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Understanding Emotional Intelligence in the Age of Social Media: Insights from Adolescents and Preadolescents

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ABSTRACT

The year 1989 marked the establishment of a document of fundamental importance for the generation's future: the Convention on the Rights of the Child (UNCRC). This treaty recognized for the first time children and adolescents as subjects with specific rights, providing the basis for their protection and development in all areas of life.

Concurrently, in the same years, Tim Berners-Lee was laying the groundwork for what would become the largest global information and communications network: the World Wide Web, officially launched in 1991. Initially conceived as a tool for the dissemination of scientific data, the web has undergone a rapid transformation, profoundly impacting the ways in which people work, learn, communicate and interact.

Today, decades later, the generation that grew up with the internet and social media finds itself navigating a digital environment full of opportunities but also potential threats. Adolescents are immersed in these dynamics, using social platforms to socialize, express themselves, get information and build their own identity.

While the Convention on the Rights of the Child enshrined fundamental principles such as the right to protection, education, participation and well-being, the advent of social media poses new and complex challenges to their effective implementation in the digital context. Phenomena such as cyberbullying, the dissemination of inappropriate content, social pressure related to body image and potential addiction to platforms raise crucial questions about the protection of adolescents' rights online.

In this scenario, the present cumulative thesis explores the relationship between social media use and emotional intelligence among preadolescents and adolescence, with a focus on the sociocultural factors that influence digital engagement and its impact on socio-emotional development. The research encompasses a systematic literature review and three empirical studies, including two cross-sectional analyses and a longitudinal investigation.

The systematic literature review provided a theoretical foundation, identifying significant gaps in existing research and offering insights into the role of emotional intelligence in moderating social media experiences.

The review highlights that low emotional intelligence levels are associated with problematic social media use, and that social media use has a negative correlation with adolescent self-esteem. Furthermore, difficulties in emotion regulation were associated with problematic social media use, while social media use was positively correlated with empathy.

The first cross-sectional study investigates the relationship between emotional intelligence, problematic social media use, and image-related activities on social media among adolescents. The findings reveal a significant negative correlation between emotional intelligence and problematic social media use. It also found that adolescents who report a high propensity to engage in image-centered interactions on social media are at greater risk of developing social media addiction. Furthermore, the study identifies image-related activities as a partial mediator between emotional intelligence and problematic social media use.

The second cross-sectional study showed a negative correlation between social media addiction and emotional intelligence in both males and females. Additionally, among males, there was a positive association between social media addiction and certain subscales of social pressure, particularly those related to pressure from family, peers, others, and the media, as well as the internalization of thin and muscular body ideals. For females, there was a positive correlation between social media addiction and the internalization of appearance ideals and thin body standards, along with correlations between social media addiction and social pressure from family, peers, others, and the media. The subscales of social pressure exhibited a significant negative correlation with emotional intelligence for both genders, whereas subscales related to internalization showed a significant negative correlation only for females.

The longitudinal study tracked changes in social media use over time and revealed a growing dependence on these platforms. The results showed a significant link between social media use and addictive behaviours, the reinforcement of appearance ideals, and an inverse relationship with emotional intelligence.

This research contributes to the growing body of knowledge by offering practical implications for educators, parents, and policymakers. Educational interventions aimed at enhancing emotional intelligence, promoting critical digital literacy and encouraging conscious use of social media appear essential to ensure that the rights guaranteed by the Convention are protected in the digital world, and to promote a safer online environment that supports the socio-emotional well-being of young people.

PRE-FACE LIST OF PUBBLICATION

This cumulative thesis is the result of research performed between 2022 and 2024 at the Department of Human Sciences, Society and Health of the University of Cassino and Southern Lazio. The first publication of this thesis is a literature review which provided the theoretical basis for the subsequent studies. This review examined previous research on the topic and identified key points and gaps that informed the subsequent research. The systematic literature review is followed by three additional studies. These include two exploratory study and a longitudinal study.

1. Piccerillo, L., & Digennaro, S. (2024). Adolescent Social Media Use and Emotional Intelligence: A Systematic Review. Adolescent Research Review. https://doi.org/10.1007/s40894-024-00245-z
2. Piccerillo, L. & Digennaro S. (2024). Navigating Emotions and Screens: Emotional Intelligence as the key to a balanced digital life for teens. Journal of Inclusive Methodology and Technology in Learning and Teaching, 4(1). https://doi.org/10.32043/jimtlt.v4i1.135
3. Iannaccone, A., Piccerillo, L., Tescione, A., & Digennaro, S. (2024). The role of social media engagement in shaping preadolescents' body image and emotional intelligence: a cross-sectional study. Italian journal of health education, sport and inclusive didactics, 8(3). https://doi.org/10.32043/gsd.v8i3.1116
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An additional study, which do not relate to this thesis, was published in international peer-reviewed journals.

1. Piccerillo, L., Misiti, F., & Digennaro, S. (2023). Assessing the Environmental Impact of a University Sport Event: The Case of the 75th Italian National

University Championships. Sustainability, 15(3), 2267. https://doi.org/10.3390/su15032267

Technical Reports:

1. Digennaro, S., Tescione, A., & Piccerillo, L. (2024). Integration of Ukrainian Refugee Children Through Sport - Methodological Guide. DOI: https://doi.org/10.13140/RG.2.2.32990.45121

2. Digennaro, S., Tescione, A., & Piccerillo, L. (2024). Integration of Ukrainian Refugee Children Through Sport: Physical Educational Materials. DOI: https://doi.org/10.13140/RG.2.2.36345.89440

Results of research carried out during the Ph.D. studies have been also presented to national and international conferences as spokesman.

1. XIII National Congress SISMES (Società Italiana delle Scienze Motorie e Sportive): November 2022, Milan.

Piccerillo L., Tescione A., Iannaccone A., Digennaro S. How (un)-sustainable are sporting events? The case-study of the National University Championship in Cassino. XIII National Congress SISMES. (2023). Sport Sciences for Health, 19(1), 1–149. https://doi.org/10.1007/s11332-022-01027-7

2. 3rd International Conference - Research on Educational Neuroscience: "The Near Future Of Education In The Digital Universe" May 2023, Rome.

Piccerillo L. & Tescione A. Analysing The Relationship Between Emotional Intelligence And The Use Of Social Network Among Preadolescents. Research on Educational Neuroscience: The Near Future Of Education In The Digital Universe. Italian Journal of Health Education, Sports and Inclusive Didactics. ISSN: 2532-3296 ISBN: 978-88-6022-469-9. Roma: Edizioni Universitarie romane

3. First International PhD Symposium On Engineering And Sport Science. University of Cassino and Southern Lazio, October 2023,

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Intelligence and Problematic Use. First International PhD Symposium On Engineering And Sport Science. University of Cassino and Southern Lazio EUC-Edizioni Università Di Cassino ISBN: 978-88-8317-129-1

4. XIV National Congress SISMES (Società Italiana delle Scienze Motorie e Sportive), Università degli Studi di Napoli "Parthenope", November 2023

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CHAPTER 1.

THEORETICAL PERSPECTIVES ON ADOLESCENT DEVELOPMENT IN CONTEMPORARY SOCIETY

1.1 General overview on adolescent development

Adolescence is widely recognized as a period of life that involves physical, social, psychological, socioemotional and behavioural changes, transitions that go beyond the scope of biological maturation alone (Reiches, 2019). Although different definitions of adolescence have emerged over the years, the World Health Organisation and the United Nations agree that adolescence is the period between the ages of 10 and 19 (WHO, 2024). However, a more inclusive definition of adolescence, extending from the age of 10 to 24 years, is more aligned with contemporary trends in adolescent development and the commonly held understanding of this stage of life (Sawyer et al., 2018).

The maturation of the hypothalamic-pituitary-adrenal (HPA) axis and the reactivation of the hypothalamic-pituitary-gonadal (HPG) axis have traditionally been recognized as the key biological events marking the onset of both puberty and adolescence (Bonnie et al., 2019). This process typically continues until the individual reaches certain milestones associated with adulthood (Choudhury et al., 2023).

However, over time, patterns of growth and development during this period have changed significantly (Sawyer et al., 2018). For example, recent decades have witnessed a trend towards earlier onset of puberty (Farello et al., 2019; Sørensen et al., 2010).

Although this period has been suggested to be extended, the exact timing of the transition to adulthood depends on many factors, including cultural and social class, historical, economic, cultural and societal influences (Choudhury et al., 2023; Worthman & Trang, 2018). This underscores the variability inherent in the process rather than the existence of a fixed timeline.

Adolescence, is divided by researchers into preadolescence or early adolescence (approximately 10 to 13 years of age), middle adolescence (approximately 14 to 17 years of age), and late adolescence /young adulthood (approximately 17 to 19 years and beyond) (Salmela-Aro, 2011). These substages are characterized by distinct differences in biological, emotional, social, and cognitive development.

Researchers have traditionally considered this life stage as a period of both vulnerability and opportunity alluding to the heightened risk, but also to particular strengths and resilience, that mark adolescence (Choudhury et al., 2023).

Adolescence can be considered a social construct, increasingly shaped by a number of factors including cultural expectations, educational systems, and digital environments. Therefore, in order to comprehend adolescence in the contemporary

age, it is necessary to employ a multifaceted approach that encompasses both established developmental theories and the latest socio-cultural influences.

Adolescent Social Life

A central role in the daily activities and thoughts of young people is their social life (Somerville, 2013). Empirical evidence suggests that adolescents tend to prioritize social interactions with peers over family interactions (Lam et al., 2014). Managing peer relationships is one of the most challenging yet crucial developmental tasks during adolescence, as the peer environment serves as a primary context for the development of social skills (Allen & Loeb, 2015).

The "social reorientation" model proposed by Nelson et al (2005), elucidates how both biological factors, such as hormonal changes, and sociocultural influences contribute to these behavioural shifts (Cosme et al., 2022).

The peer group during adolescence plays a central role in the social and identity development of young people. This process, characterised by the search for belonging and acceptance, represents a phase of emancipation from parents as the only source of support and guidance (Vrioni, 2019).

Research suggests that early adolescents tend to prioritise popularity and peer acceptance over other goals (Cosme et al., 2022). The desire to conform to peers allows young people to share styles, languages and habits, and becomes a means of building their own social identity and sense of belonging (Vrioni, 2019).

This growing emphasis on peer validation comes with an increased sensitivity to social rejection, amplifying emotional reactivity in social feedback situations (Cheng et al., 2024). Adolescents are significantly more influenced by peer feedback than adults and exhibit a greater propensity to respond adversely to exclusion from their social groups (Haller et al., 2015).

To better understand how adolescents experience these situations, researchers have designed various experiments. A study (Sebastian et al., 2012), used the “Cyberball paradigm”, a virtual ball-tossing game in which participants are gradually excluded, simulating the experience of social rejection. The results suggest that, compared with adults, adolescents experience a greater drop in mood and increased anxiety after being ostracised.

Positive peer relationships are crucial during this developmental stage, as they have been linked to increased well-being and life satisfaction among adolescents (Roach, 2018).

In early adolescence, peer groups typically comprise close non-romantic friendships, where members often adopt similar behaviours, styles, and rituals, placing greater emphasis on loyalty, trust, and self-disclosure (Salmela-Aro, 2011) .

Adolescents show a growing ability to understand their peers' mental states, particularly through enhanced perspective-taking, which involves recognizing others' feelings, motivations, and preferences (Haller et al., 2015)

According to Thornburg (1983), as adolescents grow older, they move from having predominantly same-sex friendships to having more mixed-sex friendships and, finally, to having opposite-sex friendships. Similarly, cross-cultural studies suggest that although boys and girls begin to form friendships that cross gender boundaries around the age of 12 to 13, they often continue to favour friends of the same gender because of differences in communication styles that affect comfort and interaction dynamics (Kasik et al., 2024). During adolescence, individuals may begin to engage in risky behaviours through more independent participation in social activities, gaining access to smoking, alcohol, marijuana, social media, acts of vandalism and early sexual experiences (Gilmore & Meersand, 2014).

Although peer relationships are given a high priority, relationships with parents also continue to be essential and play an important role in the well-being and overall development of children. Typically, the dynamic between parents and adolescents changes, with adolescents taking a more active role in decision making and behaviour regulation (Skinner et al., 2021).

Adolescents' ability to develop autonomy and build meaningful peer relationships is strongly influenced by their family dynamics. In circumstances where parental behaviours are restrictive of autonomy, for instance through the exercise of psychological control, adolescent individuals are more likely to experience difficulties in gaining acceptance from their peers and are at greater risk of engaging in risky behaviours (Allen & Loeb, 2015). Conflict between parents and adolescents, although a common phenomenon, can have a negative impact on mental health and quality of life (Chiang et al., 2023). Parental support and the establishment of a secure attachment are as crucial as autonomy in shaping adolescents' peer success, fostering social skills, healthy relationships, and reducing problematic behaviours.

Changes in social relationships are often accompanied by the transition from elementary school to middle school, a phase that occurs in nearly every country in the world (Mascia et al., 2023). During this transition, adolescents must quickly adapt to a new environment, new routines, and the presence of older adolescents. This shift

may be challenging as young people cope with more complex social dynamics and higher academic expectations.

Between Physical Changes and Cultural Influences

Puberty is a period of different changes that affect multiple aspects. Before there are any visible changes, the endocrine glands are producing hormones that bring about sexual development (Salmela-Aro, 2011). At physical level there is a rapid increase in height, the development of secondary sexual characteristics, along with changes in body composition and the onset of reproductive capacity (Abreu & Kaiser, 2016).

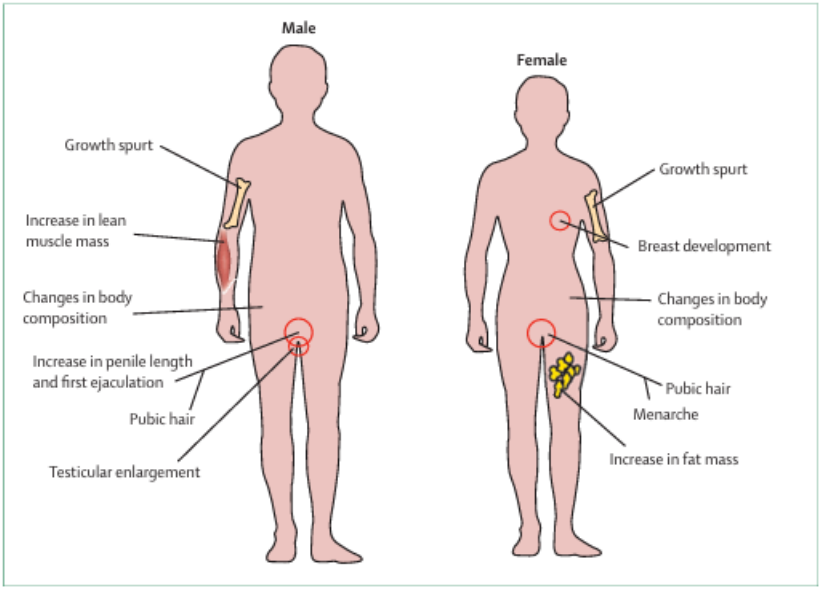


Figure 1. Physical changes that appear during pubertal development. Adapted from Abreu, A.P., & Kaiser, U.B. (2016). Pubertal development and regulation. Lancet Diabetes & Endocrinology.

This phase is also characterized by a series of changes at hormonal, neural, and behavioural levels (Naulé et al., 2021). Overall, these changes lead adolescents to develop other representation, feelings and attitudes toward their body. The elaboration of a new "body image" is one of the developmental task of adolescence (Rodriguez-Tomé et al., 1993).

Body image is not an objective reflection of the body as it is, but an interpretation, influenced by individual and contextual factors, such as the meanings and values that culture attaches to male and female bodies (Cash & Smolak, 2012). Several studies have shown that body image is a strong predictor of self-esteem in adolescence (Potard et al., 2016). Self-esteem is particularly low in this phase, and even lower in girls than in boys (Pazzaglia et al., 2020). As adolescents become more aware of their physical

appearance, there is a tendency for them to compare themselves to their peers, especially in an age where the use of social media amplifies this tendency (Alfonso-Fuertes et al., 2023).

The Tripartite Influence Model (Thompson et al., 1999) identifies three main sources of influence that shape an individual's body image: parents, peers, and media.

Parents, as primary socialization agents, significantly influence their daughters' body image and self-esteem through direct and indirect comments about weight and appearance (Pedalino & Camerini, 2022). Parental socioemotional support is associated with better body image perception (Michael et al., 2014). As children grow older and enter adolescence, peer relationships become increasingly influential and the desire for social acceptance can lead to heightened concerns about body image and increased sensitivity to social comparison (Pedalino & Camerini, 2022). Nowadays, in addition to traditional media, social media platforms represent another socio-cultural channel that influences adolescents' body image.

Carr and Hayes (2015) have defined social media as "Internet-based channels that allow users to opportunistically interact and selectively self-present, either in real time or asynchronously, with both broad and narrow audiences who derive value from user-generated content and the perception of interaction with others".

Adolescents are frequently exposed to idealized images and social media use resulted to be associated with body-related concerns (Mesce et al., 2022).

Different social networks focus on visual content such as images and videos, which encourages comparison between the real image and the idealised one (Aniulis et al., 2021). These platforms distort the way the body is represented, promoting unattainable aesthetic standards through a retouched and filtered image (Alava & Chaouni, 2024). The contrast between the self-image presented online and the reality of one's physical self can lead to identity confusion, deep questions about self-worth, and a pervasive sense of inauthenticity. This division often creates a dualism between the "real body" and the "virtual body", and triggers a process of alienation from one's own body, leading to the perception of it as an incomplete project that needs to be perfected (Digennaro, 2024).

Adolescent Identity Formation in the Digital Age

Erikson's psychosocial theory (1982) defines the life course as a sequence of stages, each with a distinct core developmental task and characterized by a specific psychosocial crisis. Each stage involves a conflict between two opposing forces, which must be balanced for healthy development. Successful resolution of each crisis leads

to the development of a specific virtue, such as trust, autonomy, initiative, industry, identity, intimacy, generativity, and integrity, while failure can result in maladaptive outcomes. The stage of adolescence is characterized by the crisis of identity vs. role confusion.

Identity development in adolescence is a process in which adolescents actively explore who they are and what they want to become, making choices in various areas such as values, relationships, and career (Branje et al., 2021).

According to Marcia (1966), this process involves two main elements: exploration and commitment. Exploration concerns the exploration of different identity alternatives, while commitment represents the process of choosing a particular direction, investing time and energy in personal choices (Crocetti, 2017).

Today's digital context offers adolescents a virtual space in which to experiment with multiple identities, sometimes divergent from the real one. The construction of identity through social media has a complex impact, which can both support and compromise the well-being of adolescents, according to different perspectives reported in the literature.

On the one hand, social media offers a space for young people to explore and assert aspects of their selves, using platforms to express emotions and moods, both through textual and visual posts (Shankleman et al., 2021). This freedom of expression can become a means to experiment and confirm an authentic identity, increasing self-awareness and self-confidence (MacIsaac et al., 2018).

Self-presentation is a fundamental behaviour in the development of identity, activated by the evaluative presence of others (Baumeister & Hutton, 1987; C.-C. Yang et al., 2018). Social media provides adolescents with the chance to engage in social interactions that enhance their self-perceptions and evaluations, thereby contributing to the development of their self-concept (their overall view of themselves) (Pérez-Torres, 2024).

Social comparison plays a decisive role in adolescent identity formation, and social media often widen the gap between the real and the ideal self, especially by increasing upward comparisons related to physical appearance (Pérez-Torres, 2024).

Furthermore, monitoring and documenting changes over time can facilitate the establishment of a sense of continuity with regard to one's identity. Weinstein (2018), describes how looking at past photos or previous posts offers adolescents an opportunity to reflect on their personal journey, providing a sense of stable identity and continuity.

Nevertheless, identity construction through social media can be frustrating and have a negative impact on well-being (Shankleman et al., 2021). For example, some adolescents engage in behaviours that are perceived as inauthentic, such as bullying, which do not represent who they are in offline life (Singleton et al., 2016).

Socio-emotional development

G. Stanley Hall (Hall, 1904), defined adolescence as a period of "storm and stress," a concept that, when viewed through both historical and contemporary lenses, highlights adolescence as a challenging phase of life (Arnett, 1999). Although many today consider the concept of "storm and stress" misleading, as it is not universally experienced evidence generally supports the idea that adolescence is a period characterized by increased sensitivity to emotional experiences, both positive and negative, especially when significant events occur in a social context (Guyer et al., 2016).

