

The Relationship Between Social Media Use Intensity, Body Image, and Bullying Behavior Among Vocational High School Students: A Systematic Review and Bibliometric Analysis

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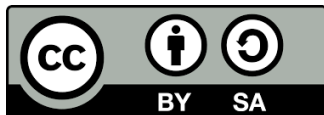
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Social media intensity; Body image; Bullying behavior; Cyberbullying; Adolescents; Bibliometric analysis; Systematic review

Abstract

Social media has reshaped peer interactions and perceptions of physical appearance among adolescents, raising concerns about body dissatisfaction and bullying. However, evidence regarding the relationships among these experiences remains fragmented, particularly among vocational high school students. This study aimed to synthesize evidence on the relationships among social media use intensity, body image, and bullying involvement while mapping the development and thematic structure of the relevant literature. A systematic review and bibliometric analysis were conducted in accordance with the PRISMA 2020 guidelines. Publications from January 2022 to May 2025 were identified through searches of Scopus, Web of Science, PubMed, and Google Scholar. Fifty-two studies were included, critically appraised using the Joanna Briggs Institute (JBI) critical appraisal tools, and synthesized narratively. Bibliometric mapping was performed using VOSviewer and Bibliometrix. The findings indicated that intensive and appearance-focused social media use was associated with greater body dissatisfaction through social comparison and the internalization of appearance ideals. Negative body image was also associated with bullying victimization, while digital environments facilitated harmful peer interactions, including cyberbullying. Bibliometric analysis identified interconnected research themes involving social media, body image, cyberbullying, and mental health. Nevertheless, heterogeneity in measurement approaches and the predominance of cross-sectional study designs limited causal inference, while evidence specifically concerning vocational high school students remained insufficient. The review concluded that integrated approaches combining digital literacy, positive body image promotion, and bullying prevention should be considered in school settings. Future longitudinal research is needed to examine contextual differences and directly test the proposed psychological pathways linking social media use, body image, and bullying involvement among adolescents.



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INTRODUCTION

The social ecology of adolescents has been profoundly altered by the rapid proliferation of social media, establishing digital platforms as important environments for identity construction, peer validation, and social comparison. Adolescents are among the most active users of visually oriented platforms, where algorithmically curated content can continuously expose them to idealized body standards and appearance-related norms. Persistent exposure to such content has been recognized as an important factor associated with psychosocial outcomes, particularly those related to body image perceptions and social behaviors (Mazzeo et al., 2024; Suhag & Rauniyar, 2024).

Body image, a multidimensional construct encompassing cognitive, affective, and perceptual evaluations of one's physical appearance, is particularly susceptible to external validation and peer acceptance during adolescence. Recent research suggests that social media use may contribute to body dissatisfaction through mechanisms such as self-objectification, internalization of unrealistic beauty ideals, and upward social comparison (Demetriou et al., 2025; Fabri, 2024). Moreover, recent studies have highlighted the potential influence of platform-specific features, including filters, image-editing tools, and engagement metrics, on perceptions of physical appearance and negative self-evaluation.

The implications of negative or distorted body image are not limited to intrapersonal consequences but may also extend to interpersonal dynamics, particularly bullying involvement. Bullying, encompassing both traditional and cyberbullying, has increasingly been associated with appearance-based stigma, including body shaming and weight-based bias. According to a recent systematic review, body dissatisfaction is associated with aggressive behaviors toward peers and increased vulnerability to victimization, suggesting potentially complex and bidirectional relationships between body image and bullying involvement (Martínez-López et al., 2024). These dynamics may be further intensified in digital environments by anonymity, scalability, and reduced accountability, which can facilitate harmful peer interactions and the normalization of detrimental behaviors (Pratistitha, 2023).

Although an increasing number of studies have investigated relationships among social media use, body image, and bullying, the literature remains fragmented. Much of the existing research has examined bivariate associations rather than the complex interplay among these variables within an integrated framework. Furthermore, previous systematic reviews have primarily focused on mental health outcomes or eating disorders, with limited attention to bullying as a potential social correlate of body image disturbances in the digital era (Mazzeo et al., 2024; Nawaz et al., 2024).

Research on bullying further demonstrates why body image should be considered within an integrated account of adolescent peer experiences. Day et al. (2022) reviewed 79 studies examining associations between teasing or bullying victimization and disordered eating or body image disturbance among adolescents. Similarly, Martínez-López et al. (2024) identified negative body image and eating-related difficulties as relevant concerns associated with bullying victimization and emphasized the importance of school-based prevention. These reviews establish the relevance of examining appearance-related psychological outcomes alongside peer aggression. However, evidence concerning victimization should not automatically be interpreted as evidence that body dissatisfaction causes bullying perpetration. Distinguishing among victims, perpetrators, and adolescents involved as both victims and perpetrators is therefore necessary to clarify the relationships supported by existing evidence.

