and Management*, 10(1), 1807-1813.
- Santos, D., Mateos-Pérez, E., Cantero, M., & Gámez-Guadix, M. (2021). Cyberbullying in adolescents: Resilience as a protective factor of mental health outcomes. *Cyberpsychology, Behavior, and Social Networking*, 24(6), 414-420. <https://doi.org/10.1089/cyber.2020.0337>
- Santos, R. M. S., Mendes, C. G., Sen Bressani, G. Y., de Alcantara Ventura, S., de Almeida Nogueira, Y. J., de Miranda, D. M., & Romano-Silva, M. A. (2023). The associations between screen time and mental health in adolescents: a systematic review. *BMC psychology*, 11(1), 127. <https://doi.org/10.1186/s40359-023-01166-7>
- Santre, S. (2023). Cyberbullying in adolescents: A literature review. *International Journal of Adolescent Medicine and Health*, 35(1), 1-7. <https://doi.org/10.1515/ijamh-2021-0133>
- Sardone, N. B., & Devlin-Scherer, R. (2010). Digital games for English classrooms. *Teaching English with Technology*, 10(1), 35-50. <http://www.iatefl.org.pl/call/callnl.htm>
- Savage, M. W., & Tokunaga, R. S. (2017). Moving toward a theory: Testing an integrated model of cyberbullying perpetration, aggression, social skills, and Internet self-efficacy. *Computers in human Behavior*, 71, 353-361. <https://doi.org/10.1016/j.chb.2017.02.016>
- Schaeffer, C. M., Petras, H., Ialongo, N., Poduska, J., & Kellam, S. (2003). Modeling growth in boys' aggressive behavior across elementary school: links to later criminal involvement, conduct disorder, and antisocial personality disorder. *Developmental psychology*, 39(6), 1020.
<https://psycnet.apa.org/doi/10.1037/0012-1649.39.6.1020>
- Scheithauer, H., Schultze-Krumbholz, A., Pfetsch, J., & Hess, M. (2021). *Types of cyberbullying*. The Wiley Blackwell Handbook of Bullying: A Comprehensive and International Review of Research and Intervention, 1, 120-138.

- Schoeler, T., Duncan, L., Cecil, C. M., Ploubidis, G. B., & Pingault, J. B. (2018). Quasi-experimental evidence on short-and long-term consequences of bullying victimization: A meta-analysis. *Psychological bulletin*, 144(12), 1229. <https://doi.org/10.1037/bul0000171>
- Schoenwald, S. K., & Hoagwood, K. (2001). Effectiveness, transportability, and dissemination of interventions: What matters when?. *Psychiatric services*, 52(9), 1190-1197. <https://doi.org/10.1176/appi.ps.52.9.1190>
- Scott, R. A., Stuart, J., & Barber, B. L. (2021). Contemporary friendships and social vulnerability among youth: Understanding the role of online and offline contexts of interaction in friendship quality. *Journal of Social and Personal Relationships*, 38(12), 3451-3471. <https://doi.org/10.1177/02654075211029384>
- Seçkin-Kapucu, M., Özcan, H., & Karakaya-Özyer, K. (2021). The Relationship Between Middle School Students' Digital Literacy Levels, Social Media Usage Purposes and Cyberbullying Threat Level. *International Journal of Modern Education Studies*, 5(2), 537-566.
- Sessa, F. M., & Steinberg, L. (1991). Family structure and the development of autonomy during adolescence. *The Journal of early adolescence*, 11(1), 38-55. <https://doi.org/10.1177/0272431691111003>
- Selwyn, N., & Aagaard, J. (2021). Banning mobile phones from classrooms—An opportunity to advance understandings of technology addiction, distraction and cyberbullying. *British journal of educational technology*, 52(1), 8-19. <https://doi.org/10.1111/bjet.12943>
- Sentse, M., Kretschmer, T., & Salmivalli, C. (2015). The longitudinal interplay between bullying, victimization, and social status: Age-related and gender differences. *Social Development*, 24(3), 659-677. <https://doi.org/10.1111/sode.12115>
- Sharma, M. K., & Marimuthu, P. (2014). Prevalence and psychosocial factors of aggression among youth. *Indian journal of psychological medicine*, 36(1), 48-53. <https://doi.org/10.4103/0253-7176.127249>
- Shavinina, L. V. (1998). Interdisciplinary innovation: Psychoeducational multimedia technologies. *New Ideas in Psychology*, 16(3), 189-204. [https://doi.org/10.1016/S0732-118X\(98\)00010-5](https://doi.org/10.1016/S0732-118X(98)00010-5)
- Siah, P. C., Tee, X. Y., Tan, J. T. A., Tan, C. S., Lokithasan, K., Low, S. K., & Yap, C. C. (2022). Cybervictimization and depression among adolescents: coping strategies as mediators. *International journal of environmental research and public health*, 19(7), 3903. <https://doi.org/10.3390/ijerph19073903>
- Slavin, R. E. (2008). Evidence-based reform in education: What will it take?. *European Educational Research Journal*, 7(1), 124-128. <https://doi.org/10.2304/eeerj.2008.7.1.124>
- Sliney, A., & Murphy, D. (2011). Using serious games for assessment. *Serious games and edutainment applications*, 225-243. https://doi.org/10.1007/978-1-4471-2161-9_12
- Slonje, R., Smith, P. K., & Frisén, A. (2017). Perceived reasons for the negative impact of cyberbullying and traditional bullying. *European journal of developmental psychology*, 14(3), 295-310. <https://doi.org/10.1080/17405629.2016.1200461>
- Smetana, J. G., Robinson, J., & Rote, W. M. (2015). Socialization in adolescence. *Handbook of socialization: Theory and research*, 2, 66-84.
- Smith, A., & Anderson, M. (2018). *Social media use in 2018*.
- Smith, P. K., Cowie, H., & Blades, M. (2003). *Understanding children's development*. Blackwell Publishing.

- Smith, P. K. (2004). Bullying: recent developments. *Child and adolescent mental health*, 9(3), 98-103. <https://doi.org/10.1111/j.1475-3588.2004.00089.x>
- Smith, P. K. (2005). *Play: Types and Functions in Human Development*.
- Smith, P. K., & Brain, P. (2000). Bullying in schools: Lessons from two decades of research. *Aggressive Behavior: Official Journal of the International Society for Research on Aggression*, 26(1), 1-9. [https://doi.org/10.1002/\(SICI\)1098-2337\(2000\)26:1%3C1::AID-AB1%3E3.0.CO;2-7](https://doi.org/10.1002/(SICI)1098-2337(2000)26:1%3C1::AID-AB1%3E3.0.CO;2-7)
- Smith, P. K. (2012). Cyberbullying: Challenges and opportunities for a research program—A response to Olweus (2012). *European journal of developmental psychology*, 9(5), 553-558. <https://doi.org/10.1080/17405629.2012.689821>
- Smith, P. K., Salmivalli, C., & Cowie, H. (2012). Effectiveness of school-based programs to reduce bullying: A commentary. *Journal of Experimental Criminology*, 8, 433-441. <https://doi.org/10.1007/s11292-012-9142-3>
- Smith, P. K., & Berkun, F. (2017). How research on cyberbullying has developed. In C. McGuckin, & L. Corcoran (Eds.). *Bullying and cyberbullying: Prevalence, psychological impacts and intervention strategies*. Hauppauge, NY: Nova Science.
- Smith, P. K., Görzig, A., & Robinson, S. (2019). Cyberbullying in schools: Cross-cultural issues. In *Cyberbullying in schools, workplaces, and romantic relationships* (pp. 49-68). Routledge.
- Smith, D., Leonis, T., & Anandavalli, S. (2021). Belonging and loneliness in cyberspace: impacts of social media on adolescents' well-being. *Australian Journal of Psychology*, 73(1), 12-23. <https://doi.org/10.1080/00049530.2021.1898914>
- Snakenborg, J., Van Acker, R., & Gable, R. A. (2011). Cyberbullying: Prevention and intervention to protect our children and youth. *Preventing School Failure: Alternative Education for Children and Youth*, 55(2), 88-95. <https://doi.org/10.1080/1045988X.2011.539454>
- Sorrentino, A., Baldry, A. C., & Farrington, D. P. (2019). *The Efficacy of the Tabby Improved Prevention and Interventions to Reduce Bullying and Cyberbullying*, 158.
- South Richardson, D. (2014). Everyday aggression takes many forms. *Current Directions in Psychological Science*, 23(3), 220-224. <https://doi.org/10.1177/0963721414530143>
- Spada, M. M. (2014). An overview of problematic Internet use. *Addictive behaviors*, 39(1), 3-6. <https://doi.org/10.1016/j.addbeh.2013.09.007>
- Spieker, S. J., Campbell, S. B., Vandergrift, N., Pierce, K. M., Cauffman, E., Susman, E. J., ... & NICHD Early Child Care Research Network. (2012). Relational aggression in middle childhood: Predictors and adolescent outcomes. *Social Development*, 21(2), 354-375. <https://doi.org/10.1111/j.1467-9507.2011.00631.x>
- Spiel, C., Salmivalli, C., & Smith, P. K. (2011). Translational research: National strategies for violence prevention in school. *International Journal of Behavioral Development*, 35(5), 381. DOI: 10.1177/0165025411407556
- Spiel, C., & Strohmeier, D. (2011). National strategy for violence prevention in the Austrian public school system: Development and implementation. *International Journal of Behavioral Development*, 35(5), 412-418. <https://doi.org/10.1177/0165025411407458>

