

# The Dark Underbelly of Social Media Addiction and its Consequences: A Narrative Review of the Allure of Online Likes

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## ABSTRACT

**Background:** In the modern era, social media has transformed how people connect, communicate, and assimilate information. However, as social media use becomes increasingly global, concerns have been raised about its negative impact on mental health and consequences such as behavioral addictions. This narrative review aimed to uncover the possible implications of users' obsession with social media and how it affects behavioral addictions to examine the factors contributing to social media obsession and explore the impact of social media addiction on mental health with the underlying causes of compulsive behaviors.

**Methods:** This narrative review was conducted using multiple databases, employing specific keywords related to social media addiction, obsessions, online likes, self-presentation, and psychological effects. A total of 71 papers were selected according to the inclusion criteria, and finally, 11 were retrieved. All the English qualitative and quantitative studies from 4 April 2011 to 14 April 2022 were included. The relevant studies were ultimately selected with the aid of peer review.

**Results:** The findings showed that gender and age differences influence social networking use. It is worth noting that users often alter their online images and feel worse after comparing themselves to others. Getting fewer likes can make teenagers feel rejected, especially if their peers have victimized them in the past. Besides, the use of social media by adolescents is connected to symptoms of depression, poor sleep, and comparing themselves to others, showing that it can have complex effects on mental health. However, the literature also indicates that social media improves communication, customer management, and engagement, in addition to providing significant learning opportunities.

**Conclusion:** This study emphasizes the need for personal responsibilities, focusing more on core connections rather than hits, likes, and popularity. While social media can be an influential tool for connecting, maintaining relationships, and empowering individuals, an attentive and critical approach is needed to avoid its potential downsides. Excessive use and easy access to social media are more likely to develop an addiction to popularity, self-objectification, and mental illness.

**Keywords:** Social Media, Internet Addiction Disorder, Compulsive Behavior, Mental Health, Social Networking

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Please cite this paper as:

Firdos S, Amanullah M. The  
Dark Underbelly of Social  
Media Addiction and its  
Consequences: A Narrative  
Review of the Allure of  
Online Likes. Interdiscip  
J Virtual Learn Med Sci.  
2024;15(4):300-315.doi:10.30476/  
ijvlms.2024.100897.1273.

Received: 26-11-2023

Revised: 18-09-2024

Accepted: 18-09-2024

## Introduction

Social media provides a platform for individuals to showcase themselves and develop their online social connections. Social media has introduced new platforms for self-disclosure, self-presentation, and impression management (1). Considerable research has focused on the benefits of Social Networking Sites (SNS), such as increased social capital, social support, and relationship maintenance (2-4). Besides, social media applications offer emotional support, self-expression, and community-building opportunities (5). Social media can also be used to advance health research and practice, social mobilization, and facilitate offline health-related services and events (6). However, countless studies have also delved into the negative impact of social media addiction. Excessive use has been associated with depression (7), loneliness (8), sleep disturbances (9), decreased psychological well-being (10), reduced life satisfaction (11), and limited social connectedness (12). Theoretical frameworks, including social comparison theory, suggest that individuals often seek and utilize information regarding the positions and opinions of others to evaluate themselves. This process involves assessing the validity of one's own views, beliefs, and abilities (13). In other words, the theory grasps that individuals are involved in self-assessment by comparing themselves with similar others, such as those in their peer groups (14). Thus, we assumed that the underlying intentions to be obsessed with social media and the liking and sharing behavior are driven by comparing with others to evaluate their abilities, opinions, and feelings. Users might tend to compare their followers, popularity, and existence online, leading to addiction and quality compromise content.

Currently, this addiction has raised a concern, wherein individuals exhibit an intensified focus on accruing likes and shares without looking into material credibility and significance (15). Undoubtedly, social media platforms are also powerful tools for businesses and campaigns to increase their

customers and productivity irrespective of distance (16). However, excessive preoccupation or fixation on a particular activity or object to showcase yourselves, gain popularity, and make an impression without considering whether the content is accurate or informative to the intended audience often leads to negative consequences such as loss of control, distress, misleading information, and interference. These metrics are dangerous to individuals' productivity and well-being and threats to society. Thus, the study's significance lies in addressing the growing concerns about people's obsession with social media and its possible effects (17). This research attempts to clarify the causes of social media addiction and its impact on users' mental health. Besides, it seeks to investigate the possibilities offered by social media platforms while acknowledging the dangers of overusing them. To achieve the goals of the review and comprehend the effects of social media addiction on individuals, the following research objectives were established:

1. To determine and analyze the factors contributing to social media users' obsession, such as the allure of likes, age, gender, and self-presentation, and to explore the opportunities offered by social media platforms.