Emotions during adolescence are significantly influenced internally by cognitive development and pubertal and hormonal changes, and externally by various socio-emotional stressors, such as new social relationships, new experiences and increasing social pressures, which often make it difficult to manage emotions and behaviour (Guyer et al., 2016). Studies of adolescent brain development have traditionally focused on two important processes: changes in gray matter and white matter.

Gray matter, which includes synapses, decreases due to synaptic pruning and cortical thinning, reflecting a refinement of neural networks (Ismail et al., 2017). In contrast, white matter, composed of myelin, increases steadily during adolescence, enhancing the speed and efficiency of neural communication.

During this period, the prefrontal cortex undergoes significant maturation, improving executive functions such as planning, decision-making, and impulse control (Crone & Steinbeis, 2017). Strengthened connectivity between cortical and subcortical regions fosters better self-regulation and more efficient cognitive processing. At the same time, the amygdala undergoes considerable development, heightening emotional reactivity and influencing mechanisms like fear suppression. This evolving interaction between brain areas may support adaptive risk-taking and greater sensitivity to social stimuli during this transitional stage of life.

These neurobiological changes play a regulatory role in the context of adolescent cognitive and emotional behaviour. Furthermore, it is hypothesised that they may support adaptive risk-taking and greater sensitivity to social stimuli during this transitional stage of life.

When adolescence begins, the ability to manage emotional expression is already partially developed, however, only during the emotional development that occurs during adolescence that individuals learn to express emotions and manage conflicting emotions (Kumar et al., 2024). Indeed, emotions during this phase are notably more frequent, intense, and volatile compared to those in adulthood, with negative emotions such as self-consciousness, loneliness, and nervousness being particularly frequent (Arnett, 1999). The aforementioned emotional volatility is further evidenced by the heightened prevalence of depressive moods during this period, with studies indicate that the global point prevalence rate of elevated self-reported depressive symptoms among adolescents from 2001 to 2020 was 34% (Shorey et al., 2022).

As cognitive abilities develop during adolescence, a greater ability to reason about emotions and more complex emotional reactivity emerges. This facilitates the ability to analyse personalities, recognise multiple emotions in oneself and others, and comprehend the subjective nature of individual emotional responses to events (Kumar et al., 2024).

The need for adolescents to develop strategies to manage anxiety and negative emotions is particularly evident when considering that adolescence is also a vulnerable period for the onset of social anxiety disorder, with a peak in severe cases around age 13 (Haller et al., 2015). Other behaviours in which hyperemotionality is clearly expressed in adolescence include taking risks and seeking rewards (Guyer et al., 2016). Risk behaviours during adolescence tend to manifest across a spectrum of domains, with substance use, including alcohol and tobacco, emerging as the most prevalent category (45%) (Bozzini et al., 2021). This is followed by behaviours linked to mental health challenges, such as depressive episodes, suicidal ideation, and self-harm, which account for 21.6% of cases (Bozzini et al., 2021). Violent or aggressive tendencies represent 14% of reported outcomes, while sexual risk behaviours contribute to 11% (Bozzini et al., 2021).

Although adolescent high-risk behaviours are potentially harmful to individual well-being, interpersonal relationships and societal norms, they can be understood as adaptive mechanisms (Ellis et al., 2012). These tendencies often stem from the need for exploration and learning, as suggested by Ciranka & Van Den Bos (2021), which allows adolescents to navigate new environments, acquire social skills and establish independence. Thus, adolescence has recently been interpreted as a period of vulnerability and opportunity (Guyer et al., 2016).

1.2 Generation alpha

The term "Generation Alpha" was suggested by McCrindle, derived from the first letter of the Greek alphabet, Alpha (McCrindle et al., 2021). The generations that preceded it - Generation Z - represent the end of the Latin alphabet in the naming of generations, making way for the emergence of Gen Alpha. Typically born to a millennial parent, Gen Alpha is considered to be born between the years 2010 and 2025. The year of their birth (2010) coincides with the launch of the iPad, the first iPhone with front camera and Instagram, which is currently the most popular brand and social media application in the world (Jha, 2020).

According to McCrindle (2021), Gen Alpha is defined by five key characteristics: Digital, Social, Global, Mobile and Visual. These distinctive traits not only outline the way this generation interacts with the world but also highlight the change in social and cultural dynamics that influence their cognitive and social processes.

The current generation of teenagers has been born into an environment already filled with digital technology, which has always been a constant presence in their daily lives (Höfrová et al., 2024). Unlike previous generations who experienced a gradual transition to digital, these young people do not know a world without the internet, smartphones and social media. For this demographic, innovations such as drone deliveries, augmented reality, electric vehicles, smart homes, robots, a cashless society and integrated technologies are the norm. The labels assigned to Generation Alpha - Glassers, Screenagers, Digital Natives, and the Connected or Wired Generation - emphasize their affinity for and integration with technological advances (Miller, 2023).

Their daily experience is deeply influenced by social platforms such as TikTok, Instagram and YouTube, which act not only as entertainment tools, but also as spaces for building identity. Indeed, another key aspect is the constant connection with others, facilitated by social platforms. Social media platforms immerse young people in a network that remains active around the clock, crossing social, geographic, and cultural boundaries (McCrindle et al., 2021). Recently, with the rise of various social media applications, many ordinary people have achieved notoriety, becoming known as “influencers”. These individuals have a significant impact on society and families, particularly shaping the attitudes and behaviours of young teenagers (Al-Ansi et al., 2023). This constant exposure highlights the global nature of Generation Alpha, as trends in fashion, food, entertainment and digital culture spread rapidly around the world (McCrindle et al., 2021).

This generation is ready to embrace a highly mobile lifestyle characterised by flexible education, remote working and digital nomadism, enabling them to navigate digital spaces, redefine traditional roles and prioritise flexibility, autonomy and global engagement (McCrindle et al., 2021). The rapid evolution of AI, robotics, and other technologies is rapidly transforming the job market, necessitating a continuous adaptation of skills and work models (Bühler et al., 2022). According to Frey and Osborne (2017), of total employment could be automated relatively quickly, perhaps over the next ten to twenty years. There will be a high demand for both technical skills like programming and app development, as well as uniquely human skills such as creative thinking, problem-solving, and negotiation (Bühler et al., 2022; Willcocks, 2020).

To prepare for this future, educational institutions must adopt innovative approaches that foster a holistic development of both technical and soft skills. António Guterres (2022), in his keynote at the United Nations' Transforming Education Summit in 2022, stated:

> "The education systems must help people learn how to learn, with a focus on problem-solving and collaboration […] provide the foundations for learning, from reading, writing and mathematics to scientific, digital, social and emotional skills […] develop students' capacity to adapt to the rapidly changing world of work […] and be accessible to all from the earliest stages and throughout their lives".

The preference for succinct responses and the tendency towards multitasking present significant challenges to the development of critical thinking skills. These skills require sustained focus, time and attention to detail, which are all factors that are difficult to replicate in online environments (Drugas, 2022). This generation favours visual and interactive learning over traditional methods (Taylor & Hattingh, 2019). They show an ability to analyse stories from different angles and to rework them in inventive ways (Carruba et al., 2022). Generation Alpha processes information in a more "reticular" and collaborative way, with a tendency to connect ideas and concepts in interconnected networks of meaning, influenced by constant exposure to digital technologies (Carruba et al., 2022). They experiment and adopt strategies such as "trial-and-error" to overcome obstacles and learn, demonstrating resilience and problem-solving skills (Taylor & Hattingh, 2019). Teachers' views of Alpha's characteristics include a high level of curiosity about learning, creativity and the ability to approach situations with a broad perspective (Apaydin & Kaya, 2020). Negative

traits often cited include dependence on technology, a tendency towards egocentrism and limited social communication (Apaydin & Kaya, 2020). These elements reflect teachers' concerns about the impact of early exposure to digital devices. Other characteristics, such as impatience and difficulty following rules, also seem to suggest that the speed and immediacy typical of the digital age can have a negative impact on the development of some relational and behavioural skills (Apaydin & Kaya, 2020).

Challenge to health and wellbeing

Adolescents today face significant health challenges that impact their immediate and future outcomes. These challenges encompass physical health issues, mental health disorders, and risky behaviours, all of which are influenced by a multitude of factors, including social, economic, and environmental conditions.

One aspect of well-being is represented by physical health. Adequate nutrition can influence the proper development of children and adolescents. However, adolescent independence often leads to a shift towards unhealthy eating habits, characterised by increased consumption of processed foods and decreased physical activity, leading to a significant risk of obesity and related health problems (Wawrzyniak & Traczyk, 2024). According to the World Health Organization (*WHO European Regional Obesity Report*, 2022) in Italy, approximately 39% of 11-year-old boys and 19% of girls are affected by excess body weight. Adolescents often struggle with poor body image, and for many girls, achieving the "ideal" body becomes a dream. In pursuit of this ideal, many young women resort to strict dieting, which can lead to a lack of balanced and nutritious food, negatively impacting their health (Oktavianto et al., 2023). In addition, the amount of time young people spend sitting increases every year (Kim & Lee, 2022). Research shows a negative correlation between physical activity and screen time, especially moderate-intensity physical activity is negatively correlated with screen time (Sanz-Martín et al., 2022). Physical activity not only improves physical health but also supports the development of social skills and helps build relationships (Cheon & Lim, 2021).

The mental health of Generation Alpha adolescents is a growing concern, influenced by complex factors such as peer pressure, intensive use of technology, and changing family and social dynamics.

Over the past decade, adolescents have experienced a marked rise in depression and anxiety, making today’s youth more vulnerable to mental health challenges than ever before (Lahti et al., 2024).

A factor contributing to this trend is increasing academic pressure, often reinforced by parental and societal expectations of high achievement. Research suggests that parental pressure to excel academically not only increases academic stress, but also strains parent-child relationships, ultimately undermining adolescents' overall life satisfaction (Haspolat & Ağirkan, 2024).

Furthermore, academic pressure is associated with mental health problems in adolescence. In a recent systematic review, academic pressure has been found to have a positive association with both depression and anxiety symptoms (Steare et al., 2023).

Modern families face increasing challenges related to rapid social and cultural changes, including parental separation and the increased time that parents spend away from their children for work reasons. These dynamics affect the well-being of adolescents, fueling fears of abandonment, broken emotional bonds and a sense of loneliness (Karhina et al., 2023; Lu, 2023)

Heavy use of digital devices and social media has been linked to a number of psychological problems in adolescents, including emotional symptoms, conduct problems and depressive symptoms (Mulla et al., 2024). Exposure to harmful content, such as violent images, risk of victimisation by strangers and cyberbullying, is a major source of stress (Winstone et al., 2023). Cyberbullying poses particularly serious risks, with victims showing higher rates of suicidal ideation, suicide attempts, and self-harm (Li et al., 2024).

CHAPTER 2.

REVIEW OF LITERATURE. ADOLESCENT SOCIAL MEDIA USE AND EMOTIONAL INTELLIGENCE: A SYSTEMATIC REVIEW

2.1 Abstract

Emotional intelligence, which encompasses the ability to perceive, understand, express, and regulate emotions, is recognized as critical to the socioemotional development of adolescents. Despite its significance, the relationship between emotional intelligence and social media use among adolescents remains largely unexplored in the literature. This work aimed to provide a review that examines the association between adolescents' emotional intelligence, including its dimensions (self-esteem, emotion regulation, empathy), and social media use. An online search of two electronic databases identified 25 studies that met the inclusion criteria. The results suggest that lower levels of emotional intelligence are associated with increased problematic social media use among adolescents, with social media use showing a negative correlation with adolescents' self-esteem. In addition, difficulties in emotion regulation were associated with problematic social media use, while social media use was positively correlated with empathy. These findings underscore the importance of considering emotional intelligence as a key factor in understanding the relationship between adolescents and problematic social media use.

2.2 Introduction

This study examines the relationship between emotional intelligence, emotional regulation, self-esteem, empathy, and social media use among adolescents. Social media platforms have become a crucial aspect of adolescents' daily lives, significantly influencing their behavior, communication patterns, and self-presentation. Due to its potential implications for adolescents' social and emotional development, understanding the impact of emotional intelligence on adolescents' social media use is of significant importance. Although systematic reviews have examined the relationship between problematic technology use, including problematic Internet use and Internet gaming disorder, and emotional intelligence, (Gisbert-Pérez et al., 2024; Leite et al., 2019; H. Yang et al., 2022), no review has focused specifically on the correlation between social media use and emotional intelligence. The purpose of this study is to address this gap by conducting a systematic review of the relationship between emotional intelligence and social media use in adolescents.

Social Media Use During Adolescence

In the current digital age, social media has taken on a dominant role among adolescents. Social media experience has cognitive, emotional, behavioral and social dimensions (Ferrara & Yang, 2015; Korte, 2020)**.** The digital environment provides a compelling context for youth to navigate socio-developmental tasks with a significant impact on their social-emotional well-being (Valkenburg, P. & Peter, J, 2013). As peer bonding is a key developmental task during adolescence, it is not surprising that social media and social network platforms are attractive to adolescents. Indeed, the most recent global census data indicate that Generation Z consisting of individuals born from the mid-1990s to the early 2010s, holds the title for the most extensive usage of social media, averaging over 2.5 hours daily on these platforms (Global Web Index, 2023). Furthermore, 71% of adolescents access more than one platform and nearly a quarter admit to being online all the time due to increased mobile accessibility via smartphones (Schivinski et al., 2020). However, concerns about problematic and addictive adolescent social media use are emerging. Research suggests that time spent on social media daily is a risk factor for developing dysfunctional mechanisms of social media use (Schivinski et al., 2020). According to experts, problematic social

media use resembles addiction with associated compulsivity, tolerance, withdrawal, motivation, and dysfunction (Shafi et al., 2021). Adolescents with problematic social media use typically have a diminished ability to regulate their social media use impulses and feel uncomfortable when social media use is restricted (Boer et al., 2020). A large-scale study of European adolescents found that the prevalence of addiction-like problematic social media use was 9.1% (Mérelle et al., 2017).

Emotional Intelligence

Emotional intelligence, defined by Salovey and Mayers (1990), as the ability to perceive, understand, express, and regulate emotions, plays a key role in promoting social adjustment and psychological well-being, especially during adolescence. Emotional intelligence is divided into different conceptualizations: ability emotional intelligence and mixed-model emotional intelligence. The Ability-based model originates from the groundbreaking research conducted by Salovey and Mayer. They formulated a four-branch model of emotional intelligence, encompassing skills such as perception, appraisal, and expression of emotion; using emotions to enhance cognitive processes, understanding and analyzing emotions, using emotional knowledge; and adaptive regulation of emotion (Salovey et al., 1999). Mixed models characterize emotional intelligence as a collection of interrelated emotional and social competencies, skills and facilitators that determine how effectively individuals understand and express themselves, understand others and relate with them, and cope with daily demands (Bar-On, 1997). Another differentiation was further operated by Petrides and Furnham (2001), who distinguished Trait emotional intelligence (TEI) from Ability emotional intelligence (AEI) and claimed that the nature of the model is determined by the type of measurement. Trait emotional intelligence is defined as a constellation of emotional self-perceptions located at the lower levels of personality hierarchies and measured via the trait emotional intelligence questionnaire (TEI-Que), while Ability emotional intelligence concerns emotion-related cognitive abilities that ought to be measured via maximum-performance tests (Petrides et al., 2007). However, the different “definitions" of emotional intelligence tend to be complementary rather than contradictory (Ciarrochi et al., 2000). According to

Petrides and Furnahm (2001), Trait emotional intelligence includes various personality traits such as empathy and assertiveness (Goleman, 2005), as well as elements of social intelligence (Thorndike, 1920), personal intelligence (Gardner, H, 1983), and ability emotional intelligence (Salovey & Mayer, 1990). The domain of Trait emotional intelligence includes 15 distinct components: trait optimism, trait happiness, self-esteem, emotion management, assertiveness, social awareness, empathy, emotion perception, emotion expression, relationships, emotion regulation, impulsiveness (low), stress management, self-motivation, and adaptability. Hughes and Evans (2018) identified several limitations in existing models of emotional intelligence, including the lack of clear and concise definitions that provide boundaries for each emotional intelligence-related construct and the absence of a theoretical framework. To overcome these limitations, they proposed an integrative theoretical model, which includes ability emotional intelligence, affect-related personality traits, and emotional regulation, called the Integrated Model of Affect-related Individual Differences.

Emotional Intelligence In Adolescence

Despite differences among emotional intelligence models, their application has resulted in numerous emotional intelligence-related findings, such as correlations between higher emotional intelligence scores and well-being, prosocial behavior, and physical activity (Laborde et al., 2016; Llamas-Díaz et al., 2022; Mavroveli et al., 2009; Sanchez-Alvarez et al., 2015). During adolescence, emotional intelligence is particularly relevant, as it affects the quality of relationships with peers, family, and teachers (Petrides et al., 2006). Adolescents with high emotional competencies tend to have some relationship skills, such as the ability to both communicate and listen clearly and to manage conflict constructively, which can help them maintain interpersonal relationships (Wang et al., 2019). Research suggests that emotional intelligence is an important construct in preventing health and behavioral problems, including problematic Internet and technology use (Sural et al., 2019). In fact, several studies indicate that higher emotional intelligence correlates with more adaptive coping and fewer dysfunctional strategies (Alshakhsi et al., 2022; Kun & Demetrovics, 2010). On the other hand, people with lower levels of emotional intelligence are more likely to

develop problematic behaviors. A small number of studies have shown that lower levels of emotional intelligence may be correlated with higher levels of problematic use of technological communication media such as smartphones, the Internet, and video games (Alshakhsi et al., 2022; Che et al., 2017; Gisbert-Pérez et al., 2024). A recent review found a positive correlation between adolescent emotion dysregulation and the severity of problematic technology use, including problematic smartphone use, problematic Internet use and Internet Gaming Disorder (H. Yang et al., 2022). Nonetheless, there is still relatively limited research examining the relationship between emotional intelligence components and these problematic behaviours.

Current study

Emerging evidence suggests that emotional intelligence may act as a protective factor against various negative outcomes, including problematic technology use. However, its specific relationship with social media use remains underexplored, particularly within the context of adolescence. To address this gap, the current study systematically reviewed the literature on emotional intelligence and social media use during adolescence. defined as the period between the ages of 10 and 19.

2.3 Methods

Information Sources and Search Terms for Identification of Studies

Between January 2023 and August 2023, an exhaustive search was conducted using the Web of Science Core Collection and Pubmed electronic database using the search strings stated in Table 1. The search query was formulated to identify studies investigating the nexus between emotional intelligence and social media among adolescents' group. Given the relative scarcity of research focusing on the interplay between emotional intelligence and social media utilization among adolescents, specific facets within the framework of Trait emotional intelligence, were included in the search string. According to Petrides and Furnham (2001), the sampling domain of Trait emotional intelligence includes four primary factors (Well-Being, Self-Control, Emotionality, and Sociability) and a total of 15 facets. For each of these primary factors, one specific facet was selected (emotional regulation, emotion management

self-esteem and empathy). To include studies that have not emerged from the initial databases-research, reference lists from previously identified articles were also screened as a source of information.

emotional intelligence OR emotional quotient OR emotional competence OR trait emotional intelligence OR emotion regulation OR self-esteem OR empathy	social network OR social media OR social networking site OR social media use OR Web 2.0 OR social networking platforms OR Instagram OR Facebook OR Snapchat OR Twitch OR tiktok OR YouTube OR WhatsApp OR Twitter	adolescent OR young OR pubescent OR teenage OR student OR youth OR adolescence OR early adolescence

Table 1 Search strings

Screening (inclusion and exclusion criteria)

The second phase of the review process entailed a screening procedure conducted in adherence to predefined inclusion and exclusion criteria. The inclusion criteria for the search strategy were articles published in English and Spanish, peer-reviewed journals, between the years 2001 and 2023. The decision to limit the study to this specific period was motivated by the notable development of social media, coinciding with the introduction of tools for assessing emotional intelligence in 2001, e.g. Ciarrochi et al., (2001). To be considered for inclusion, studies were required to utilize instruments or methodologies grounded in one of the various established theoretical models of emotional intelligence or Trait emotional intelligence or one of its facets. Moreover, the selection criteria extended to studies that investigated both the overall extent of social media usage and the specific types of usage. This approach allowed for a comprehensive examination of the influence of social media on emotional intelligence across various dimensions. The WHO (2015) defines adolescence as the period between the ages of 10 and 19 years, so the participants' age range had to be from 10 to 19 years, including individuals of any ethnicity or gender. Articles that included participants recruited from college or postsecondary education settings were also subject to exclusion, because such studies expanded the age range beyond the

confines of adolescence, and they did not offer separate analyses of results based on age groups. Cross-sectional or longitudinal designs, and only full-text articles were included. Including specific facets provides a detailed understanding of how emotional intelligence interacts with adolescents' behavior on social media platforms.

