

THE ROLE OF SOCIAL MEDIA ENGAGEMENT IN SHAPING PREADOLESCENTS' BODY IMAGE AND EMOTIONAL INTELLIGENCE: A CROSS-SECTIONAL STUDY

IL RUOLO DELL'INTERAZIONE SUI SOCIAL MEDIA NELLA FORMAZIONE DELL'IMMAGINE CORPOREA E DELL'INTELLIGENZA EMOTIVA DEI PREADOLESCENTI: UNO STUDIO TRASVERSALE



Alice Iannaccone

University of Cassino and Southern Lazio

alice.iannaccone@unicas.it



Lidia Piccerillo

University of Cassino and Southern Lazio,

lidia.piccerillo@unicas.it



Alessia Tescione

University of Cassino and Southern Lazio

alessia.tescione@unicas.it



Simone Digennaro

University of Cassino and Southern Lazio

s.digennaro@unicas.it



Double Blind Peer Review

Citazione

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. *Giornale Italiano di Educazione alla Salute, Sport e Didattica Inclusiva*, 8(2), Edizioni Universitarie Romane.

Doi:

<https://doi.org/10.32043/gsd.v8i3.1116>

Copyright notice:

© 2023 this is an open access, peer-reviewed article published by Open Journal System and distributed under the terms of the Creative Commons Attribution 4.0 International, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

gsdjournal.it

ISSN: 2532-3296

ISBN 978-88-7730-494-0

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.

L'immagine corporea e l'intelligenza emotiva sono cruciali per lo sviluppo dei preadolescenti. Tuttavia, l'ampio utilizzo dei social media potrebbe avere effetti negativi. Un campione di 1109 preadolescenti ha completato un questionario. I risultati mostrano una correlazione negativa tra l'uso dei social media e sia l'immagine corporea che l'intelligenza emotiva. Ci suggerisce la necessità di nuove strategie educative per affrontare l'impatto dei social media su questi importanti aspetti dello sviluppo giovanile.

KEYWORDS

Preadolescence; emotional intelligence; body image; social media
Preadolescenza; intelligenza emotiva; immagine corporea; social media

Received 30/04/2024

Accepted 14/06/2024

Published 24/06/2024

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 (Spies 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; Fardouly et al., 2020; 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., 2022).

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.

1. 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, 2023). The feedback and validation received through social networks play a crucial role in shaping an individual's self-esteem and sense of self-worth (Lee et al., 2020). Interactions on social media, including likes, comments, and reactions from friends and followers, can either enhance or diminish one's self-perception (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., 2022). 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., 2014; Meier & Gray, 2014; 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., 2016).

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., 2020), 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.

2. Materials and Methods

2.1. 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.

2.2. Instruments

2.2.1 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').

2.2.2 Emotional Intelligence

The Italian adaptation of the Trait Emotional Intelligence Questionnaire – Child Short Form (TEIQue-CSF) by Russo et al., (2012) was used to assess emotional intelligence (EI) 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.

2.2.3 Sociocultural Attitudes Towards Appearance

The Italian adaptation of the Sociocultural Attitudes Towards Appearance Questionnaire-4-Revised (SATAQ-4R) developed by Stefanile et al. in 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.

2.4 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. 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.

Table 1 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.

	Female			Male		
	Mean	SE	SD	Mean	SE	SD
Age	12,07	,038	,898	12,16	,039	,913
Trait Emotional intelligence	3,3285	,02248	,52764	3,4444	,01850	,43614
Social Media Addiction Scale	12,7514	,20454	4,80131	11,9227	,19609	4,62381
Internalization: thin/low fat	2,9921	,04883	1,14304	2,5380	,04712	1,10698
Internalization: muscular	1,8105	,03068	,71888	2,5584	,04736	1,11270
Internalization: ideal appearance	3,7069	,03557	,83335	3,6661	,04697	1,10252
Pressures: family	2,0796	,04164	,96864	2,1798	,03650	,85764
Pressures: peers	1,7123	,03883	,90323	1,9002	,03862	,90235
Pressures: others	1,7273	,03778	,87800	1,9504	,03834	,89578
Pressures: media	1,9139	,04900	1,13648	1,8334	,04015	,93651

Table 1. Descriptive statistics (mean, standard deviations -SD, and standard errors-SE) of the variables investigating emotional intelligence, addiction to social media and subscales of the SATAQ-4R.

Spearman correlations between variables are reported in Table 2.