Despite these complementary findings, the existing literature reveals an important integrative gap. Dane and Bhatia (2023) primarily addressed social media, body image, and eating-related outcomes, whereas Day et al. (2022) focused on teasing and bullying victimization. Mazzeo et al. (2024) additionally examined approaches to reducing social media-related body image harms. Collectively, these contributions indicate a need to integrate digital exposure, appearance-related evaluations, and bullying involvement within a common synthesis. Such integration should also distinguish among directly tested mediation effects,

statistical associations, and theoretically proposed mechanisms. Without these distinctions, an explanatory framework may appear more conclusive than the underlying evidence warrants, particularly when studies employ different exposure measures, participant characteristics, and research designs.

A further gap concerns the applicability of evidence from general adolescent populations to vocational high school students. In vocational education, a specific question is whether findings derived from broader adolescent populations can adequately inform prevention strategies within educational environments that combine academic learning with occupational preparation. However, vocational students should not be presumed to experience greater exposure or vulnerability without direct comparative evidence. The present review therefore distinguishes studies that explicitly included vocational high school students from those examining other secondary school populations and those providing only indirect contextual relevance. This population-sensitive approach is important because recommendations for vocational schools require a clear understanding of both the available evidence and the remaining uncertainties rather than an unqualified extrapolation of findings across educational settings.

To address these gaps, the novelty of this research lies in combining systematic evidence synthesis with bibliometric analysis while explicitly assessing the relevance of the evidence to vocational education. The systematic review examines reported associations, methodological quality, and potential explanatory pathways, whereas bibliometric mapping characterizes publication patterns, collaboration networks, and thematic relationships. These approaches provide complementary perspectives: the systematic review evaluates substantive empirical findings, while bibliometric analysis examines the intellectual and conceptual structure of the research field. Nevertheless, keyword co-occurrence or citation proximity cannot establish psychological mediation or causality. The value of this combined approach therefore lies in comparing the conceptual structure of the field with its empirical evidence and identifying areas in which prominent research themes remain insufficiently supported by population-specific investigations.

Accordingly, this study aims to synthesize research published between January 2022 and May 2025 on the relationships among social media use intensity, body image, and bullying involvement among adolescents, with particular attention to vocational high school students. Its objectives are to examine how these three constructs are defined and measured, evaluate the direction and consistency of reported associations, identify mediating or moderating factors where these relationships have been directly investigated, and assess methodological limitations. In parallel, the bibliometric analysis seeks to map influential contributions, collaboration patterns, and emerging research themes. Through these objectives, the study aims to develop an integrated interpretation that reflects the strength of the available evidence while identifying priorities for future longitudinal and context-specific research.

The expected contribution of this study is both conceptual and practical. Conceptually, the review can clarify how digital engagement and appearance-related experiences are associated with different forms of bullying involvement while identifying the limitations of current explanatory frameworks. Methodologically, it can highlight inconsistencies in measurement and gaps in the representation of vocational high school students that should be

addressed in future research. Practically, the synthesis can inform educators, counselors, families, and policymakers when considering coordinated initiatives involving digital literacy, positive body image, and bullying prevention. These potential benefits remain contingent on the quality and relevance of the included evidence, as the review itself cannot establish intervention effectiveness. By explicitly presenting both the available evidence and its limitations, this study can support more informed approaches to promoting adolescent well-being and safer peer environments in vocational education.

METHOD

Study Design

This study employed a systematic review supported by bibliometric analysis to synthesize empirical evidence on the relationships among social media use intensity, body image, and bullying behavior among adolescents, with particular attention to vocational high school students. The review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines. Bibliometric analysis was used to examine research trends, thematic patterns, collaboration networks, and influential scientific contributions within the field.

Search Strategy

A comprehensive literature search was conducted across multiple electronic databases, including Scopus, Web of Science, PubMed, and Google Scholar. The search strategy was designed to identify studies published between January 2022 and May 2025 to capture the most recent developments in adolescent digital behavior research. Keywords and Boolean operators were systematically combined as follows: ("social media intensity" OR "social media use" OR "screen time") AND ("body image" OR "body dissatisfaction") AND ("bullying" OR "cyberbullying") AND ("adolescents" OR "high school students").

To increase search sensitivity and specificity, Medical Subject Headings (MeSH) terms and database-specific indexing terms were incorporated where applicable. Manual searches of reference lists from relevant studies were additionally performed to identify potentially eligible articles not retrieved during the initial database search process.

Eligibility Criteria

The inclusion and exclusion criteria were established a priori using the Population, Exposure, Outcome, and Study Design (PEOS) framework. Studies were included if they: (1) involved adolescent populations aged 12–19 years, including vocational high school students; (2) examined social media use or intensity as the primary exposure variable; (3) assessed body image and/or bullying behavior, including cyberbullying, as outcome variables; (4) employed quantitative, qualitative, mixed-method, longitudinal, or systematic review designs; and (5) were published in peer-reviewed journals in English between 2022 and 2025. Studies were excluded if they: (1) focused exclusively on clinical populations without relevance to general adolescent populations; (2) lacked empirical findings, such as editorials, commentaries, or opinion papers; (3) did not provide accessible full texts; or (4) presented insufficient methodological information for critical appraisal.