2. To investigate the impact of social media obsession on users' mental health, including its association with depression, anxiety, and decreased psychological well-being.

3. To determine the factors that can lead to social media addiction or compulsive behavior, such as psychological factors, social influences, and platform design features.

## Methods

The study employed a narrative review to investigate the phenomenon of social media obsession, along with possible effects on mental health and the mechanisms that promote this obsession, serving as a framework for the perspectives and discussion. A comprehensive search strategy was developed to gather a wide range of literature, which included various types of studies—both qualitative and quantitative. This approach allowed for a

thorough evaluation of the topic. The articles were screened based on their titles and full texts, with valuable input from peer feedback.

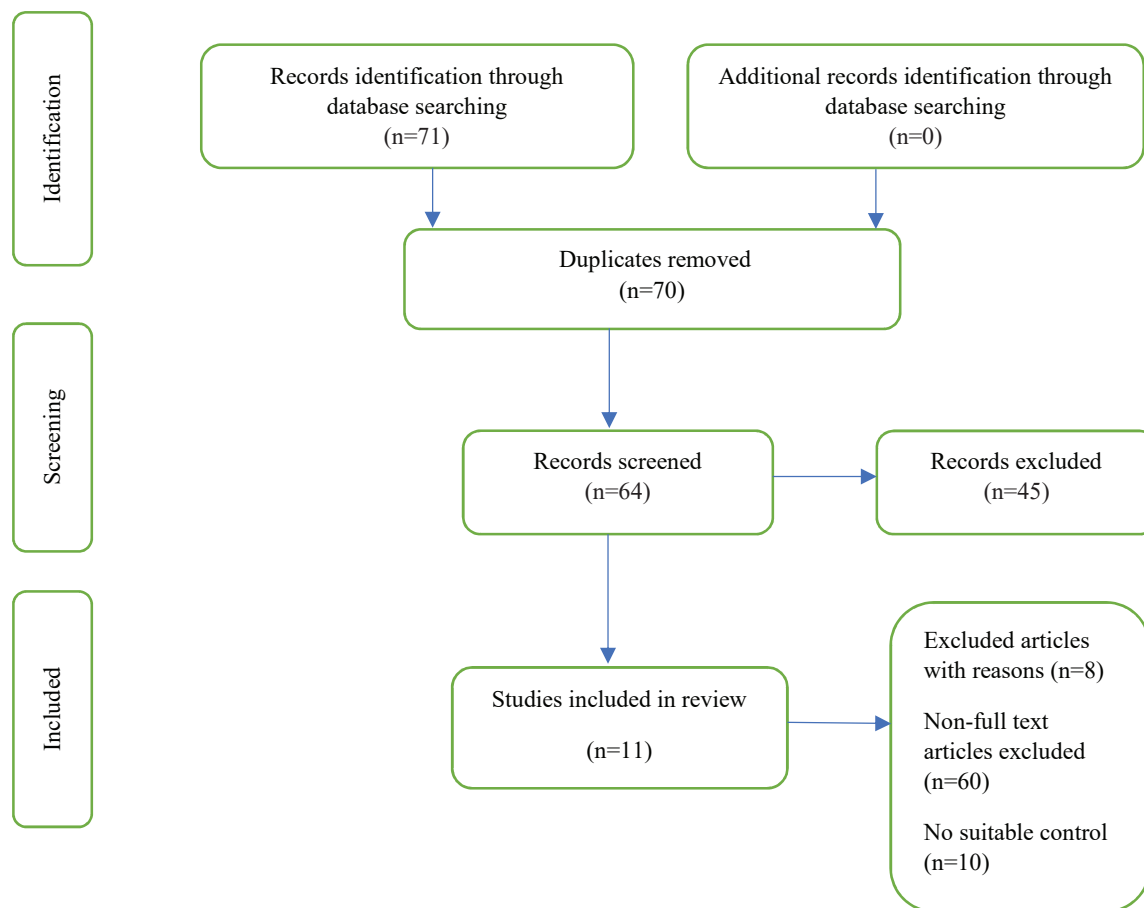
*Search Strategy and Selection Criteria*

