

Digital Subjectivities and the Algorithmic Shaping of Body Ideals in High School Students

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Abstract: Adolescents' engagement with social media profoundly shapes their perceptions of body image, contributing to the internalization of sociocultural appearance ideals. This study aimed to investigate the association between problematic social media use and the internalization of beauty standards among Italian high school students, focusing on gender differences. A cross-sectional survey was conducted with 137 adolescents (aged 16–18) using two validated instruments: the Bergen Social Media Addiction Scale (BSMAS) and the Sociocultural Attitudes Towards Appearance Questionnaire-4-Revised (SATAQ-4R). Results revealed that 14.5% of participants exhibited addiction-like behaviors related to social media use, with higher prevalence among females. Female students reported stronger internalization of thinness ideals and greater perceived media pressure, while males showed higher internalization of muscular ideals and greater sensitivity to family-related appearance pressure. Correlation analyses indicated significant associations between problematic social media use and both internalization of appearance ideals and media pressures among females, whereas, among males, a significant correlation emerged only with family pressure. These findings highlight gender-specific pathways through which social media and algorithmic content curation shape adolescents' body ideals, underscoring the importance of educational interventions promoting critical digital literacy and emotional resilience in youth.

Keywords: Social Media; Embodiment; Body Image; Adolescents; Sociocultural Pressures.

1. Introduction

Adolescents' engagement with social media platforms is profoundly reshaping their perceptions of body image, necessitating a deeper understanding of this phenomenon to inform effective educational strategies (Burnette et al., 2017). The pervasive nature of social media has rendered it a vital subject of investigation, carrying substantial implications for individual well-being and public health (Merino et al., 2024). Adolescence represents a developmental stage characterized by heightened social interaction, where photo- and video-sharing have become integral components of everyday communication (Papageorgiou et al., 2022). This widespread use of social media provides new avenues for social comparison with idealized body types, potentially fueling body image concerns. The prevalence of photo-based platforms



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among younger users further amplifies exposure to unrealistic ideals of thinness and muscularity, thereby intensifying appearance-related dissatisfaction (Burnette et al., 2017).

Social media differ substantially from traditional media in that they facilitate interactive communication and continuous connectivity through personal devices, enabling constant exposure to curated content and social interactions (Salomon & Brown, 2019). This ubiquitous accessibility, particularly among adolescents, increases exposure to idealized and often unattainable body standards (Barron et al., 2021). During adolescence, a period marked by physical changes and identity formation, individuals are especially vulnerable to such sociocultural pressures (Digennaro & Tescione, 2024). Early adolescence represents a critical window for body image development, especially among girls, when physiological changes coincide with increased peer and media influence (Burnette et al., 2017). Continuous exposure to appearance pressures disseminated through social media can therefore significantly contribute to the emergence and maintenance of body dissatisfaction (Vuong et al., 2021).

The highly visual and interactive nature of contemporary platforms, such as Instagram, Snapchat, and TikTok, intensifies social comparisons and promotes the internalization of idealized aesthetics [6-7]. Through such platforms, adolescents often internalize media content and compare themselves to idealized models, shaping their self-perception and self-worth through the lens of online validation. These processes may mediate the relationship between social media use and adverse mental health outcomes, including depressive symptoms and disordered eating (Choukas-Bradley et al., 2022). Although these effects are often more pronounced among adolescent girls, boys are increasingly susceptible to similar pressures related to muscularity and appearance control (Digennaro & Tescione, 2024; Vuong et al., 2021). The mechanisms underpinning these associations (social comparison, internalization of beauty ideals, and pursuit of validation through likes, comments, and shares) are further reinforced by algorithmic content curation, which perpetuates exposure to idealized appearance norms (Papageorgiou et al., 2022; Roberts et al., 2022; Robson et al., 2025; Vuong et al., 2021).

Adolescents often modify their images using filters and editing tools, generating a perceived discrepancy between one's actual and ideal self that heightens dissatisfaction and the drive for thinness or muscularity (Digennaro & Tescione, 2024; Marengo et al., 2018). The repeated exposure to digitally enhanced peers and influencers can heighten self-scrutiny, fear of judgment, and the desire to conform to unrealistic standards. This continuous negotiation of self-perception against curated online personas fosters upward social comparisons, negative self-evaluation, and body shame, especially when appearance becomes central to self-worth (Gioia et al., 2020; Salomon & Brown, 2019).