- Spiel, C., & Strohmeier, D. (2012). Evidence-based practice and policy: When researchers, policy makers, and practitioners learn how to work together. *European Journal of Developmental Psychology*, 9(1), 150-162. <https://doi.org/10.1080/17405629.2011.616776>
- Spies Shapiro, L. A., & Margolin, G. (2014). Growing up wired: Social networking sites and adolescent psychosocial development. *Clinical child and family psychology review*, 17, 1-18. <https://doi.org/10.1007/s10567-013-0135-1>
- Spring, B., & Hitchcock, K. (2010). Evidence-based practice. *The Corsini encyclopedia of psychology*, 1-4.
- Squire, K. D. (2008). Video game-based learning: An emerging paradigm for instruction. *Performance Improvement Quarterly*, 21(2), 7-36. <https://doi.org/10.1002/piq.20020>
- Steffes, E. M., & Duverger, P. (2012). Edutainment with Videos and its Positive Effect on Long Term Memory. *Journal for Advancement of Marketing Education*, 20(1).
- Steffgen, G., König, A., Pfetsch, J., & Melzer, A. (2009). The role of empathy for adolescents' cyberbullying behaviour. *Kwartalnik Pedagogiczny= Pedagogical Quarterly*, 214(4), 183-198. <https://hdl.handle.net/10993/4388>
- Sticca, F., & Perren, S. (2013). Is cyberbullying worse than traditional bullying? Examining the differential roles of medium, publicity, and anonymity for the perceived severity of bullying. *Journal of youth and adolescence*, 42, 739-750. <https://doi.org/10.1007/s10964-012-9867-3>
- Sticca, F., Machmutow, K., Stauber, A., Perren, S., Palladino, B. E., Nocentini, A., ... & Mc Guckin, C. (2015). The coping with cyberbullying questionnaire: *Development of a new measure. Societies*, 5(2), 515-536. <https://doi.org/10.3390/soc5020515>
- Striegel-Moore, R. H., & Cachelin, F. M. (1999). *Body image concerns and disordered eating in adolescent girls: Risk and protective factors*. <https://psycnet.apa.org/doi/10.1037/10325-003>
- Strohmeier, D., & Gradinger, P. (2023). Longitudinal antecedents and consequences of ethnic, cyber and offline victimization. *European Journal of Developmental Psychology*, 1-20. <https://doi.org/10.1080/17405629.2023.2271209>
- Subrahmanyam, K., Smahel, D., Subrahmanyam, K., & Šmahel, D. (2011). Constructing identity online: Identity exploration and self-presentation. *Digital youth: The role of media in development*, 59-80. https://doi.org/10.1007/978-1-4419-6278-2_4
- Suler, J. (2004). The online disinhibition effect. *Cyberpsychology & behavior*, 7(3), 321-326. <https://doi.org/10.1089/1094931041291295>
- Sullivan, T. N., Farrell, A. D., Sutherland, K. S., Behrhorst, K. L., Garthe, R. C., & Greene, A. (2021). Evaluation of the Olweus Bullying Prevention Program in US urban middle schools using a multiple baseline experimental design. *Prevention science*, 22(8), 1134-1146. <https://doi.org/10.1007/s11121-021-01244-5>
- Susi, T., Johannesson, M., & Backlund, P. (2007). *Serious games: An overview*.
- Swearer, S., & Hymel, S. (2015). Bullying and discrimination in schools: Exploring variations across student subgroups. *School Psychology Review*, 44(4), 504-509. <https://doi.org/10.17105/15-0133.1>

- Tahir, R., & Wang, A. I. (2018, October). Codifying game-based learning: The league framework for evaluation. In *Proceedings of the 12th European Conference on Game Based Learning (ECGBL 2018)*, Sophia Antipolis, France (pp. 4-5).
- Tajfel, H. (1972). Some developments in European social psychology. *European Journal of Social Psychology*. DOI: 10.1002/ejsp.2420020307
- Tajfel, H., Turner, J. C., Austin, W. G., & Worchel, S. (1979). An integrative theory of intergroup conflict. *Organizational identity: A reader*, 56(65), 9780203505984-16.
- Tajfel, H., & Turner, J. C. (2004). The social identity theory of intergroup behavior. In *Political psychology* (pp. 276-293). Psychology Press.
- Taneja, H., Wu, A. X., & Edgerly, S. (2018). Rethinking the generational gap in online news use: An infrastructural perspective. *New Media & Society*, 20(5), 1792-1812. <https://doi.org/10.1177/1461444817707348>
- Tanrikulu, I. (2018). Cyberbullying prevention and intervention programs in schools: A systematic review. *School psychology international*, 39(1), 74-91. <https://doi.org/10.1177/0143034317745721>
- Tanrikulu, I., & Erdur-Baker, Ö. (2021). Motives behind cyberbullying perpetration: a test of uses and gratifications theory. *Journal of Interpersonal Violence*, 36(13-14), NP6699-NP6724. <https://doi.org/10.1177/0886260518819882>
- Tao, S., Reichert, F., Law, N., & Rao, N. (2022). Digital technology use and cyberbullying among primary school children: Digital literacy and parental mediation as moderators. *Cyberpsychology, Behavior, and Social Networking*, 25(9), 571-579. <https://doi.org/10.1089/cyber.2022.0012>
- Tarafdar, M., Maier, C., Laumer, S., & Weitzel, T. (2020). Explaining the link between technostress and technology addiction for social networking sites: A study of distraction as a coping behavior. *Information Systems Journal*, 30(1), 96-124. <https://doi.org/10.1111/isj.12253>
- Thompson, R. J., Mata, J., Jaeggi, S. M., Buschkuhl, M., Jonides, J., & Gotlib, I. H. (2010). Maladaptive coping, adaptive coping, and depressive symptoms: Variations across age and depressive state. *Behaviour research and therapy*, 48(6), 459-466. <https://doi.org/10.1016/j.brat.2010.01.007>
- Thornhill, R., Fincher, C. L., & Aran, D. (2009). Parasites, democratization, and the liberalization of values across contemporary countries. *Biological Reviews*, 84(1), 113-131. <https://doi.org/10.1111/j.1469-185X.2008.00062.x>
- Tian, L., Yan, Y., & Huebner, E. S. (2018). Effects of cyberbullying and cybervictimization on early adolescents' mental health: Differential mediating roles of perceived peer relationship stress. *Cyberpsychology, Behavior, and Social Networking*, 21(7), 429-436. <https://doi.org/10.1089/cyber.2017.0735>
- Timeo, S., Riva, P., & Paladino, M. P. (2020). Being liked or not being liked: A study on social-media exclusion in a preadolescent population. *Journal of adolescence*, 80, 173-181. <https://doi.org/10.1016/j.adolescence.2020.02.010>
- Toda, Y., Oh, I., Tsuruta, T., & Kanetsuna, T. (2020). Theories and research on traditional/cyberbullying and Internet-mediated problems. In *Tackling Cyberbullying and Related Problems* (pp. 17-40). Routledge.

- Tokunaga, R. S., & Rains, S. A. (2010). An evaluation of two characterizations of the relationships between problematic Internet use, time spent using the Internet, and psychosocial problems. *Human Communication Research*, 36(4), 512-545. <https://doi.org/10.1111/j.1468-2958.2010.01386.x>
- Tokunaga, R. S., & Rains, S. A. (2016). A review and meta-analysis examining conceptual and operational definitions of problematic Internet use. *Human Communication Research*, 42(2), 165-199. <https://doi.org/10.1111/hcre.12075>
- Tosuntaş, Ş. B., Karadağ, E., Emirtekin, E., Kircaburun, K., & Griffiths, M. D. (2020). Sofalizing and its relationship with problematic social media use and psychosocial factors: A new phenomenon among emerging adults. *The Social Science Journal*, 1-13. <https://doi.org/10.1080/03623319.2020.1809900>
- Tran, C. V., Weiss, B., & Nguyen, N. P. (2022). Academic achievement, and cyber-bullying and cyber-victimization among middle-and high-school students in Vietnam. *International Journal of School & Educational Psychology*, 10(1), 118-127. <https://doi.org/10.1080/21683603.2020.1837700>
- Troop-Gordon, W., & Ladd, G. W. (2005). Trajectories of peer victimization and perceptions of the self and schoolmates: Precursors to internalizing and externalizing problems. *Child development*, 76(5), 1072-1091. <https://doi.org/10.1111/j.1467-8624.2005.00898.x>
- Troy, A. S., & Mauss, I. B. (2011). Resilience in the face of stress: Emotion regulation as a protective factor. *Resilience and mental health: Challenges across the lifespan*, 1(2), 30-44.
- Tsekleves, E., Cosmas, J., & Aggoun, A. (2016). Benefits, barriers and guideline recommendations for the implementation of serious games in education for stakeholders and policymakers. *British Journal of Educational Technology*, 47(1), 164-183. <https://doi.org/10.1111/bjet.12223>
- Ttofi, M. M., & Farrington, D. P. (2011). Effectiveness of school-based programs to reduce bullying: A systematic and meta-analytic review. *Journal of experimental criminology*, 7, 27-56. <https://doi.org/10.1007/s11292-010-9109-1>
- Tukachinsky, R., & Tokunaga, R. S. (2013). The effects of engagement with entertainment. In *Communication yearbook 37* (pp. 287-321). Routledge.
- Turgay, A. (2004). Aggression and disruptive behavior disorders in children and adolescents. *Expert review of neurotherapeutics*, 4(4), 623. <https://doi.org/10.1586/14737175.4.4.623>
- Ubbink, D. T., Guyatt, G. H., & Vermeulen, H. (2013). Framework of policy recommendations for implementation of evidence-based practice: a systematic scoping review. *BMJ open*, 3(1), e001881. <https://doi.org/10.1136/bmjopen-2012-001881>
- Ucus, S. (2015). Elementary school teachers' views on game-based learning as a teaching method. *Procedia-Social and Behavioral Sciences*, 186, 401-409. <https://doi.org/10.1016/j.sbspro.2015.04.216>
- UNICEF. More Than a Third of Young People in 30 Countries Report Being a Victim of Online Bullying: U-Report Highlights Prevalence of Cyberbullying and Its Impact on Young People. 2019. Availableonline :<https://www.unicef.org/press-releases/unicef-poll-more-third-young-people-30-countries-report-being-victim-online-bullying> (accessed on 29 December 2022).
- Underwood, M. K., & Ehrenreich, S. E. (2017). The power and the pain of adolescents' digital communication: Cyber victimization and the perils of lurking. *American Psychologist*, 72(2), 144. <https://psycnet.apa.org/doi/10.1037/a0040429>