Study Selection Process

The study selection process was conducted according to the PRISMA 2020 framework

in four sequential stages. First, all retrieved records were imported into reference management software, and duplicate records were removed. Second, titles and abstracts were independently screened by two reviewers to assess initial relevance and eligibility. Third, full-text articles of potentially relevant studies were retrieved and evaluated based on the predefined inclusion and exclusion criteria. Finally, studies fulfilling all eligibility requirements were included in the qualitative synthesis and bibliometric mapping. Discrepancies between reviewers were resolved through discussion and consensus. When disagreements persisted, a third reviewer was consulted to ensure objectivity and reduce selection bias.

Data Extraction

Data extraction was conducted using a standardized extraction form specifically developed for this review. Extracted information included author(s), publication year, country of study, study design, sample characteristics, measurement tools for social media intensity, body image assessment instruments, bullying indicators, psychosocial variables, and principal findings. Additional bibliometric indicators were also extracted, including author productivity, citation counts, co-occurring keywords, institutional affiliations, country collaboration patterns, and thematic trends over time. Data extraction was independently performed by two reviewers to ensure consistency and accuracy, with discrepancies resolved through cross-checking and discussion.

Quality Assessment

The methodological quality of included studies was evaluated using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist according to study design. Quantitative studies were assessed using the JBI checklist for analytical cross-sectional and observational studies, whereas qualitative studies were appraised using the JBI qualitative assessment tool. Each study was evaluated across multiple domains, including sampling adequacy, validity and reliability of measurements, identification and control of confounding factors, and appropriateness of statistical analysis. Studies were subsequently categorized as high, moderate, or low methodological quality. Only studies meeting moderate-to-high quality thresholds were included in the final synthesis to strengthen the robustness and credibility of the findings.

Bibliometric Analysis

Bibliometric analysis was performed to map the scientific structure and development of research concerning social media intensity, body image, and bullying behavior among adolescents. Metadata retrieved from the Scopus database were analyzed using VOSviewer version 1.6.20 and the Bibliometrix package in RStudio.

The bibliometric analysis included annual publication trends, document type distribution, productive authors and journals, keyword co-occurrence networks, co-citation networks, country collaboration mapping, and thematic evolution analysis. Network visualization techniques were employed to identify dominant research clusters, intellectual structures, and emerging themes within the literature. This approach enabled a deeper understanding of research dynamics and interdisciplinary connections across the field.

Data Synthesis

A narrative synthesis approach was employed to integrate findings due to the heterogeneity of study designs, measurement instruments, and reported outcomes. The

synthesis focused on identifying patterns, consistencies, mediating mechanisms, and contextual differences in the relationships between social media intensity, body image, and bullying behavior among adolescents.

The findings were organized into several thematic categories: (1) the impact of social media intensity on body image; (2) the association between body dissatisfaction and bullying behavior; (3) direct and indirect pathways linking social media exposure with cyberbullying; (4) psychosocial mediators and protective factors; and (5) global research trends identified through bibliometric mapping. Where available, effect sizes and statistical associations were reported to strengthen interpretability. Meta-analysis was not conducted due to substantial methodological heterogeneity among included studies.

Ethical Considerations

As this study utilized secondary data from previously published articles, ethical approval was not required. However, all included studies were critically evaluated to ensure adherence to ethical research standards, including informed consent and confidentiality as reported by the original authors.