Abstracts, reports, duplicates, conceptual papers, research debates, commentaries and book reviews were excluded. To maintain the focus of our analysis, articles featuring clinical samples were deliberately excluded. The primary aim was to investigate the connection between emotional intelligence and social media usage from a preventive standpoint, to draw conclusions that possess reduced potential for bias. Furthermore, the selection process involved the exclusion of studies that examined emotional intelligence and social media usage but did not explicitly investigate the relationship between these two constructs. This approach ensured the inclusion of studies that directly contributed to the objective of scrutinizing the interplay between emotional intelligence and social media use among adolescents, thus enhancing the robustness of the conclusions".

Eligibility

Eligibility is the process by which the author manually includes or excludes literature items in light of particular criteria in accordance with the research question and the study objectives (Tang et al., 2021). An examination was conducted on all the retrieved articles, and only those aligning perfectly with the predefined criteria were considered suitable for inclusion. Titles and abstracts of all retrieved publications were imported into Zotero, and duplicates were removed by one reviewer. Two reviewers independently screened the titles and abstracts of retrieved articles. Articles that were deemed highly unlikely to be relevant based on their title and abstract were disregarded. Full-text versions of the remaining articles were then obtained and screened independently by the same reviewers. Researchers were blinded to each other's decisions throughout the selection process. Disagreements between the reviewers' decisions were resolved through discussion. Following the inclusion and exclusion criteria and the subsequent manual screening of titles, abstracts, and full texts, a total of 25 articles met the stringent standards and were retained for the

synthesis. Full-text versions of the remaining articles were screened independently by the same reviewers. The results of the literature search and the subsequent selection process are visually depicted in the flowchart provided in Figure 2. The included studies were categorized according to different components and dimensions of emotional intelligence to facilitate a comprehensive analysis of their contributions to the research objectives. One additional study was identified after screening the reference lists of eligible articles.

Quality assessment, data extraction and synthesis

The quality of the studies reported was assessed using the Observation Study Quality Evaluation tool (OSQE) (Drukker et al., 2021). The OSQE has a cohort version, a case-control version and a cross-sectional version. All three versions have a different scoring system. The OSQE cross-sectional is a selection of items from the OSQE cohort. The OSQE cohort includes 14 obligatory items and 2 optional items, while the OSQE cross-sectional includes 7 obligatory items and 3 optional items (a higher score represents a better quality). Quality assessment of the selected studies was performed by two authors independently and, through meetings, consensus was reached on the score of the articles (refer to Supplementary Material for scoring details). For each of the selected articles, a data extraction process was undertaken, encompassing multiple essential facets. This included parameters such as the identification of authors, the year of publication, sample size, mean age of subjects, gender distribution, geographical origin of the research, specific instruments used for the assessment of emotional intelligence, self-esteem, empathy, emotional regulation, the extent of involvement with social media platforms, and the primary outcomes derived from the investigation. Due to the heterogeneity of studies (different measures, different approaches, and designs), the articles that fulfilled the inclusion and exclusion criteria were synthesized using a qualitative narrative approach. The description of the data and findings from the systematic review was the basis for the qualitative synthesis.

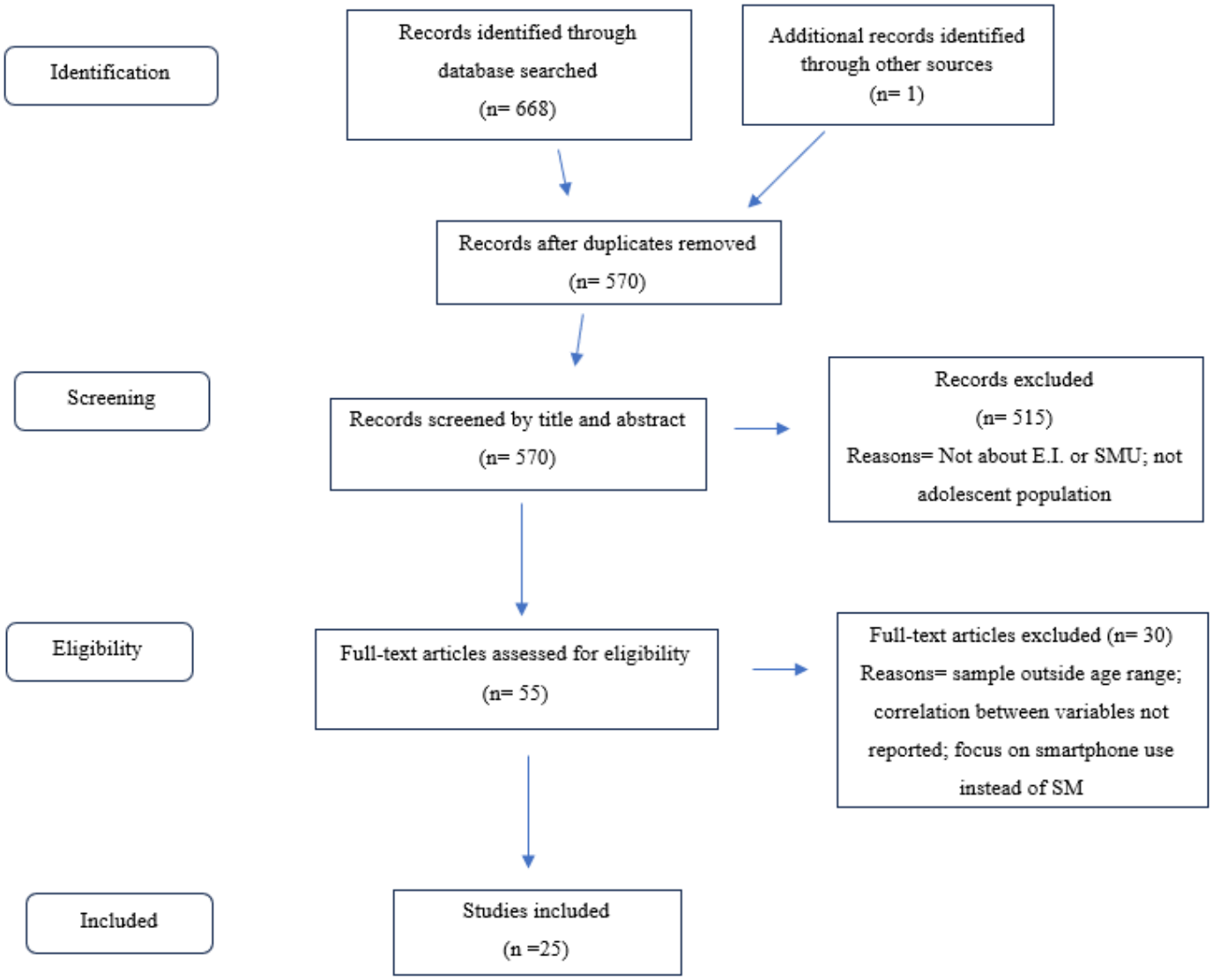


Figure 2. PRISMA flow diagram of the literature review and paper inclusion pathways

References	Sample size	Means age	% Of boys	Study Country	EI Instrument	Social Media Instrument	Primary outcomes	Quality
(Arrivillaga et al., 2022b)	597	14.36	45.2%	Spain	Wong and Law's Emotional Intelligence Scale (WLEIS)	Bergen Social Media Addiction Scale (BSMAS)	BSMAS showed a negative and significant correlation with EI, intrapersonal perception, and emotional regulation in girls. No significant correlation was observed between the BSMAS and EI or the sub-dimensions in boys	5
(Arrivillaga et al., 2022a)	2,068	14.61	46.2%	Spain	WLEIS	Social Media Addiction Questionnaire (SMAQ)	EI showed negative associations with SMAQ, perceived stress and depressive symptoms.	5
(Kircaburun, et al., 2019)	470	16.29	40%	Turkey	TEI-QueSF	BSMAS	EI showed negative associations with BMAS. Significant higher levels of PSMU in females and higher levels of EI in males.	6

(Pino & Mastromarino, 2023)	Not reported	17	35.4	Italy	TEI-QueASF	BSMAS	Males reported higher scores of EI than females. Having high stress levels and low EI levels predict the possibility of incurring a social network addiction	2
(Errasti et al., 2017)	503	14.6	54.1%	Spain	Basic Empathy Scale; Rosenberg Self-Esteem Scale	Use of Facebook Questionnaire. Use of Twitter Questionnaire	Positive correlation between FB-Frequency and Affective and Cognitive Empathy. Significant positive correlation between TW-Frequency and Affective Empathy. Significant negative correlation between FB and TW use and Self-esteem.	6
(Thorisdottir et al., 2019)	10.563	Mean not reported (14-16 years)	49.7%	Iceland	Rosenberg Self-Esteem Scale	Time on SM: On average, how many hours a day do you spend on SM? Multidimensional Scale of Facebook Use	Significant negative correlation between time on SM, active use and passive use of SM and self-esteem.	8

(Valkenburg, Beyens, Pouwels, Van Driel, et al., 2021)	387	14.11	56%	Netherlands	Self-esteem: How satisfied do you feel about yourself right now?	Time spent with SM: How much time in the past hour did they spend with the three most popular platforms.	The association of the mean level of SMU with the mean level of self-esteem was significantly negative.	7
(Woods & Scott, 2016)	467	Mean not reported (11-17 years)	Not reported	Scotland	Rosenberg Self-Esteem Scale	Emotional investment in SM (Social Integration and Emotional Connection) Overall and nighttime SMU	Significant negative correlation between self-esteem and SMU and emotional investment in SM.	5
(Martinez-Pecino & Garcia-Gavilán, 2019)	233	15.12	53.2%	Spain	Rosenberg Self-Esteem Scale	Problematic Instagram Use (PIU)	The negative direct effect of self-esteem on PIU	6
(Kelly et al., 2018)	10.904	14.3	50.4%	UK	Rosenberg Self-Esteem Scale	SMU: Average hours of SMU on a weekday	≥5 h on SM and no SMU were related to low self-esteem.	10
(Cingel & Olsen, 2018)	337	15.8	51.9%	Netherlands	Rosenberg Self-Esteem Scale	Time spent on Facebook	Self-esteem was negatively related to overall Facebook time.	5

(Neira & Barber, 2014)	1.819	14.6	45%	Australia	Self-esteem (How often do you: feel good about yourself?', 'feel satisfied with who you are?', and 'feel sure about yourself.)	SNS use; SNS frequency scale; SNS investment scale;	A significant negative relationship between SNS investment and self-esteem was found. No significant correlation between SNS use and SNS frequency.	5
(Livet et al., 2022)	3.801	12.80	52%	Canada	Rosenberg Self-Esteem Scale	"How much time per day you spend engaging with Facebook, Twitter, or other SM?"	Higher levels of SMU and video gaming were associated with lower levels of self-esteem. Any further increases in social exposure in a given year were associated with a lower report of self-esteem both the same year and the next (+ 1 year)	9

(Acar et al., 2022)	221	15.81	50.7%	Turkey	Rosenberg Self-Esteem Scale	Social Media Addiction Scale	Self-esteem was negatively correlated with emotional problems and SM addiction.	6
(Wartberg et al., 2021a)	1.221	13.04	53.9%	Germany	Difficulties in Emotion Regulation Scale Short Form	Social Media Disorder Scale	Statistically significant associations between PSMU and problematic emotion regulation in all six investigated facets.	7
(Meeus et al., 2019)	725	11.6	45%	Belgium	Rosenberg Self-Esteem Scale;	Online self-presentation (adapted from the media and technology usage and attitudes scale by Rosen (Rosen et al., 2013) Online popularity	Self-presentation on SM positively correlated with online affirmation, which was positively associated with self-esteem	7
(Xu et al., 2023)	1.789	14.48	45.4%	China	Rosenberg Self-Esteem Scale; Self-concept Clarity Scale	Mobile Social Addiction Scale	Self-esteem and self-concept clarity were negatively correlated with mobile SM addiction.	8

(Rodgers et al., 2020)	681	12.76	51%	Australia	The item "I have high self-esteem. Ranging from 1 (Not very true of me) to 5 (Very true of me).	The frequency of SMU was assessed by adolescents rating how often they used different social networking services including Snapchat, Instagram, Facebook, YouTube, Twitter, and Pinterest.	SMU was correlated weakly-to-moderately with lower self-esteem.	7
(Ciacchini et al., 2023)	258	17.42	42.2%	Italy	Rosenberg Self-Esteem Scale	BSMAS and: "Which SM do you use the most?"; "How many hours do you spend on SM per day"; "Do you use SM every day?".	BSMAS was negatively correlated with self-esteem. The negative link between self-esteem and hours spent on social networks and checking SM.	6
(Coyne et al., 2019)	457	13.5	47%	United State	Self-regulation was assessed using a modified 13-item measure (Novak & Clayton, 2001)	Eight items regarding how many hours they spend on a typical day engaging in media other than social networking, 7-item Problematic Social Media Use Scale	Moderate users had higher levels of self-regulation and lower levels of overall media use compared to peak increase users.	9

(Gracia Granados et al., 2020)	884	15.7	46.4%	Spain	Wong and Law's Emotional Intelligence Scale (only item related to emotional regulation)	Social Media Addiction Questionnaire	Negative relationship between emotional regulation and PSMU and a partial mediating role of depression in this relationship.	5
(Vossen & Valkenburg, 2016)	942	T1: 12.9, T2: 13.3,	50%	Netherlands	Adolescent Measure of Empathy and Sympathy	How many days of the week do you use social network sites [instant messaging apps]? And on the days that you use social network sites [instant messaging apps], how much time do you spend on this per day?	At both time points, SMU was positively correlated with affective empathy and cognitive empathy.	9
(Marino, Gini, et al., 2020)	761	15.4	55.5%	Italy	Difficulties in Emotion Regulation Strategies; E-motions questionnaire	Social Media Disorder Scale; SMU per day; perceived SMU by friends	Difficulties in emotion regulation significantly contribute to PSMU directly and indirectly, via frequency of SMU and	7

							facilitating use of e-motions.	
(Peker & NebiOğlu Yildiz, 2022)	1.151	14.4	36.2%	Turkey	Emotion Regulation Scale	Social Media Addiction Scale	Negative significant relationships between reappraisal and SM addiction, and positive significant relationships between suppression and SM addiction.	7
(Stockdale & Coyne, 2020)	385	18	47%	USA	Empathy was assessed using a 7-item measure (Davis, 1983)	Reasons for SMU; a modified version of the Problematic use of Mobile Phones	Reasons for SMU were positively correlated with pathological SMU and empathy	10

Table 2 Qualitative synthesis based on the description of the data and results collected from the systematic review

2.4 Results

Study Characteristics

Twenty-five articles meeting the inclusion and exclusion criteria were included in this review. The total number of participants across the 25 articles was 41.624 (boys' percentage across studies = 49.3%; mean age across studies = 14.6 years). In all the studies, data were collected through questionnaires. Twenty studies used a cross-sectional perspective, while four studies used a longitudinal methodology. The distribution of the nationalities was: Spain (5), Netherlands (3 Turkey (3), Italy (2), Australia (2), Iceland, United States (2), United Kingdom, Germany, Belgium, China, and Scotland (one study each). Most of the excluded studies did not report the association between emotional intelligence and social media use or involved participants outside the age range of 10–19 years old or did not contain at least one component of emotional intelligence or social media use. Based on OSQE cross-sectional scores, 31.6% (n=6), 26.3% (n=5), 26.3% (n=5), 10.6% (n=2) and 5.3% (n=1) were rated 5, 6, 8 and 2 stars out of 10, respectively. Based on the OSQE cohort scores, 66.7% (n=4), 16.7% (n=1) and 16.7% (n=2) were rated 9, 10 and 7 stars out of 16 respectively.

Emotional Intelligence and Social Media in Adolescents

The literature review showed four relevant results regarding the construct of emotional intelligence about social media. All studies examined social media use from a problematic standpoint, with three utilizing the Bergen Social Media Addiction Scale (BSMAS) and the remaining one employing the Social Media Addiction Questionnaire (SMAQ) (Andreassen et al., 2017; Hawi & Samaha, 2017). The BSMAS assesses with 6 items the characteristic symptoms of addiction (i.e., salience, conflict, mood modification, withdrawal, tolerance, and relapse), without making a diagnosis of addiction, but suggesting a level of risk of problematic social media use. The SMAQ is composed of eight items scored on a 7-point Likert scale that ranges from strongly disagree strongly agree, with higher scores indicating dysfunctional mechanisms of social media use. Two of the studies measured emotional intelligence using the Wong and Law's Emotional Intelligence Scale (WLEIS) (Law et al., 2004),

while two used the TEI-QueSF (Petrides, 2009). The WLEIS is often used to measure a range of basic emotional skills and consists of a 16-item scale divided into four subscales: self-evaluation of emotions, evaluation of others' emotions, use of emotions, and regulation of emotions. The TEI-Que comprises fifteen emotional intelligence domain personality grouped into four dimensions: well-being, self-control, emotionality and sociability. Two of these studies were conducted in Spain, one in Turkey and one in Italy. All the studies included in this review highlight a negative relationship between emotional intelligence and dysfunctional social media use. In the majority of studies (Arrivillaga et al., 2022b; Kircaburun, et al., 2019; Pino & Mastromarino, 2023), gender differences in problematic social media use were observed and were significantly higher in females compared to males; conversely, males tended to have higher levels of emotional intelligence. The correlational analyses of the Kirkaburun (2019) and Arrivillaga (2022a) study show a significant negative association between dysfunctional mechanisms of social media use and emotional intelligence, while the Arrillaga (2022b) study shows a negative and significant association only in the female sample. Several specific mediating variables were examined in these studies. It was found that perceived stress acts as a mediator in the relationship between emotional intelligence and problematic social media use, while depressive symptoms play a partial mediating role in this relationship (Arrivillaga et al., 2022a). Mediational analysis results showed that mindfulness, rumination and depression fully accounted for the association between trait emotional intelligence and problematic social media use (Kircaburun, et al., 2019) Consistent with Pino and Mastromarino's (2023) findings, increased stress and decreased emotional intelligence emerged as predictive factors associated with an increased likelihood of developing social network addiction. It should be noted, however, that the studies are not without limitations. One such limitation relates to the use of self-report measures for both problematic social media use and emotional intelligence, which may be susceptible to the influence of social desirability bias. In addition, the research designs adopted a cross-sectional approach, which precludes the establishment of causal relationships between the variables under investigation.

Adolescents' Self-esteem and Social Media Use

Constant exposure to social media encourages users to compare themselves to others online, which can be detrimental to their self-esteem (Alfasi, 2019). This effect is notably significant during adolescence, a developmental stage where individuals shape their identities and evaluate themselves based on both internal and external perceptions (Acar et al., 2022). There is a relatively large body of research that has examined the association between social networking site use and self-esteem. The Rosenberg Self-Esteem Scale is the most commonly used survey measure to assess general, trait-like levels of self-esteem (Rosenberg, 1989). According to Rosenberg, self-esteem manifests when "a specific object (in this case, oneself) holds a positive or negative attitude with essentially the same qualities and attitudes as towards other objects (besides oneself)" Consequently, he posited that, given the measurability of attitudes towards objects, attitudes towards oneself could similarly be quantified. The self-esteem scale developed by Rosenberg consists of 10 items, with responses assessed on a Likert scale. The majority (11) of studies on SOCIAL MEDIA USE and self-esteem in this review used Rosenberg's self-esteem scale (Acar et al., 2022; Ciacchini et al., 2023; Cingel & Olsen, 2018; Errasti et al., 2017; Kelly et al., 2018; Livet et al., 2022; Martinez-Pecino & Garcia-Gavilán, 2019; Thorisdottir et al., 2019; Valkenburg, Beyens, Pouwels, Van Driel, et al., 2021; Woods & Scott, 2016; Xu et al., 2023). However, two studies (Rodgers et al., 2020; Valkenburg, Beyens, Pouwels, van Driel, et al., 2021) , employed a single-item measure of self-esteem ("How satisfied do you feel about your-self right now?"; "I have high self-esteem"). The key finding was a weak-to-moderate correlation between social media use and lower self-esteem. The assessment of variables related to social media has emerged as a more diversified research field, with numerous research tools being employed to examine various dimensions of engagement and problematic usage. Some studies have focused on the problematic aspect of social media usage, utilizing targeted instruments to measure this phenomenon (Acar et al., 2022; Ciacchini et al., 2023; Martinez-Pecino & Garcia-Gavilán, 2019; Xu et al., 2023). These tools include the Problematic Instagram Use (Marino et al., 2017), the Social Media Addiction Scale (Sahin, C., 2018), the Mobile Social Addiction Scale (Liu et al., 2023) and the BSMAS (Monacis

et al., 2017). A study examining the relationship between problematic Instagram use and the number of likes received on posts found a notable correlation with self-esteem. Specifically, it identified a negative direct effect of self-esteem on problematic Instagram use, indicating that individuals with higher self-esteem tend to exhibit lower levels of problematic Instagram use (Martinez-Pecino & Garcia-Gavilán, 2019). A consistent pattern of negative correlations has been found in the research carried out by other studies on addiction to social media and self-esteem (Acar et al., 2022; Ciacchini et al., 2023; Xu et al., 2023). These findings suggest that individuals with lower self-esteem may be more susceptible to developing an addiction to social media platforms. For these individuals, social media may potentially serve as a means of seeking validation and building social connections.