- Vaillancourt, T., Faris, R., & Mishna, F. (2017). Cyberbullying in children and youth: Implications for health and clinical practice. *The Canadian journal of psychiatry*, 62(6), 368-373. <https://doi.org/10.1177/0706743716684791>
- Valkenburg, P. M., & Peter, J. (2007). Preadolescents' and adolescents' online communication and their closeness to friends. *Developmental psychology*, 43(2), 267. <https://psycnet.apa.org/doi/10.1037/0012-1649.43.2.267>
- Valkenburg, P. M., Sumter, S. R., & Peter, J. (2011). Gender differences in online and offline self-disclosure in pre-adolescence and adolescence. *British journal of developmental psychology*, 29(2), 253-269. <https://doi.org/10.1348/2044-835X.002001>
- Van Aken, M. A., & Asendorpf, J. B. (1997). Support by parents, classmates, friends and siblings in preadolescence: Covariation and compensation across relationships. *Journal of Social and Personal relationships*, 14(1), 79-93. <https://doi.org/10.1177/0265407597141004>
- Van Cleemput, K., Vandebosch, H., & Pabian, S. (2014). Personal characteristics and contextual factors that determine "helping," "joining in," and "doing nothing" when witnessing cyberbullying. *Aggressive behavior*, 40(5), 383-396. <https://doi.org/10.1002/ab.21534>
- Van Eck, R. (2015). Digital game-based learning: Still restless, after all these years. *EDUCAUSE review*, 50(6), 13.
- Vandebosch, H., & Van Cleemput, K. (2009). Cyberbullying among youngsters: Profiles of bullies and victims. *New media & society*, 11(8), 1349-1371. <https://doi.org/10.1177/1461444809341263>
- Vandebosch, H., Poels, K., & Deboutte, G. (2014). Schools and cyberbullying: Problem perception, current actions and future needs. *International Journal of Cyber Society and Education*, 7(1), 29-48. <https://www.learntechlib.org/p/209181/>
- Vandenbroucke, A. R., Crone, E. A., Erp, J. B. V., Güroğlu, B., Hulshoff Pol, H. E., de Kogel, C. H., ... & Brouwer, A. M. (2021). Integrating cognitive developmental neuroscience in society: lessons learned from a multidisciplinary research project on education and social safety of youth. *Frontiers in integrative neuroscience*, 15, 756640. <https://doi.org/10.3389/fnint.2021.756640>
- van den Eijnden, R., Vermulst, A., van Rooij, A. J., Scholte, R., & van de Mheen, D. (2014). The bidirectional relationships between online victimization and psychosocial problems in adolescents: A comparison with real-life victimization. *Journal of youth and adolescence*, 43, 790-802. <https://doi.org/10.1007/s10964-013-0003-9>
- van der Merwe, P. (2014). Adolescence, Internet use, social adjustment, and emotional intelligence. *Mediterranean Journal of Social Sciences*, 5(23), 2327.
- Van Der Waerden, B. L. (2013). *Mathematical statistics* (Vol. 156). Springer Science & Business Media.
- van Geel, M., Goemans, A., Toprak, F., & Vedder, P. (2017). Which personality traits are related to traditional bullying and cyberbullying? A study with the Big Five, Dark Triad and sadism. *Personality and individual differences*, 106, 231-235. <https://doi.org/10.1016/j.paid.2016.10.063>
- Vannucci, A., & McCauley Ohannessian, C. (2019). Social media use subgroups differentially predict psychosocial well-being during early adolescence. *Journal of youth and adolescence*, 48, 1469-1493. <https://doi.org/10.1007/s10964-019-01060-9>

- Vázquez, C., Duque, A., & Hervás, G. (2013). Satisfaction with life scale in a representative sample of Spanish adults: validation and normative data. *The Spanish journal of psychology*, 16, E82. <https://doi.org/10.1017/sjp.2013.82>
- Venter, E. (2017). Bridging the communication gap between Generation Y and the Baby Boomer generation. *International journal of Adolescence and Youth*, 22(4), 497-507. <https://doi.org/10.1080/02673843.2016.1267022>
- Verheijen, G. P., Burk, W. J., Stoltz, S. E., van den Berg, Y. H., & Cillessen, A. H. (2021). A longitudinal social network perspective on adolescents' exposure to violent video games and aggression. *Cyberpsychology, Behavior, and Social Networking*, 24(1), 24-31. <https://doi.org/10.1089/cyber.2019.0776>
- Viner, R. M., Gireesh, A., Stiglic, N., Hudson, L. D., Goddings, A. L., Ward, J. L., & Nicholls, D. E. (2019). Roles of cyberbullying, sleep, and physical activity in mediating the effects of social media use on mental health and wellbeing among young people in England: a secondary analysis of longitudinal data. *The Lancet Child & Adolescent Health*, 3(10), 685-696. [https://doi.org/10.1016/S2352-4642\(19\)30186-5](https://doi.org/10.1016/S2352-4642(19)30186-5)
- Vovk, M., Emishyants, O., Zelenko, O., Maksymova, N., Drobot, O., & Onufriieva, L. (2020). Psychological features of experiences of frustration situations in youth age. *International Journal of Scientific and Technology Research*, 9(1), 920-924.
- Waasdorp, T. E., & Bradshaw, C. P. (2015). The overlap between cyberbullying and traditional bullying. *Journal of Adolescent Health*, 56(5), 483-488. <https://doi.org/10.1016/j.jadohealth.2014.12.002>
- Wachs, S. (2013). Moral disengagement and emotional and social difficulties in bullying and cyberbullying: Differences by participant role. In *Emotional and behavioural difficulties associated with bullying and cyberbullying* (pp. 119-132). Routledge.
- Wachs, S., Wright, M. F., & Vazsonyi, A. T. (2019). Understanding the overlap between cyberbullying and cyberhate perpetration: Moderating effects of toxic online disinhibition. *Criminal Behaviour and Mental Health*, 29(3), 179-188.
- Walrave, M., & Heirman, W. (2011). Cyberbullying: Predicting victimisation and perpetration. *Children & Society*, 25(1), 59-72. <https://doi.org/10.1111/j.1099-0860.2009.00260.x>
- Walsh, S. D., Sela, T., De Looze, M., Craig, W., Cosma, A., Harel-Fisch, Y., ... & Pickett, W. (2020). Clusters of contemporary risk and their relationship to mental well-being among 15-year-old adolescents across 37 countries. *Journal of Adolescent Health*, 66(6), S40-S49. <https://doi.org/10.1016/j.jadohealth.2020.02.012>
- Wang, M. T., & Degol, J. L. (2016). School climate: A review of the construct, measurement, and impact on student outcomes. *Educational psychology review*, 28(2), 315-352. <https://doi.org/10.1007/s10648-015-9319-1>
- Wang, Z., Xie, Q., Xin, M., Wei, C., Yu, C., Zhen, S., ... & Zhang, W. (2020). Cybervictimization, depression, and adolescent internet addiction: The moderating effect of prosocial peer affiliation. *Frontiers in Psychology*, 11, 572486. <https://doi.org/10.3389/fpsyg.2020.572486>
- Wang, X., Wang, W., Qiao, Y., Gao, L., Yang, J., & Wang, P. (2022). Parental phubbing and adolescents' cyberbullying perpetration: A moderated mediation model of moral disengagement and online disinhibition. *Journal of interpersonal violence*, 37(7-8), NP5344-NP5366. <https://doi.org/10.1177/0886260520961877>

- Wang, L., Jiang, S., Zhou, Z., Fei, W., & Wang, W. (2024). Online disinhibition and adolescent cyberbullying: A systematic review. *Children and Youth Services Review*, 156, 107352. <https://doi.org/10.1016/j.chidyouth.2023.107352>
- Wartberg, L., Kriston, L., & Thomasius, R. (2020). Internet gaming disorder and problematic social media use in a representative sample of German adolescents: Prevalence estimates, comorbid depressive symptoms and related psychosocial aspects. *Computers in Human Behavior*, 103, 31-36. <https://doi.org/10.1016/j.chb.2019.09.014>
- Wati, I. F. (2020, December). Digital game-based learning as a solution to fun learning challenges during the Covid-19 pandemic. In *1st International Conference on Information Technology and Education (ICITE 2020)* (pp. 202-210). Atlantis Press. DOI: 10.2991/assehr.k.201214.237
- Watts, L. K., Wagner, J., Velasquez, B., & Behrens, P. I. (2017). Cyberbullying in higher education: A literature review. *Computers in Human Behavior*, 69, 268-274. <https://doi.org/10.1016/j.chb.2016.12.038>
- Way, A. K., & Malvini Redden, S. (2017). The study of youth online: A critical review and agenda. *Review of Communication*, 17(2), 119-136. <https://doi.org/10.1080/15358593.2017.1293838>
- Webster, A., Svalastog, A. L., & Allgaier, J. (2020). Mapping new digital landscapes. *Information, Communication & Society*, 23(8), 1100-1105. <https://doi.org/10.1080/1369118X.2020.1784507>
- Weinstein, M., Jensen, M. R., & Tynes, B. M. (2021). Victimized in many ways: Online and offline bullying/harassment and perceived racial discrimination in diverse racial-ethnic minority adolescents. *Cultural diversity and ethnic minority psychology*, 27(3), 397.
- Weir, K. (2023). Social media brings benefits and risks to teens. Here's how psychology can help identify a path forward. *Monitor on Psychology*, 54(6), 46.
- Wells, K. B., & Miranda, J. (2006). Promise of interventions and services research: can it transform practice?. *Clinical Psychology: Science and Practice*, 13(1), 99.
- Westney, O. E., Jenkins, R. R., & Benjamin, C. A. (1983). Sociosexual development of preadolescents. *Girls at puberty: Biological and psychosocial perspectives*, 273-300. https://doi.org/10.1007/978-1-4899-0354-9_12
- Williamson, R. D., & Smoak, E. P. (2005). Embracing edutainment with interactive e-learning tools. *The Journal of Extension*, 43(5), 20.
- Williford, A., Elledge, L. C., Boulton, A. J., DePaolis, K. J., Little, T. D., & Salmivalli, C. (2013). Effects of the KiVa antibullying program on cyberbullying and cybervictimization frequency among Finnish youth. *Journal of Clinical Child & Adolescent Psychology*, 42(6), 820-833. <https://doi.org/10.1080/15374416.2013.787623>
- Williford, A. P., Maier, M. F., Downer, J. T., Pianta, R. C., & Howes, C. (2013). Understanding how children's engagement and teachers' interactions combine to predict school readiness. *Journal of applied developmental psychology*, 34(6), 299-309. <https://doi.org/10.1016/j.appdev.2013.05.002>
- Wilson, M. S., & Reschly, D. J. (1996). Assessment in school psychology training and practice. *School Psychology Review*, 25(1), 9-23. <https://doi.org/10.1080/02796015.1996.12085799>
- Wingate, V. S., Minney, J. A., & Guadagno, R. E. (2013). Sticks and stones may break your bones, but words will always hurt you: A review of cyberbullying. *Social Influence*, 8(2-3), 87-106. <https://doi.org/10.1080/15534510.2012.730491>