	BSMAS	TEI	ITh	IMu	IIA	PrFa	PrPe	PrOh	PrMe
BSMAS	-	-,283**	,216**	,165**	-0,004	,293**	,262**	,335**	,353**
TEI	-,384**	-	-0,048	-0,043	-0,021	-,152**	-,087*	-,170**	-,171**
ITh	,304**	-,309**	-	,363**	0,015	,329**	,254**	,244**	,298**
IMu	0,062	-,095*	,099*	-	,103*	,408**	,395**	,362**	,382**
IIA	,375**	-,255**	,598**	0,005	-	-,109*	-,086*	-0,065	-0,045
PrFa	,279**	-,239**	,346**	0,061	,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 2: 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)

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.

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, 2011). 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., (2022) 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, 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.

Furthermore, 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.

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.

Acknowledgments

Authors would like to express their gratitude to the heads of the involved schools and the participants' parents for allowing us to conduct the research and to all the students who volunteered to participate and to Francesco Marino and Laura Bugno for their collaboration during data collection.

References

- Acar, I. H., Avçılar, G., Yazıcı, G., & Bostancı, S. (2022). The roles of adolescents' emotional problems and social media addiction on their self-esteem. *Current Psychology*, 41(10), 6838–6847. <https://doi.org/10.1007/s12144-020-01174-5>
- Amado Alonso, D., León-del-Barco, B., Mendo-Lázaro, S., & Iglesias Gallego, D. (2020). Examining Body Satisfaction and Emotional–Social Intelligence among School Children: Educational Implications. *International Journal of Environmental Research and Public Health*, 17(6), 2120. <https://doi.org/10.3390/ijerph17062120>
- Amiri, S., & Navab, A. G. (2019). Emotion regulation, brain behavioural systems, and sensory sensitivity in sociocultural attitudes towards appearance in adolescents. *Neuropsychiatry i Neuropsychologia*, 14(1–2), 32–38. <https://doi.org/10.5114/nan.2019.87726>
- Andreassen, C. S., Pallesen, S., & Griffiths, M. D. (2017). The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addictive Behaviors*, 64, 287–293. <https://doi.org/10.1016/j.addbeh.2016.03.006>
- Arrivillaga, C., Rey, L., & Extremera, N. (2022). Uso problemático de redes sociales e inteligencia emocional en adolescentes: Análisis de las diferencias por género. *European Journal of Education and Psychology*, 1–16. <https://doi.org/10.32457/ejep.v15i1.1748>

Boursier, V., Gioia, F., & Griffiths, M. D. (2020). Objectified Body Consciousness, Body Image Control in Photos, and Problematic Social Networking: The Role of Appearance Control Beliefs. *Frontiers in Psychology*, 11, 147. <https://doi.org/10.3389/fpsyg.2020.00147>

Cash, T. F. (2005). The influence of sociocultural factors on body image: Searching for constructs. *Clinical Psychology: Science and Practice*, 12(4), 438–442. <https://doi.org/10.1093/clipsy.bpi055>

Cash, T. F., & Smolak, L. (Eds.). (2012). *Body image: A handbook of science, practice, and prevention* (2. ed., paperback ed). Guilford Press.

Chang, L., Li, P., Loh, R. S. M., & Chua, T. H. H. (2019). A study of Singapore adolescent girls' selfie practices, peer appearance comparisons, and body esteem on Instagram. *Body Image*, 29, 90–99. <https://doi.org/10.1016/j.bodyim.2019.03.005>

Chen, R., & Sharma, S. K. (2015). Learning and self-disclosure behavior on social networking sites: The case of Facebook users. *European Journal of Information Systems*, 24(1), 93–106. <https://doi.org/10.1057/ejis.2013.31>

Chua, T. H. H., & Chang, L. (2016). Follow me and like my beautiful selfies: Singapore teenage girls' engagement in self-presentation and peer comparison on social media. *Computers in Human Behavior*, 55, 190–197. <https://doi.org/10.1016/j.chb.2015.09.011>

Çimke, S., & Yıldırım Gürkan, D. (2023). Factors affecting body image perception, social media addiction, and social media consciousness regarding physical appearance in adolescents. *Journal of Pediatric Nursing*, 73, e197–e203. <https://doi.org/10.1016/j.pedn.2023.09.010>

De Stasio, S., Ragni, B., Bucchi, E., Altea, G., & Bacile, C. (2019). The use of social networking sites: The interplay between school burnout levels and friendship quality in adolescence. *International Journal of Developmental and Educational Psychology. Revista INFAD de Psicología.*, 1(2), 255–260. <https://doi.org/10.17060/ijodaep.2019.n2.v1.1694>

De Vries, D. A., Peter, J., De Graaf, H., & Nikken, P. (2016). Adolescents' Social Network Site Use, Peer Appearance-Related Feedback, and Body Dissatisfaction: Testing a Mediation Model. *Journal of Youth and Adolescence*, 45(1), 211–224. <https://doi.org/10.1007/s10964-015-0266-4>