Studies on social media use duration among adolescents often involve custom questions to assess this aspect, for example, "On average, how many hours a day do you spend on social media?" or "How much time a day do you spend on Facebook, Twitter or other social media?".

It is important to underline that the findings of such studies are based on participants' estimates and subjective perceptions of their social media behavior, so there may variations and limitations related to participants' memory or perception of time (A. Y. Lee et al., 2021). All studies included in this review found significant weak to moderate negative associations between time of social media use and self-esteem (Ciacchini et al., 2023; Cingel & Olsen, 2018; Kelly et al., 2018; Livet et al., 2022; Thorisdottir et al., 2019; Valkenburg, Beyens, Pouwels, van Driel, et al., 2021). A negative correlation was found between usage time and self-esteem ($r = -.188$, $p < .001$), and a slight negative correlation between active and passive social media use was also noted in a study (Thorisdottir et al., 2019).

Focused on two prominent social networking platforms, Facebook and Twitter, the 'Facebook Use Questionnaire' and the 'Twitter Use Questionnaire' were developed to provide detailed insights into users' posting frequency, updates, expression of personal emotions, and empathy towards others' emotions. Findings highlighted a significant negative relationship between self-esteem and the frequency of Facebook use ($r=-.124$; $p=<.05$). Similarly, self-esteem exhibited a significant negative correlation with both

the frequency of Twitter use and the expression of emotions on Twitter (r=-.151; p <.01; r=-.187 p<.01).

Two studies incorporated in this review adopted a longitudinal methodology. In Valkenburg and colleagues study (2021), levels of social media use and self-esteem were assessed by an average of 126 momentary assessments of both variables over three weeks. Analyses revealed a significant negative association between Instagram, Snapchat and WhatsApp use and participants' self-esteem, meaning that participants who spent more time on social media over the three weeks had lower average self-esteem than those who spent less time on social media over this period. In contrast, Livet's study (2022) extended over five years, during which participants consistently responded to annual surveys at twelve-month intervals. The findings indicated noteworthy associations between social media and self-esteem across these five time points. Specifically, adolescents with higher levels of social media use and video gaming reported consistently lower self-esteem. The study further highlighted significant within-person associations. Any additional increases in social media exposure within a given year were linked to a concurrent decrease in self-esteem during that year and extended to the following year (+1 year). Instead, another study investigated how different online activities (posting status updates, posting photos of oneself with others, posting selfies, posting videos of oneself with others, and posting videos of oneself alone) were related to self-esteem and the results showed an indirect positive effect of self-presentation online on self-esteem via perceived online popularity (e.g. receiving “likes”) (Meeus et al., 2019).

The body of research indicates a generally negative relationship between social media use and self-esteem, regardless of the tool used to assess the variables and the type of study (cross-sectional or longitudinal). One of the key points is the relationship between problematic social media use and self-esteem. It would suggest that those with lower levels of self-esteem are more likely to engage in problematic use, perhaps seeking validation and connection through these channels. Despite the mixed criteria used to measure the duration of social media use, often relying on the subjective estimates of participants, a discernible negative relationship seems to emerge.

Adolescents Emotional Regulation and Social Media

Emotional regulation may be defined as the processes, both intrinsic and extrinsic, responsible for monitoring, evaluating, and modifying emotional reactions (R. A. Thompson, 1991). Emotions, viewed as biological processes, organize multi-system responses to significant environmental events. Emotional regulation becomes essential for flexibility in behavioral processes and the quick and efficient response to changing conditions. It is worth noting the relative paucity of empirical research in this area. The present review includes four cross-sectional studies and one longitudinal. In assessing emotional regulation in these transversal studies, validated scales have been utilized, such as the "Difficulties in Emotion Regulation" (Kaufman et al., 2016). This scale assesses difficulties in emotional functioning, including lack of emotional awareness, inability to accept one's emotions, difficulty engaging in goal-directed cognition and behavior, lack of ability to manage impulses, lack of emotional clarity, and difficulty accessing effective strategies to feel better when distressed. Higher scores on this scale reflect greater emotional regulation difficulties. Multiple studies found a negative correlation between problematic social media use and emotional regulation abilities (Gracia Granados et al., 2020; Peker & NebiOğlu Yildiz, 2022; Wartberg et al., 2021a). Emotional regulation strategies such as limited access to emotion regulation strategies ($r=.38$, $p<.01$), nonacceptance of emotional responses ($r=.32$, $p<.01$), impulse control difficulties ($r=.37$, $p<.01$); difficulties engaging in goal-directed behavior ($r=.40$, $p<.01$), lack of emotional awareness ($r=.13$, $p<.01$) and lack of emotional clarity ($r=.34$, $p<.01$) were all positively correlated with problematic social media use (Wartberg et al., 2021a). Emotional suppression was positively correlated with social media addiction ($r=.21$, $p <.01$), while emotional reappraisal was negatively correlated with it ($r=-.08$, $p <.01$) (Peker & NebiOğlu Yildiz, 2022).

Another study, confirms that both social context characteristics and emotion regulation contribute to explaining the frequency of social media use and problematic social media use among adolescents (Marino, Gini, et al., 2020). Regarding social context, friendships impact adolescents' social media usage, where friends' perceptions of usage frequency correlate with individual use but not with problematic levels. On the other hand, social norms directly predict problematic social media use, suggesting

that peer pressure to use social media frequently and expectations of constant online availability pose a direct risk, irrespective of actual usage frequency. A study of a sample of 457 adolescents over six years aimed to understand the predictors and outcomes associated with different patterns of social media time use (Coyne et al., 2019). Most adolescents (83%), categorized as moderate users, consistently maintained their social media usage over time. Another group (increasers: 12%) started with low social media use, gradually increasing to higher levels by the end of the study. The third group, referred to as peak users (6%), initially had low social media use that spiked rapidly after a few years and then returned to baseline levels. Moderate users had higher levels of self-regulation and lower levels of overall media use compared to both peak users and increased users. This study suggests that patterns of social media use may vary significantly among adolescents, and that such patterns may be associated with differences in levels of self-regulation and overall media use.

Adolescent's Empathy and Social Media

Empathy is defined as "a cognitive and emotional understanding of another's experience, resulting in an emotional response that is congruent with a view that others are worthy of compassion and respect and have intrinsic worth" (Barnett & Mann, 2013) Psychology often defined it as a multidimensional construct, encompassing cognitive and behavioral states (Davis, 1983). Empathic social skills play a crucial role in youth social development models and are key predictors of prosocial behavior, such as helping strangers, cooperative actions forgiveness and volunteering choices (Schroeder et al., 2015). Empathic ability is a construct closely related to emotional intelligence, since empathy is a skill closely related to understanding and using emotions (Segura et al., 2020). There is a limited body of research on the association between empathy and social media usage, with only three studies identified so far. Among these, one provides a cross-sectional perspective, while two offer longitudinal insights over time. Standardized questionnaires, such as the Basic Scale of Empathy (Jolliffe & Farrington, 2006) and Adolescent Measure of Empathy and Sympathy (Vossen et al., 2015), were utilized in two studies (Errasti et al., 2017; Vossen & Valkenburg, 2016). The third study (Stockdale & Coyne, 2020) employed a 7-item

measure for empathy, though the specific tool was not detailed. One research study examined the frequency of use of two specific social media platforms, Facebook and Twitter, and found that people who were more active on these platforms, both in expressing their positive or negative feelings and in empathizing with others, had higher levels of affective and cognitive empathy (Errasti et al., 2017). Vossen and Valkenburg (2016) study results demonstrated a connection between the use of social media and a gradual enhancement of cognitive and affective empathy over time (2016). On the other hand, the second longitudinal study broadened the research perspective by exploring the motivations for using social networking sites over three years (Stockdale & Coyne, 2020). The study found a positive correlation between motivations such as seeking information, social connection, and boredom and pathological use of social media and empathy, and an inverse relationship between pathological use of social media and empathy ($r= -0.19$, $p<.001$).

2.5 Discussion

The integration of information and communication technologies into daily life has transformed how individuals, particularly adolescents, communicate and interact. The concept of "onlife", coined by Floridi to describe the contemporary experience of being hyper-connected in a digital world where the line between online and offline existence is becoming increasingly blurred, fits perfectly with the Gen Z experience (Floridi, 2015). This exponential and constant growth in the use of social platforms raises significant concerns, especially for adolescents who are known to be more susceptible to impulsivity and emotional challenges (Carvalho et al., 2023). While previous research has predominantly examined the role of emotional intelligence and problematic use of digital technologies more broadly (e.g., Internet addiction, gaming disorder), this study uniquely focuses on social media use. It also expands the scope of the search to including specific dimensions of emotional intelligence. This systematic review analyzed, organized and evaluated the existing literature on the relationship between emotional intelligence and social media use among adolescents, identifying a total of 25 articles. The findings of this study elucidate several

associations linking adolescents' emotional intelligence, emotional regulation, self-esteem, and empathy with their patterns of social media consumption.

This review highlights the potential of emotional intelligence as a preventative factor against problematic behaviors in adolescents. Studies consistently show a link between lower emotional intelligence and increased problematic social media use. The Interaction of Person-Affect-Cognition-Execution (I-PACE) model developed by Brand et al. (Brand et al., 2016) has been used as a theoretical framework in several studies. This model suggests that individual characteristics, affective and cognitive responses to internal or external stimuli, executive and inhibitory control, and decision-making behaviors influence the use of specific Internet applications or sites, impacting vulnerability or prevention of the development of Internet-related problems such as problematic social media use. These studies support the I-PACE model's thesis that various risk factors interact to create different problematic online behaviors. Notably, all the reviewed studies found that low emotional intelligence (considered as an individual characteristic) is a risk factor for problematic social media use.

Three studies added useful elements to the understanding of the relationship between emotional intelligence and problematic social media use. The results highlight that low levels of emotional intelligence are associated with higher levels of perceived stress and depressive symptoms, both of which are predictive of problematic social media us. Additionally, studies consistently show a concerning trend: females tend to have higher problematic social media use than males. This highlights a potential gender gap in social media navigation. Nevertheless, gender differences in emotional intelligence scores may depend on the instruments and theoretical approaches used (Joseph & Newman, 2010). Furthermore, the studies currently available have focused specifically on the problematic use of social media among adolescents, rather than exploring other aspects of the use of these platforms, such as, for example, the frequency of use, the methods of interactions, the type of shared content, and activities performed. The limitation of research in this area highlights the need for a wider variety of studies that can cover a broader range of social media behaviors and interactions.

Self-esteem is mainly driven by three processes: social comparison, social feedback processing, and self-reflection, and all of these processes are influenced by social media use (Krause et al., 2021). Studies on self-esteem and social media use supports this thesis by showing a consistent negative trend between the two variables. In explaining the relationship between SNS use and self-esteem, social comparison emerged as a frequently used concept. A study (Thorisdottir et al., 2019), included in this review, has shown that both active and passive social media use are positively related to social comparisons, which in turn are negatively related to self-esteem. Social networks allow numerical social comparisons (number of friends, followers, likes, retweets, etc.) (Errasti et al., 2017). According to a recent study carried out among pre-teens, around 39% of the sample indicated they regularly check the number of likes and views of their videos or photos, doing so often or always (Digennaro & Iannaccone, 2023). Engaging in these activities, along with the need for likes and followers, can have a negative impact on self-esteem of adolescents.(Meeus et al., 2019). Although online interactions can initially boost self-esteem through positive feedback, a potential downside emerges, as individuals, particularly those with lower self-esteem, may develop a dependency on social approval and engagement with social media (Martinez-Pecino & Garcia-Gavilán, 2019). Individuals with higher self-esteem seem to be less swayed by the quantity of "likes" they receive on social media when it comes to the likelihood of experiencing problematic internet use. This suggests that a solid sense of self-worth might serve as a buffer against the negative impacts of seeking validation through online interactions.

Regarding emotion regulation, findings highlight that the ability to regulate emotions contribute to the frequency or problematic nature of social media interactions in adolescence. Adolescents with difficulties in emotional functioning, including lack of emotional awareness, inability to accept one's emotions, difficulty engaging in goal-directed cognition and behaviour, lack of ability to manage impulses, lack of emotional clarity handling emotions are more likely to frequently use social media, and to incur in dysfunctional social media use. Higher scores on the Difficulty in Emotion Regulation Scale are associated with higher problematic social media use, suggesting that deficits in emotional regulation or maladaptive regulatory strategies may be a risk

factor for the development of social media addiction. Sometimes adolescents use these platforms as a maladaptive strategy to cope with difficult emotional states, attempting to find distraction and escape from emotional experiences (C. Andreassen & Pallesen, 2014). Yet, contrary to their intended relief, this behavior tends to result in a negative shift in mood (Hoge et al., 2017).

Research on the relationship between empathy and social media use is limited, with only three studies identified. social media activity, particularly emotional expression and empathic interaction, appears to be positively correlated with users' levels of empathy (Errasti et al., 2017). This may imply that conscious use of can enhance people's empathic abilities. On the other hand, the inverse correlation between pathological social media use and empathy suggests that certain online behaviors and motivations may hinder the development of empathy (Stockdale & Coyne, 2020). Furthermore, if excessive use is motivated primarily by boredom rather than meaningful interactions or specific goals, it could contribute to some sort of harmful addiction (Stockdale & Coyne, 2020).

Limitations

The limitations of this systematic review should be noted. A meta-analysis was not conducted due to the high heterogeneity of the measures used across the included studies, which restricts our ability to infer the effect size of the reported associations. Almost all the studies included had cross-sectional design, which limited the possibility of making inferences about possible causal relationship between emotional intelligence and social media use. Another limitation is associated with the small number of studies included for some dimensions of emotional intelligence, therefore affecting the ability to draw robust conclusions. The potential influence of publication bias must be considered. This review did not include gray literature searches, which may have limited the scope of inclusion of research studies. In addition, the generalizability of findings to other cultural settings is limited because most studies have been conducted in Western cultural contexts.

Regarding the limitations of the included studies, it should be mentioned that variable relative to time spent on social media, rely on participants' perceptions and

subjective estimates of their social media use. This introduces potential variability and limitations due to inaccuracies in participants' memory or perception of time. Another limitation is the use of self-report measures. Social desirability response bias may lead to inaccurate self-reports and erroneous study conclusions (Latkin et al., 2017). Furthermore, the studies relied primarily on convenience sampling, which limits the generalizability of the findings.

Future Directions and Implications

This review suggests a number of methodological gaps that should be considered in future research to deepen the current understanding of emotional intelligence and social media use. All studies use questionnaires to collect data, overlooking qualitative techniques that could more thoroughly capture the rich and varied experiences of adolescents in their interactions with social media. In order to be able to indicate causality and confidently identify the directions of these relationships, future studies need to employ longitudinal designs.

These of the current study may have important practical implications for the implementation of health prevention and promotion programs. According to a number of studies, emotional intelligence can be learned and improved through the implementation of intervention programs (Gilar-Corbi et al., 2019; Nelis et al., 2011). Emotional intelligence training can significantly improve emotion identification, management skills, emotion regulation and understanding, and general emotional skills. Adolescents with higher emotional intelligence are more aware of their emotions and behaviours, better able to regulate their emotions, and less likely to engage in problematic social media use. Improving adolescents' emotional intelligence skills may be the key to preventing the development of problematic behaviours, such as excessive use of the social media platform.

2.6 Conclusion

The associations between emotional intelligence and problematic social media engagement among adolescents have not been previously reviewed. The present systematic review suggests promising, but also challenging, preliminary evidence on the associations between emotional intelligence and problematic social media

engagement among adolescents. Lower levels of emotional intelligence have consistently been linked to heightened engagement in problematic social media behaviours among adolescents across various studies, underscoring emotional intelligence's potential protective role against addiction. Furthermore, these studies have identified negative correlations between different aspect of social media use (time of social media use and addiction to social media) and adolescents' self-esteem, and emotional regulation, while social media use appeared to be positively correlated with empathy. These findings highlight the significance of emotional intelligence in shaping adolescents' interactions with social media, suggesting that enhancing emotional intelligence skills could mitigate the risk of problematic social media use and promote healthier emotional development in this demographic.

CHAPTER 3

CROSS-SECTIONAL STUDIES ON ADOLESCENTS' EMOTIONAL INTELLIGENCE AND SOCIAL MEDIA USE

3.1 Navigating Emotions And Screens: Emotional Intelligence As The KeyTo A Balanced Digital Life For Teens

Abstract: This study investigates the relationship between emotional intelligence, problematic social media use, and image-related activities on social media among adolescents. Con- ducted with 1109 students from Italian lower secondary schools, the research employs questionnaires to assess emotional intelligence, problematic social media use, and image-related activities on social media. The findings reveal a significant negative correlation between emotional intelligence and problematic social media use and. It also found that adolescent who report high propensity to have image-centred interactions on social media are at a greater risk for developing social media addiction. Furthermore, the study identifies image-related activities as a partial mediator between emotional intelligence and problematic social media use. The paper concludes with recommendations for promoting healthier patterns of use, and interventions aimed at promoting emotional intelligence skills to mitigate potential harms associated with social media platforms.

3.1.1 Introduction

Emotional intelligence since its introduction by Salovey and Mayer in 1990 (Salovey & Mayer, 1990) and subsequent popularization by Goleman in 1995 (Goleman, 1995), has garnered significant attention in academic spheres, influencing domains such as education, organizational behavior, and broader societal contexts. One conceptualisation sees EI as an ability to accurately perceive emotions, use emotions to facilitate thinking, understand emotions and their meanings, and manage emotions in oneself and others (Mayer et al., 2016). According to this concept, EI can be evaluated through objective assesseents using 'maximum performance' tests.

Another conceptualization views EI as a dispositional trait, which refers to a constellation of behavioral dispositions and self-perceptions concerning one’s ability to recognize, process, and utilize emotion-laden information (Petrides et al., 2007). Following this approach TEI can be evaluated through self-report questionnaires (Petrides et al., 2007).

In Italy, as in many countries, the annual increase in the use of media devices underlines the ubiquitous presence and perceived value of media and social networks as valuable resources for individuals, including children and adolescents (Bozzola et al., 2022). According to the national statistics institute (ISTAT), 96.6% of young people

between 11 and 14 years old use the internet, 86.3% of them every day, and this percentage rises to 98.3% for young people between 15 and 17 years old (93.5% every day) (ISTAT, 2022). In today's media-saturated world, adolescents utilize platforms such as whatsapp, Instagram, Snapchat, and Facebook not only for entertainment but also for communication (Crone & Konijn, 2018).

The motivation for this study arises from the recognition of the intertwined nature of emotional intelligence and social networks in today's digital landscape. As adolescents increasingly navigate these platforms, the potential impact on emotional well-being becomes a critical area of exploration. Research supports a connection between technology-based social comparison, feedback-seeking, and depressive symptoms (Nesi & Prinstein, 2015).

Social media use is associated with body image concerns and disordered eating (Holland & Tiggemann, 2016). Moreover, excessive engagement with social media and the increase in the time spent on the internet raises the issue of problematic social media use (Bilgin et al., 2020). According to Kuss and Griffith (Kuss & Griffiths, 2011) excessive use could lead to addiction characterized by all addiction components. The use of social networking sites may lead to preoccupation (salience) and mood alterations (mood modification), requiring increased time and energy for the same effects over time (tolerance), and cessation may result in withdrawal symptoms and subsequent relapse (Griffiths & Kuss, 2017).

The present study aims to investigate the relationship between EI, PSMU and image-related activities performed on social media among adolescents. Specifically, the objectives of the study are to analyze the relationship between emotional intelligence and problematic social media use and to investigate the potential mediating role of image-related activities.