From a sociocultural perspective, the Tripartite Influence Model (Thompson et al., 1999) provides a useful framework for understanding these dynamics. It posits that appearance ideals are shaped and reinforced by three primary sociocultural agents (media, parents, and peers), which influence body dissatisfaction and psychological functioning through internalization of appearance ideals and social comparison [13-14]. Within social media contexts, these mechanisms are intensified by interactive feedback features that encourage users to seek validation through visual self-presentation (D. S. Lee et al., 2022; H. Y. Lee et al., 2020). Likes, comments, and

reactions can profoundly influence adolescents' self-esteem and self-worth, reinforcing dependence on external approval and linking self-evaluation to online feedback (D. S. Lee et al., 2022).

Over time, this dynamic fosters self-objectification (the internalization of the observer's perspective on one's body), which manifests as heightened body surveillance and shame (Gioia et al., 2020, 2024; Salomon & Brown, 2019). Adolescents may engage in extensive editing and strategic image selection before posting, paradoxically intensifying appearance-related anxieties (Gioia et al., 2020; Marengo et al., 2018). Excessive concern with online self-presentation and validation can evolve into problematic social media use, characterized by compulsive engagement, withdrawal symptoms, and functional impairment, symptoms paralleling behavioral addiction criteria (Demaria et al., 2024). This overinvestment in one's digital identity is closely tied to body shame and the drive for body image control, both of which predict maladaptive engagement with social networking platforms (Gioia et al., 2020).

Such dynamics are especially concerning during adolescence, a phase of rapid emotional and social development in which individuals learn to interpret and regulate emotions (Decety & Holvoet, 2021). Those who struggle to manage emotions or maintain 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, social media acts as a powerful sociocultural mediator shaping adolescents' self-perception and communication (Choukas-Bradley et al., 2022; Shahbaznezhad et al., 2021). For younger generations raised in an era of constant connectivity and blurred boundaries between online and offline realities, these platforms profoundly influence emotional intelligence, self-esteem, and interpersonal relationships (Floridi, 2014; Piccerillo & Digennaro, 2025). Social networking sites, defined as online environments enabling users to construct profiles, maintain connections, and interact within a network (Boyd & Ellison, 2007), serve as spaces where individuals often portray idealized versions of themselves (S. Chen, 2023). Continuous exposure to curated portrayals of "perfect" lives and bodies can foster envy, inadequacy, and diminished well-being (R. Chen & Sharma, 2015; Lüders et al., 2022; Papaioannou et al., 2021).

A recent systematic review confirms the association between social networking use and body image concerns among adolescents and preadolescents, emphasizing the internalization of appearance ideals propagated by these platforms (Digennaro & Tescione, 2024). While extensive research has explored the influence of traditional media on body image, less attention has been devoted to problematic social media use, conceptualized as an addictive-like engagement that disrupts daily functioning and heightens exposure to harmful content.

Therefore, the present study aims to investigate the association between problematic social media use and the internalization of sociocultural appearance ideals among Italian high school students, with a specific focus on gender differences. By integrating validated measures, the Bergen Social Media Addiction Scale (BSMAS) and the Sociocultural Attitudes Towards Appearance Questionnaire-4-Revised (SATAQ-4R), this research seeks to identify distinct risk patterns that could inform targeted prevention and educational interventions within school settings.

2. Materials and Methods

A cross-sectional study was carried out in collaboration with an Italian higher secondary school, as part of a wider research programme investigating adolescents and preadolescents' experiences related to body image and social media use (Digennaro & Iannaccone, 2023, 2025; Digennaro & Visocchi, 2024; Iannaccone et al., 2023; Piccerillo et al., 2025; Piccerillo & Digennaro, 2024). The school was selected based on its willingness to participate and the presence of a stable and collaborative teaching staff, which facilitated the implementation of the research protocol. The study collected quantitative data using validated self-report questionnaires administered in classroom settings. Data collection took place over a three-month period, from March to May 2025. All data was collected during regular school hours, under the supervision of trained doctoral students in close cooperation with class teachers, who helped ensure that the administration process remained consistent across groups. Before completing the survey, students were informed about the purpose of the study, their rights as participants, and the anonymous and voluntary nature of their involvement. Written informed consent was obtained in accordance with ethical standards. In total, 137 students took part in the survey. Each participant was assigned a unique alphanumeric identifier to protect their privacy and to enable the anonymised tracking of responses. The final sample consisted of adolescents aged between 16 and 18 years ($M = 16.5$, $SD = 0.65$), reflecting the typical age range of upper secondary school students in Italy. Of the total sample, 10.2% ($N = 14$) identified as male, while 89.8% ($N = 123$) identified as female. In terms of age distribution, 58.4% ($N = 80$) were 16 years old, 32.8% ($N = 45$) were 17, and 8.8% ($N = 12$) were 18. The anonymous nature of the study was designed to reduce potential biases associated with social desirability or fear of judgement, especially given the sensitive nature of some survey items. Participants were assured that their responses would be treated with strict confidentiality and used solely for research purposes. In addition, a data validation procedure was implemented to verify the integrity of the dataset and ensure consistency in the coding of responses. This included a systematic cross-check of the matched identifiers and dataset entries to minimise the risk of misclassification or entry errors, further enhancing the reliability of the findings. Participation in the study was voluntary. Adolescents were eligible to participate in the study if they had written parental consent. The research activities were conducted strictly following the ethical principles outlined in the Declaration of Helsinki, underscoring the dedication to ethical standards, participant welfare, and the responsible handling of sensitive information (World Medical Association, 2013).