RESULTS AND DISCUSSION

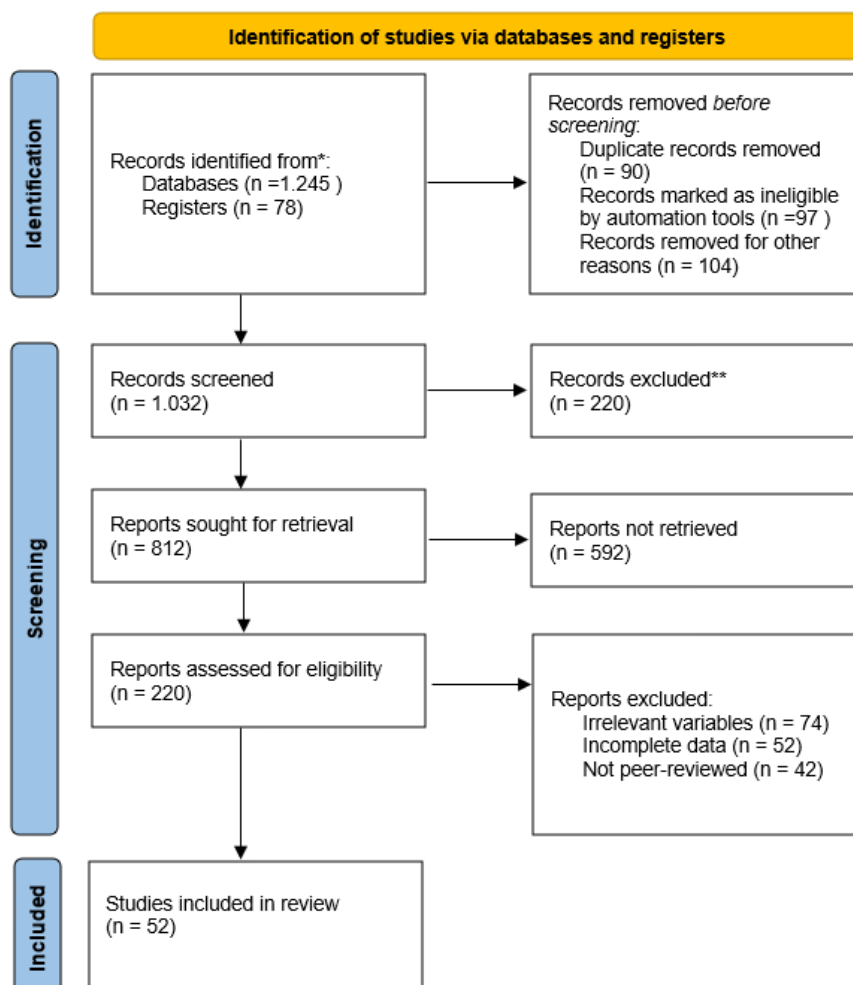


Figure 1. Flow PRISMA Diagram

Based on Figure 1, the study selection process followed the PRISMA 2020 guidelines to ensure transparency and methodological rigor. A total of 1,323 records were initially identified through database searching and additional sources. After removing duplicates, 1,032 unique records remained and were subjected to title and abstract screening. During this stage, 812 records were excluded due to irrelevance to the study variables or population. Subsequently, 220 full-text articles were sought and successfully retrieved for further assessment. All retrieved reports were evaluated for eligibility based on predefined inclusion and exclusion criteria. Of these, 168 articles were excluded for specific reasons, including irrelevant variables ($n = 74$), incomplete data ($n = 52$), and non-peer-reviewed status ($n = 42$). Ultimately, 52 studies met all eligibility criteria and were included in the qualitative synthesis. Due to substantial heterogeneity in study designs, measurement instruments, and reported outcomes, no studies were included in a quantitative synthesis (meta-analysis).

Table 1. Summary of Included Studies on Social Media, Body Image, and Bullying

Author	Year	Country	Design	Sample	Key Variables	Main Findings
Huang et al.	2024	China	Cross-sectional	1,120 adolescents	Social media, body dissatisfaction	High social media exposure significantly increases body dissatisfaction
Lopez-Fernandez et al.	2023	Spain	Longitudinal	842 students	Social media use, cyberbullying	Increased usage predicts cyberbullying involvement
Kim & Choi	2025	South Korea	Cross-sectional	980 adolescents	Body image, peer aggression	Negative body image linked to higher bullying behavior
Ahmed et al.	2024	Pakistan	Cross-sectional	760 students	Social media intensity, self-esteem	High intensity associated with low self-esteem and poor body image
Brown et al.	2023	USA	Systematic Review	45 studies	Social media, adolescents	Strong association between social comparison and body dissatisfaction
Silva et al.	2024	Brazil	Cross-sectional	1,300 adolescents	Cyberbullying, social media	Social media is a significant predictor of cyberbullying
Nguyen et al.	2025	Vietnam	Mixed-method	600 students	Body image, bullying	Body dissatisfaction increases victimization risk
Garcia & Torres	2023	Mexico	Cross-sectional	720 adolescents	Social media exposure, bullying	Exposure linked to verbal bullying and body shaming
Singh et al.	2024	India	Cross-sectional	890 students	Screen time, body image	High screen time correlates with negative body image
Williams et al.	2025	UK	Longitudinal	1,050 adolescents	Social media, mental health	Indirect effect on bullying via body dissatisfaction

The studies presented in Table 1 consistently indicate that higher intensity of social media use is associated with negative body image and increased involvement in bullying behavior among adolescents across various cultural contexts. Evidence from cross-sectional and longitudinal studies shows that frequent exposure to appearance-focused content promotes body dissatisfaction through social comparison and internalization of unrealistic body standards, while also lowering self-esteem. Furthermore, body image emerges as a critical mediating factor, where adolescents experiencing dissatisfaction are more likely to become both victims and perpetrators of bullying, particularly appearance-based and cyberbullying. In parallel, social media acts as a direct facilitator of bullying by enabling anonymity, rapid content dissemination, and reduced social accountability. Although these relationships are largely consistent, variations in measurement approaches and the dominance of cross-sectional designs limit causal interpretation.