A comprehensive search was carried out across multiple databases, including PubMed and Google Scholar, to identify both qualitative and quantitative studies published in the English language over the past 12 years, spanning from April 4, 2011, to April 14, 2022. This time frame was selected to ensure the inclusion of a broad spectrum of relevant literature, as there was a greater availability of English-language publications. To cover the concept, a wide range of keywords were used to search the relevant studies from different databases, including social media addiction, obsessions, mental health, compulsive behavior, online likes, impact of excessive social media use, and opportunities of social media. A total of 71 articles were initially selected based on defined inclusion criteria.

The selected articles were required to be in English and focus on themes such as risk factors and obsession associated with social media, self-presentation, peer and social comparison on social media, likes behavior, mental health challenges related to social media addiction, and marketing advantages derived from social media. After removing seven duplicate entries, 64 articles proceeded to title and abstract screening. This screening resulted in the exclusion of 45 articles due to reasons such as non-peer-reviewed status, irrelevance, or failure to meet the research objectives. Ultimately, 11 articles were retrieved for further review (Figure 1).

**Results**

In this study, a narrative review methodology was employed in accordance with the previously outlined flowchart. A total of 71 articles were identified, of which seven were excluded due to duplication. Consequently, 64 articles proceeded to the



**Figure 1:** Flow diagram of articles included in the narrative review

screening phase. Among these, 45 did not satisfy the study criteria, resulting in a final selection of 11 articles for review. Table 1 presents an overview of the key findings from all screened and included articles.

As illustrated in Table 1, most of the studies were carried out in the United States.

Additionally, the highest volume of studies was recorded in 2021. It is important to note that quantitative research emerged as the most prevalent type of study. The following sections will outline the findings from each study in chronological order, with a more comprehensive discussion provided later.

**Table 1:** Main features of included articles

	Title	Author(s)	Year	Country	Type of Study
1	The Impact of Social Media on Children, Adolescents, and Families (18).	Gwenn Schurgin O’Keeffe, and Kathleen Clarke-Pearson.	2011	Disparate	Clinical report
2	Follow me and like my beautiful selfies: Singapore teenage girls’ engagement in self-presentation and peer comparison on social media (19).	Trudy Hui Chua and Leanne Chang.	2016	Singapore	Qualitative research
3	Selective Self-Presentation and Social Comparison through Photographs on SNS* (20).	Jesse Fox, and Megan A. Vendemia.	2016	USA	Quantitative study
4	Social media in marketing: A review and analysis of the existing literature (21).	Ali Abdallah Alalwan, Nripendra P. Rana, Yogesh K. Dwivedi, and Raed Algharabat.	2017	Disparate	Review article
5	Exploring how and why young people use SNS* (22).	Laura Gray.	2018	UK	Quantitative Study
6	Getting Fewer “Likes” Than Others on Social Media Elicits Emotional Distress Among Victimized Adolescents (23).	Hae Yeon Lee, Jeremy P. Jamieson, Harry T. Reis, Christopher G. Beevers, Robert A. Josephs, Michael C. Mullarkey, Joseph O’Brien, David S. Yeager.	2020	USA	Mixed method
7	Adolescent Mental Health Challenges in the Digital World (24).	Linda Charmaramana, Olaide Sodea, and David Bickhamb.	2020	USA	Case study (Book chapter)
8	A computational reward learning account of social media engagement (25).	Björn Lindström, Martin Bellander, David T. Schultner, Allen Chang, Philippe N. Tobler and David M. Amodio.	2021	Disparate	Quantitative study
9	Social Media and Well-Being: Pitfalls, Progress, and Next Steps (26).	Ethan Kross, Philippe Verduyn, Gal Sheppes, Cory K. Costello, John Jonides, and Oscar Ybarra.	2021	Disparate	Review article
10	Examining the links between active Facebook use, received likes, self-esteem, and happiness: A study using objective social media data (27).	Davide Marengo, Christian Montag, Cornelia Sindermann, Jon D. Elhai, and Michele Settanni.	2021	Italy	Quantitative study
11	Risk Factors Associated with Social Media Addiction: An Exploratory Study (28).	Jin Zhao, Ting Jia, Xiuming Wang, Yiming Xiao, and Xingqu Wu.	2022	China	Exploratory study