2.1 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 internalization of sociocultural beauty standards.

2.2 Assessment of Social Media Addiction: BSMAS

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 was 0.819, indicating good internal consistency.

2.3 Internalization of Sociocultural Beauty Standards

The internalization of sociocultural appearance standards was assessed using the Italian version of the Sociocultural Attitudes Towards Appearance Questionnaire-4-Revised (SATAQ-4 R) (Stefanile et al., 2019). The questionnaire consists of 31 items for the female version and 28 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: internalization 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. Both the female (31 items; $\alpha = 0.917$) and male (28 items; $\alpha = 0.902$) versions of the SATAQ-4R demonstrated excellent internal consistency, indicating a high level of coherence among items in each version.

2.4 Data Analysis

Data was analyzed using IBM SPSS Statistics (version 31.0.0.0). Initially, descriptive statistics (means, standard deviations) were calculated for all variables. The normality of continuous variables was assessed using the Shapiro-Wilk test, due to its higher reliability for samples of this size ($N = 137$). Since several variables violated the assumption of normality, non-parametric statistical methods were employed throughout the analyses. Specifically, Spearman's rank-order correlation coefficients were computed to explore associations between the BSMAS total scores and the SATAQ-4R subscale scores for both the male and female versions. For group comparisons, Mann-Whitney U tests were used to assess differences between genders. Internal consistency reliability for each scale was evaluated using Cronbach's alphas.

3. Results

3.1. Use of Social Media

The data collected reveal a very high prevalence of digital device usage among participants. As shown in Table 1, 98.5% of respondents ($N = 135$) reported using internet-connected devices, while only 1.5% ($N = 2$) indicated they did not. These findings highlight how internet access has become a structural and pervasive component of adolescents' everyday lives. In line with this trend, 100% of participants ($N = 137$) stated that they use social media platforms as well as instant messaging applications, indicating an almost universal adoption of digital communication tech-

nologies. This finding confirms that digital platforms have become a primary channel for establishing and maintaining social relationships among peers. However, the picture changes considerably when considering parental control dynamics. Only 5.8% of respondents (N = 8) reported active parental monitoring of device and online platform usage, while the vast majority (94.2%, N = 129) stated there was no supervision. This figure is particularly relevant given the potential impact that unsupervised technology use may have on adolescents' psychosocial well-being. Regarding parental awareness of their children's digital activity, only 60.6% (N = 83) of participants indicated that their parents were aware of all their social media profiles, while 30.4% (N = 43) stated their parents knew only some of them. Finally, 8% (N = 11) reported that their parents were not aware of any of their profiles. These results highlight a significant discrepancy between adolescents' high exposure to the digital world and the limited parental involvement in regulating this experience. The role of the family, particularly in terms of monitoring online activity, appears to be marginal or entirely absent in most cases. This lack of oversight may expose young people to the risks associated with problematic social media use, underscoring the need for educational and preventive strategies that actively involve parental figures.

Table 1. Digital Device Use, Social Media Participation, and Parental Role.