3.1.2 Materials and Methods

Participants and Procedures

The population of the research consists of 1109 students studying in 6 lower secondary schools. The research was conducted during April of the 2023 academic year. The age ranges from 10 to 14 (Mage = 12.12, SD =.907). 49.1% of the students in the final sample were girls (n= 551), 49.7% were boys (n=558).

A letter explaining the aims and rationale of the study was sent to the headmasters and teachers in each school involved. Informed consent was obtained from parents. All participants filled out the questionnaire individually in their classrooms, after brief group

instruction on the answer formats. Administration of all materials lasted approximately 45 minutes.

Measures

Emotional intelligence: the short form of the "trait emotional intelligence questionnaire – child" (TEIQUE-CSF) (Mavroveli et al., 2008)) was used to assess emotional intelligence. The questionnaire has been validated for Italian children and adolescent by Russo (2012). It consists of thirty-six five-point Likert-type questions.

Bergen social media addiction scale: BSMAS contains six items reflecting core addiction elements (salience, mood modification, tolerance, withdrawal, conflict, and relapse). Each item is answered on a 5-point Likert scale ranging from 1 (very rarely) to 5 (very often). Sample items include: "How often during the last year have you used social media so much that it has had a negative impact on your job/studies?" and "How often during the last year have you felt an urge to use social media more and more?". The BSMAS has been validated for Italian adolescent by Monacis et al. (2017). Instagram Image Activity Scale: The scale is designed to measure the frequency of activities related to images performed on social media. Participants were asked to indicate how often they engaged in different types of image-related activities using a 5-point Likert scale (1 - almost never; 5 - almost always) (Di Gesto et al., 2020). High scores on the scale correspond to high use of social media for image-related activities.

Data analysis

IBM SPSS Statistics 23.0 was used to conduct the analyses (SPSS Inc., Chicago, Il, USA). Descriptive statistics and Spearman correlations between of all study variables were analysed. The mediation analyses were conducted using the PROCESS Model 4 (Hayes, 2022). EI was the antecedent variable, PSMU was the outcome variable, and activities related to images performed on social media (IIAS) was the mediator. The assumptions of normality, multicollinearity, independence of errors, and homoscedasticity were tested before the analyses.

Sociodemographic variables, such as age and sex, were entered as covariates, the bootstrapping method (i.e., 5,000 resamples) was used to assess the statistical significance of the indirect effects, using 95% confidence intervals. An effect was considered significant if the 95% ci did not include zero.

3.1.3 Results

Means, standard deviations, and Spearman correlations are presented in Table 3. As shown, EI and PSMU had a significant and negative correlation. While PSMU is significantly correlated with IIAS.

Mediation analysis indicates a significant total effect of EI on PSMU, B=-3.5063, SE = 0.2795, p <0.0000. Regarding the covariates, the total effect of age and sex on PSMU was not significant, respectively B=-0.1382, SE=0.1496, p=0.3555 and B=0.2568,

SE=0.2713, p=0.3440. Moreover, all the direct effects were statistically different from zero (p<0.001). There is a negative direct effect of EI on IIAS, B=-0.0904, SE=0.0368, p=0.0142 and a positive effect of IIAS on PSMU B=3.6590 SE=0.2023, p=0.0000. The indirect effects show that IIAS mediated between EI and PSMU (indirect effect = − 0.3306, BootSE = 0.1408, 95% CI [− -0.023, -0.489].

	MEAN	SD	1	2	3
TEI	**3.38**	**0.49**	**1**	**-0.341****	**-0.08****
BERGEN	**12.45**	**4.76**		**1**	**0.474****
IIAS	**2.25**	**0.59**			**1**

Table 3 Descriptive Statistics and Correlations Between Study Variables

**p<0.001

	B	**SE**	**t**	**p**	**LLCI**	**ULCI**
Total Effect						
EI->Bergen	-3.5063	0.2795	-12.5456	0.0000	-4.0547	-2.9579
Age->Bergen	-0.1382	0.1496	-0.9244	0.3555	-0.4317	0.1552
Sex->Bergen	0.2568	0.2713	0.9468	0.3440	-0.2755	0.7891
Direct Effect						
EI ->IIAS	-0.0904	0.0368	-2.4555	0.0142	-0.1626	-0.0182
IIAS ->Bergen	3.6590	0.2023	18.0855	0.0000	3.2620	4.0560
EI ->Bergen	-3.1757	-0.2457	-12.9248	0.0000	-3.6578	-2.6936
Indirect Effect	Effect	BootSE	BootLLCI	BootULCI		
EI->IIAS->Bergen	-0.3306	0.1408	-0.023	-0.489		

Table 4 Effects in the Mediation Model

3.1.4 Discussions

Contemporary teenagers seem to have accepted society's demand for continuous online connectivity and they are engaged in a culture of sharing, for example, images,status updates and likes ((Kuss & Griffiths, 2011; Ståhl, 2017). Following this observation, the present study aimed to investigate the relationship between EI and PSMU among adolescents, with a specific focus on the mediating role of IIAS. The significant and negative correlation between EI and PSMU suggest that adolescents withhigher levels of EI may be less likely to develop problematic social media habits. These findings are consistent with Henning's (Henning et al., 2021) statements, suggesting that lower EI scores may represent a vulnerability factor or significant risk for the onset of ad- diction-related problems, including both substance use disorders and behavioural addictions. Adolescents who may lack adequate coping skills to manage negative emotions arising from stressful situations may attempt to distract themselves and avoid associated uncomfortable feelings through involvement in social networking sites activities. Such online activities, along with other problematic Internet-based behaviours, may function as maladaptive coping mechanisms, and they may use theseactivities to displace negative emotions, escape from reality, or attempt to regulate feelings of loneliness, depression, anxiety, and stress, despite the potential negative consequences of using these strategies (Gioia et al., 2021). The results also showed that higher EI was associated with reduced image-related social media activities, e.g. post a video or a photo of themselves, look at the profiles of their friends, see photos or videos posted by celebrities, etc. Young people with more developed EI may prefer to engage in meaningful offline interactions rather than seeking gratification and approval through online activity. According to Digennaro and Iannaccone (Digennaro & Iannaccone, 2023), girls are more engaged in image-related social media activities and seek more approval than boys. Not surprisingly, there is a direct impact of IIAS on PSMU, indicating that individuals who engage in higher levels of image-related social media use are more likely to develop problematic behaviours associated with it. For instance, the intensity of the use of a of a well-known social media platform like Facebook has been correlated to the development of addiction to that specific platform (Brailovskaia et al., 2020). However, Boer ((Boer et al., 2021) argues that high levels of social media use are not linked to adverse effects on mental health, instead, it is viewed as a common behaviour during adolescence. On the other hand, addictive social media usage can have detrimental impacts on mental well-being.

The mediation analysis provided evidence for a partial role of IIAS in mediating the relationship between EI and social media; in particular, an increase in EI intelligence is associated with a reduction in problems related to the use of social media, and this effect is mediated by a decrease in image-related activities on social media.

Social media offer communication opportunities to maintain and deepen existing relationships, but also to build new relationships, in fact, according to the results of the study of Pediconi and Brunori (Pediconi & Brunori, 2019), more than 40% of adolescents use social media to communicate with others and more than 14% to meet new people. Clearly in today's society, where social media is deeply integrated into the daily lives of many young people, both minimal and excessive use of social media can have negative impacts on wellbeing and adolescents who use social media sparingly may experience a lack of social interaction and miss out on important social information, while those who excessively use social media may displace meaningful offline activities (Boer et al., 2022). Therefore, it is essential to support adolescents in adopting a critical approach to the use of social media, recognizing their role as tools to promote sociability without considering them the main priority, ignoring the value of face-to-face inter- actions and personal connections outside of the digital world. Support provided by both schools and families in navigating online environments and social media and develop awareness of the strengths and weakness of this platform is an urgent and pressing challenge (Taibi et al., 2023). It may be helpful to encourage parents to be actively involved in paying attention to their teenagers' use of smartphones and social media (Abi-Jaoude et al., 2020). Perhaps the most effective strategy to reduce media-related risks is a strategy based on open discussion, with a focus on positive engagement and guidance (L. Chen & Shi, 2019).

Also, interventions aimed at promoting emotional intelligence skills may prove beneficial in mitigating the risk of social media addiction among adolescents. School-based social and emotional learning (SEL) programmes could represent a method for improving social and emotional well-being in students. Such programs have frequently led to significant reductions in students' emotional distress, conduct problems, and mental health issues (Carroll et al., 2020). This intervention should enable teenagers to recognise and handle their emotions, set and accomplish positive goals, promote the ability to understand and respond to the emotions of others in an empathetic way, make informed and responsible decisions to overcome obstacles and stressful situation (Elias et al., 2015).

3.1.5 Conclusion

In conclusion, this study underscores the importance of EI in the context of adolescent social media use. The findings suggest that higher levels of EI may serve as a protective factor against problematic social media behaviours. Additionally, the identification of image-related activities on social media as a partial mediator high- lights the need to consider specific online activities in understanding social media addiction. These insights have implications for interventions aimed at promoting healthy online behaviours among adolescents, emphasizing the importance of enhancing emotional intelligence and

fostering social media literacy. It is important to acknowledge that the conclusions drawn from these findings may be constrained by certain limitations inherent in the study design. These include the use of a cross-sectional research design, which limits the ability to establish causal relation- ships between variables. Additionally, the non-probabilistic sampling method employed in the Italian context may introduce biases and affect the generalizability of the results to the broader population. Lastly, reliance on self-report questionnaires for data collection may be subject to response biases and inaccuracies.

Further research in this area could explore the efficacy of interventions targeting EI and social media literacy as means to promote healthy online behaviours among adolescents.

3.2 The Role Of Social Media Engagement In Shaping Preadolescents' Body Image And Emotional Intelligence: A Cross-Sectional Study

Abstract: Body image (BI) and emotional intelligence (EI) are crucial for the development of preadolescents. However, the widespread use of social media (SM) may have negative effects. Overall, 1109 preadolescents completed an anonymous questionnaire. Results show a negative correlation between social media use and both body image and emotional intelligence. These findings suggest the need for new educational strategies to address social media's impacts on these important aspects of youth development.

3.2.1 Introduction

During adolescence, young people face a variety of significant psychological, physical, social, and relational changes that can have a profound impact on their sense of self and on the development of their emotional capacities. The social environment surrounding adolescents influences their cognitive, emotional, and behavioural development. This environment includes family, friends, school and, more recently, social media and other digital platforms. The way younger generations see and perceive essential parts of the human condition, such as the body, well-being, identity and self, are being reshaped by technology (Digennaro, 2024).

Adolescents and preadolescents have become experts in the use of social media and, in particular, they spend a great number of hours on social networking sites (SNS), which are a specific type of social media (Shapiro & Margolin, 2014). In these virtual spaces, people can share their own content, view others' profiles and give/receive feedback, such as likes and comments. SNS are a set of internet-based applications that have been developed on the technological and ideological foundations of Web 2.0. These platforms facilitate the creation and exchange of user-generated content, which includes messages and photos that can reveal different aspects of users' personalities (Kaplan & Haenlein, 2010). Thus, SNS offer young people a wide range of opportunities to explore, reveal and express different aspects of themselves, including authentic aspects of self, aspirations, desires, and visions that individuals have of themselves, and also false aspects of self. Changing the representation and narrative of life, relationships and information on social networks gives everyone the ability to shape their social and personal selves according to their preferences and circumstances (Digennaro, 2024).

The evidence regarding the positive and negative effects of social media is varied and multifaceted. Numerous studies have documented both the beneficial and detrimental impacts of social media usage across various domains of human experience.

On one hand, responsible use of social media can improve human relationships through increased social support (Utz & Breuer, 2017), improved perceptions of friendship quality (De Stasio et al., 2019) and increased empathy (Vossen & Valkenburg, 2016). Furthermore, viewing positive social media content can increase viewers' self-efficacy and positive emotions, influencing their learning engagement and emotional well-being through the embodied emotion and brain feedback phenomenon (Qi et al., 2024).

Conversely, a substantial body of literature also underscores the risks inherent in excessive or uncontrolled social media consumption. Such risks encompass heightened psychological distress, encompassing conditions like depression, social anxiety, feelings of loneliness, and body dissatisfaction(O'Day & Heimberg, 2021; Vidal et al., 2020).

Numerous research studies have examined the impact of social media on body image (Digennaro & Iannaccone, 2023; Holland & Tiggemann, 2016; Kleemans et al., 2018) but the focus has been primarily on adolescence, with limited attention paid to preadolescence. The platforms facilitate virtual interactions that allow individuals to connect with others, share multimedia content, and establish a digital presence separate from their physical experiences. Additionally, users often engage in social comparisons with content on social networks, which frequently feature meticulously edited and filtered imagery. These comparisons can promote unrealistic beauty standards and provoke concerns about one's body image (Dwivedi et al., 2021).

The present study seeks to address this gap by examining the relationship between social media use, socio-cultural attitudes towards appearance and emotional intelligence, aiming to reveal potential links between the development of body image and emotional intelligence among male and female preadolescents.

Body Image and Emotional Intelligence

Body image is a complex concept that involves various aspects, including how individuals perceive their physical appearance, the emotions they experience in relation to their body, and their cognitive beliefs about their body (Cash & Smolak, 2012). Research highlights the significant impact of socio-cultural factors on the development of body dissatisfaction (Cash, 2005). Negative body image can arise from different influences such as family, peers, media portrayals, and societal expectations, ultimately affecting self-esteem, abilities, and social interactions (Hosseini & Padhy, 2025). The feedback and validation received through social networks play a crucial role in shaping an individual's self-esteem and sense of self- worth (H. Y. Lee et al., 2020a). Interactions on social media, including likes, comments, and reactions from friends and followers, can

either enhance or diminish one's self- perception(R. Chen & Sharma, 2015; Chua & Chang, 2016).These dynamics can greatly influence self-perception, potentially leading to body dissatisfaction and disruptions in self-image formation (Papaioannou et al., 2021). Exposure to idealised lives and experiences on social media platforms can trigger feelings of inadequacy and envy, impacting an individual's overall well-being. Moreover, seeking validation online through likes and positive comments can foster a reliance on external validation, linking one's self-worth to online approval (Dwivedi et al., 2021). Numerous studies focused on female cohorts, driven by the prevalent notion that females encounter greater body image difficulties (Chang et al., 2019; Ferguson et al., 2021; Tiggemann & Slater, 2014). Nevertheless, other investigations have been conducted on samples composed by both male and female participants, revealing that body image concerns are not inherently confined to females. Emerging evidence indicates a lack of substantial gender disparities in this domain (Boursier et al., 2020; Çimke & Yıldırım Gürkan, 2023; de Vries et al., 2020).

Trait emotional Intelligence or trait emotional self-efficacy explicitly recognises the intrinsic subjectivity of emotions and can be defined as a constellation of emotion- related self-perceptions and dispositions that constitute the affective aspects of personality (Petrides et al., 2006). Essentially, trait emotional intelligence is a reflection of an individual's perception of their own emotional competencies and their confidence in their ability to manage their emotions effectively. These self- perceptions are crucial to various aspects of psychological well-being, including body image. Despite the potential importance of trait emotional intelligence in the shaping of body image and psychological well-being, research in this area is limited. Currently, while the existing literature has investigated the interaction between emotional intelligence and body image in various populations, including young athletes, young adults and children (Pollatos et al., 2020; Sanchez-Ruiz et al., 2019), there is still a paucity of studies investigating this phenomenon among preadolescents. Further research is needed to address the potential role of EI in developing body image and its potential implications for psychological well-being.

3.2.2 Materials and Methods

Participants and Procedure

The study was conducted on a convenience sample of 1109 preadolescents from 7 different Italian schools. Data collection took place during regular school hours, with the collaborative assistance of educators, after obtaining parental informed consent. An anonymous, self-administered battery of questionnaires was used to investigate participants' daily social media usage, primary activities on social networks, tendency towards social media addiction, emotional intelligence, and level of body satisfaction.

Every participant was given a distinct identification code to ensure the confidentiality of their responses. The data gathered from the survey were treated anonymously and kept confidential.

All research procedures adhered strictly to the ethical guidelines outlined in the Declaration of Helsinki, emphasising our commitment to ethical practices, participant well-being, and the responsible management of confidential data. Ethical approval for the study was obtained from the Institutional Review Board of the Department of Human Sciences, Society, and Health at the University of Cassino and Southern Lazio.

Instruments

Social Media Addiction

The tendency towards social media addiction was evaluated using the Bergen Social Media Addiction Scale (BSMAS) developed by Andreassen et al., in 2017. This tool consists of six items carefully designed to capture essential aspects of addiction, including salience, mood alteration, tolerance, loss of control, withdrawal, conflict, and functional impairment. Participants were asked to rate each item on a 5-point Likert scale, ranging from 1 ('very rarely') to 5 ('very often').

Emotional Intelligence

The Italian adaptation of the Trait Emotional Intelligence Questionnaire – Child Short Form (TEIQue-CSF) by Russo et al., (Russo et al., 2012) was used to assess emotional intelligence among children aged 8 to 13 years. This version was meticulously crafted based on a thorough review of socioemotional development literature within this age group. The goal was to pinpoint the essential components of trait EI during childhood, primarily focusing on self-perceptions. The questionnaire comprises 36 items, each rated on a 5-point scale from 1 (Strongly Disagree) to 5 (Strongly Agree), providing insights into various facets of emotional intelligence in young individuals.

Sociocultural Attitudes Towards Appearance

The Italian adaptation of the Sociocultural Attitudes Towards Appearance Questionnaire-4-Revised (SATAQ-4R) developed by Stefanile et al. (Stefanile et al., 2019) was used. This questionnaire comprises 31 items for the female version and 28 items for the male version. Participants rated their responses on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Both versions of the questionnaire are divided into two main sections: Internalization and Pressures. The Internalization section includes questions about perceptions of thinness and body fat, muscularity, and overall attractiveness. In contrast, the Pressures section focuses on inquiries concerning the influence of family, peers, significant others, and media on body image perceptions.

Data analysis

The data collected were analysed using the SPSS 26 statistical software package. The univariate- Shapiro-Wilks's W test—and multivariate tests suggested that data did not come from normally distributed univariate or multivariate distributions. Transformations did not correct normality. Therefore, non-parametric analysis was conducted for descriptive statistics. Mann-Whitney U test was employed to assess differences between male and female participants regarding Body Satisfaction, Emotional Intelligence, and Social Media Addiction. Additionally, Spearman correlation analysis was conducted to explore the relationship between these variables.

3.2.3 Results

The sample consisted of 1109 students with a mean age of 12.12 years, comprising 50.3% males and 49.7% females. Among them, 98.6% reported using an internet-connected device, while 90.3% were found to use social media. This percentage rises to 98.6% when considering instant messaging apps.

The table below represents descriptive statistics, including means, standard deviations and standard errors for variables associated with emotional intelligence, addiction to social media, and subscales of the SATAQ-4R, namely thinness and body fat, muscularity, overall attractiveness, and pressures from peers, family, significant others, and media.

Results showed a negative correlation between social media addiction and emotional intelligence in both males and females. In addition, among males, there is a positive association between social media addiction and certain subscales of social pressure, specifically those related to pressure from family, peers, others, and the media, as well as the internalisation of thin and muscular body ideals. For females, there is a positive correlation between social media addiction and internalisation of appearance ideals and thin body standards, as well as a correlation between social media addiction and the subscales of social pressure from family, peers, others, and the media. The subscales of social pressure show a significant and negative correlation with emotional intelligence for both genders, whereas the subscales related to internalisation show a significant negative correlation only for females.

Variable	**Female (Mean ± SE ± SD)**	**Male (Mean ± SE ± SD)**
Age	12.07 ± 0.038 ± 0.898	12.16 ± 0.039 ± 0.913
Trait Emotional Intelligence	3.32 ± 0.022 ± 0.527	3.44 ± 0.018 ± 0.436

Social Media Addiction Scale	12.75 ± 0.204 ± 4.801	11.92 ± 0.196 ± 4.623
Internalization: thin/low fat	2.99 ± 0.048 ± 1.143	2.53 ± 0.047 ± 1.106
Internalization: muscular	1.81 ± 0.030 ± 0.718	2.55 ± 0.047 ± 1.112
Internalization: ideal appearance	3.70 ± 0.035 ± 0.833	3.66 ± 0.046 ± 1.102
Pressures: family	2.07 ± 0.041± 0.968	2.17 ± 0.036 ± 0.857
Pressures: peers	1.71 ± 0.038± 0.903	1.90 ± 0.038 ± 0.902
Pressures: others	1.72 ± 0.037 ± 0.878	1.95 ± 0.038 ± 0.895
Pressures: media	1.91 ± 0.04900 ± 1.13648	1.83 ± 0.040 ± 0.936

Table 5 Descriptive statistics of the variables investigating emotional intelligence, addiction to social media and subscales of the SATAQ-4R.