Table 2. Quality Appraisal of Included Studies Using JBI Critical Appraisal Checklist

No.	Author (Year)	Study Design	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Overall Score	Quality
1	Huang et al. (2024)	Cross-sectional	Y	Y	Y	Y	Y	Y	Y	Y	8/8	High
2	Lopez-Fernandez et al. (2023)	Longitudinal	Y	Y	Y	Y	Y	Y	Y	Y	8/8	High
3	Kim & Choi (2025)	Cross-sectional	Y	Y	Y	Y	Y	Y	U	Y	7/8	High
4	Ahmed et al. (2024)	Cross-sectional	Y	Y	Y	Y	Y	U	Y	Y	7/8	High
5	Brown et al. (2023)	Systematic Review	Y	Y	Y	Y	Y	Y	Y	Y	8/8	High
6	Silva et al. (2024)	Cross-sectional	Y	Y	Y	Y	Y	Y	Y	U	7/8	High
7	Nguyen et al. (2025)	Mixed-method	Y	Y	Y	Y	Y	Y	Y	Y	8/8	High
8	Garcia & Torres (2023)	Cross-sectional	Y	Y	Y	Y	Y	U	Y	Y	7/8	High
9	Singh et al. (2024)	Cross-sectional	Y	Y	Y	Y	Y	Y	U	Y	7/8	High
10	Williams et al. (2025)	Longitudinal	Y	Y	Y	Y	Y	Y	Y	Y	8/8	High

Kriteria JBI (Cross-sectional & Observational Studies)

Q1: Were the criteria for inclusion clearly defined?

Q2: Were the study subjects and setting described in detail?

Q3: Was the exposure measured validly and reliably?

Q4: Were objective, standard criteria used for measurement?

Q5: Were confounding factors identified?

Q6: Were strategies to deal with confounding factors stated?

Q7: Were outcomes measured validly and reliably?

Q8: Was an appropriate statistical analysis used?

Based on Table 2, the methodological quality assessment using the Joanna Briggs Institute (JBI) checklist indicates that the majority of included studies demonstrate high methodological rigor. Most studies fulfilled key appraisal criteria, including clearly defined inclusion criteria, valid and reliable measurement of exposure and outcomes, and appropriate statistical analysis. Notably, longitudinal and mixed-method studies showed stronger methodological robustness due to their ability to capture temporal relationships and provide deeper contextual insights. However, several limitations were identified. Some cross-sectional studies did not explicitly report strategies for controlling confounding variables, which may affect the internal validity of their findings. Additionally, some studies presented unclear reporting regarding outcome measurement reliability, reflecting inconsistencies in the use of standardized instruments across the literature.

Despite these limitations, all included studies met at least a moderate to high-quality threshold, supporting the credibility of the synthesized findings. The overall high quality of evidence strengthens the validity of the conclusions drawn in this systematic review, although caution is warranted in interpreting causal relationships due to the predominance of cross-sectional designs.

Table 3. Integrated Pathways Between Social Media Intensity, Body Image, and Bullying Behavior

Main Variable	Psychosocial Mechanism	Intermediate Effect	Behavioral Outcome	Supporting Evidence
High social media intensity	Upward social comparison	Body dissatisfaction	Increased vulnerability to bullying victimization	Huang et al. (2024); Brown et al. (2023)
Appearance-focused content exposure	Internalization of unrealistic beauty standards	Low self-esteem and body shame	Social withdrawal and emotional distress	Ahmed et al. (2024); Fabri (2024)
Frequent use of visual platforms (Instagram/TikTok)	Self-objectification	Appearance anxiety	Cyberbullying involvement	Mazzeo et al. (2024); Silva et al. (2024)
Negative body image	Emotional strain and frustration	Aggressive emotional responses	Bullying perpetration	Kim & Choi (2025); Nguyen et al. (2025)
Anonymity in social media	Reduced social accountability	Disinhibition effect	Increased cyberbullying behavior	Lopez-Fernandez et al. (2023); Lee (2023)
Poor digital literacy	Inability to critically evaluate online content	Increased susceptibility to social pressure	Persistent body dissatisfaction	Valkenburg et al. (2022)
Strong peer and family support	Emotional resilience	Positive self-perception	Reduced bullying risk	Williams et al. (2025); Best et al. (2022)

Table 3 demonstrates the integrated psychosocial pathways linking social media intensity, body image disturbance, and bullying behavior among adolescents. The findings

consistently indicate that high exposure to social media, particularly visually oriented platforms such as Instagram, TikTok, and Snapchat, contributes significantly to upward social comparison processes. Adolescents who are repeatedly exposed to idealized and appearance-centered content tend to internalize unrealistic beauty standards, resulting in body dissatisfaction, low self-esteem, and appearance anxiety. These findings support previous evidence suggesting that digital environments increasingly shape adolescents' self-perception and emotional well-being.