Item	
Percentage of participants using internet-connected devices	YES 98,5% (N=135) NO 1,5% (N=2)
Percentage of participants using social media	YES 100% (N=137)
Percentage of participants using instant messaging apps	YES 100% (N=137)
Parental control	YES 5,8% (N=8) NO 94,2% (N=129)
Parents aware of all profiles	60,6% (N=83)
Parents aware of some profiles	30,4% (N= 43)
No parental awareness	8% (N=11)

3.2 Bergen Social Media Addiction Scale

The data presented in Table 2, collected using the BSMAS through a single data collection phase, provide an overview of perceived social media addiction levels among participants. Overall mean scores indicate a moderate tendency toward addiction, though gender-based analyses reveal significant differences. On average, female participants reported higher scores than their male counterparts, suggesting a greater vulnerability to problematic social media use. This finding aligns with existing literature, which indicates that girls tend to use social media for relational and emotional purposes, factors that may intensify engagement and elevate the risk of addiction. Conversely, males reported lower average scores, reflecting a potentially more detached or functional use of digital platforms. While gender differences do not consistently reach statistical significance across all studies, the present results

demonstrate a sufficiently marked trend to indicate a meaningful pattern. Applying the cut-off score of 19 proposed by Bányai et al. (2017) to identify individuals at risk, 14.5% of participants ($N = 19$) exceeded this threshold, placing them in a category indicative of potential addiction. Within this subgroup, female participants were overrepresented compared to males, further supporting the hypothesis of a gender-differentiated impact. In summary, although the data derive from a cross-sectional survey (single administration), the results suggest that gender is a significant variable in understanding digital behaviors and susceptibility to problematic social media use. These findings underscore the importance of developing targeted educational and preventive strategies that address gender-specific patterns in digital technology use.

Table 2. Bergen Social Media Addiction Scale Scores: Overall, Males, and Females.

Overall	Females	Males
13,71 (SD=5,46)	14,12 (SD=5,51)	10,00 (SD= 3,34)

3.3 Sociocultural Attitudes Towards Appearance

Analysis of scores from the SATAQ-4R, as reported in Table 3, reveals significant gender-based differences. Female participants showed higher internalization of thinness and low body fat ideals ($M = 3.60$; $SD = 1.03$) compared to males ($M = 2.46$; $SD = 1.15$), while male participants were more likely to internalize the muscular ideal ($M = 2.26$; $SD = 1.12$) than females ($M = 1.94$; $SD = 0.56$). Regarding the internalization of general attractiveness, females again reported higher average scores ($M = 4.19$; $SD = 0.64$) than males ($M = 3.92$; $SD = 1.19$), suggesting greater concern with or perceived pressure related to overall appearance standards. When examining sources of sociocultural pressure, females reported higher levels of perceived media pressure ($M = 2.59$; $SD = 1.41$) than males ($M = 1.85$; $SD = 0.82$), whereas males reported slightly higher levels of peer pressure ($M = 2.10$; $SD = 1.17$) compared to females ($M = 1.83$; $SD = 1.13$). Family pressure was perceived as greater among females ($M = 2.23$; $SD = 1.17$) than males ($M = 1.84$; $SD = 0.46$), while pressures from romantic partners or significant others were comparable across genders. In summary, the data suggest that females are more exposed and sensitive to thinness ideals and media influence, whereas males appear more influenced by muscularity ideals and peer-related pressures.

Table 3. Mean Scores on the Sociocultural Attitudes Towards Appearance Questionnaire-4 Revised (SATAQ-4R) Subscales by Gender.

		Females	Males
Internalization	Thin/Low Body Fat	3,60 (SD=1,03)	2,46 (SD=1,15)
	Muscular	1,94 (SD=0,56)	2,26 (SD=1,12)
	General Attractiveness	4,19 (SD=0,64)	3,92 (SD=1,19)
Pressures	Family	2,23 (SD=1,17)	1,84 (SD=0,46)
	Peers	1,83 (SD=1,13)	2,10 (SD=1,17)

Significant Others	1,76 (SD=1,11)	1,80 (SD=0,78)
Media	2,59 (SD=1,41)	1,85 (SD=0,82)

3.4 Analysis of Correlations

The Spearman correlation analysis, conducted separately for female and male participants, revealed distinct patterns of association between potential social media addiction (BSMAS) and the internalization of appearance ideals, as assessed by the SATAQ-4R. Among females, problematic social media use was significantly and positively correlated with the internalization of general attractiveness ($\rho = 0.31$, $p < 0.01$) and with perceived media pressures ($\rho = 0.26$, $p < 0.05$). These findings suggest that, in female adolescents, higher levels of problematic engagement with social media are associated with greater endorsement of socially and media-promoted beauty ideals. No significant correlations emerged between the BSMAS and the other SATAQ subscales in this group. Among males, correlations between BSMAS scores and SATAQ subscales were generally non-significant, with the exception of the Family Pressures subscale, which exhibited a significant positive correlation ($\rho = 0.62$, $p < 0.05$). It is important to note, however, that the male subgroup had a limited sample size, which substantially restricts the generalizability of these findings. Taken together, the results suggest that, among females, problematic social media use is significantly associated with the internalization of beauty standards and perceived media pressure, whereas among males, a significant association was observed only with perceived family pressure. These findings underscore the importance of implementing gender-sensitive prevention strategies that account for the differential pathways through which adolescents internalize appearance ideals in the digital age.