	BSMAS	**TEI**	**ITh**	**IMu**	**IIA**	**PrFa**	**PrPe**	**PrOt**	**PrMe**
BSMAS	-	-.283**	.216**	.165**	-.004	.293**	.262**	.335**	.353**
TEI	-.384**	-	-.048	-.043	-.021	-.152*	-.087*	-.170**	-.171**
ITh	.304**	-.309**	-	.363**	.015	.329**	.254**	.244**	.298**
IMu	.062	-.095*	.099*	-	-.103*	.408**	.395**	.362**	.382**
IIA	.375**	-.255**	.598**	.005	-	-.109*	-.086*	-.065	-.045
PrFa	.279**	-.239**	.346**	.061	.212**	-	.593**	.665**	.501**
PrPe	.300**	-.285**	.331**	.095*	.226**	.584**	-	.705**	.619**
PrOt	.248**	-.154*	.276**	.097*	.183**	.610**	.611**	-	.649**
PrMe	.357**	-.292**	.470**	.141**	.362**	.384**	.525**	.413**	-

Table 6 Relationship between variables assessed through the Spearman Correlational analysis for males upper diagonal of the table) and females (lower diagonal of the table).

**p<0.01; *p<0.05 (BSMAS: Bergen Social Media Addiction Scale; TEI: Trait Emotional Intelligence; ITh: Internalization thin/low body fat; IMu: Internalisation muscular; IIA: Internalization ideal appearance; PrFa: Pressures family; PrPe: Pressures peers; PrOt: Pressures others; PrMe: Pressures media).

3.2.4 Discussion

The purpose of the present study was to examine the associations among emotional intelligence, social media addiction, internalisation of appearance ideals and appearance pressures. Specifically, the hypothesis of the study was that preadolescents with a greater social network addiction have lower emotional intelligence and greater internalisation of appearance ideals and appearance pressures. The results of the analyses confirm the research hypotheses in line with the reference literature. In the context of this study, there were no differences between males and females.

Since the 1970s, the mass media has consistently promoted thinness as the ideal body shape for women and girls, reflecting a societal emphasis on thinness as a cornerstone of female beauty and physical appearance(Hsu et al., 2021; Watson et al., 2019). This culturally based body ideal, referred to as the "thin ideal", has been linked to women's overall body dissatisfaction, increased investment in appearance, and increased engagement in disordered eating behaviours (Grabe et al., 2008). Thus, in this study, the socially preferred standard of thinness and general desire for physical attractiveness is mainly internalised by girls. Today, more than ever, social media platforms are saturated with images, messages and narratives that promote and celebrate certain body types. It is therefore not surprising that higher use of social media is associated with significantly higher internalisation of a thin ideal. A recent meta-analytic review (Mingoia et al., 2017) suggests that the tripartite influence model, originally applied to traditional media, may extend to new media exposure, proposing that the internalisation of a thin ideal could mediate the relationship between social networking site use and body dissatisfaction.

In contrast to the thin ideal commonly attributed to women, the ideal male body is typically distinguished by a dual focus on leanness (i.e. low body fat) and muscularity (Lavender et al., 2017). In line with this, the standard of muscularity is internalised to a greater extent for boys. Similarly to the female sample as well, for male the tendency to be addicted to social media is associated with a significantly higher internalisation of a muscular ideal.

Despite differences in cultural expectations regarding physical appearance between the two genders, factors that contribute to body dissatisfaction, such as social and cultural pressures, may have a similar impact on both genders (Helfert & Warschburger, 2013). Individuals, particularly preadolescents, are susceptible to comparing themselves to edited and filtered images that promote aesthetic standards that are often unattainable.

Consistent with the existing literature, this study revealed that preadolescents reporting higher levels of emotional intelligence demonstrated lower levels of problematic internet use, suggesting a reduced tendency toward social media addiction. This aligns, for example, with the findings of the study conducted by Acar et al.,(2022) which observed that adolescents who tended to report higher levels of emotional problems

also demonstrated higher levels of social media addiction. Emotional intelligence appears to be negatively and significantly associated with problematic social media use for both females and males, albeit with a slightly stronger correlation observed among girls. These findings are partially consistent with those reported by Arrivillaga et al. (2022b), which instead found a significant association only among girls.

Moreover, emotional intelligence has a negative association with exposure to perceived appearance pressure from family, peers, significant others, and the media. This supports the hypothesis that emotions and affective states are an influencing factor in body image. In particular, according to Swami et al. (2010), the well-being component of trait emotional intelligence is facilitative of the development of a healthier body image. Similarly, another study (Amado Alonso et al., 2020), found that preadolescents who have better emotional and social skills are also more satisfied with their body image, and when they are satisfied with their body image, they have a greater ability to understand and appreciate the emotions of others. A lack of emotional expression and regulation has also been postulated to alter body image. Adolescents who frequently experience negative thoughts and feelings about their appearance are more likely to experience appearance dissatisfaction if they tend to use negative strategies to regulate negative appearance-related emotions (Amiri & Navab, 2019).

In particular, the current literature lacks studies that examine concurrently the relationships between social media use, body image perceptions and emotional intelligence among adolescents in this age group. This gap in the research presents an opportunity for future investigations to provide a more detailed examination of the interrelationships between these variables and their combined influence on the well-being of adolescents.

In this perspective, future research should contribute to design longitudinal studies that examine the ongoing effects of social media use on the trajectories of body image and emotional intelligence, accounting for developmental changes over time.

Interventions aimed at fostering positive body image and emotional intelligence skills among preadolescents should be developed and assessed. By addressing these research needs, scholars can contribute to the formulation of evidence-based strategies to promote the healthy development of adolescents in the digital era. To tackle issues of body image dissatisfaction, it is imperative to implement educational initiatives and interventions led by professionals such as psychologists, graduates in sports sciences, nutritionists, and medical experts. The primary objective is to raise awareness within the educational community, including students, teachers, and parents, and to devise practical approaches for maintaining a positive body image. These approaches could include initiatives to promote healthy dietary habits, such as providing nutritious meal options in schools, and encouraging regular physical activity.

In order to enhance the efficacy of such programs and engage participants, they should be tailored to meet the evolving needs of contemporary society. Therefore, implementing targeted programs and school-based laboratories to enhance emotional competencies and foster positive body image construction could prove beneficial. By equipping preadolescents with the skills to understand and manage their emotions, they may be better prepared to navigate the challenges presented by social media. In turn, promoting critical thinking and media literacy could enhance young people's ability to distinguish between realistic and idealised representations on social platforms.

There are several limitations that should be considered when interpreting the results of the present study. The causal relationships between variables are unknown due to the cross-sectional nature of the study. Therefore, to establish causality and examine the direction of these effects, future studies should use longitudinal designs. The present study used standardised self-report questionnaires, which have limitations such as memory recall and social desirability bias.

3.2.5 Conclusions

The findings of this study underscore the complex interplay between social media usage, body image, and emotional intelligence among preadolescents. The pervasiveness of social media in contemporary society presents both opportunities and challenges for preadolescents and adolescent development. While social media platforms offer avenues for social connection and self-expression, they also expose young people to unrealistic beauty ideals and societal pressures. Hence, the need to develop educational strategies to build a positive body image and emotional skills.

CHAPTER 4.

LONGITUDINAL PERSPECTIVES ON EMOTIONAL INTELLIGENCE AND SOCIAL MEDIA

4. Alpha generation's social media use: sociocultural influences and emotional intelligence

Abstract: Preadolescence, a critical developmental stage, is increasingly influenced by social media, blending physical and virtual experiences. Generation Alpha, born entirely in the digital age, is particularly impacted as technology shapes their learning and social interactions. Social media's emphasis on appearance affects body image and emotional intelligence, yet research has primarily focused on adolescence and girls, leaving gaps for preadolescents. This study explores the effects of social media use on preadolescents' appearance ideals and emotional intelligence, proposing three hypotheses: (H1) increased social media use correlates with addiction, (H2) promotes sociocultural appearance ideals, and (H3) negatively affects emotional intelligence. Structural equation modeling confirmed these relationships, showing both positive and negative associations with social media use.

4.1 Introduction

Preadolescence is a crucial transitional stage between childhood and adolescence, marked by significant physical, cognitive, and social changes, including puberty, the shift from primary to secondary education, and the psychological adjustments related to emerging sexuality (Eccles, 1999; Khan & Avan, 2020). Concurrently, individuals experience notable emotional development, including the ability to perceive, interpret, and respond to new emotions and feelings (Decety & Holvoet, 2021). Individuals who struggle to manage their emotions or cultivate a positive self-image are more vulnerable to mental health issues such as depression, eating disorders, low self-esteem, and social isolation (Resurrección et al., 2014).

In today's digital age, preadolescents' development is increasingly influenced by social media platforms, which serve as sociocultural mediators shaping self-perception and communication through activities like photo sharing and self-representation (Choukas-Bradley et al., 2022; Shahbaznezhad et al., 2021). The intertwining of physical and virtual realities, along with constant connectivity, is particularly evident in Generation Alpha, who have grown up immersed in technology (Floridi, 2014). These platforms affect body image and self-esteem and influence emotional intelligence and interpersonal relationships (Piccerillo & Digennaro, 2024).

Despite the growing body of research on adolescence, the preadolescent stage remains underexplored, particularly regarding the long-term effects of social media use on emotional development and sociocultural influences. Therefore, this study aims to address these gaps by exploring the relationship between social media use, appearance, and emotional intelligence, and by identifying potential connections between attitudes towards appearance and emotional intelligence.

Alpha generation and social media

Social networking sites are online platforms that enable individuals to create a public or semi-public profile within a specific system. Users can compile a list of other users with whom they are connected, and they can view and navigate through their list of connections and those made by others within the system (Boyd & Ellison, 2007). Platforms such as Facebook, Instagram, and TikTok serve as spaces where individuals carefully shape their digital identities, often portraying an idealised version of themselves (S. Chen, 2023). According to a report by the Italian Institute of Statistics (ISTAT)*, Italian preadolescents commonly engage in various online activities, including playing online interactive games, sending and receiving emails, and using social media. Notably, social media has emerged as a central platform for socialising and communication among this cohort, often referred to as "digital natives" - the first generation to be raised entirely within the internet and social media landscape (Turner, 2015).

Generation Alpha refers to individuals born in the 21st century who have been surrounded by technology from an early age. Unlike earlier generations, they have constant access to information and digital devices, largely influenced by their millennial parents, who frequently share family life on social media. This exposure immerses them in the "onlife" dimension, where every day experiences blend seamlessly with the continuous presence of digital technologies (Floridi, 2014). They interact easily with peers worldwide and can access information anytime, anywhere. Their preference for visual content over text further defines them, as they respond more readily to visual stimuli. These defining characteristics—digital, social, global, mobile, and visual—constitute the foundation of Generation Alpha's identity (McCrindle et al., 2021). A recent study conducted by Jukic and Skoja (2021), identifies two distinct perceptions of Generation Alpha: positive aspects, such as strong knowledge of technology and media, and negative aspects, including reliance on technology, reduced socialisation, tendencies toward "selfishness" and narcissism, and a lack of independence.

Notwithstanding, the younger generation's engagement with social media is influenced by various motivations, such as social interactions, information sharing, leisure, and escapism. Notably, there are discernible behavioural differences between males and females in this context. Specifically, females demonstrate increased use of Snapchat when motivated by social interaction, social capital, and information sharing, while males tend to engage in increased viewing and liking for leisure, and reduced viewing when seeking appearance feedback (Jarman et al., 2024).

Sociocultural influences and social media

The Tripartite Influence Model (J. K. Thompson et al., 1999) suggests that appearance ideals are shaped and reinforced by three main sociocultural factors: the media, parents, and peers. These influences affect body dissatisfaction and psychological functioning through two main pathways: internalisation of appearance ideals and social appearance comparisons (Jarman et al., 2021). According to the model, exposure to these sociocultural influences increases the likelihood of adopting unrealistic appearance ideals, leading to more frequent social comparisons. These comparisons often result in body dissatisfaction and negative psychological effects because individuals feel they do not meet these unattainable standards.

The feedback and validation received through social media might significantly impact an individual's self-esteem and self-worth. Likes, comments, and reactions from friends and followers on these platforms can either enhance or diminish one's self-perception (H. Y. Lee et al., 2020b). Online communities, characterised by shared interests, ideologies, or lifestyles, can substantially shape an individual's identity, values, and beliefs, sometimes exerting a more significant influence than physical social circles (Lüders et al., 2022). Continuous exposure to seemingly perfect lives and experiences on social media may foster feelings of inadequacy and envy, impacting an individual's self-esteem and overall well-being.

Additionally, the pursuit of online validation in the form of likes and positive comments can lead to a dependence on external approval, linking one's sense of self-worth to online feedback (Lee et al., 2022). Social media allow users to engage in content creation and curation actively, playing an active role in shaping their online presentation and self-perception (Dwivedi et al., 2021). These dynamics raise concerns, particularly for younger users, as preadolescents and adolescents are highly susceptible to the influence of social media on self-perception during their crucial phase of identity development (Samari et al., 2022). By blurring the boundary between reality and

virtuality, social media significantly influences the construction of digital identities and impact self-perception, including its effect on self-esteem and self-worth (Chen & Sharma, 2015; Papaioannou et al., 2021). A comprehensive understanding of these dynamics is crucial for addressing potential challenges arising from the impact of social media on self-perception, particularly among younger users.

A recent systematic review examining adolescents and preadolescents has found a link between the use of social networking platforms and increased concerns about body image (Digennaro & Tescione, 2024). This finding is particularly troubling, as, according to the Tripartite Influence Model, young individuals are prone to internalising the appearance ideals propagated by social media, thereby reinforcing unrealistic beauty standards that exacerbate body dissatisfaction.

Emotional intelligence and social media

Originating from the seminal work of Mayer and Salovey in 1990, Emotional Intelligence is defined as the capacity to be aware of, control, and express one's emotions, and handle interpersonal relationships judiciously and empathetically (Salovey & Mayer, 1990). This includes the ability to identify and differentiate between one's own emotions and those of others and to apply this emotional information to guide both thought and behaviour. Building upon this foundational concept, a further development in the theory introduced the concept of Trait Emotional Intelligence (TEI). Defined by Petrides and colleagues, TEI encompasses a set of emotional self-perceptions and dispositions that inform one's proficiency in recognising, processing, and managing emotional information (Petrides et al., 2004). This approach provides a nuanced understanding of how individuals perceive and utilize emotional cues within themselves and in interactions with others. According to Petrides and Furnahm, TEI includes 15 distinct components: trait optimism, trait happiness, self-esteem, emotion management, assertiveness, social awareness, empathy, emotion perception, emotion expression, relationships, emotion regulation, impulsiveness (low), stress management, self-motivation and adaptability (Petrides & Furnham, 2001). Recently, the concept of Digital Emotional Intelligence has been introduced as an integration of emotional intelligence and digital competence (Audrin & Audrin, 2024). The authors propose a model where trait emotional intelligence predicts attitudes toward digital competence, while digital emotional intelligence is influenced by the knowledge and skills associated with digital competence. This highlights the reciprocal relationship between emotional intelligence and digital

competence, suggesting that both EI and DC contribute to the development of each other in the digital context.

Preadolescents and adolescents encounter significant challenges in their emotional development, making emotional intelligence particularly pertinent for this age group (Larson & Brown, 2007). Technology's ever-present nature in today's preadolescent relationship environment has made its influence hard to ignore. The capacity of social media technologies to profoundly influence users' emotions is well-documented, with the mood of the user often being associated with the messages, notifications, updates, and posts viewed online (see Steinert & Dennis, 2022). The increasing use of digital tools and social media has led to complex multi-channel interactions, which require managing a large variety of emotional signals, often heterogeneous in nature (Audrin & Audrin, 2024). Adopting a multi-faceted approach, scholars are beginning to investigate the relationship between emotional intelligence and the wide field of social media. Arrivillaga et al.'s (2022) study, emphasised the role of emotional intelligence in understanding problematic social media use among adolescents. The study's results established a significant relationship between problematic social media use and emotional intelligence, particularly among females (Arrivillaga et al., 2022b). Furthermore, Wartberg et al.'s (2021) study highlights that younger individuals with problematic social media use tend to experience greater difficulties in emotion regulation, particularly in terms of impulse control and accessing effective emotional strategies.

Current study

Building on the preceding discourse, this study examines the validity of the following three hypotheses:

Hypothesis 1 (H1) posits a positive correlation between social media use frequency and the likelihood of developing social media addiction, suggesting that increased time on these platforms heightens susceptibility to addictive social media behaviours.

Hypothesis 2 (H2) suggests that frequent social media use leads to greater internalisation of sociocultural influences, with potential differences between sexes in how exposure to idealised appearance models impacts body dissatisfaction and self-perceptions.

Hypothesis 3 (H3) proposes an inverse relationship between social media use frequency and emotional intelligence, indicating that more time on social media may

hinder emotional intelligence development due to fewer face-to-face interactions and the superficial nature of online communication.

Together, these hypotheses aim to explore the relationships between social media usage, social media addiction, internalisation of sociocultural standards, and emotional intelligence in preadolescents.

4.2 Method

Study design and Sample

A two-wave panel survey was conducted in collaboration with seven Lower Italian Secondary Schools as part of a collaborative research program. The first wave was conducted from February to March 2023 (Time 1), and the second wave in May/June 2023 (Time 2).

Data was collected during regular school hours with the collaboration of teachers and doctoral students. A total of 959 students participated in Time 1, while 939 students participated in Time 2. A pairing procedure between the first and second administrations revealed that a cohort of 721 completed both survey waves. The retention rate was thus 75.1%. Each participant was assigned a unique identifier at Time 1, which was used again at Time 2 to accurately link responses across both time points, ensuring anonymity and enabling longitudinal analysis.

The final sample consisted of students aged 10 to 15, with an average age of 12.1 (SD=0.87). Boys accounted for 45.7% (N=341) of respondents, while girls represented 52.70% (N=380). Out of the total sample of 721, 0,83% (N=6) were 10 years old, 27,05 (N=195) were 11 years old, 37,45% (N=270) were 12 years old, 21,48% (N=227) were 13 years old, 2,64% (N=19) were 14 years old, and 0,55% (N=4) were 15 years old.

The study's anonymous design reduced respondent bias and social desirability, as participants were assured confidentiality. Furthermore, to minimize the potential for code misalignment or errors, a validation process was implemented to cross-verify the accuracy of the matched subset.

Ethical Approval and Consent to Participate

Participation in the study was voluntary. Preadolescents were eligible to participate in the study if they had written parental consent. Ethical approval was granted by Institutional Review Board of the University of Cassino and Southern Lazio (Approval number: 0010965). The research activities were conducted strictly following the ethical principles outlined in the Declaration of Helsinki, last modified in 2001, underscoring the

dedication to ethical standards, participant welfare, and the responsible handling of sensitive information (World Medical Association Declaration of Helsinki', 2013).

Instruments

Data were collected using a questionnaire divided into four sections. The first section gathered sociodemographic information, including age, gender, and school year. The second section assessed social media usage, asking participants if they owned an internet-connected device and used social media or instant messaging apps. No further questions were asked if participants indicated "no" to social media use. Those who did use social media were queried about parental awareness of their profiles, daily time spent online, types of activities, and levels of addiction. The third section evaluated participants' trait emotional intelligence, while the final section focused on the internalisation of sociocultural beauty standards.

An attention check question required participants to select a specific box, and those who answered incorrectly were excluded from data analysis (25) to enhance the reliability of the finding (Parcell et al., 2023).

Measure of social media site use

Daily time spent on social media was assessed through a scale specifically designed for the survey, where participants indicated their usage duration for each platform within categorised intervals: less than 30 minutes, 30-60 minutes, 1-2 hours, 2-4 hours, and more than 4 hours. They also specified the time of day they primarily used each platform, with options for morning, lunchtime, afternoon, evening, and night, allowing for multiple selections.