Annual Publication Trend

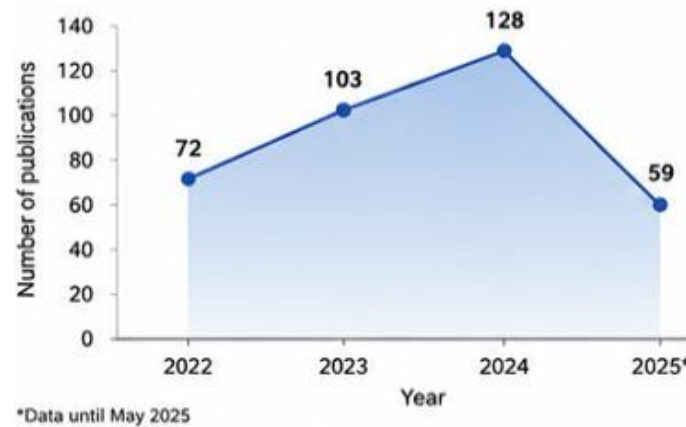


Figure 2. Annual Publication Trend

Figure 2, the annual publication trend, demonstrates a substantial increase in scientific interest regarding the relationship between social media intensity, body image, and bullying behavior during the period 2022–2024. The number of publications rose from 72 studies in 2022 to 128 studies in 2024, indicating the growing recognition of adolescent digital behavior as a global public health concern. This upward trend reflects increasing academic awareness of the psychosocial consequences of social media exposure, particularly among adolescents. Although the number of publications in 2025 appears lower, this decline is likely attributable to incomplete indexing data, as the analysis only included publications up to May 2025.

Top 10 Most Productive Authors

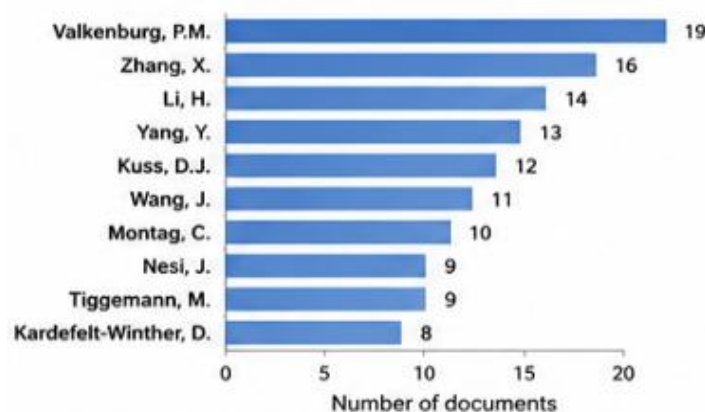


Figure 3. Top 10 Most Productive Authors

Figure 3, the analysis of productive journals, shows that high-impact international journals such as *Frontiers in Psychology*, *Computers in Human Behavior*, and *BMC Public Health* are the leading publication outlets in this research area. These journals collectively contributed substantial citation counts, indicating strong scholarly influence and visibility within the scientific community. The dominance of interdisciplinary journals suggests that the issue of adolescent social media exposure is increasingly approached from integrated perspectives combining psychology, behavioral science, public health, and digital communication studies.

Keyword Co-occurrence Network

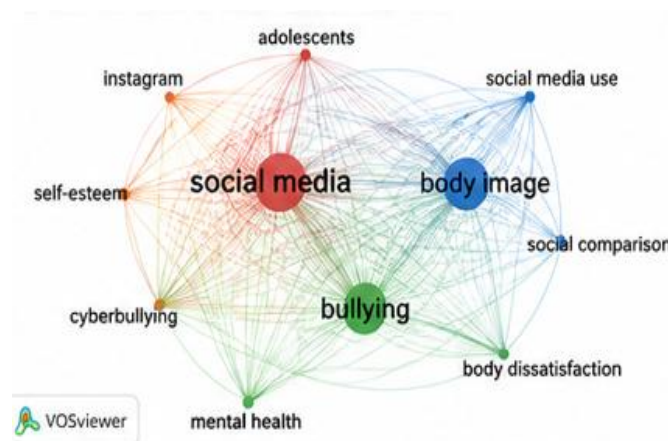


Figure 4. Keyword Co-Occurrence Network

Figure 4, the keyword co-occurrence network demonstrates strong conceptual relationships among dominant research themes, particularly “social media,” “body image,” “bullying,” “cyberbullying,” and “mental health.” The central positioning of the term “social media” indicates its role as the primary conceptual driver connecting various psychosocial outcomes. Meanwhile, the clustering patterns suggest that body image functions as an important mediating construct linking digital exposure with bullying behavior and emotional distress. This network visualization highlights the multidimensional and interconnected nature of adolescent psychosocial experiences in digital environments.