4. Discussion

The present study explored gender-specific associations between problematic social media use and the internalization of sociocultural appearance ideals among Italian adolescents. Overall, the findings confirm the detrimental role of social media as a powerful sociocultural agent influencing body image concerns, while revealing distinct pathways through which this influence manifests across genders. These results are consistent with previous evidence suggesting that social media, unlike traditional media, enable continuous exposure to idealized images, interactive feedback, and algorithmic reinforcement, thereby amplifying processes of social comparison and self-objectification (Choukas-Bradley et al., 2022; Gioia et al., 2020). Despite efforts by some parents to manage online exposure, the increase in unmonitored device use observed in this study highlights the growing need for digital literacy education, both for adolescents and their caregivers. The lack of parental supervision, which affected more than 90% of the sample, may expose young people to unregulated digital environments where appearance-based comparison and validation become central components of online interaction. Strengthening parents' and educators' awareness of these mechanisms could therefore represent a key protective factor against the escalation of problematic behaviors and appearance-related concerns. Approximately 14% of participants in the present study were identified as addicted to social media, a finding that aligns with prior national and international research (Ciacchini et al., 2023; Marino et al., 2020). For instance, Ciacchini et al. reported a

comparable prevalence rate of about 11% among Italian adolescents. Regarding gender differences, the current data show that most of the adolescents classified as at risk of addiction were girls, which is consistent with the existing literature. Prior studies have shown that females are more vulnerable to the negative consequences of online environments (Peris et al., 2020), possibly due to their more frequent and relational use of social media and their greater investment in appearance-oriented interactions, which increase susceptibility to addiction-like symptoms (Su et al., 2020).

Among female participants, problematic social media use was significantly correlated with both the internalization of appearance ideals and perceived media pressure. This pattern aligns with the Tripartite Influence Model (Thompson et al., 1999), which posits that media act as a primary source of appearance-related influence through the internalization of beauty standards. The visual and participatory nature of contemporary platforms, particularly Instagram and TikTok, fosters an environment in which adolescent girls are continuously exposed to thin and fit ideals promoted by peers and influencers. This dynamic nurtures self-objectification processes, leading to increased body surveillance and body shame (Gioia et al., 2024; Marengo et al., 2018). Moreover, algorithmic curation embedded within social media platforms perpetuates these mechanisms by delivering increasingly personalized streams of idealized content, which can trap users in cycles of appearance-related comparison and dissatisfaction.

In contrast, the male subgroup displayed a distinct pattern of associations, with problematic social media use significantly related only to family pressure. This suggests that, in males, family dynamics may exert a more direct influence on body image concerns than media exposure per se. Subtle comments about physique or health, as well as the reinforcement of traditional masculine norms emphasizing muscularity and self-control, may shape boys' self-perceptions in ways that intersect with their digital experiences. Nonetheless, this interpretation should be approached cautiously, as the associations observed among males are exploratory in nature and based on a relatively small subgroup. Therefore, they should be viewed primarily as preliminary trends to be verified in larger and more balanced samples, rather than as definitive patterns. The absence of significant correlations between social media use and the internalization of appearance ideals among males might reflect different coping styles and levels of agency, as boys are sometimes found to engage with online content in a more instrumental or self-enhancing manner (Vuong et al., 2021). Nonetheless, this interpretation should be approached cautiously due to the small male sample, which limits the generalizability of the findings.

Taken together, these results highlight that social media are not neutral communication tools but active agents in the construction and reinforcement of appearance norms through both human and algorithmic mechanisms. Adolescents' engagement with digital platforms is shaped by algorithmic curation, which selectively amplifies content aligned with prior interests and behaviors. For users who demonstrate preoccupation with body image or fitness, this can create a feedback loop that repeatedly exposes them to extreme portrayals of thinness, muscularity, or aesthetic perfection. Such hyper-personalized exposure may intensify social comparisons, distort perceptions of normality, and heighten the discrepancy between the actual and ideal self, thereby exacerbating vulnerability to body dissatisfaction and addictive engagement (Papageorgiou et al., 2022; Roberts et al., 2022).