- Wittmann, M., Arce, E., & Santisteban, C. (2008). How impulsiveness, trait anger, and extracurricular activities might affect aggression in school children. *Personality and Individual Differences*, 45(7), 618-623. <https://doi.org/10.1016/j.paid.2008.07.001>
- Wölfer, R., Schultze-Krumbholz, A., Zagorscak, P., Jäkel, A., Göbel, K., & Scheithauer, H. (2014). Prevention 2.0: Targeting cyberbullying@ school. *Prevention Science*, 15, 879-887. <https://doi.org/10.1007/s11121-013-0438-y>
- Wolke, D., Woods, S., Bloomfield, L., & Karstadt, L. (2000). The association between direct and relational bullying and behaviour problems among primary school children. *The Journal of Child Psychology and Psychiatry and Allied Disciplines*, 41(8), 989-1002. <https://doi.org/10.1111/1469-7610.00687>
- Wolniczak, I., Cáceres-DelAguila, J. A., Palma-Ardiles, G., Arroyo, K. J., Solís-Visscher, R., Paredes-Yauri, S., ... & Bernabe-Ortiz, A. (2013). Association between Facebook dependence and poor sleep quality: a study in a sample of undergraduate students in Peru. *PloS one*, 8(3), e59087. <https://doi.org/10.1371/journal.pone.0059087>
- Wood, M. A., Bukowski, W. M., & Lis, E. (2016). The digital self: How social media serves as a setting that shapes youth's emotional experiences. *Adolescent Research Review*, 1, 163-173. <https://doi.org/10.1007/s40894-015-0014-8>
- Woolf, S. H. (2008). *The meaning of translational research and why it matters*. *Jama*, 299(2), 211-213. DOI: 10.1001/jama.2007.26
- Wong, J. S., & Schonlau, M. (2013). Does bully victimization predict future delinquency? A propensity score matching approach. *Criminal Justice and Behavior*, 40(11), 1184-1208. <https://doi.org/10.1177/0093854813503443>
- World Health Organization. (2018). *Engaging young people for health and sustainable development: Strategic opportunities for the World Health Organization and partners*.
- Wright, M. F. (2016). Cybervictims' emotional responses, attributions, and coping strategies for cyber victimization: a qualitative approach. *Safer Communities*, 15(3), 160-169. <https://doi.org/10.1108/SC-03-2016-0006>
- Wright, M., Wang, Y., & Wellman, M. P. (2019, June). Iterated deep reinforcement learning in games: History-aware training for improved stability. In *Proceedings of the 2019 ACM Conference on Economics and Computation* (pp. 617-636). <https://doi.org/10.1145/3328526.3329634>
- Xanidis, N., & Brignell, C. M. (2016). The association between the use of social network sites, sleep quality and cognitive function during the day. *Computers in human behavior*, 55, 121-126. <https://doi.org/10.1016/j.chb.2015.09.004>
- Yafie, E. (2017, September). Development Game Edutainment Combined with Multimedia Learning to Improve Cognitive and Naturalistic Intelligence At 5–6 Years Old Kindergarten. In *9th International Conference for Science Educators and Teachers (ICSET 2017)* (pp. 583-592). Atlantis Press. DOI: 10.2991/icset-17.2017.97
- Yao, M., Zhou, Y., Li, J., & Gao, X. (2019). Violent video games exposure and aggression: The role of moral disengagement, anger, hostility, and disinhibition. *Aggressive behavior*, 45(6), 662-670. <https://doi.org/10.1002/ab.21860>

- Ybarra, M. L., & Mitchell, K. J. (2004). Online aggressor/targets, aggressors, and targets: A comparison of associated youth characteristics. *Journal of Child Psychology and Psychiatry*, 45(7), 1308-1316. <https://doi.org/10.1111/j.1469-7610.2004.00328.x>
- Yoon, J. S., Barton, E., & Taiariol, J. (2004). Relational aggression in middle school: Educational implications of developmental research. *The Journal of Early Adolescence*, 24(3), 303-318. <https://doi.org/10.1177/0272431604265681>
- You, L., & Lee, Y. H. (2019). The bystander effect in cyberbullying on social network sites: Anonymity, group size, and intervention intentions. *Telematics and Informatics*, 45, 101284. <https://doi.org/10.1016/j.tele.2019.101284>
- Young, E. L., Boye, A. E., & Nelson, D. A. (2006). Relational aggression: Understanding, identifying, and responding in schools. *Psychology in the Schools*, 43(3), 297-312. <https://doi.org/10.1002/pits.20148>
- Yudes, C., Rey, L., & Extremera, N. (2022). The moderating effect of emotional intelligence on problematic internet use and cyberbullying perpetration among adolescents: Gender differences. *Psychological Reports*, 125(6), 2902-2921. <https://doi.org/10.1177/00332941211031792>
- Zalewski, M., Lengua, L. J., Wilson, A. C., Trancik, A., & Bazinet, A. (2011). Emotion regulation profiles, temperament, and adjustment problems in preadolescents. *Child Development*, 82(3), 951-966. <https://doi.org/10.1111/j.1467-8624.2011.01575.x>
- Zimmer-Gembeck, M. J., Hawes, T., Scott, R. A., Campbell, T., & Webb, H. J. (2023). Adolescents' online appearance preoccupation: a 5-year longitudinal study of the influence of peers, parents, beliefs, and disordered eating. *Computers in Human Behavior*, 140, 107569. <https://doi.org/10.1016/j.chb.2022.107569>
- Zin, H. M., & Zain, N. Z. M. (2010). The effects of edutainment towards students' achievements. In *Regional Conference on Knowledge Integration in ICT* (Vol. 129, p. 2865).
- Zych, I., Ortega-Ruiz, R., & Del Rey, R. (2015). Scientific research on bullying and cyberbullying: Where have we been and where are we going. *Aggression and violent behavior*, 24, 188-198. <https://doi.org/10.1016/j.avb.2015.05.015>
- Zych, I., Ortega-Ruiz, R., & Marín-López, I. (2016). Cyberbullying: a systematic review of research, its prevalence and assessment issues in Spanish studies. *Psicología Educativa*, 22(1), 5-18. <https://doi.org/10.1016/j.pse.2016.03.002>
- Zych, I., Baldry, A. C., Farrington, D. P., & Llorent, V. J. (2019). Are children involved in cyberbullying low on empathy? A systematic review and meta-analysis of research on empathy versus different cyberbullying roles. *Aggression and violent behavior*, 45, 83-97. <https://doi.org/10.1016/j.avb.2018.03.004>
- Zorica, M. B. (2014). Edutainment at the higher education as an element for the learning success. In *EDULEARN14 Proceedings* (pp. 4089-4097). IATED.

Appendix A

Discussion group structure

1. Opening question: Introduction of participants and the research team

- Hi everyone! How are you? We are psychologists and work at the University. Let's start the session by introducing ourselves. I'll go first, and then it'll be your turn. Does that sound good?

2. Introductory question

- How are things going at school with your classmates?
- How do you use digital tools?

3. Substantial in-depth questions: Online and offline social experiences

- Tell us more about your online and offline social experiences.

4. Transition and in-depth questions

- Classroom climate: Sharing emotions, perceptions of the school environment, and general experiences.

5. Focused substantial questions - Negative online and offline experiences related to school life:

- In your opinion, is bullying or cyberbullying more serious? Would you like to explain your answer?
- What are some effective ways to counter cyberbullying? Who can help, and what can be done to address it?

6. Exploratory questions:

- Relevant to participant engagement in the Serious Game, a tool used in this research: I'm thinking of creating an app to tackle bullying and cyberbullying. Do you think it could work?

7. Closing questions for the discussion

- We've talked about several topics. Which ones were the most important to you?
- Is there anything else you'd like to add?

Appendix B

Questionnaire in Italian

L'uso dei social a scuola

Ciao!

Ti invitiamo a partecipare a una ricerca condotta dal Dipartimento di Culture, Educazione e Società dell'Università della Calabria sull'uso dei social media, degli strumenti digitali (es., smartphone) e sulle relazioni sociali a scuola. Prima di rispondere, leggi attentamente ciascuna affermazione e pensa quanto ti rispecchi in ciascuna di esse. Non ci sono risposte giuste o sbagliate, la risposta migliore è quella che più ti rappresenta. Puoi scegliere solo una tra le opzioni di risposta proposte. Grazie per la tua partecipazione!

PROFILO

P1_1

Genere

- ☐ Maschio
- ☐ Femmina
- ☐ Altro

P1_2

Età: _____

P1_3

Con riferimento alle ultime due settimane, quanto tempo al giorno usi lo smartphone per controllare il tuo profilo social?

- ☐ Meno di un'ora al giorno
- ☐ Da 1 a 3 ore al giorno
- ☐ Da 3 a 5 ore al giorno
- ☐ Più di 5 ore al giorno
- ☐ Non so

P1_4

Con riferimento alle ultime due settimane, quanto tempo al giorno usi Internet per attività di svago (da smartphone/pc/tablet)?