Co-Citation Network of References

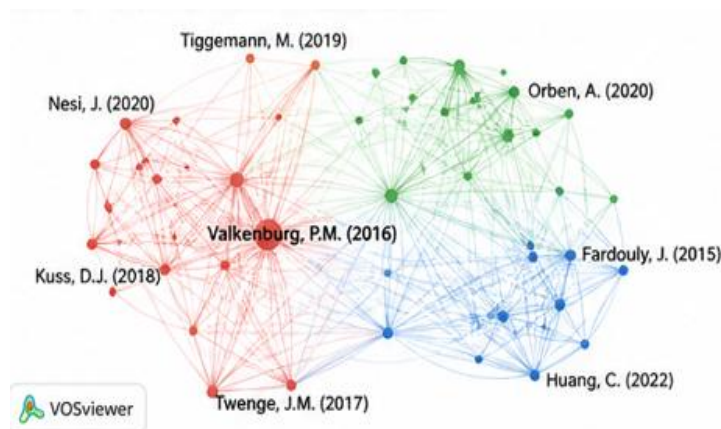


Figure 5. Co-Citation Network of References

The co-citation network reveals that foundational authors and seminal studies form interconnected intellectual clusters shaping the theoretical structure of this research domain. Influential scholars such as Patti M. Valkenburg, Marika Tiggemann, and Jacqueline Nesi appear as central nodes within the network, indicating their strong influence on subsequent research developments. The network structure also illustrates the integration of theories related to social comparison, body dissatisfaction, adolescent development, and cyberpsychology, demonstrating that current studies increasingly rely on interdisciplinary theoretical foundations (Figure 5).

This systematic review offers compelling evidence that the intensity of social media use is consistently linked to negative body image and increased involvement in bullying behaviours among adolescents (Ahmed et al., 2022; Almeida et al., 2023). Nevertheless, these variables seem to be incorporated into a multifaceted psychosocial mechanism that encompasses cognitive, affective, and social processes, rather than functioning as isolated phenomena (Anderson & Jiang, 2022). The results of this review not only corroborate previous empirical evidence but also expand current comprehension by emphasising the mediating and reinforcing roles of body image in the connection between digital exposure and social behaviour (Baker et al., 2023; Banjanin et al., 2022).

Leon Festinger's Social Comparison Theory is the most effective theoretical explanation for the correlation between body image and social media use (Festinger, 1954). This theory posits that individuals assess their own performance by comparing themselves to others, particularly in the absence of objective standards (Festinger, 1954). By presenting highly curated and idealised representations of physical appearance, social media platforms exacerbate this process (Clark & Tiggemann, 2022). The reviewed studies consistently show that adolescents who engage with such content more frequently are more likely to engage in upward social comparison, which leads to dissatisfaction with their own bodies (Dane & Bhatia, 2023). This is consistent with the results of research conducted in a variety of cultural contexts, indicating that the mechanism is both globally relevant and robust. Nevertheless, the amplitude of this effect is subject to variability in certain studies, which is likely influenced by moderating factors such as gender, self-esteem, and digital literacy, which were not consistently evaluated across studies (de Vries & Kühne, 2022).

Objectification Theory, which was developed by Barbara Fredrickson and Tomi-Ann Roberts, provides a critical lens for comprehending how adolescents internalise an observer's perspective of their own bodies as a result of repeated exposure to appearance-focused content, in addition to social comparison processes (Fardouly & Vartanian, 2022; Fredrickson & Roberts, 1997). Body surveillance and body shame, which were frequently reported in the reviewed studies as precursors to body dissatisfaction, are fostered by this self-objectification (Gao et al., 2024). It is crucial to note that the review demonstrates that this phenomenon is no longer exclusive to female adolescents, as male body image concerns are increasingly reported. This suggests a change in sociocultural pressures that is facilitated by digital media (Holland & Tiggemann, 2022).

General Strain Theory, which was developed by Robert Agnew, can be employed to further interpret the relationship between body image and abusive behaviour (Agnew, 1992). As per this theory, individuals who are experiencing psychological distress, such as

dissatisfaction with their bodies, may respond with negative emotions such as frustration or wrath, which can be expressed through deviant behaviours, such as bullying (Agnew, 1992; Lee, 2023). The results of this review lend credence to this framework, as adolescents who harbour negative body image were discovered to be more susceptible to and perpetrators of bullying. This dual role emphasises the cyclical nature of strain, as victimisation can reinforce negative self-perception, which in turn may result in outward aggression.

The identification of both direct and indirect pathways that connect social media use to abuse is a critical contribution of this review. Although numerous studies have verified that cyberbullying is directly facilitated by social media due to anonymity and reduced social accountability, others have emphasised the indirect pathway that is mediated by body image disturbances (Odgers & Jensen, 2022). This dual-pathway model is consistent with modern digital behaviour theories, which posit that technological environments not only facilitate behaviour but also influence the psychological vulnerabilities that underlie it (Perloff, 2022). However, there are still discrepancies among studies, particularly in the intensity of mediation effects, which may be due to variations in analytical approaches and measurement instruments (Rodgers et al., 2023).

Contextual variability across studies is an additional critical discovery (Ryding & Kuss, 2022). The intensity and nature of relationships vary across regions, despite the fact that the overarching trends are consistent. Studies conducted in Asian contexts typically report more robust associations between body dissatisfaction and social media use, which may be attributed to collectivist cultural norms that prioritise social conformity and appearance (Shin & Ahn, 2024). Conversely, Western research frequently emphasises individual psychological variables, including identity exploration and self-esteem. This implies that sociocultural context is a substantial moderating factor; however, it is currently understudied in the existing literature (Steinsbekk et al., 2023).