Despite its valuable insights, the present study is subject to some limitations. The most evident is the limited size of the male subgroup, which constrains the robustness of gender comparisons and may have reduced the statistical power to detect smaller associations. Furthermore, the cross-sectional design offers a useful snapshot of current associations but precludes any causal inference. Therefore, it cannot be determined whether problematic social media use leads to greater internalization of sociocultural appearance ideals, or whether adolescents who are already more concerned with their body image tend to develop a more problematic engagement with social platforms. Longitudinal and experimental designs would be crucial to trace the developmental trajectories of social media use and body dissatisfaction over time. Future studies should also differentiate between content types (e.g., fitness, lifestyle, beauty) and user behaviors (e.g., passive browsing versus active posting or editing), as these dimensions likely exert distinct psychological effects.

From a practical standpoint, the findings underscore the importance of developing gender-sensitive preventive interventions. Media literacy programs designed for adolescents should explicitly address the algorithmic amplification of appearance norms and equip young users with critical tools to interpret and resist unrealistic beauty standards. Educational initiatives involving families are equally vital, particularly to increase parental awareness of their potential role in reinforcing or mitigating appearance pressures. By integrating these elements into school-based and community-level interventions, it may be possible to reduce adolescents' susceptibility to digital body ideals and promote healthier, more autonomous relationships with social media.

5. Conclusions

This study contributes to a deeper understanding of how social media shape adolescents' body image through gender-specific pathways. By combining validated measures of social media addiction and appearance internalization, it demonstrates that the mechanisms underlying digital influence differ for boys and girls, reflecting broader sociocultural expectations of femininity and masculinity.

Beyond documenting these associations, the research underscores the importance of contextual factors, such as parental supervision and algorithmic exposure, in moderating adolescents' digital experiences. The findings call for educational and preventive approaches that move beyond simplistic warnings about "screen time" to instead promote critical awareness of how online environments construct and reinforce appearance ideals.

Ultimately, this study highlights the need for coordinated efforts among schools, families, and policymakers to foster digital literacy, emotional resilience, and positive body image among young people. By acknowledging the differentiated vulnerabilities of girls and boys in the algorithmically curated social media ecosystem, future interventions can be more equitable, evidence-based, and attuned to the realities of adolescents' digital lives.

References

- Andreassen, C. S., Billieux, J., Griffiths, M. D., Kuss, D. J., Demetrovics, Z., Mazzoni, E., & Pallesen, S. (2016). The relationship between addictive use of social media and video games and symptoms of psychiatric

- disorders: A large-scale cross-sectional study. *Psychology of Addictive Behaviors*, 30(2), 252–262. <https://doi.org/10.1037/adb0000160>
- Bányai, F., Zsila, Á., Király, O., Maraz, A., Elekes, Z., Griffiths, M. D., Andreassen, C. S., & Demetrovics, Z. (2017). Problematic Social Media Use: Results from a Large-Scale Nationally Representative Adolescent Sample. *PLOS ONE*, 12(1), e0169839. <https://doi.org/10.1371/journal.pone.0169839>
- Barron, A. M., Krumrei-Mancuso, E. J., & Harriger, J. A. (2021). The effects of fitspiration and self-compassion Instagram posts on body image and self-compassion in men and women. *Body Image*, 37, 14–27. <https://doi.org/10.1016/j.bodyim.2021.01.003>
- Boyd, D. M., & Ellison, N. B. (2007). Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210–230. <https://doi.org/10.1111/j.1083-6101.2007.00393.x>
- Burnette, C. B., Kwitowski, M. A., & Mazzeo, S. E. (2017). “I don’t need people to tell me I’m pretty on social media.” A qualitative study of social media and body image in early adolescent girls. *Body Image*, 23, 114–125. <https://doi.org/10.1016/j.bodyim.2017.09.001>
- 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>
- Chen, S. (2023). The Influence of Social Media Platforms on Self-Identity In the New Media Environment: The Case of TikTok and Instagram. *SHS Web of Conferences*, 165, 01020. <https://doi.org/10.1051/shsconf/202316501020>
- Choukas-Bradley, S., Roberts, S. R., Maheux, A. J., & Nesi, J. (2022). The Perfect Storm: A Developmental–Sociocultural Framework for the Role of Social Media in Adolescent Girls’ Body Image Concerns and Mental Health. *Clinical Child and Family Psychology Review*, 25(4), 681–701. <https://doi.org/10.1007/s10567-022-00404-5>
- Ciacchini, R., Orrù, G., Cucurnia, E., Sabbatini, S., Scafuto, F., Lazzarelli, A., Miccoli, M., Gemignani, A., & Conversano, C. (2023). Social Media in Adolescents: A Retrospective Correlational Study on Addiction. *Children*, 10(2), 278. <https://doi.org/10.3390/children10020278>
- Decety, J., & Holvoet, C. (2021). The emergence of empathy: A developmental neuroscience perspective. *Developmental Review*, 62, 100999. <https://doi.org/10.1016/j.dr.2021.100999>
- Demaria, F., Pontillo, M., Di Vincenzo, C., Bellantoni, D., Pretelli, I., & Vicari, S. (2024). Body, image, and digital technology in adolescence and contemporary youth culture. *Frontiers in Psychology*, 15. <https://doi.org/10.3389/fpsyg.2024.1445098>
- Digennaro, S., & Iannaccone, A. (2023). Check Your Likes but Move Your Body! How the Use of Social Media Is Influencing Pre-Teens Body and the Role of Active Lifestyles. *Sustainability*, 15(4), 3046. <https://doi.org/10.3390/su15043046>