- ☐ Meno di un'ora al giorno
- ☐ Da 1 a 3 ore al giorno
- ☐ Da 3 a 5 ore al giorno
- ☐ Più di 5 ore al giorno
- ☐ Non so

P1_5

Domande sull'uso degli strumenti digitali e sulle abitudini relative ai social media

Con riferimento alle ultime due settimane, indica la frequenza con la quale hai svolto le seguenti attività su Internet:

1. Mai
2. Raramente
3. Qualche volta
4. Spesso
5. Sempre

1. Studiare (seguire video-lezioni, esercitazioni, ecc.).	1	2	3	4	5
2. Ricercare informazioni su argomenti specifici, leggere libri, giornali, ecc.	1	2	3	4	5
3. Seguire corsi online (apprendimento lingua straniera, ecc.)	1	2	3	4	5
4. Scaricare/ascoltare musica.	1	2	3	4	5
5. Scaricare/guardare film, serie, video ecc.	1	2	3	4	5
6. Condividere file.	1	2	3	4	5
7. Giochi multiplayer.	1	2	3	4	5
8. Giochi single player.	1	2	3	4	5
9. Conoscere gente nuova.	1	2	3	4	5
10. Comunicare con parenti e amici.	1	2	3	4	5
11. Usare Social Networking Sites.	1	2	3	4	5
12. Shopping online.	1	2	3	4	5
13. Fitness, Yoga, Meditazione ecc. tramite piattaforme e app.	1	2	3	4	5
14. Webbing (zapping sul web).	1	2	3	4	5

P1_6

Con riferimento alle ultime due settimane, la notte faccio fatica a dormire perché uso Internet.

- ☐ Mai
- ☐ Raramente
- ☐ Qualche volta
- ☐ Spesso
- ☐ Sempre

Di seguito sono riportate alcune domande sul tuo rapporto con i social media e sull'uso che ne fai (Facebook, Twitter, Instagram, ecc.). Per ciascuna domanda scegli la risposta che ti descrive meglio.

1. Molto raramente
2. Raramente
3. Qualche volta
4. Spesso
5. Molto spesso

Durante l'ultimo anno, con quale frequenza...

1. Hai trascorso molto tempo pensando ai social media o hai programmato di usarli?	1	2	3	4	5
2. Hai sentito il bisogno di usare sempre di più i social media?	1	2	3	4	5

3. Hai usato i social media per dimenticare i tuoi problemi personali?	1	2	3	4	5
4. Hai provato a smettere di usare i social media senza riuscirci?	1	2	3	4	5
5. Sei diventato ansioso o agitato se ti è stato proibito l'uso dei social media?	1	2	3	4	5
6. Hai utilizzato i social media così tanto che il loro uso ha avuto un impatto negativo sul tuo lavoro/sui tuoi studi?	1	2	3	4	5

Le affermazioni qui di seguito descrivono come alcune persone potrebbero reagire in alcune situazioni. Per favore indica quanto sei d'accordo con le affermazioni che seguono e segna una delle cinque risposte possibili.

1. Per nulla d'accordo
2. Poco d'accordo
3. Abbastanza d'accordo
4. Molto d'accordo
5. Del tutto d'accordo

1. È giusto venire alle mani per proteggere i propri amici	1	2	3	4	5
2. Danneggiare le cose degli altri non è molto grave se si pensa che ci sono persone che picchiano la gente	1	2	3	4	5
3. Non si può incolpare la singola persona che appartiene ad un gruppo per i guai che il suo gruppo commette	1	2	3	4	5
4. Se i/le giovani vivono in cattive condizioni nei quartieri dove abitano non possono essere rimproverati/e se sono aggressivi/e	1	2	3	4	5
5. Non è grave dire piccole bugie dal momento che non fanno male a nessuno	1	2	3	4	5
6. Se a scuola i/le giovani litigano fra loro e sono maleducati è colpa dei/delle loro insegnanti	1	2	3	4	5
7. È bene usare la forza contro chi offende la tua famiglia	1	2	3	4	5
8. Rubare un po' di denaro non è affatto grave se si pensa alle grandi quantità di denaro che vengono rubate	1	2	3	4	5
9. Una persona che si limita a suggerire di violare delle regole non può essere incolpata se gli altri le danno retta e poi lo fanno	1	2	3	4	5

10. Se i/le giovani non vengono bene educati a casa loro, non possono essere rimproverati/e se poi si comportano male	1	2	3	4	5
11. Non vi è motivo che le persone si offendano quando vengono prese in giro, perché anche questo è un modo di interessarsi a loro	1	2	3	4	5
12. Se le persone lasciano in giro le proprie cose è colpa loro se poi qualcuno le ruba	1	2	3	4	5
13. È giusto battersi quando è in gioco l'onore del proprio gruppo	1	2	3	4	5
14. Non è grave insultare un amico o una amica dal momento che picchiarlo/a è peggio	1	2	3	4	5
15. Se un gruppo di persone decide di fare qualcosa di dannoso non è giusto dare la colpa al singolo	1	2	3	4	5
16. Non si devono rimproverare i/le giovani se usano delle parolacce dal momento che la maggior parte dei loro amici fa lo stesso	1	2	3	4	5
17. Il prendere in giro non fa veramente male a nessuno	1	2	3	4	5
18. Le persone che vengono maltrattate di solito se lo meritano	1	2	3	4	5
19. È bene mentire per evitare guai ai propri amici	1	2	3	4	5
20. Di fronte alle cose illegali che certa gente è capace di fare, prendere cose di poco conto da un negozio senza pagare non è affatto grave	1	2	3	4	5
21. Non è giusto rimproverare una persona che ha contribuito solo in piccola parte al danno prodotto dall'intero gruppo	1	2	3	4	5
22. I/Le giovani non possono essere rimproverati/e per essersi comportati male se i/le loro amici/che li hanno indotti/e a comportarsi così	1	2	3	4	5
23. Gli insulti tra coetanei/e non recano danno ad alcuno/a	1	2	3	4	5
24. Non si possono incolpare i/le giovani che si comportano male con i loro genitori quando questi sono troppo oppressivi	1	2	3	4	5

Come affronti le situazioni?

Ad ognuno di noi capita a volte di dover affrontare eventi negativi e/o spiacevoli e ognuno li affronta a modo proprio. Nelle seguenti domande, indica che cosa solitamente pensi quando ti capitano eventi negativi e/o spiacevoli utilizzando questa scala di punteggi.

1. (Quasi) mai
2. Qualche volta
3. Abbastanza spesso
4. Spesso
5. (Quasi) sempre

1. Penso a come mi fa sentire quello che mi è capitato	1	2	3	4	5
2. Ripenso continuamente a ciò che mi è capitato e a quello che ho provato	1	2	3	4	5
3. Non riesco a staccarmi dai sentimenti che la situazione ha suscitato in me	1	2	3	4	5
4. Penso alla cosa migliore da fare	1	2	3	4	5
5. Penso al modo migliore per affrontare la situazione	1	2	3	4	5
6. Penso a pianificare ciò che è meglio fare	1	2	3	4	5

Le seguenti affermazioni indagano i tuoi pensieri e sentimenti in una serie di situazioni. Per ogni affermazione, indica, in modo sincero, quanto ti descrive da “mai vero” a “sempre vero”. Leggi attentamente ogni affermazione prima di rispondere. Grazie!

0. Mai vero
1. Quasi mai vero
2. Né vero né falso
3. Qualche volta vero
4. Sempre vero

1. A volte trovo difficile vedere le cose dal punto di vista di un'altra persona (r)	0	1	2	3	4
2. In caso di disaccordo, cerco di tenere conto del punto di vista di ognuno prima di prendere una decisione	0	1	2	3	4
3. A volte cerco di comprendere meglio i miei amici immaginando come le cose appaiono dalla loro prospettiva	0	1	2	3	4
4. Se sono sicuro di avere ragione riguardo a qualcosa, non spreco molto tempo ad ascoltare le argomentazioni degli altri (r)	0	1	2	3	4
5. Credo che esistano due opposti aspetti in ogni vicenda e cerco di prenderli in considerazione entrambi	0	1	2	3	4
6. Quando sono in contrasto con qualcuno, di solito cerco di “mettermi nei suoi panni” per un attimo	0	1	2	3	4
7. Prima di criticare qualcuno, cerco di immaginare cosa proverei se fossi al suo posto	0	1	2	3	4

Il bullismo consiste in comportamenti aggressivi ripetitivi perpetrati da una o più persone nei confronti di una vittima incapace di difendersi e a scuola è un fenomeno problematico particolarmente diffuso. Di seguito troverai alcune domande che riguardano una nuova forma di bullismo, denominata cyberbullismo. Le domande riguardano la tua vita negli ultimi 2-3 mesi (dall'inizio della scuola fino ad oggi). Quando rispondi, cerca di pensare a tutto questo periodo e non soltanto ad ora. Il cyberbullismo è una nuova forma di bullismo che fa uso di:

- Sms (messaggini telefonici), chat o messaggistica istantanea
- Foto o video
- Telefonate
- E-mail
- Blog
- Siti web
- Giochi di ruolo on-line
- Social Network

1. Quante volte hai subito episodi di cyberbullismo negli ultimi 2-3 mesi?

- ☐ mai
- ☐ solo una volta o due
- ☐ 2-3 volte al mese
- ☐ una volta a settimana
- ☐ diverse volte a settimana

2. In che modo hai subito atti di cyberbullismo negli ultimi 2-3 mesi?

Indica con che frequenza ti è accaduto, cliccando su una delle possibili risposte elencate. Negli ultimi due o tre mesi, quante volte ti è capitato:

1. Mai
2. Solo 1 volta o 2
3. 2-3 volte al mese
4. 1 volta a settimana
5. Diverse volte a settimana

1. Qualcuno/a mi ha detto cose brutte o mi ha insultato/a con messaggi di testo o online.	1	2	3	4	5
2. Qualcuno/a ha detto cose cattive su di me ad altri, sia online che tramite messaggi di testo.	1	2	3	4	5
3. Qualcuno/a mi ha minacciato tramite messaggi di testo o online.	1	2	3	4	5
4. Qualcuno/a è entrato/a nel mio account e ha rubato informazioni personali (ad esempio, tramite e-mail o account di social network).	1	2	3	4	5
5. Qualcuno/a è entrato/a nel mio account e ha finto di essere me (ad esempio, attraverso la messaggistica istantanea o gli account di social network).	1	2	3	4	5
6. Qualcuno/a ha creato un account falso, fingendo di essere me (ad esempio, su Instagram o WhatsApp).	1	2	3	4	5