\*SNS: Social Networking Sites

The research findings by O’Keeffe and Clarke-Pearson highlight the benefits and risks associated with social media use among children and adolescents (18).

Chua and Chang’s research examined the disparities in self-perceived beauty standards among adolescent girls, considering the impact of peer influence and the difficulties they faced in reconciling their personal beliefs with socially idealized beauty norms (19).

In the study conducted by Fox and Vendemia, it was revealed that women were more likely than males to modify images and experience greater negative feelings following upward social comparisons. The study highlighted that women tend to invest more time in editing photos to achieve a socially acceptable appearance in online contexts (20).

Social media has been recognized as an effective instrument for enhancing communication, managing customer relationships, and fostering customer engagement, as highlighted in the research conducted by Alalwan and colleagues (21). The findings emphasized the significance of social media in marketing strategies and the critical need for the successful adoption and implementation of these platforms.

The main findings of a separate study by Gray revealed notable differences in SNS usage based on gender and age, as well as a distinct perception that online interactions differ from those conducted in-person (22).

Another study by Lee and colleagues found that teenagers who received fewer likes on their social media posts claimed to be more impoverished, feel more rejected, and experience more negative self-referential thoughts. More depressed symptoms were linked to adverse reactions to insufficient likes. The emotional impact of inadequate social validation on social media was influenced by prior experiences of peer victimization (23).

A case study conducted by Charmaramana and colleagues addresses the rising incidence of adolescent mental health issues associated with technology usage. It draws attention to the impact of social media usage among

teenagers on symptoms of depression, sleep disturbances, and tendencies for social comparison. The study highlights the complex relationship between social media use and mental health outcomes, indicating a need for more in-depth investigation and comprehension of these relationships (24).

Lindström and colleagues’ findings repeatedly demonstrated that reward learning concepts can model human behavior on social media. Their research found significant individual differences in social reward learning on social media (25).

Social media can have beneficial and detrimental effects on well-being. Kross and colleagues’ study on the association between well-being and social media found a fragile but noteworthy negative correlation, suggesting that social media use can impact emotional well-being (26).

The study conducted by Marengo and colleagues found that the frequency of users updating their profiles and sharing personal content directly affected the frequency and intensity of “Likes” received. Users’ happiness was correlated with the positive feedback they received, with self-esteem acting as a partial mediating factor (27).

The research conducted by Zhao et al. demonstrated that females exhibited higher rates of addiction and greater levels of social media dependency compared to males. Additionally, impulsivity was found to have a positive correlation with social media addiction, whereas self-esteem showed a negative correlation with it (28).

## Discussion

While social media offers undeniable benefits, its addictive nature has sparked growing concern. This narrative review aimed to uncover the factors that contribute to social media obsession and explore its impact on mental health, mainly focusing on the underlying mechanisms that drive compulsive behaviors. Examining a diverse range of literature, we categorized key themes to illuminate the complexities of this emerging issue, which can be explained

through the categorization of the various themes. The review analyzed selected articles based on pertinent headings and subheadings, addressing factors contributing to social media addiction, including age, gender, and self-presentation. The articles emphasized the positive aspects of social media, such as its ability to enhance creativity, promote community engagement, and provide learning opportunities despite the associated risks of addiction. Ultimately, the impact of social media on mental health, focusing on factors associated with compulsive behavior, such as social comparison and reward learning, the desire for publicity, impulsivity, self-esteem, and emotional regulation are discussed.

#### *Factors that Lead to Social Media Addiction*

This section analyzes various factors, including age, gender, self-presentation, and mental health.