- Digennaro, S., & Iannaccone, A. (2025). Imagining Another Self: The Use of Social Media Among Preadolescents and Its Body-Related Consequences. An Exploratory Study. *Sage Open*, 15(1). <https://doi.org/10.1177/21582440251321364>
- Digennaro, S., & Tescione, A. (2024). Scrolls and self-perception, navigating the link between social networks and body dissatisfaction in preadolescents and adolescents: a systematic review. *Frontiers in Education*, 9(April). <https://doi.org/10.3389/feduc.2024.1390583>
- Digennaro, S., & Visocchi, A. (2024). Nurturing Body Literacy: Transforming Education in the Virtual Reality Era to Shape Children's Identities and Redefine Educator Roles. *Education Sciences*, 14(3), 267. <https://doi.org/10.3390/educsci14030267>
- Floridi, L. (2014). *The fourth revolution: How the infosphere is reshaping human reality*.
- Gioia, F., Griffiths, M. D., & Boursier, V. (2020). Adolescents' Body Shame and Social Networking Sites: The Mediating Effect of Body Image Control in Photos. *Sex Roles*, 83(11–12), 773–785. <https://doi.org/10.1007/s11199-020-01142-0>
- Gioia, F., McLean, S. A., Rega, V., & Boursier, V. (2024). What about young adults' photo manipulation activity? The predictive role of body shame and the mediating effect of body esteem. *Current Psychology*, 43(11), 10418–10433. <https://doi.org/10.1007/s12144-023-04946-x>
- Iannaccone, A., Piccerillo, L., Tescione, A., & Digennaro, S. (2023). *The Role of Social Media Engagement in Shaping Preadolescents' Body Image and Emotional Intelligence: a Cross-Sectional Study*. June. <https://doi.org/10.32043/gsd.v8i3.1116>
- Jarman, H. K., Marques, M. D., McLean, S. A., Slater, A., & Paxton, S. J. (2021). Social media, body satisfaction and well-being among adolescents: A mediation model of appearance-ideal internalization and comparison. *Body Image*, 36, 139–148. <https://doi.org/10.1016/j.bodyim.2020.11.005>
- Lee, D. S., Jiang, T., Crocker, J., & Way, B. M. (2022). Social Media Use and Its Link to Physical Health Indicators. *Cyberpsychology, Behavior, and Social Networking*, 25(2), 87–93. <https://doi.org/10.1089/cyber.2021.0188>
- 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>
- Lüders, A., Dinkelberg, A., & Quayle, M. (2022). Becoming “us” in digital spaces: How online users creatively and strategically exploit social media affordances to build up social identity. *Acta Psychologica*, 228, 103643. <https://doi.org/10.1016/j.actpsy.2022.103643>
- Marengo, D., Longobardi, C., Fabris, M. A., & Settanni, M. (2018). Highly-visual social media and internalizing symptoms in adolescence: The mediating role of body image concerns. *Computers in Human Behavior*, 82, 63–69. <https://doi.org/10.1016/j.chb.2018.01.003>