7. Qualcuno/a ha pubblicato online informazioni personali su di me	1	2	3	4	5
8. Qualcuno/a ha pubblicato online video o foto imbarazzanti su di me.	1	2	3	4	5
9. Qualcuno/a ha alterato foto o video che avevo pubblicato online.	1	2	3	4	5
10. Sono stato/a escluso/a o ignorato/a da altri/e in un sito di social network o in una chat room su Internet.	1	2	3	4	5
11. Qualcuno/a ha diffuso voci su di me su Internet.	1	2	3	4	5

12. Hai mai preso parte ad episodi di cyberbullismo diretti verso altri ragazzi/e negli ultimi 2-3 mesi?

- ☐ Mai
- ☐ Solo una volta o due
- ☐ 2-3 volte al mese
- ☐ 1 volta a settimana
- ☐ Diverse volte a settimana

13. In che modo hai messo in atto comportamenti di cyberbullismo negli ultimi 2-3 mesi?

Indica con che frequenza ti è accaduto, facendo una croce su una delle possibili risposte nelle colonne a destra. Negli ultimi due o tre mesi, quante volte ti è capitato:

1. Mai
2. Solo 1 volta o 2
3. 2-3 volte al mese
4. 1 volta a settimana
5. Diverse volte a settimana

1. Ho detto cose brutte a qualcuno/a o l'ho chiamato/a con nomi offensivi usando messaggi di testo o online.	1	2	3	4	5
2. Ho detto cose spiacevoli su qualcuno/a ad altre persone, online o tramite messaggi di testo.	1	2	3	4	5
3. Ho minacciato qualcuno/a tramite messaggi di testo o online.	1	2	3	4	5
4. Sono entrato/a nell'account di qualcuno/a e ho rubato informazioni personali (ad esempio, tramite e-mail o account di social network).	1	2	3	4	5
5. Sono entrato/a nell'account di qualcuno/a e ho finto di essere lui/lei (ad esempio, attraverso la messaggistica istantanea o gli account di social network).	1	2	3	4	5
6. Ho creato un account falso, fingendo di essere qualcun altro/a (ad esempio su Instagram o WhatsApp).	1	2	3	4	5

7. Ho pubblicato online informazioni personali su qualcuno/a	1	2	3	4	5
8. Ho pubblicato online video o foto imbarazzanti di qualcuno/a	1	2	3	4	5
9. Ho alterato foto o video di un'altra persona che erano stati pubblicati online.	1	2	3	4	5
10. Ho escluso o ignorato qualcuno/a in un sito di social network o in una chat room su Internet.	1	2	3	4	5
11. Ho sparso voci su qualcuno/a su Internet.	1	2	3	4	5

Ogni tanto, Internet e cellulari sono utilizzati per fare i bulli o i prepotenti. Immagina che da alcune settimane ricevi continuamente dei messaggi cattivi e minacciosi. Hai anche scoperto che sono state diffuse alcune tue immagini imbarazzanti. Cosa faresti in questa situazione? “Io...”

1. Certamente no
2. Piuttosto no
3. Piuttosto sì
4. Certamente sì
5. Nessuna risposta

1. comunicherei l'accaduto ai proprietari del sito internet o alla compagnia telefonica (per esempio YouTube)	1	2	3	4	5
2. andrei dalla polizia	1	2	3	4	5
3. cambierei i miei dati personali (numero di telefono, indirizzo e-mail, nickname in una chat, profilo in un social network)	1	2	3	4	5
4. sarei completamente disperato/a	1	2	3	4	5
5. manderei a mia volta dei messaggi cattivi e minacciosi al bullo	1	2	3	4	5
6. eviterei ogni contatto con il bullo	1	2	3	4	5
7. cercherei aiuto online	1	2	3	4	5
8. andrei da qualcuno/a che mi ascolta e mi consola	1	2	3	4	5
9. direi al/la bullo/a di smettere di farlo	1	2	3	4	5
10. starei alla larga dal/la bullo/a	1	2	3	4	5
11. passerei del tempo con i miei amici in modo da pensare ad altro	1	2	3	4	5
12. penserei che è colpa mia	1	2	3	4	5
13. farei finta che non mi importa nulla di tutto ciò	1	2	3	4	5
14. ne parlerei con gli amici	1	2	3	4	5
15. accetterei le cose come sono, perché contro il bullismo non si può fare nulla	1	2	3	4	5
16. farei capire al/la bullo/a che il suo comportamento non va per niente bene	1	2	3	4	5
17. informerei un docente o il preside	1	2	3	4	5
18. mi vendicherei nel mondo reale (offline, per esempio a scuola)	1	2	3	4	5
19. ignorerei tutti i messaggi e tutte le immagini					

in modo che il/la bullo/a perda interesse nel farlo	1	2	3	4	5
20. mi chiederei perché è successo proprio a me	1	2	3	4	5
21. non saprei cosa fare	1	2	3	4	5
22. direi al/la bullo/a che il suo comportamento non è per nulla divertente	1	2	3	4	5
23. cercherei consulenza professionale	1	2	3	4	5
24. starei più attento/a a chi ha accesso ai miei dati	1	2	3	4	5
25. direi al/la bullo/a che il suo comportamento mi ferisce	1	2	3	4	5
26. mi vendicherei personalmente	1	2	3	4	5
27. andrei da qualcuno che mi accetta così come sono	1	2	3	4	5
28. bloccherei il/la bullo/a in modo che non possa più contattarmi	1	2	3	4	5
29. mi vendicherei con l'aiuto dei miei amici	1	2	3	4	5
30. cercherei di non pensarci	1	2	3	4	5
31. metterei meno informazioni personali su Internet	1	2	3	4	5
32. chiamerei una linea telefonica d'aiuto (per esempio, Telefono Azzurro)	1	2	3	4	5
33. mi vendicherei nel mondo virtuale (online, per esempio SMS, e-mail)	1	2	3	4	5
34. chiederei al/la bullo/a perché lo fa	1	2	3	4	5
35. andrei da qualcuno/a di cui mi posso fidare	1	2	3	4	5
36. salverei i messaggi/le immagini come prove dell'accaduto (per esempio, ne farei una copia o uno screenshot)	1	2	3	4	5

Ti sei già trovato/a in una situazione del genere? (Sì/No)

SWLS – LIFE SATISFACTION

Di seguito sono riportate 5 affermazioni, usando la scala da 1 (completamente in disaccordo) a 7 (completamente d'accordo) indica quanto sei d'accordo con ogni affermazione.

1. Completamente in disaccordo
2. In disaccordo
3. Lievemente in disaccordo
4. Né d'accordo né in disaccordo
5. Lievemente d'accordo
6. D'accordo
7. Completamente d'accordo

1. Per la maggior parte la mia vita si avvicina al mio ideale	1	2	3	4	5	6	7
2. Le mie condizioni di vita sono eccellenti	1	2	3	4	5	6	7

3. Sono soddisfatto della mia vita	1	2	3	4	5	6	7
4. Fino ad ora ho ottenuto le cose importanti che voglio nella vita	1	2	3	4	5	6	7
5. Se potessi vivere la mia vita di nuovo, non cambierei quasi nulla.	1	2	3	4	5	6	7

Appendix C

Questionnaire in Spanish

Uso de las redes sociales en la escuela

¡Hola!

Te invitamos a participar en una encuesta realizada por la Facultad de Ciencias de la Educación y Psicología de la Universidad de Córdoba sobre el uso de las redes sociales, las herramientas digitales (por ejemplo, los teléfonos móviles) y las relaciones sociales en la escuela.

Antes de responder, lee atentamente cada afirmación y piensa en qué medida te ves reflejado en cada una de ellas. No hay respuestas correctas o incorrectas, la mejor respuesta es la que mejor te representa. Sólo puedes elegir una de las opciones de respuesta propuestas. Gracias por participar.

Código: _____

Centro: _____

Curso: _____ Grupo: _____

Fecha: _____

PERFIL

P_1

Género

- ☐ Hombre
- ☐ Mujer
- ☐ Otro

P_2

Edad: ____

P_3

Con relación a las últimas dos semanas, ¿cuánto tiempo dedicas diariamente a usar tu teléfono móvil para acceder a tus perfiles en redes sociales?

- ☐ Menos de una hora al día
- ☐ De 1 a 3 horas al día
- ☐ De 3 a 5 horas al día
- ☐ Más de 5 horas al día
- ☐ No lo sé

P_4

Con relación a las dos últimas semanas, ¿cuánto tiempo dedicas diariamente a utilizar Internet para actividades de ocio desde tu teléfono móvil, PC o tablet?

- ☐ Menos de una hora al día
- ☐ De 1 a 3 horas al día
- ☐ De 3 a 5 horas al día
- ☐ Más de 5 horas al día
- ☐ No lo sé

P_5

Preguntas sobre el uso de herramientas digitales y hábitos en las redes sociales

Con relación a las dos últimas semanas, por favor, indique con qué frecuencia realizó las siguientes actividades en Internet:

	Nunca	Rara vez	A veces	A menudo	Siempre
Estudiar (seguir clases en vídeo, tutoriales, etc.)					
Buscar información sobre temas concretos, leer libros, periódicos, etc.					
Cursos online (aprendizaje de idiomas, etc.)					
Descargar/escuchar música					
Descargar/ver películas, series, vídeos, etc.					
Compartir archivos					
Juegos multijugador					
Juegos para un jugador					
Conocer gente nueva					
Comunicación con la familia y los amigos					
Usar redes sociales					
Compras online					
Fitness, yoga, meditación, etc. a través de plataformas y aplicaciones					
Scrolling (zapping por la web)					

P_6

Durante las últimas dos semanas, he experimentado dificultades para conciliar el sueño por la noche debido a mi uso de Internet.