Digennaro, S. (2024). The syndrome of multiple bodies: The transformative impact of the onlife existence on preadolescents. *Frontiers in Education*, 9, 1362448. <https://doi.org/10.3389/feduc.2024.1362448>

Digennaro, S., & Iannaccone, A. (2023). Check Your Likes but Move Your Body! How the Use of Social Media Is Influencing Pre-Teens Body and the Role of Active Lifestyles. *Sustainability*, 15(4), 3046. <https://doi.org/10.3390/su15043046>

Dwivedi, Y. K., Hughes, L., Baabdullah, A. M., Ribeiro-Navarrete, S., Giannakis, M., Al-Debei, M. M., Dennehy, D., Metri, B., Buhalis, D., Cheung, C. M. K., Conboy, K., Doyle, R., Dubey, R., Dutot, V., Felix, R., Goyal, D. P., Gustafsson, A., Hinsch, C., Jebabli, I., ... Wamba, S. F. (2022). Metaverse beyond the hype: Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, 66, 102542. <https://doi.org/10.1016/j.ijinfomgt.2022.102542>

Fardouly, J., Magson, N. R., Rapee, R. M., Johnco, C. J., & Oar, E. L. (2020). The use of social media by Australian preadolescents and its links with mental health. *Journal of Clinical Psychology*, 76(7), 1304–1326. <https://doi.org/10.1002/jclp.22936>

Ferguson, C. J., Muñoz, M. E., Garza, A., & Galindo, M. (2014). Concurrent and Prospective Analyses of Peer, Television and Social Media Influences on Body Dissatisfaction, Eating Disorder Symptoms and Life Satisfaction in Adolescent Girls. *Journal of Youth and Adolescence*, 43(1), 1–14. <https://doi.org/10.1007/s10964-012-9898-9>

Grabe, S., Ward, L. M., & Hyde, J. S. (2008). The role of the media in body image concerns among women: A meta-analysis of experimental and correlational studies. *Psychological Bulletin*, 134(3), 460–476. <https://doi.org/10.1037/0033-2909.134.3.460>

Helfert, S., & Warschburger, P. (2011). A prospective study on the impact of peer and parental pressure on body dissatisfaction in adolescent girls and boys. *Body Image*, 8(2), 101–109. <https://doi.org/10.1016/j.bodyim.2011.01.004>

Holland, G., & Tiggemann, M. (2016). A systematic review of the impact of the use of social networking sites on body image and disordered eating outcomes. *Body Image*, 17, 100–110. <https://doi.org/10.1016/j.bodyim.2016.02.008>

Hosseini, S. A., & Padhy, R. K. (2023). Body Image Distortion. In *StatPearls*. StatPearls Publishing. <http://www.ncbi.nlm.nih.gov/books/NBK546582/>

Hsu, J. L., Hung, R. T.-L., & Antoine, M. (2021). Investigating the Linkages between BMI, Body Image, and SATAQ among Young Asian Females. *International Journal of Environmental Research and Public Health*, 18(14), 7460. <https://doi.org/10.3390/ijerph18147460>

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, 53(1), 59–68. <https://doi.org/10.1016/j.bushor.2009.09.003>

Kleemans, M., Daalman, S., Carbaat, I., & Anschütz, D. (2018). Picture Perfect: The Direct Effect of Manipulated Instagram Photos on Body Image in Adolescent Girls. *Media Psychology*, 21(1), 93–110. <https://doi.org/10.1080/15213269.2016.1257392>

Lavender, J. M., Brown, T. A., & Murray, S. B. (2017). Men, Muscles, and Eating Disorders: An Overview of Traditional and Muscularity-Oriented Disordered Eating. *Current Psychiatry Reports*, 19(6), 32. <https://doi.org/10.1007/s11920-017-0787-5>

Lee, H. Y., Jamieson, J. P., Reis, H. T., Beevers, C. G., Josephs, R. A., Mullarkey, M. C., O'Brien, J. M., & Yeager, D. S. (2020). Getting Fewer “Likes” Than Others on Social Media Elicits Emotional Distress Among Victimized Adolescents. *Child Development*, 91(6), 2141–2159. <https://doi.org/10.1111/cdev.13422>

Meier, E. P., & Gray, J. (2014). Facebook Photo Activity Associated with Body Image Disturbance in Adolescent Girls. *Cyberpsychology, Behavior, and Social Networking*, 17(4), 199–206. <https://doi.org/10.1089/cyber.2013.0305>

Mingoia, J., Hutchinson, A. D., Wilson, C., & Gleaves, D. H. (2017). The Relationship between Social Networking Site Use and the Internalization of a Thin Ideal in Females: A Meta-Analytic Review. *Frontiers in Psychology*, 8, 1351. <https://doi.org/10.3389/fpsyg.2017.01351>