For age and gender, we found that social media is extremely popular among the younger generation, and research suggests that a substantial portion of them dedicate several hours daily to online activities (29-31). A study conducted by Lenhart and colleagues reported that 24% of young people are constantly online, with 71% using multiple SNSs (32). Another study showed a relationship between age and the perceived level of depth communication via SNS, which peaked at approximately 15 years of age. In addition, a study highlighted notable variations in SNS usage patterns among different age groups of young users, whether for communication, disseminating content like photos or videos, or gaming (33). The influence of age on the use of SNS has been explained through the “dual systems model” of adolescent risk-taking behavior (34, 35). The model indicates that mid-adolescence is a distinct period marked by heightened risk-taking tendencies, which can be attributed to the varying levels of development in socio-emotional and cognitive control systems at different developmental stages (34). Consequently, individuals, particularly those around the age of 15, may demonstrate

a greater tendency to pursue exhilarating experiences despite their impulse control mechanisms being less developed (36). As a result, younger adolescents may not perceive risks in the same way as their older counterparts.

Likewise, the literature indicates that there is a distinct gender disparity in the patterns of SNS usage. Females tend to utilize SNS for sharing imagery, blogging, and commenting on others’ content, while males predominantly engage in gaming activities on these platforms. A study revealed that college students use SNS to showcase and disseminate personal content, aiding identity expression (37). Besides, it has been observed that young individuals are often exposed to distressing online experiences. Lack of communication about these events can affect their emotional well-being and, subsequently, their learning (22).

In relation to self-presentation, Goffman proposed that individuals behave as actors in the theater of life, perpetually engaging in performances aimed at gaining the approval and respect of others (38). As social media platforms offer us novel opportunities to carefully construct our self-presentation (39-41), showcasing our most glamorous photos and original posts, this self-presentation management can yield positive outcomes (42). Self-presentation involves a deliberate attempt to engage in behaviors that shape a preferred identity for an audience (43, 44). Users can choose how they present themselves and can update the information they share (45). Few types of research indicate that requesting people to view their social media profiles can enhance self-esteem (46, 47) and enhance their capacity to cope with negative feedback (48). Additionally, similar research found that participants tended to check their profiles automatically following experiences of rejection as a means to elevate their mood (23).

On the other hand, self-presentation on social media can lead to various unintended negative consequences, particularly in terms of emotional well-being. Research indicates

that individuals often feel worse when they compare their lives with the idealized portrayals they encounter on these platforms (47). This phenomenon is linked to self-objectification, which has been associated with several detrimental outcomes, including depression, body shame, and disordered eating (14, 49). Therefore, the dynamics of social media use are deeply influenced by age, gender, and the manner of self-presentation, impacting emotional well-being and learning processes.

Regarding mental health, research indicates that young age plays a crucial role in physical, cognitive, and social development. This developmental stage is also linked to a notable increase in mental health challenges. With the significant rise in technology utilization in recent years, users may experience pressure to attain and maintain unrealistic standards of social media validation. This phenomenon can result in the internalization of negative feelings, leading to heightened anxiety and adverse self-perceptions. Previous research has demonstrated significant relations between increased social media usage and internalizing symptoms, such as depression and anxiety, during adolescence (50, 51). A related study indicates that the adverse impact adolescents face when receiving a limited number of likes on social media posts, referred to by the authors as “insufficient social validation,” is associated with depressive symptoms throughout the academic year (23). Adolescents who engage extensively with social media and develop emotional attachments to it often experience negative outcomes, including diminished sleep quality, lower self-esteem, and heightened levels of anxiety and depression (52). Similarly, high school students who often make unfavorable self-comparisons on Facebook are prone to depressive symptoms, as social media amplifies such comparisons. A longitudinal study indicated that individuals exhibiting more depressive symptoms at a given time are more likely to participate in behaviors associated with social comparison and feedback-seeking, such as sharing personal information online, sexting (defined as sharing

nude or semi-nude selfies), monitoring others’ activities, or passively consuming content on social media platforms (53).

### *Social Media Opportunities*

Social media offers various advantages in several areas, including interpersonal connections, health, communication, educational opportunities, and economic benefits, as detailed in the following sections.