- ☐ Nunca
- ☐ Rara vez
- ☐ A veces
- ☐ A menudo
- ☐ Siempre

Sección 4

A continuación, encontrarás algunas preguntas sobre tu relación y uso de las redes sociales (Facebook, Twitter, Instagram, etc.). Por favor, selecciona la respuesta que mejor te describa en cada pregunta.

1. Muy raramente
2. Raramente
3. A veces
4. A menudo
5. Muy a menudo

En el último año, con qué frecuencia ha realizado las siguientes actividades: (Poner tabla con los valores de cada puntuación).

1. Has pasado mucho tiempo pensando en redes sociales o planeando su uso.	1	2	3	4	5
2. Has sentido un deseo cada vez de usar más y más las redes sociales.	1	2	3	4	5
3. Has usado las redes sociales para olvidar tus problemas personales.	1	2	3	4	5
4. Has intentado reducir el uso redes sociales, pero no has podido.	1	2	3	4	5
5. Te has sentido nervioso o molesto cuando te han prohibido usar las redes sociales.	1	2	3	4	5
6. Has usado tanto las redes sociales que ellas han tenido un impacto negativo en tus estudios.	1	2	3	4	5

Sección 5

Indica tu grado de acuerdo con las siguientes afirmaciones y elija una de las cinco respuestas posibles.

1 = Totalmente en desacuerdo	2 = Más en desacuerdo que de acuerdo	3 = Ni de acuerdo ni en desacuerdo	4 = Más de acuerdo que en desacuerdo	5 = Totalmente de acuerdo	
1. Está bien pegar a alguien que insulta a tu familia.	1	2	3	4	5
2. Está bien pelearse con quien amenaza el honor de tu grupo.	1	2	3	4	5
3. Está bien pelearse para proteger a tus amigos.	1	2	3	4	5
4. Pegar a compañeros o compañeras que son insoportables (desagradables) es solo darles una “lección”.	1	2	3	4	5
5. Coger la bici de alguien sin su permiso es solo “tomarla prestada”.	1	2	3	4	5
6. No hay nada de malo en “colocarse” (tomar drogas) de vez en cuando.	1	2	3	4	5
7. Robar algo de dinero no es tan grave si lo comparas con aquellos que roban mucho dinero.	1	2	3	4	5
8. Está bien insultar a un compañero/a de clase, lo peor sería pegarle.	1	2	3	4	5
9. En comparación con las cosas ilegales que la gente hace, coger/tomar algunas cosas de una tienda sin pagarlas no es muy grave.	1	2	3	4	5
10. No se puede culpar a los chicos/as por decir palabrotas (usar malas palabras) cuando todos sus amigos lo hacen.	1	2	3	4	5
11. Si los chicos/as viven en malas condiciones no se les puede culpar por comportarse de manera agresiva.	1	2	3	4	5
12. No se puede culpar a los chicos/as por portarse mal si sus amigos les presionaron para que lo hiciera.	1	2	3	4	5
13. Un chico/a que solo sugiere romper las normas/reglas no debería ser culpado si otros chicos/as van y lo hacen.	1	2	3	4	5
14. Si los miembros de un grupo deciden juntos hacer algo malo no es justo culpar a algún chico/a del grupo por ello.	1	2	3	4	5

15. No es justo culpar a un chico/a que solo ha participado un poco en algún daño causado por el grupo.	1	2	3	4	5
16. Burlarse de otro en realidad no le hace daño.	1	2	3	4	5
17. Está bien decir pequeñas mentiras porque en realidad no hacen daño.	1	2	3	4	5
18. Los insultos entre chicos/as no hacen daño a ninguno.	1	2	3	4	5
19. Los chicos/as que reciben maltrato normalmente han hecho algo para merecérselo.	1	2	3	4	5
20. No se puede culpar a los chicos/as por portarse mal cuando sus padres les exigen demasiado.	1	2	3	4	5
21. Si los chicos/as se pelean o se portan mal en la escuela es culpa del profesor/a.	1	2	3	4	5
22. Está bien tratar mal a alguien que se comportó como un “gusano”.	1	2	3	4	5
23. Algunas personas merecen ser tratadas como animales (de manera cruel).	1	2	3	4	5
24. Alguien que es odioso (repugnante) no se merece ser tratado como un ser humano.	1	2	3	4	5

Sección 6

A lo largo de la vida, todos tenemos que lidiar con eventos negativos y/o desagradables, pero cada persona los gestiona de una forma diferente. A continuación, encontrarás algunos pensamientos que suelen tener los chicos de tu edad cuando tienen algún problema que los hace sentir mal. Por favor, marca en la opción que refleje mejor lo que sueles pensar. Por favor, marca la opción que refleje mejor tu pensamiento.

1 = (Casi) nunca	2 = A veces	3 = Regularmente	4 = Frecuentemente	5 = (Casi) Siempre	
1. Pienso que yo tengo la culpa.	1	2	3	4	5
2. Una y otra vez pienso en lo que pasó.	1	2	3	4	5
3. Me quedo pensando en lo que pasó por mucho tiempo.	1	2	3	4	5
4. Una y otra vez pienso en lo feo que fue eso.	1	2	3	4	5
5. Todo el tiempo quiero entender porqué me siento de esa manera.	1	2	3	4	5
6. Muchas veces pienso en lo que pasó.	1	2	3	4	5
7. Pienso y pienso en lo horrible que fue lo que pasó.	1	2	3	4	5
8. Pienso si puedo hacer algo mejor.	1	2	3	4	5
9. Pienso que aprendí cosas gracias a lo que me pasó.	1	2	3	4	5
10. Pienso en cómo puedo resolver esto.	1	2	3	4	5
11. Pienso que lo que me pasó me sirvió para crecer.	1	2	3	4	5
12. Pienso en cómo puedo cambiar lo que me pasó.	1	2	3	4	5
13. Pienso en qué es lo mejor que puedo hacer.	1	2	3	4	5

Sección 7

A continuación, se presentan una serie de frases que exploran tus pensamientos y sentimientos en diversas situaciones. Por favor, responde con sinceridad, eligiendo la opción que mejor te describa, desde “Totalmente en desacuerdo” hasta “Totalmente de acuerdo”. Lee detenidamente cada afirmación antes de responder. ¡Gracias!

0 = Nunca es verdad	1 = Casi nunca cierto	2 = Ni verdadero ni falso	3 = A veces cierto	4 = Siempre cierto	
1. A veces encuentro difícil ver las cosas desde el punto de vista de otros.	0	1	2	3	4
2. En un desacuerdo con otros, trato de ver las cosas desde el punto de vista de los demás antes de tomar una decisión.	0	1	2	3	4
3. A veces intento entender mejor a mis amigos imaginando cómo ven las cosas desde su perspectiva.	0	1	2	3	4
4. Si estoy seguro/a de que tengo la razón en algo, no pierdo mucho tiempo escuchando los argumentos de otras personas.	0	1	2	3	4
5. Creo que todas las cuestiones se pueden ver desde dos perspectivas e intento considerar ambas.	0	1	2	3	4
6. Cuando estoy molesto con alguien, generalmente trato de «ponerme en su pellejo» durante un tiempo.	0	1	2	3	4
7. Antes de criticar a alguien, intento imaginar cómo me sentiría yo si estuviera en su lugar.	0	1	2	3	4

Sección 8

El acoso se define como un patrón de comportamiento agresivo y repetitivo llevado a cabo por una o varias personas contra una víctima que no puede defenderse. Este fenómeno problemático es especialmente prevalente en entornos escolares.

A continuación, encontrarás algunas preguntas relacionadas con una forma de acoso más reciente, el ciberacoso. Estas preguntas se refieren a tu vida en los últimos 2-3 meses, desde el inicio del período escolar hasta hoy. Cuando respondas, trata de considerar todo este período y no solo el momento presente. El ciberacoso es una variante de acoso que emplea diferentes medios, como mensajes de texto (SMS), chat o mensajería instantánea.

1. Foto o vídeo
2. Llamadas telefónicas
3. Correo electrónico
4. Blog
5. Sitios web
6. Juegos de rol en línea Redes sociales

¿Cuántas veces has sufrido ciberacoso en los últimos 2-3 meses?

- ☐ Nunca
- ☐ Solo una o dos veces
- ☐ 2-3 veces al mes
- ☐ Una vez por semana
- ☐ Varias veces a la semana

¿Cómo ha experimentado el ciberacoso en los últimos 2-3 meses?

Indique con qué frecuencia le ha sucedido esto haciendo clic en una de las posibles respuestas enumeradas.

En los últimos 2-3 meses, cuantas veces te ha pasado esto:	Nunca	Sólo 1 o dos veces	2-3 veces al mes	Una vez por semana	Varias veces a la semana
1. Alguien me ha dicho palabras malsonantes o me ha insultado usando el email o SMS.	1	2	3	4	5
2. Alguien ha dicho a otras palabras malsonantes sobre mí usando internet o SMS.	1	2	3	4	5
3. Alguien me ha amenazado a través de mensajes en internet o SMS.	1	2	3	4	5
4. Alguien ha pirateado mi cuenta de correo y ha sacado mi información personal.	1	2	3	4	5
5. Alguien ha pirateado mi cuenta y se ha hecho pasar por mí	1	2	3	4	5
6. Alguien ha creado una cuenta falsa para hacerse pasar por mí.	1	2	3	4	5
7. Alguien ha colgado información personal sobre mí en internet.	1	2	3	4	5
8. Alguien ha colgado videos o fotos comprometidas mías en internet.	1	2	3	4	5
9. Alguien ha retocado fotos mías que yo había colgado en internet.	1	2	3	4	5
10. He sido excluido o ignorado de una red social o de chat.	1	2	3	4	5
11. Alguien ha difundido rumores sobre mí por internet.	1	2	3	4	5

En los últimos 2-3 meses, ¿has participado alguna vez en situaciones de ciberacoso dirigidas a otros niños o niñas?

- ☐ Nunca
- ☐ Solo una o dos veces
- ☐ 2-3 veces al mes
- ☐ Una vez por semana
- ☐ Varias veces a la semana

¿Cómo te has involucrado en comportamientos de ciberacoso en los últimos 2-3 meses?

Indique con qué frecuencia le ha sucedido esto haciendo clic en una de las posibles respuestas enumeradas.