The Bergen Social Media Addiction Scale (BSMAS), developed by Andreassen et al. (2016), was used to assess key components of social media addiction. The scale consists of six questions, each corresponding to a different dimension: salience, mood modification, tolerance, withdrawal, conflict, and relapse. These questions help evaluate the presence of addictive behaviours associated with social media use. Participants rated their experiences on a 5-point Likert scale from 1 ('very rarely') to 5 ('very often'). The BSMAS has been validated for Italian adolescents by Monacis et al. (2017) , confirming its reliability and cross-cultural relevance in assessing social media addiction in this demographic. The Cronbach's Alpha value for the Bergen Social Media Addiction Scale is 0.750, which indicates good internal consistency.

Emotional Intelligence

The Italian adaptation of the Trait Emotional Intelligence Questionnaire – Child Short Form (TEIQue-CSF), as reported by Russo et al. (2012), was used. The questionnaire comprises thirty-six items, for which responses were elicited based on a Likert scale extending from 1, indicating 'Disagree completely', to 5, denoting 'Completely Agree'. The Cronbach's Alpha value for the Trait Emotional Intelligence scale is 0.850, which indicates good internal consistency.

Internalisation of Sociocultural Beauty Standards

The internalisation of sociocultural appearance standards was assessed using the Italian version of the Sociocultural Attitudes Towards Appearance Questionnaire-4-Revised (SATAQ-4R) (Stefanile et al., 2019).

The questionnaire consists of thirty-one items for the female version and twenty-eight items for the male version, employing a 5-point Likert scale where responses range from 1 (definitely disagree) to 5 (definitely agree). Both versions are structured into two primary sections: internalisation and pressures.

The Internalization section addresses queries pertaining to thinness, body fat, muscularity, and general attractiveness. On the other hand, the Pressures section includes questions related to the influence of family, peers, significant others, and media. The Cronbach's Alpha value for the Sociocultural Attitudes Towards Appearance Questionnaire-4-Revised is 0.840, which indicates good internal consistency.

Data analysis

The study used R-Studio software for statistical analysis (ver. R 4.4.2). Descriptive statistics were calculated for various variables, including gender, age, digital device use, social media engagement, and parental awareness across time points. Structural equation modelling (SEM) was used to test the relationships between social media use, social media addiction, sociocultural attitudes towards appearance and emotional intelligence. Root Mean Square Error of Approximation (RMSEA) indices were used to assess model fit throughout the analysis. RMSEA, alongside other fit indices such as the Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI), helped ensure the model's adequacy.

In addition, analyses of variance (ANOVA) were conducted to determine the effect of time spent on social media on scales of beauty standard internalisation, allowing comparisons of mean scores between groups. All statistical analyses were performed on de-identified data in accordance with ethical standards.

4.3 Results

Social Media use

Table 7 shows that the use of internet-connected devices remained high and stable among participants across the two-time points (T1:98.61%, T2: 99.16%). Social media engagement increased slightly ($p<0.01$), indicating a growing trend in online interaction. The use of instant messaging apps was consistent throughout the study, reflecting steady communication habits. The average number of social media platforms used by participants also grew from 5.0 (SD = 2.67) at Time 1 to 5.3 (SD = 2.67) at Time 2. This increase was consistent across all age groups, with 11-year-olds using an average of 4.78 platforms at Time 1 and 5.3 at Time 2, 12-year-olds using 5.27 at Time 1 and 5.59 at Time 2, and 13-year-olds using 5.81 at Time 1 and 6.19 at Time 2. These differences were statistically significant ($p < 0.05$) for all age groups, suggesting an expansion of their digital social networks as they aged.

The percentage of participants whose parents did not control their internet use increased slightly from 42.8% at Time 1 to 49% at Time 2. However, this difference was not statistically significant. Most participants reported that their parents were aware of all their social media profiles (68.91% at both Time 1 and Time 2), while a smaller group reported that their parents were not aware of any of their social media profiles (5.6% at both Time 1 and Time 2).

Item	T1	T2
Percentage of participants using internet-connected devices	98.61% (n=711)	99.16% (n=715)
Percentage of participants using social media	88% (n=637)	90.15% (n=650)
Percentage of participants using instant messaging apps	98% (n=712)	98% (n=712)
Average number of social media platforms used (SD)	5.0 (SD = 2.67)	5.3 (SD = 2.67)
Average number of platforms by age	11 years: 4.78 12 years: 5.27 13 years: 5.81	11 years: 5.3 12 years: 5.59 13 years: 6.19
Parental control	No: 42.8% Yes: 57.2%	No:49% Yes: 51%

Parents aware of all profiles	68.91% (n=439)	68.91% (n=439)
Parents aware of some profiles	25.5% (n=157)	25.5% (n=157)
No parental awareness	5.6% (n=36)	5.6% (n=36)

Table 7 Digital device usage, social media engagement, and parental awareness across time points

Table 8 provides an overview of participants most frequently used social media platforms. TikTok emerges as the most popular platform, with a significant proportion of users engaging with it for between two and four hours per day (26%), which suggests elevated levels of user engagement. Instagram is used with similar frequency but with more moderate usage durations, including at night. In contrast, WhatsApp is used for longer periods, with 15% of users spending over four hours on the app daily, highlighting its role in facilitating constant communication throughout the day.

Platform	Usage Rate	Typical Usage Duration	Usage Patterns Throughout the Day
TikTok	75.58%	1-2 hours: 29% 2-4 hours: 26% Over 4 hours: 18%	Frequently used throughout the day, including at night
Instagram	68.09%	30-59 minutes: 30% 1-2 hours: 19% Over 4 hours: 13%	Used in the morning, consistently throughout the day, including at night
Pinterest	44.52%	<30 minutes: 74.45%	Prominent in the afternoon
BeReal	25.57%	<30 minutes: 91.26%	Significant usage, especially in the afternoon
Twitch	27.46%	1-2 hours: 28% 30-59 minutes: 22%	Prominent in the evening
Snapchat	31.34%	<30 minutes: 53%	Frequently used in the afternoon

Discord	17.47%	<30 minutes: 46.44% 30-59 minutes: 29.36%	Prominent in the afternoon and evening
X (Twitter)	11.78%	<30 minutes: 56%	Prominent in the afternoon
Facebook	10.95%	15-29 minutes: 74.68% 30-59 minutes: 12.65%	Most used in the morning and evening
WhatsApp	95.97%	Over 4 hours: 15.06% 1-2 hours: 21% 2-4 hours: 16.76%	Used consistently throughout the day

Table 8 Distribution of Social Media Platform Usage, Average Daily Duration, and Temporal Usage Patterns

Bergen Social Media Addiction Scale

Bergen Social Media Addiction Scale scores show a slight decrease in mean social media addiction scores from T1 to T2 ($p<0.05$). Females showed a stable trend toward greater social media dependence than males, scoring higher at both assessment points. However, the difference between genders was statistically significant only at T2 ($p < 0.01$). Based on the cut-off score of 19 suggested by Bányai (2017), 9.3% of participants at T1 and 8.7% at T2 were identified as being at risk of problematic social media use. When disaggregated by gender, the prevalence of risk among females was 10.3% at T1 and 11.6% at T2. In contrast, the percentage of males at risk was lower, with 7.6% at T1 and 5% at T2.

Overall (T1)	Overall (T2)	Female (T1)	Female (T2)	Males (T1)	Males (T2)
12.6 (SD=4.4)	12.3 (SD=4.7)	12.8 (SD=5.2)	12.8 (SD=4.6)	12,3 (SD=4.2)	11.6 (SD=4.0)

Table 9 Bergen Social Media Addiction Scale

Trait Emotional Intelligence

The average Trait Emotional Intelligence (Table 4) score appears to be relatively stable across the two-time points, with a slight decrease from 3.38 (SD=0.49) at T1 to 3.34 (SD=0.51) at T2. The mean score for females is slightly lower than the mean score for males at both time points ($p<0.01$).

Overall (T1)	Overall (T2)	Female (T1)	Female (T2)	Males (T1)	Males (T2)
3.38 (SD=.49)	3.34 (SD=.51)	3.35 (SD=.55)	3.30 (SD=.55)	3.45 (SD=.41)	3.41 (SD=.43)

Table 10 Trait Emotional Intelligence

Sociocultural Attitudes Towards Appearance

Table 11 presents the mean and standard deviation scores for different variables, divided by gender (Female and Male) and two-time points (T1 and T2). The variables are categorized into two main sections: internalization and pressures. For the internalisation section, regarding Thin/Low Body Fat at T1, females have a mean score of 3.02 (SD=1.15), while males show a score of 2.56 (SD=1.07), indicating a greater internalisation of thin/low body fat ideals among females. This trend continues at T2.

It appears that males tend to internalise the societal ideal of muscularity, obtaining a score of 2.50 (SD=1.05) at T1 and 2.40 (SD=1.04) at T2. In contrast, females were less drawn to this ideal, scoring 1.81 (SD=0.54) at T1 and 1.76 (SD=0.74) at T2.

Overall, participants reported experiencing moderate levels of pressure regarding their appearance from all sources, with average scores ranging between 1.66 and 2.07. Family seems to be one of the highest sources of pressure, with average values tending to be higher than other categories. The mean scores relating to the pressure perceived by the family vary between 2.07 (SD=0.97) and 1.97 (SD=0.92) for the female sample and between 2.11 (SD=0.76) and 1.98 (SD=0.87) for the male sample, showing stable values over time. Perceived pressure from the media varies between 1.94 (SD=1.13) and 2.02 (SD=1.23) in the female sample and between 1.79 (SD=0.95) and 1.62 (SD=0.84) in the male sample.

		Mean (SD) Female (T1)	Mean (SD) Female (T2)	Mean (SD) Male (T1)	Mean (SD) Male (T2)
Internalization	Thin/Low Body Fat	3.02 (1.15)	2.97 (1.16)	2,56 (1.06)	2,42 (1.07)

	Muscular	1.81 (0.54)	1.76 (0.74)	2.50 (1.05)	2.40 (1.04)
	General Attractiveness	3.72 (0.84)	3.40 (0.68)	3.65 (1.11)	3.80 (1.11)
Pressures	Family	2.07 (0.97)	1.97 (0.92)	2.11 (0.76)	1.98 (0.87)
	Peers	1.66 (0.87)	1.72 (0.96)	1.83 (0.84)	1.70 (0.79)
	Significant Others	1.71 (0.86)	1.73 (0.91)	1.93 (00.86)	1.76 (0.85)
	Media	1.94 (1.13)	2.02 (1.226)	1.79 (0.95)	1.62 (0.84)

Table 11 Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ-4R)

Correlational analysis

The recruited sample was homogeneously distributed between male and female participants. The chi-squared analysis revealed a substantial association ($\chi^2 = 1032.7$, df= 6), surpassing the critical threshold and confirming statistical significance. Moreover, the obtained p-value (< 0.005) provided additional confirmation of the significant relationship. Similarly, a significant association was found regarding the use of internet-connected devices ($\chi^2 = 1442$, df = 4, p-value < 0.005). The three hypotheses were tested using structural equation modelling in R, testing both the hypothesised effect and the effect in the opposing direction.

H1: Positive correlation between the frequency of social media use and the likelihood of developing social media addiction.

Structural equation modelling (SEM) revealed a significant positive covariance between social media use and social media addiction at both Time 1 (T1) and Time 2 (T2). The covariance values were 13.596 ($p < 0.05$) at T1 and 14.604 ($p < 0.05$) at T2, indicating a consistent positive relationship between social media usage and Bergen Scale scores across time points. The estimated variances of the latent variables (social media use: T1 = 50.635, T2 = 56.831; Bergen Scale: T1 = 23.035, T2 = 24.255) represent the variability in these constructs. Residual variances accounted for measurement errors in the observed variables. Fit indices supported the adequacy of the model: the Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) both reached 1.000, indicating excellent fit. Additionally, the Root Mean Square Error of Approximation (RMSEA) and Standardized

Root Mean Square Residual (SRMR) were both 0.000, further confirming the model's accuracy.

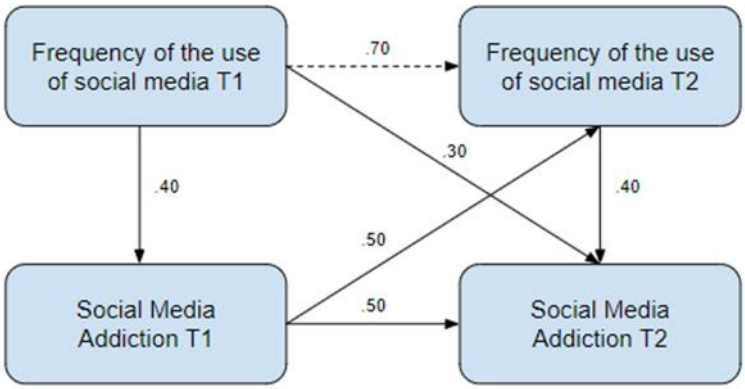


Figure 3 Relationships between the frequency of SMU and BSMAS at T1 and T2

Note: The dashed arrow indicates non-significance.

H2: Increased frequency of social media use is associated with higher levels of internalisation of sociocultural appearance standards among preadolescents.

The use of social media showed a positive correlation with SATAQ-4R scores in both males and females. In males, the correlation coefficient was .33 at Time 1 (T1), indicating a moderate positive association between higher social media use and SATAQ-4R scores. This positive correlation persisted at Time 2 (T2) with a coefficient of .30, suggesting consistency in the relationship over time. For females, the correlation coefficients were .31 at T1 and .30 at T2, indicating a similar pattern of moderate positive correlations across both time points. Additionally, both the Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) were 1.000, indicating an excellent fit. The Root Mean Square Error of Approximation (RMSEA) and Standardized Root Mean Square Residual (SRMR) were both 0.000, confirming the precise fit of the model.

An analysis of variance (ANOVA) was conducted to investigate the impact of time spent on social media on the muscular subscale among males. The results revealed a significant effect ($F(1, 449) = 8.768$, $p = 0.00323$), indicating that the amount of time spent on social media significantly influences muscular scores. This suggests a statistically significant difference in muscular scores based on varying levels of social media use. Comparable results were observed at both T1 and T2 assessments. The same analysis was performed for female respondents focusing on the subscale attractiveness. The results indicate a significant effect of time of use on attractiveness ($F(1, 471) = 14.38$, $p = 0.000168$). The finding suggested that the amount of time individuals spend on social media significantly influences perceptions of attractiveness. Specifically, higher levels of social media use correlate with altered attractiveness ratings. Similar results were observed at both T1 and T2 assessments.

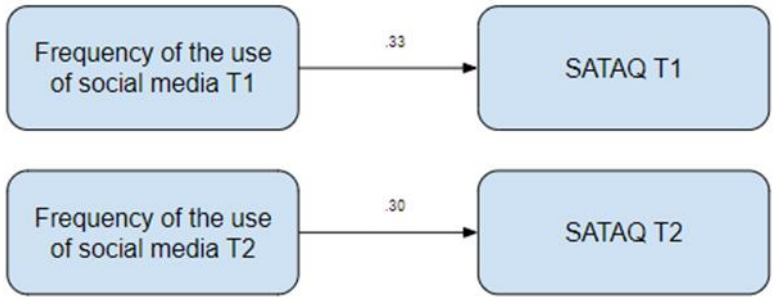


Figure 4 Relationships between the frequency of SMU and SATAQ-4R scores for males at T1 and T2.

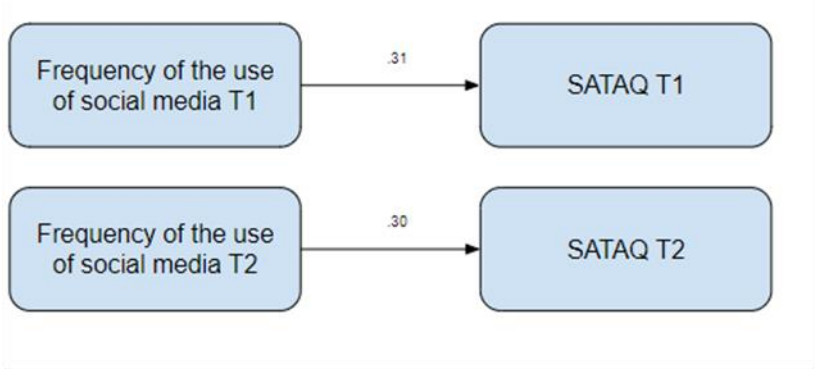


Figure 5 Relationship between the frequency of SMU and SATAQ-4R scores for females at T1 and T2.

H3: inverse relationship between social media use frequency and emotional intelligence

There is an inverse relationship between the frequency of social media use and emotional intelligence in preadolescents.

SEM analyses revealed a negative relationship between social media use and TEI scores at both Time 1 (-0.126, $p < 0.05$) and Time 2 (-0.122, $p < 0.05$). The estimated variances of the latent variables (social media use: T1 = 50.863, T2 = 57.554; TEI scale: T1 = 0.248, T2 = 0.267) represent the variability within these constructs, and residual variances account for measurement error in the observed variables. The model had an excellent fit (CFI = 1.000, TLI = 1.000, RMSEA = 0.000, SRMR = 0.000). These findings indicate a potential negative influence of social media use on emotional intelligence.

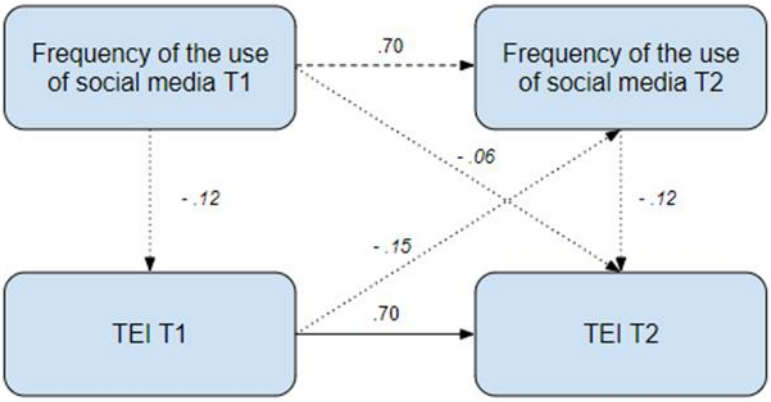


Figure 6 Figure 6 Relationships between frequency of SMU and TEI at T1 and T2.

Note: the dotted arrow indicates negative correlation, while the dashed arrow indicates non-significance.

4.4 Discussion

The present research investigated the relationships between social media usage patterns, sociocultural influences, and emotional intelligence. The overarching goal was to enhance understanding of how technology and digitalisation influence Alpha Generation, with implications for guiding and improving policy and educational strategies. This study confirmed the massive use of technology by preadolescents, in line with data from previous studies (Iannaccone et al., 2024). Ninety-nine per cent of participants reported the use of internet-connected devices, and approximately 90 per cent reported the use of social media. It was also found that, on average, participants use about five different platforms, demonstrating a growing trend towards "media multitasking", which refers to the simultaneous use of multiple digital information sources (Beuckels et al., 2021).

A total of 75.58% of the sample reported using TikTok, which is consistent with other studies that identify it as one of the most popular social platforms today (Piccerillo & Tescione, 2023). TikTok's exponential growth, nearly doubling its user base from 2021 to 2022 to reach 45%, underscores its significant impact on social media consumption, especially among younger users (Tirendi & Gargiulo, 2024).

The findings of this study reveal a significant gap in parental control over children's use of internet-connected devices, with 42.19% of the sample reporting no monitoring, a figure that increased to 49% over time. These trends are similar to those found in other studies, such as Dinleyici's (2016), which found that 32.4%of parents reported no monitoring of their children's online activities. Despite efforts by some

parents to manage online exposure, the increase in unmonitored device use highlights the growing need for digital literacy education, both for young and their caregivers.

Approximately 9% of the sample was identified as addicted to social media, a finding that aligns with numerous prior studies (Ciacchini et al., 2023; Marino, Lenzi, et al., 2020). For instance, similar prevalence rates of social media addiction (11%) have been reported by Ciacchini et al. (2023).

Regarding gender differences, this study found that most addicts were girls, which aligns with the existing literature. Research indicates that females are more vulnerable to the negative consequences of the online environment (Peris et al., 2020). This increased vulnerability may be attributed to their more frequent use of social media and preference for social online interactions, which place them at a greater risk of developing addiction-like symptoms (Su et al., 2020).

The hypothesis (H1) that increased time spent on social media correlates with a higher likelihood of social media addictive behaviours among preadolescents was supported by the findings of this study. This model indicates that the frequency of social media use is linked to the development of addiction over time. As preadolescents engage more with these platforms, the likelihood of addiction increases, creating a reinforcing cycle. The more time they spend online, the stronger their emotional reliance on social media becomes, which further deepens the addictive behaviours.