Despite addiction or other consequences, social media can have profound benefits that extend the individual level, the perception of the community, and the world around them. These advantages encompass the chance to interact with the community by taking part in fundraising activities and volunteering for local and political events. They also encourage creativity through the sharing of artistic and musical endeavors, as well as the development of ideas across various mediums, including blogs, podcasts, videos, and gaming platforms. Additionally, establishing connections with individuals from diverse backgrounds based on common interests is crucial for all users, as it fosters respect, tolerance, and enhanced discussions regarding personal and global issues (54). Moreover, social media can help individuals promote their identity and develop unique social skills (55). Similarly, information related to health and case studies is readily available on social media platforms. Adolescents with chronic illnesses can now use these websites to connect with peers facing similar health challenges, thereby establishing supportive networks (56).

Social media platforms facilitate effective collaboration among students, enabling them to engage in various projects and assignments collectively. Tools such as Facebook and other similar platforms provide opportunities for students to work together outside the classroom, fostering the exchange of ideas related to their academic tasks. Some educational institutions have effectively incorporated blogs into their pedagogical approaches, which enhances students’ English language proficiency, written communication, and creative skills (55, 57).

Additionally, social media plays a significant role in promoting lifelong learning within medical education and healthcare, as it enables learners to exchange knowledge, pose inquiries, and collaborate on various projects (58). Furthermore, the literature indicates that social media contributes substantially to the economy. Numerous users and entrepreneurs leverage nearly all social media platforms for profit generation, marketing efforts, and connecting with distant customers and audiences. A study revealed that around 93% of businesses worldwide have adopted innovative platforms and tools to engage with and serve their clients (59). Additionally, it was reported that increasing the share of advertisements in Facebook's news feed by just 1% could result in an estimated revenue boost of approximately USD 8.17 million weekly (60). Notably, over 20% of consumers indicated that social media is a crucial source of information when considering new product purchases (61). Similarly, findings from another study highlighted that marketing strategies significantly affect consumers' purchasing intentions and loyalty, with value equity and brand equity acting as mediators in this relationship (62).

### *Factors Associated with Social Media Compulsive Behavior*

Several key factors, including social comparison, reward learning, the desire for public acceptance, impulsivity, self-esteem, and emotional states, influence compulsive behavior on social media.

The desire for social approval can be reinforced through positive feedback, resulting in enhanced feelings of well-being. Social comparison is a collective phenomenon across cultures, rooted in early childhood and evolution (63, 64). Studies have linked upward social comparisons on social media to the experience of Fear of Missing out (FOMO) (65), a sense of meaninglessness (66), and dissatisfaction with body image (67, 68). Social comparison can have positive and negative consequences (69). Negative affect is characterized by the experience of adverse

emotions, including fear and hostility. In contrast, positive affect pertains to the extent of feelings characterized by enthusiasm, activity, and alertness (70). Research indicates that engagement with social media can amplify the perception that others are more successful, which in turn may lead to heightened negative feelings and diminished positive outcomes (71). Similarly, the perception that others are more advantaged was found to have a negative correlation with emotional well-being (72). Moreover, it has been described that people who viewed profiles of physically attractive users reported decreased positive affect compared to those who viewed profiles of less attractive users (73). A study indicates that receiving likes on social media correlates with enhanced happiness and self-esteem while also potentially initiating upward social comparison processes that may result in feelings of envy and symptoms of depression (74). Beyond the pursuit of rewards, there are various motivations for posting on social media, including self-expression and the cultivation of relationships (75). Certain demographic variables, including age, may moderate the impact of reward learning on online behavior. For instance, adolescents generally exhibit greater sensitivity to social rewards and punishments compared to adults (76).

Social media platforms have become one of the most convenient ways to be recognized globally due to the significant increase in user-generated content in recent decades. These platforms enable users to upload various types of content, including photos, videos, vlogs, and blogs, which can garner millions of views, likes, comments, and shares (77, 78).