En los últimos 2-3 meses, con qué frecuencia has vivido las siguientes situaciones:	Nunca	Sólo 1 o dos veces	2-3 veces al mes	Una vez por semana	Varias veces a la semana
1. He dicho palabras malsonantes a alguien o le he insultado usando SMS o mensajes en internet.	1	2	3	4	5
2. He dicho palabras malsonantes sobre alguien a otras personas en mensajes por internet o por SMS.	1	2	3	4	5
3. He amenazado a alguien a través de SMS o mensajes en internet.	1	2	3	4	5

4. He pirateado la cuenta de correo de alguien y he robado su información personal.	1	2	3	4	5
5. He pirateado la cuenta de alguien y me he hecho pasar por él/ella.	1	2	3	4	5
6. He creado una cuenta falsa para hacerme pasar por otra persona.	1	2	3	4	5
7. He colgado información personal de alguien en internet.	1	2	3	4	5
8. He colgado videos o fotos comprometidas de alguien en internet.	1	2	3	4	5
9. He retocado fotos o videos de alguien que estaban colgados en internet.	1	2	3	4	5
10. He excluido o ignorado a alguien en una red social o chat.	1	2	3	4	5
11. He difundido rumores sobre alguien en internet.	1	2	3	4	5

Sección 9

De vez en cuando, Internet y los teléfonos móviles se utilizan para intimidar o acosar. Imagina que llevas unas semanas recibiendo continuamente mensajes desagradables y amenazantes. También has descubierto que se han difundido fotos tuyas íntimas.

¿Alguna vez has experimentado una situación de este tipo?

☐ Sí

☐ No

¿Qué harías en esta situación?

0 = Definitivamente no	1 = Probablemente no	2 = Probablemente sí	3 = Definitivamente sí
------------------------	----------------------	----------------------	------------------------

1. ...Ir a la policía	0	1	2	3
2. ...Informar a un/a profesor/a o al director/a del colegio	0	1	2	3
3. ... Llamar a un servicio telefónico de ayuda	0	1	2	3
4. ... Hacer saber a la persona que no me hace gracia en absoluto	0	1	2	3
5. ...Hacerle saber a la persona que su comportamiento no es aceptable en absoluto	0	1	2	3
6. ...Decirle a la persona que deje de hacerlo	0	1	2	3
7. ... Preguntar a la persona por qué lo hace	0	1	2	3
8. ...Estar completamente desesperado/a	0	1	2	3
9. ...Preguntarme por qué me pasó esto	0	1	2	3
10. ...No saber qué hacer	0	1	2	3
11. ...Hablar con mis amigos/as porque es bueno para mí	0	1	2	3
12. ... Acudir a alguien que me escucha y me reconforta	0	1	2	3
13. ...Pasar tiempo con mis amigos/as para no pensar en ello	0	1	2	3
14. ...Hablar con mis padres y pedirles consejo	0	1	2	3
15. ...Prestar más atención a quién accede a mis datos	0	1	2	3
16. ...Bloquear a esa persona para que no pueda contactarme más	0	1	2	3

17. ...Guardar mensajes/fotos como evidencia (p.ej., copias o capturas de pantalla)	0	1	2	3
18. ...Se la devuelvo con la ayuda de amigos/as en el ciberespacio (en internet, p.ej., mensaje de texto, correo electrónico)	0	1	2	3
19. ...Insulto a la persona en el ciberespacio (en internet, p.ej., mensaje de texto, correo electrónico)	0	1	2	3
20. ...Se la devuelvo	0	1	2	3

Sección 10

A continuación, hay cinco afirmaciones con las cuales usted puede estar de acuerdo o en desacuerdo. Lea cada una de ellas y marca tu grado de acuerdo en las siguientes afirmaciones.

1 = Fuertemente en desacuerdo	2 = En desacuerdo	3 = Ligeramente en desacuerdo	4 = Ni de acuerdo ni en desacuerdo	5 = Ligeramente de acuerdo	6 = De acuerdo	7 = Fuertemente de acuerdo
1. En la mayoría de los aspectos, mi vida se acerca a mi ideal.			1 2 3 4 5 6 7			
2. Las condiciones de mi vida son excelentes.	1	2	3 4 5 6 7			
3. Estoy completamente satisfecho/a con mi vida.		1 2 3 4 5 6 7				
4. Hasta ahora, he conseguido las cosas más importantes que quiero en la vida.	1	2 3 4 5 6 7				
5. Si pudiera vivir mi vida de nuevo, no cambiaría nada.		1 2 3 4 5 6 7				

Appendix D

Serious Game resumen

Giovanni/Gaia is a 12-year-old student in the second year of middle school. He/she is a thoughtful preadolescent who loves going to school, meeting new friends, and expanding their interests.

This game presents unpleasant events that could happen to you or a friend, either at school or on social media. Your choices influence the story: pay attention to your behavior! Throughout the events, each interaction corresponds to a score. Have fun!

In the neighborhood where Giovanni/Gaia grew up, he/she lived a peaceful life without any noteworthy events. As the second child, with a 15-year-old older sister with whom they have a very close relationship, Giovanni/Gaia has almost never broken the rules set by their parents and teachers. His/her father, a factory worker, and mother, a homemaker, have always worked hard to provide Giovanni/Gaia with a proper education, knowing the importance of schooling for their future life. For this reason, Giovanni/Gaia has always earned good grades, participated in school-related sports and artistic activities, and even joined the school music orchestra. In elementary school, they made friends with boys and girls during Christmas plays or end-of-year performances: fortunately, all of Giovanni/Gaia's friends live in the same neighborhood.

Flavio, an only child, is very popular, partly due to his parents' prestige, as they are well-known in the town. Although Flavio used to be one of Giovanni/Gaia's best friends in elementary school, over time he suddenly drifted away and joined another group. This new group is always seeking girls and sports events to show off. Initially, Flavio earned good grades, but later he decided to focus primarily on his social life, sports, and certain unpleasant behaviors that caused Giovanni/Gaia to distance themselves from him.

Alessia is another friend from elementary school who, in the past, experienced unpleasant situations alongside Giovanni/Gaia; for instance, both were sometimes targeted by older, bullying kids who lived in the neighborhood. In middle school, she started masking her insecurities by associating with more popular groups.

Christian is the "bookworm" of the class, shy and studious. Giovanni/Gaia is one of the few who speaks to him about things other than academics, trying to include him in alternative social activities.

Eva is very introverted and has never really managed to make friends: for some reason, she seems to struggle when meeting new people. Her difficulty in making decisions makes her an outsider to the class's main groups.

Riccardo, a fan of music and art, spends a lot of time on his tablet and is very skilled with digital tools. Giovanni/Gaia admires him greatly because he has these interests while maintaining socially appropriate and respectful behavior toward others.

Professor Cardinale, a teacher of Italian and humanities, is the main point of reference for the class, as she accompanies the students throughout their three years of schooling. She is deeply passionate about her work, although sometimes the students can be a bit exasperated, and other times unpleasant or alarming events occur. She is highly dedicated to improving social relationships among the young people she educates to create a more pleasant school climate, which is why she is a point of reference for the entire institution.

All the classmates have either started or are about to start their personal accounts on the most popular social media platform of the moment, Pro-Social Network, an app where they can connect with their friends by chatting, sharing photos and videos, commenting on, and liking others' posts. It's a virtual environment especially popular among young people, who can use these profiles to present themselves as they wish. The platform also includes an instant messaging feature, allowing users to send private messages to someone or create small groups.

The pic in the group

On the morning of an ordinary school day, just a few weeks into the school year, the dynamics of the class group are already starting to take shape. During the break, Giovanni/Gaia is chatting with classmates about grades and favorite subjects, including Flavio. While the group is talking, Professor Cardinale, who is listening in, compliments Christian for being on top of the curriculum and always prepared in all subjects. Moments after this compliment, a notification pops up in the class's Pro-Social Network group: a message from Flavio saying, "Hahaha, I'm always prepared too... in art. Here you go," attaching an embarrassing photo of a drawing of the words "NERD + TEACHER" on the bathroom wall. Approval messages and laughter quickly follow.

The revenge

Riccardo was one of the few students who didn't say anything in the group chat when Flavio humiliated Christian—he hates gratuitous cruelty and bullying. Riccardo doesn't always express his emotions clearly; he prefers to think before he acts, but he often takes things personally. A few days after the bathroom graffiti incident, Riccardo pulls you aside and asks for your help "teaching Alessia a lesson." Alessia had mortified Christian alongside Flavio by laughing at and approving his messages. To avenge Christian, Riccardo wants to harass Alessia—and he wants your help to carry it out.

The Christmas dinner

Following the events of recent weeks, there are now conflicts between Flavio's group and Riccardo, while people like Christian continue to suffer, targeted by insults or caught between personal attempts to stand up for one side or the other. As Christmas approaches, some classmates are planning an evening get-together to say goodbye before the holidays. Giovanni/Gaia is included by Alessia in a group chat with Flavio and his friends, but Riccardo is left out. Some classmates start to raise concerns that excluding Riccardo isn't fair, leading to a debate. A decision must be made. Eva stays neutral because she doesn't want to cause any problems, but your vote could determine whether Riccardo is excluded or included.

The teacher's project

Professor Cardinale launches an inclusive socialization project to address bullying in the classroom. From February to Easter, Giovanni/Gaia and Riccardo join the initiative, but Alessia, Flavio, and his group decide not to participate, dismissing the project as boring and pointless. Eva, who is curious about joining, asks about the purpose of the project and how the sessions will work. During the sessions, Flavio and the others cause disruptions by posting humiliating content about the participants on Pro-Social Network. One day, Eva privately messages you, saying she won't participate in the project anymore because Flavio and his group are pressuring her not to join, threatening to post humiliating information about her online.

Last day of school

The school year has been filled with both positive and negative experiences. Each classmate has displayed both kind and hurtful behaviors toward others, and over time these actions have shaped the group's dynamics. In the final days before summer vacation, the teacher asks the students specific questions to reflect on their feelings and any changes in their behavior toward their peers over the course of the year, before bidding them farewell for the summer.