O'Day, E. B., & Heimberg, R. G. (2021). Social media use, social anxiety, and loneliness: A systematic review. *Computers in Human Behavior Reports*, 3, 100070. <https://doi.org/10.1016/j.chbr.2021.100070>

Papaioannou, T., Tsohou, A., & Karyda, M. (2021). Forming digital identities in social networks: The role of privacy concerns and self-esteem. *Information & Computer Security*, 29(2), 240–262. <https://doi.org/10.1108/ICS-01-2020-0003>

Petrides, K. V., Sangareau, Y., Furnham, A., & Frederickson, N. (2006). Trait Emotional Intelligence and Children's Peer Relations at School. *Social Development*, 15(3), 537–547. <https://doi.org/10.1111/j.1467-9507.2006.00355.x>

Pollatos, O., Georgiou, E., Kobel, S., Schreiber, A., Dreyhaupt, J., & Steinacker, J. M. (2020). Trait-Based Emotional Intelligence, Body Image Dissatisfaction, and HRQoL in Children. *Frontiers in Psychiatry*, 10, 973. <https://doi.org/10.3389/fpsyt.2019.00973>

Qi, X., Jiang, Y., & Lian, R. (2024). The effect of social media upward comparison on Chinese adolescent learning engagement: A moderated multiple mediation model. *BMC Psychology*, 12(1), 122. <https://doi.org/10.1186/s40359-024-01621-z>

Russo, P. M., Mancini, G., Trombini, E., Baldaro, B., Mavroveli, S., & Petrides, K. V. (2012). Trait Emotional Intelligence and the Big Five: A study on Italian Children and Preadolescents. *Journal of Psychoeducational Assessment*, 30(3), 274–283. <https://doi.org/10.1177/0734282911426412>

Sanchez-Ruiz, M.-J., Merhi, R., & Nicolaou, M. (2020). The role of trait emotional intelligence in appearance perception. *International Journal of Adolescence and Youth*, 25(1), 932–944. <https://doi.org/10.1080/02673843.2020.1781216>

Spies Shapiro, L. A., & Margolin, G. (2014). Growing Up Wired: Social Networking Sites and Adolescent Psychosocial Development. *Clinical Child and Family Psychology Review*, 17(1), 1–18. <https://doi.org/10.1007/s10567-013-0135-1>

Stefanile, C., Nerini, A., Matera, C., Schaefer, L. M., & Thompson, J. K. (2019). Validation of an Italian version of the Sociocultural Attitudes Towards Appearance Questionnaire-4-Revised (SATAQ-4R) on non-clinical Italian women and men. *Body Image*, 31, 48–58. <https://doi.org/10.1016/j.bodyim.2019.08.005>

Swami, V., Frederick, D. A., Aavik, T., Alcalay, L., Allik, J., Anderson, D., Andrianto, S., Arora, A., Brännström, Å., Cunningham, J., Danel, D., Doroszewicz, K., Forbes, G. B., Furnham, A., Greven, C. U., Halberstadt, J., Shuang Hao, Haubner, T., Choon Sup Hwang, ... Zivcic-Becirevic, I. (2010). The Attractive Female Body Weight and Female Body Dissatisfaction in 26 Countries Across 10 World Regions: Results of the International Body Project I. *Personality and Social Psychology Bulletin*, 36(3), 309–325. <https://doi.org/10.1177/0146167209359702>

Tiggemann, M., & Slater, A. (2014). NetTweens: The Internet and Body Image Concerns in Preteenage Girls. *The Journal of Early Adolescence*, 34(5), 606–620. <https://doi.org/10.1177/0272431613501083>

Utz, S., & Breuer, J. (2017). The Relationship Between Use of Social Network Sites, Online Social Support, and Well-Being: Results From a Six-Wave Longitudinal Study. *Journal of Media Psychology*, 29(3), 115–125. <https://doi.org/10.1027/1864-1105/a000222>

Vidal, C., Lhaksampa, T., Miller, L., & Platt, R. (2020). Social media use and depression in adolescents: A scoping review. *International Review of Psychiatry*, 32(3), 235–253. <https://doi.org/10.1080/09540261.2020.1720623>

Vossen, H. G. M., & Valkenburg, P. M. (2016). Do social media foster or curtail adolescents' empathy? A longitudinal study. *Computers in Human Behavior*, 63, 118–124. <https://doi.org/10.1016/j.chb.2016.05.040>

Watson, A., Murnen, S. K., & College, K. (2019). Gender differences in responses to thin, athletic, and hyper-muscular idealized bodies. *Body Image*, 30, 1–9. <https://doi.org/10.1016/j.bodyim.2019.03.010>