The desire to belong to publicity in social media refers to an individual's willingness to post about their belonging, which includes sharing photos that show activities with friends, describing experiences of belonging, or tagging the profiles of close others in posted photos (79, 80). Social media use can also fulfill psychological needs like belongingness, social interaction, achievement, competence, and self-identity (81, 82). Conversely, some social



media users focus on disseminating accurate information and raising awareness regarding various issues. Besides, teenagers are more particularly influenced by social networking activities and consider it an essential competition to highlight their appearance, personality, and achievements. Those who post more pictures with others are less likely to show depressive symptoms compared to those who do not post actively (83). Communities are moving towards a desire to belong to publicity, and people seem more interested in showing belonging, self-presentation, and self-worth to expose their human resources, connections, networking, success, and achievements, whether real or fake. Some users may even purchase SNS accounts to expand their number of followers (84). A study has shown that individuals are more likely to engage in online activities that increase their popularity when they perceive that others are doing the same (85). Individuals who perceive themselves as less popular often receive fewer likes on social media compared to their peers, which may lead to feelings of rejection and the development of negative self-perceptions (23). A survey carried out in the U.S. revealed that adolescents with depressive symptoms were significantly more likely to post content that received minimal engagement compared to those without such symptoms (71% vs. 43%). This lack of positive online feedback might push these emotionally vulnerable teens to use social media even more, seeking validation, thus perpetuating and intensifying the cycle (86).

The association between impulsivity and social media compulsive behavior is a topic of ongoing debate as different findings show that trait impulsivity and the severity of social media addiction were positively allied (87). At the same time, contradicted findings revealed the opposite results unrelated to impulsivity (88). In this context, the explanation is well justified by the “Dual System Theory”, which explains the imbalance between the reflective and impulsive systems leading to addictive behaviors (89). Literature findings consistently show the negative relationship between self-esteem and social media-

compulsive behavior. Levels of self-esteem were found to be negatively correlated with social media addiction (28). Individuals use more social media to obtain higher levels of self-esteem (e.g., harvesting “likes”) and to get rid of feelings of low self-esteem (11). Interestingly, another study identified the impact of self-esteem on social media compulsive behavior is regulated by emotions (90). People who experience anxiety often turn to social media for comfort, seeking attention, support, or a sense of belonging (91). Similarly, there is a strong link between social anxiety and social media addiction (92). Depression and loneliness are reported as both reasons (93) and the consequences of social media compulsive behavior (94).

### *Limitations and Suggestions*

This review encountered several limitations, including specific inclusion and exclusion criteria that reduced the number of articles considered. The review’s scope may have been constrained by the scanty search sources. Furthermore, while the review acknowledges certain positive aspects of social media, it predominantly emphasizes the negative consequences.

Despite these limitations, the findings of this review have significant implications for both research and practice. The article highlights the necessity for mental health interventions that target the psychological effects of social media addiction, including depression, anxiety, and low self-esteem. Apart, schools and educational institutions should develop programs to educate students about the risks of social media addiction, focusing on promoting healthy online habits, critical thinking, and emotional resilience. Overall, this review provides a basis for further exploration and intervention regarding social media addiction, emphasizing the need for a balanced approach that enhances benefits while reducing potential harms.

### **Conclusion**

Social media presents a multitude of opportunities and advantages, having become

an integral part of modern life across various sectors. Social media optimization has established itself as a critical component in this landscape. However, it is crucial not to ignore the potential pitfalls of excessive use of social media, as evidenced by numerous studies so far. Both internal and external influences, along with mediating and moderating variables, can play a role in the development of addictive behaviors associated with social media engagement. The findings of this review underscore the necessity for users to engage with social media with considerable caution. It emphasizes the importance of individual accountability, prioritizing meaningful connections over metrics such as hits and likes. Additionally, it highlights the critical significance of content authenticity and mental well-being in online interactions.

### Acknowledgments

We appreciate the academics and researchers whose contributions improved our paper. We particularly thank our colleagues for their invaluable assistance and support throughout the research process.

### Conflict of Interest

The authors declare that they have no conflicts of interest to disclose.

### Ethical Considerations

Not applicable.

### Funding/Support

The authors received no financial support for the research, authorship, and publication of this study.

### Availability of Data and Materials

The authors confirm that the data supporting the findings of this study are available within the article and public domains.

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