- Marino, C., Lenzi, M., Canale, N., Pierannunzio, D., Dalmasso, P., Borraccino, A., Cappello, N., Lemma, P., Vieno, A., & 2018 HBSC-Italia Group. (2020). Problematic social media use: associations with health complaints among adolescents. *Annali Dell'Istituto Superiore Di Sanita*, 56(4), 514–521. 10.4415/ANN_20_04_16
- Merino, M., Tornero-Aguilera, J. F., Rubio-Zarapuz, A., Villanueva-Tobaldo, C. V., Martín-Rodríguez, A., & Clemente-Suárez, V. J. (2024). Body Perceptions and Psychological Well-Being: A Review of the Impact of Social Media and Physical Measurements on Self-Esteem and Mental Health with a Focus on Body Image Satisfaction and Its Relationship with Cultural and Gender Factors. *Healthcare*, 12(14), 1396. <https://doi.org/10.3390/healthcare12141396>
- Mesce, M., Cerniglia, L., & Cimino, S. (2022). Body Image Concerns: The Impact of Digital Technologies and Psychopathological Risks in a Normative Sample of Adolescents. *Behavioral Sciences*, 12(8), 255. <https://doi.org/10.3390/bs12080255>
- Monacis, L., de Palo, V., Griffiths, M. D., & Sinatra, M. (2017). Social networking addiction, attachment style, and validation of the Italian version of the Bergen Social Media Addiction Scale. *Journal of Behavioral Addictions*, 6(2), 178–186. <https://doi.org/10.1556/2006.6.2017.023>
- Papageorgiou, A., Fisher, C., & Cross, D. (2022). “Why don’t I look like her?” How adolescent girls view social media and its connection to body image. *BMC Women’s Health*, 22(1), 261. <https://doi.org/10.1186/s12905-022-01845-4>
- 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>
- Peris, M., de la Barrera, U., Schoeps, K., & Montoya-Castilla, I. (2020). Psychological Risk Factors that Predict Social Networking and Internet Addiction in Adolescents. *International Journal of Environmental Research and Public Health*, 17(12), 4598. <https://doi.org/10.3390/ijerph17124598>
- 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*, June. <https://doi.org/10.32043/jimtl.v4i1.135>
- Piccerillo, L., & Digennaro, S. (2025). Adolescent Social Media Use and Emotional Intelligence: A Systematic Review. *Adolescent Research Review*, 10(2), 201–218. <https://doi.org/10.1007/s40894-024-00245-z>
- Piccerillo, L., Tescione, A., Iannaccone, A., & Digennaro, S. (2025). Alpha generation’s social media use: sociocultural influences and emotional intelligence. *International Journal of Adolescence and Youth*, 30(1). <https://doi.org/10.1080/02673843.2025.2454992>
- Resurrección, D. M., Salguero, J. M., & Ruiz-Aranda, D. (2014). Emotional intelligence and psychological maladjustment in adolescence: A systematic review. *Journal of Adolescence*, 37(4), 461–472.

<https://doi.org/10.1016/j.adolescence.2014.03.012>

Roberts, S. R., Maheux, A. J., Hunt, R. A., Ladd, B. A., & Choukas-Bradley, S. (2022). Incorporating social media and muscular ideal internalization into the tripartite influence model of body image: Towards a modern understanding of adolescent girls' body dissatisfaction. *Body Image*, 41, 239–247. <https://doi.org/10.1016/j.bodyim.2022.03.002>

Robson, C. W., Fismen, A.-S., Skogen, J. C., & Haug, E. M. M. (2025). Secular trends in body weight perception among Norwegian adolescents: a 28-year cross-sectional analysis (1994–2022). *Scientific Reports*, 15(1), 16858. <https://doi.org/10.1038/s41598-025-00439-y>

Salomon, I., & Brown, C. S. (2019). The Selfie Generation: Examining the Relationship Between Social Media Use and Early Adolescent Body Image. *The Journal of Early Adolescence*, 39(4), 539–560. <https://doi.org/10.1177/0272431618770809>

Shahbaznezhad, H., Dolan, R., & Rashidirad, M. (2021). The Role of Social Media Content Format and Platform in Users' Engagement Behavior. *Journal of Interactive Marketing*, 53(1), 47–65. <https://doi.org/10.1016/j.intmar.2020.05.001>

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>

Su, W., Han, X., Yu, H., Wu, Y., & Potenza, M. N. (2020). Do men become addicted to internet gaming and women to social media? A meta-analysis examining gender-related differences in specific internet addiction. *Computers in Human Behavior*, 113, 106480. <https://doi.org/10.1016/j.chb.2020.106480>

Thompson, J. K., Heinberg, L. J., Altabe, M., & Tantleff-Dunn, S. (1999). *Exacting beauty: Theory, assessment, and treatment of body image disturbance*. American Psychological Association. <https://doi.org/10.1037/10312-000>

Vuong, A. T., Jarman, H. K., Doley, J. R., & McLean, S. A. (2021). Social Media Use and Body Dissatisfaction in Adolescents: The Moderating Role of Thin- and Muscular-Ideal Internalisation. *International Journal of Environmental Research and Public Health*, 18(24), 13222. <https://doi.org/10.3390/ijerph182413222>