These findings are consistent with previous research, which has also reported moderate positive correlations between social media usage frequency and levels of social media addiction (Paschke et al., 2021; Van Den Eijnden et al., 2018). Moreover, socio-cultural influences play a significant role in shaping these patterns (H2). The results showed a positive and significant correlation between the amount of time spent on social media and the internalisation of muscular ideals in males, as well as general attractiveness in females. This suggests that higher social media usage is linked to internalising culturally promoted body ideals, with distinct patterns emerging across genders. Our findings align with previous research, the study by Vuong et al. (2021) found that the correlation between social media use and muscular-ideal internalisation appears to be more significant in boys, which may align with the societal pressures men face regarding muscularity. In the study by Dahlgren et al. (2024), a significant positive correlation was found between time spent on social networks and the General Attractiveness scale in girls, similar to the results in our study. This shows that in girls, spending more time on social media is linked to greater concern about their attractiveness.

The findings of this study confirm H3 that there is an inverse relationship between the frequency of social media use and emotional intelligence in preadolescents. Specifically, as the frequency of social media use increases, levels of emotional intelligence tend to decrease. This is consistent with prior research showing that extensive engagement with social media can negatively impact emotional regulation, self-esteem and social skills (Gracia Granados et al., 2020; Krause et al., 2021; Wartberg et al., 2021b).

This study presents several strengths. Its short-term longitudinal design, with two data collection points, facilitates the observation of changes in social media use, sociocultural influences, and emotional intelligence in preadolescents, addressing behaviours that can evolve rapidly. By examining multiple platforms and their combined usage, the research offers a comprehensive view of media behaviors in this demographic. Furthermore, the findings reinforce existing literature, adding validity while providing new data within the context of Generation Alpha. Lastly, the study's relevance is amplified by growing concerns regarding preadolescents' social media use, making it significant for policymakers, educators, and families.

Despite its strengths, this study has several limitations. The limited number of measurement points constrains the ability to identify stable trends over time, risking the misinterpretation of temporary fluctuations as significant changes. The sample is drawn from a specific geographical area, which limits the generalizability of the findings to the broader preadolescent population. The proposed model does not incorporate all the relevant variables simultaneously, making it difficult to assess the direct and indirect relationships between them. Additionally, the relationships between the proposed variables may be bidirectional, and while important correlations between social media use, addiction, and internalisation of body ideals are noted, the study does not establish direct causal links between them.

Future research should expand the longitudinal design to include additional data collection points over a longer period. Using objective measures of screen time would enhance the accuracy of usage data. Employing a larger and more diverse sample would improve the generalizability of findings across various cultural and socioeconomic contexts. In future research, variables such as self-esteem, social support, parenting styles, cultural and socioeconomic factors, the type of content consumed, and experiences of cyberbullying could be explored as additional factors influencing the relationship between social media use, emotional intelligence, and body image internalisation.

These findings hold significant implications for practice, particularly for professionals in mental health, education, and youth development sectors. The results underscore the necessity of implementing proactive and sustained strategies to address social media addiction, which remains a growing concern among preadolescents and adolescents. Given the link between social media use and social media addiction behaviours, early intervention is paramount.

Having and using a smartphone, spending time on social networks, and even becoming addicted to them are new behaviour patterns in a society where digital skills are becoming essential. The importance of digital competence is recognised by educational institutions and even government bodies. The European Commission, for example, includes it as one of the eight key competences for its citizens. According to Soler-Costa et al. (Soler-Costa et al., 2021), one of the key areas that constitutes digital competence is netiquette. Netiquette primarily focuses on the social and cultural skills involved in digitally mediated communication (Heitmayer & Schimmelpfennig, 2024). Educating preadolescents about appropriate conduct, respect for others, and navigating the digital space safely can prevent the misuse of social media platforms. Schools, as one of the most influential environments for young people, provide an ideal setting for interventions. Research consistently supports the efficacy of school-based programs in reducing problematic online behaviours (Cañas & Estévez, 2021; Favini et al., 2024). These programs could incorporate components such as fostering critical thinking around social media use and encouraging healthier, more balanced engagement with digital platforms. One key aspect is the need to foster critical thinking about the online content consumed, particularly regarding the excessive emphasis on image-based content. Encouraging preadolescents, to value the quality and authenticity of information over superficial image-based portrayals can help reduce the emotional dependency on social media for validation.

Moreover, it is essential that schools, parents, and mental health professionals work collaboratively to provide continuous support for individuals at risk. This could include regular monitoring of social media habits, offering counselling or peer support for those struggling with dependency, and integrating emotional intelligence training to help young people manage the sociocultural pressures they encounter online.

Finally, the implications of this study extend to policy and curriculum development, where there is an increasing need to integrate comprehensive media education and mental health resources into school curricula. Such initiatives would not

only mitigate the risks associated with excessive social media use but also equip young people with the skills to navigate the digital world healthily and sustainably.

4.5 Conclusions

This study examines the impact of social media on the well-being of Generation Alpha, focusing on social media addiction, the internalisation of beauty ideals, and emotional intelligence. Findings indicate high social media usage among preadolescents, underscoring the need to understand its effects on mental health and sociocultural attitudes. The positive correlation between social media use and both addiction and the internalisation of beauty standards highlights the importance of early interventions to foster healthier media consumption.

While the study supports the hypothesis linking increased social media use to higher addiction risks and internalisation of beauty ideals, it found no significant gender differences in addiction patterns. Additionally, excessive social media exposure appears to negatively affect emotional intelligence.

Strengths include a short-term longitudinal design and detailed platform analysis, but limitations such as reliance on self-reported data suggest the need for further research. Future studies should extend the research duration, integrate qualitative insights, and utilise objective screen-time metrics.

These findings provide valuable insights for educators, mental health professionals, and policymakers to develop strategies that mitigate social media addiction and promote healthier digital habits among preadolescents.

APPENDIX A

1. Sono Maschio (__) Femmina (__) Identità non binaria (__) indicalo con una X

2. Utilizzi un device (smartphone, ipad, smartwatch, ecc.) connesso ad internet?

□ Sì

□ No

3. Utilizzi i social network come ad esempio Instagram, Facebook, TikTok, ecc.?

□ Sì

□ No

4. Utilizzi app di messaggistica istantanea come ad esempio WhatsApp, Telegram, Snapchat, ecc.?

□ Sì

□ No

5. I tuoi genitori controllano le attività che svolgi su internet?

□ Sì

□ No

6. I tuoi genitori sono a conoscenza di tutti i tuoi profili social?

□ Sì, di tutti

□ No, di nessuno

□ Sì, solo di alcuni

Indica con una X i momenti della giornata in cui utilizzi maggiormente i social network e/o le app di messaggistica istantanea

ATTENZIONE: rispondi soltanto per i social network o le app di messaggistica che utilizzi; troverai delle caselle vuote dove potrai inserire social network o app di messaggistica che utilizzi ma che non sono presenti nell'elenco.

	Mattino	Ora di pranzo	Pomeriggio	Sera	Notte
1. BeReal					
2. Discord					
3. Facebook					
4. Instagram					
5. Messenger					
6. Pinterest					
7. Reddit					
8. Snapchat					
9. Telegram					
10. TikTok					
11. Twitch					
12. Twitter					
13. WhatsApp					
14. YouTube					
15. ……..……					

16. ……..……..					
17. …….					

Indica quali sono i giorni della settimana in cui utilizzi maggiormente i social network, puoi selezionare una o entrambe le risposte

- □ dal lunedì al venerdì
- □ sabato e Domenica
- □

Indica con una X il tempo di utilizzo giornaliero medio rispondendo soltanto per i social network e le app di messaggistica istantanea che utilizzi; troverai delle caselle vuote dove potrai inserire social network o app di messaggistica che utilizzi ma che non sono presenti nell'elenco.

	Tra **15** e **29** minuti	Tra **30** minuti e **59** minuti	Tra **1** ora e **1:59** minuti	Tra **2** ore e **4** ore	Più di **4** ore
1. BeReal					
2. Discord					
3. Facebook					
4. Instagram					
5. Messenger					
6. Pinterest					
7. Reddit					
8. Snapchat					
9. Telegram					

10. TikTok					
11. Twitch					
12. Twitter					
13. WhatsApp					
14. YouTube					
15. ……					
16. ……..……..					
17. …….					

Indica con una X le attività che svolgi maggiormente sui social network e/o app di messaggistica, puoi selezionare più di una risposta

	Mai	Raramente	Spesso	Sempre
Postare una foto o un video che mi ritraggono				
Guardare i profili dei miei amici e delle mie amiche				
Guardare foto o video che mi ritraggono, aggiunte dai miei amici e dalle mie amiche				
Guardare foto o video che ritraggono i miei amici e le mie amiche				
Guardare foto o video di celebrità, influencer e streamer				
Pubblicare storie o dirette in cui ci sono io				
Guardare storie o dirette in cui ci				

sono io, postate da me stesso				
Guardare storie o dirette in cui ci sono i miei amici o le mie amiche				
Guardare storie di celebrità, influencer e streamer				
Mettere like a foto o video che mi ritraggono, aggiunte dai miei amici o dalle mie amiche				
Mettere like a foto o video che ritraggono i miei amici e le mie amiche				
Mettere like a foto o video che ritraggono celebrità, influencer e streamer				
Controllare il numero di like e visualizzazioni alle mie foto e/o video				
Controllare il numero di visualizzazioni delle mie storie				
Controllare il numero di like e visualizzazioni delle foto e/o video dei miei amici e delle mie amiche				

Ti proponiamo ora delle domande per cercare di comprendere il tuo rapporto con il mondo dei social

- Per favore, rispondi a tutte le domande
- Ricorda che non ci sono risposte giuste o sbagliate e che non verrai in alcun modo giudicato
- Metti una X sul numero che meglio corrisponde alla tua opinione, ricordando che

  1 corrisponde a **Molto raramente 2** corrisponde a **Raramente 3** corrisponde a **A Volte**

  4 corrisponde a **Spesso 5** corrisponde a **Molto spesso**

	Molto raramente	**Raramente**	**A volte**	**Spesso**	**Molto spesso**
1) Passo molto tempo pensando ai social media e a pianificare come utilizzarli	1	2	3	4	5
2) Sento un'urgenza ad utilizzare i social che aumenta sempre di più	1	2	3	4	5
3) Uso i social media per dimenticare i problemi personali	1	2	3	4	5
4) Ho provato a ridurre l'utilizzo dei social media ma senza successo	1	2	3	4	5
5) Divento irrequieto e preoccupato quando mi è proibito utilizzare i social media	1	2	3	4	5
6) Uso i social media così tanto da avere un impatto negativo sullo studio	1	2	3	4	5

Vorremmo ora proporti delle domande relative ai tuoi stati d'animo

- È importante rispondere a TUTTE le domande.
- Ricordati che non ci sono risposte giuste o risposte sbagliate e che non verrai in alcun modo giudicato.

	PER NIENTE d'accordo	**POCO** d'accordo	**ABBASTANZA** d'accordo	**MOLTO** d'accordo	**COMPLETAMENTE** d'accordo
1. Cerco sempre di essere di buon umore	1	2	3	4	5
2. Mi piace incontrare gente nuova	1	2	3	4	5

3. Mi riesce difficile abituarmi all'inizio di un nuovo anno scolastico	1	2	3	4	5
4. Sono molto contento/a di me	1	2	3	4	5
5. Quando sono triste, cerco di fare qualcosa per cambiare il mio umore	1	2	3	4	5
6. Mi sento spesso triste	1	2	3	4	5
7. Se sto bene con qualcuno, glielo dico	1	2	3	4	5
8. Vado d'accordo con tutti	1	2	3	4	5
9. Mi sento spesso arrabbiato/a	1	2	3	4	5
10. Ai miei compagni/e di scuola piace giocare con me	1	2	3	4	5
11. Mi abituo velocemente a stare in un posto nuovo	1	2	3	4	5
12. Spesso non sono soddisfatto/a di me	1	2	3	4	5
13. Molte volte non penso prima di fare qualcosa	1	2	3	4	5
14. Sono molto bravo/a a capire come si sentono le altre persone	1	2	3	4	5
15. Non mi piace impegnarmi molto per ottenere qualcosa	1	2	3	4	5
16. È facile per me capire come mi sento	1	2	3	4	5
17. Se devo fare qualcosa, so di poterla fare molto bene	1	2	3	4	5
18. Mi arrabbio molto facilmente	1	2	3	4	5
19. Cerco di fare i compiti a casa nel modo migliore possibile	1	2	3	4	5
20. È facile per me parlare delle mie emozioni	1	2	3	4	5
21. Non mi piace aspettare per avere ciò che desidero	1	2	3	4	5
22. Sono un/a ragazzo/a felice	1	2	3	4	5
23. Non mi piace studiare molto	1	2	3	4	5
24. Penso che potrei essere triste quando sarò più grande	1	2	3	4	5
25. Sto simpatico/a alla maggior parte delle persone	1	2	3	4	5
26. Prima di fare qualcosa ci penso molto bene	1	2	3	4	5
27. Non sono bravo/a a controllare le mie emozioni	1	2	3	4	5
28. Mi abituo alle nuove persone molto velocemente	1	2	3	4	5
29. Non trovo le parole per dire agli altri come mi sento	1	2	3	4	5
30. Non mi piace provare cose nuove	1	2	3	4	5
31. Mi piace stare insieme alle altre persone	1	2	3	4	5
32. So come dimostrare agli altri quanto ci tengo a loro	1	2	3	4	5
33. Spesso non capisco come mi sento	1	2	3	4	5
34. Ho difficoltà a capire le emozioni che provano gli altri	1	2	3	4	5
35. Se non faccio bene qualcosa, non mi piace riprovare a farla	1	2	3	4	5

36. Di solito penso molto attentamente prima di parlare	1	2	3	4	5

Questionario n.1 (FEMMINA)

- Compila questo questionario se sei una **FEMMINA** o ti identifichi nel genere **NON BINARIO**
- Leggi attentamente ognuna delle seguenti affermazioni e indica con una X il tuo grado di accordo o disaccordo con ciascuna di esse
- Nel rispondere pensa al tuo aspetto e a come ti senti riguardo al modo in cui appare il tuo corpo

  Ricorda che, **1** corrisponde a **Per niente d'accordo, 2** corrisponde a **Poco d'accordo, 3** corrisponde a **Abbastanza d'accordo, 4** corrisponde a **Molto d'accordo** e **5** corrisponde a **Completamente d'accordo**

	PER NIENTE d'accordo	**POCO** d'accordo	**ABBASTANZA** d'accordo	**MOLTO** d'accordo	**COMPLETAMENTE** d'accordo
1) Per me è importante apparire muscolosa	1	2	3	4	5
2) Per me è importante avere un bell'aspetto con gli abiti che indosso	1	2	3	4	5
3) Voglio che il mio corpo sembri molto magro	1	2	3	4	5
4) Penso molto a sembrare muscolosa	1	2	3	4	5
5) Penso molto al mio aspetto	1	2	3	4	5
6) Penso molto a sembrare magra	1	2	3	4	5
7) Voglio essere bella	1	2	3	4	5
8) Voglio che il mio corpo sembri muscoloso	1	2	3	4	5
9) Non penso molto al mio aspetto	1	2	3	4	5
10) Non voglio che il mio corpo sembri muscoloso	1	2	3	4	5
11) Voglio che il mio corpo sembri molto snello	1	2	3	4	5
12) Per me è importante essere attraente	1	2	3	4	5
13) Penso molto ad avere poco grasso corporeo	1	2	3	4	5

14) Non penso molto a come appaio	1	2	3	4	5
15) Vorrei avere un corpo che sembri molto muscoloso	1	2	3	4	5
16) Sento le pressioni dei membri della mia famiglia a sembrare più magra	1	2	3	4	5
17) Sento le pressioni dei membri della mia famiglia a migliorare il mio aspetto	1	2	3	4	5
18) I membri della mia famiglia mi incoraggiano a diminuire la quantità di grasso del mio corpo	1	2	3	4	5
19) I membri della mia famiglia mi incoraggiano ad essere in gran forma	1	2	3	4	5
20) I miei coetanei mi incoraggiano ad essere più magra	1	2	3	4	5
21) Sento le pressioni dei miei coetanei a migliorare il mio aspetto	1	2	3	4	5
22) Sento le pressioni dei miei coetanei a sembrare in gran forma	1	2	3	4	5
23) Ricevo pressioni da parte dei miei coetanei a diminuire la quantità di grasso del mio corpo	1	2	3	4	5
24) Persone significative per me mi incoraggiano ad essere più magra	1	2	3	4	5
25) Sento le pressioni di persone significative a migliorare il mio aspetto	1	2	3	4	5
26) Sento le pressioni di persone significative a sembrare in gran forma	1	2	3	4	5
27) Ricevo pressioni da parte di persone significative a diminuire la quantità di grasso del mio corpo	1	2	3	4	5
28) Sento le pressioni dei media ad apparire in gran forma	1	2	3	4	5
29) Sento le pressioni dei media a sembrare più magra	1	2	3	4	5
30) Sento le pressioni dei media a migliorare il mio aspetto	1	2	3	4	5
31) Sento le pressioni dei media a diminuire la quantità di grasso del mio corpo	1	2	3	4	5

Questionario n.2 (MASCHIO)

- Compila questo questionario se sei un **MASCHIO** o ti identifichi nel genere **NON BINARIO**
- Leggi attentamente ognuna delle seguenti affermazioni e indica con una X il tuo grado di accordo o disaccordo con ciascuna di esse
- Nel rispondere pensa al tuo aspetto e a come ti senti riguardo al modo in cui appare

Ricorda che, **1** corrisponde a **Per niente d'accordo, 2** corrisponde a **Poco d'accordo, 3** corrisponde a **Abbastanza d'accordo, 4** corrisponde **Molto d'accordo** e **5** corrisponde a **Completamente d'accordo**

	PER NIENTE d'accordo	**POCO** d'accordo	**ABBASTANZA** d'accordo	**MOLTO** d'accordo	**COMPLETAMENTE** d'accordo
1) Per me è importante apparire muscoloso	1	2	3	4	5
2) Voglio che il mio corpo sembri molto magro	1	2	3	4	5
3) Penso molto a sembrare muscoloso	1	2	3	4	5
4) Penso molto a sembrare magro	1	2	3	4	5
5) Voglio che il mio corpo sembri muscoloso	1	2	3	4	5
6) Non penso davvero molto al mio aspetto	1	2	3	4	5
7) Non penso molto a come appaio	1	2	3	4	5
8) Vorrei avere un corpo che sembri molto muscoloso	1	2	3	4	5
9) Sento le pressioni dei membri della mia famiglia a sembrare più magro	1	2	3	4	5
10) Sento le pressioni dei membri della mia famiglia a migliorare il mio aspetto	1	2	3	4	5
11) I membri della mia famiglia mi incoraggiano ad essere in gran forma	1	2	3	4	5
12) Sento le pressioni dei membri della mia famiglia ad essere più muscoloso	1	2	3	4	5

13) I membri della mia famiglia mi incoraggiano ad aumentare la dimensione o la definizione dei miei muscoli	1	2	3	4	5
14) Sento le pressioni dei miei coetanei a migliorare il mio aspetto	1	2	3	4	5
15) Sento le pressioni dei miei coetanei a sembrare in gran forma	1	2	3	4	5
16) Sento le pressioni da parte dei miei coetanei ad essere più muscoloso	1	2	3	4	5
17) I miei coetanei mi incoraggiano ad aumentare la dimensione o la definizione dei miei muscoli	1	2	3	4	5
18) Sento le pressioni di persone significative a migliorare il mio aspetto	1	2	3	4	5
19) Sento le pressioni di persone significative a sembrare in gran forma	1	2	3	4	5
20) Ricevo pressioni da parte di persone significative a diminuire la quantità di grasso del mio corpo	1	2	3	4	5
21) Ricevo pressioni da parte di persone significative ad essere più muscoloso	1	2	3	4	5
22) Sento le pressioni da parte di persone significative ad aumentare la dimensione o la definizione dei miei muscoli	1	2	3	4	5
23) Sento le pressioni dei media ad apparire in gran forma	1	2	3	4	5
24) Sento le pressioni dei media a sembrare più magro	1	2	3	4	5
25) Sento le pressioni dei media a migliorare il mio aspetto	1	2	3	4	5
26) Sento le pressioni dei media a diminuire la quantità di grasso del mio corpo	1	2	3	4	5
27) Sento le pressioni dei media ad essere più muscoloso	1	2	3	4	5
28) Sento le pressioni dei media ad aumentare la dimensione o la definizione dei miei muscoli	1	2	3	4	5

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