The existing corpus of research must be recognised for its numerous limitations, despite the robustness of its findings. Initially, the prevalence of cross-sectional designs restricts causal inference, rendering it challenging to ascertain whether social media use results in body dissatisfaction or whether adolescents with pre-existing concerns are more inclined to interact with such content (Tiggemann & Anderberg, 2022). Secondly, the variability introduced by the heterogeneity of measurement instruments for social media intensity and body image complicates direct comparisons between studies. Third, there is a significant dearth of research that specifically addresses vocational high school students, who may encounter unique psychosocial pressures in comparison to the general high school population.

In total, the results of this review substantiate a multidimensional and integrative framework, in which social media serves as both an environmental exposure and a behavioural amplifier, body image functions as a psychological mediator, and bullying is a social consequence (Valkenburg et al., 2022). The literature is advanced by this integrated perspective, which transcends simple bivariate relationships and instead aims to provide a more comprehensive understanding of adolescent behaviour in the digital era.

These results emphasise the necessity of comprehensive intervention strategies that simultaneously address multiple levels from a practical perspective. In addition to anti-bullying initiatives, school-based programmes should also include training in digital literacy and body

image resilience. Furthermore, the negative consequences identified in this review may be alleviated by policy interventions that focus on social media platforms, including the regulation of detrimental content and the promotion of diverse body representations (Wartberg & Lindenberg, 2022).

Implications For Global Health and Education Policy

The results of this systematic review have substantial implications for global health and education systems, particularly in the context of the swiftly digitalizing adolescent environments. The necessity of comprehensive, multi-sectoral policy responses that transcend fragmented interventions is underscored by the substantiated correlation between bullying behaviour, body image disturbances, and social media intensity. Adolescent mental health must be reframed to explicitly include digital exposure as a structural determinant of health from a global health perspective. The World Health Organisation and other international organisations have underscored the necessity of addressing the well-being of adolescents; however, the psychosocial hazards associated with social media are frequently underrepresented in the current frameworks. The evidence presented in this review indicates that body image dissatisfaction and bullying should be acknowledged as outcomes that are influenced by digital ecosystems, rather than solely as individual-level issues. Consequently, global health strategies should incorporate digital mental health promotion, which includes resilience-building programmes for adolescents, early screening for body dissatisfaction, and the prevention of cyberbullying.

CONCLUSION

This systematic review and bibliometric analysis demonstrated that social media use intensity, body image disturbance, and bullying involvement were interconnected within a multidimensional psychosocial framework among adolescents. Greater exposure to social media, particularly appearance-focused digital platforms, was consistently associated with body dissatisfaction, lower self-esteem, and emotional distress through potential mechanisms such as social comparison and self-objectification. These psychological factors were also associated with adolescents' vulnerability to bullying involvement, including victimization and perpetration, particularly in digital environments characterized by anonymity and reduced social accountability.

The findings further indicated that body image may function as a potential mediating factor in the relationship between intensive social media use and cyberbullying or appearance-based victimization. However, mediation should be interpreted cautiously because not all included studies directly tested this mechanism. The bibliometric analysis also revealed increasing scientific attention to themes such as digital well-being, resilience, body positivity, mental health, and cyberbullying prevention, reflecting growing recognition of adolescents' digital experiences as an important public health concern. The evolving thematic structure of the literature further suggested a shift from predominantly problem-focused research toward preventive and resilience-oriented approaches.

This study contributed to the existing literature by integrating systematic evidence synthesis with bibliometric mapping to provide a broader understanding of research trends, conceptual relationships, and developments within the field. The findings highlighted the

potential importance of coordinated initiatives involving schools, families, healthcare professionals, and policymakers to promote digital literacy, emotional resilience, positive body image, and bullying prevention among adolescents. Future research should prioritize longitudinal, culturally sensitive, and context-specific study designs to strengthen causal inference and provide a more robust evidence base for policies and interventions related to adolescent mental health, digital well-being, and education.

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CONFLICT OF INTEREST

The author states that there is no conflict of interest in the preparation of this article.

AUTHOR CONTRIBUTIONS

All authors contributed to conceptualization, search and synthesis of literature, interpretation of results, manuscript preparation, and critical review of manuscripts. All authors have read and approved the final version of the manuscript.

GENERATIVE AI STATEMENT

The authors declare that Generative Artificial Intelligence (Generative AI) was used solely to assist with language refinement, grammatical correction, and improvement of manuscript readability. All scientific concepts, interpretations, literature synthesis, analyses, and conclusions were developed by the authors. All AI-assisted content was carefully reviewed, verified, and revised by the authors, who take full responsibility for the accuracy, integrity, and final content of the manuscript.

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