



The Role of Social Media in Adolescent Mental Health: A Comprehensive Review

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Abstract

Social media has become a prominent part of adolescent experiences, with more than 90% of individuals ages 13-18 utilizing social media platforms such as Instagram, TikTok, and Snapchat daily (Pew Research Center, 2023). This review uses literature from 2018 - 2025 to explore the role of social media in adolescent mental health whereby anxiety, depression and self-esteem are the primary focus for high-income countries. Studies reveal both beneficial (e.g., social connection, self-expression) and detrimental (e.g., cyberbullying, social comparison) impacts of social media on adolescent mental health, broadly dependent upon dose of use, platform type and the demographics of the individual using social media. The primary findings suggest that moderate social media use (1-2 hours daily) is associated with more benefits, whereas excessive use (>3 hours daily) is linked with increased risk to mental health. There are still gaps in this review with respect to: renewed longitudinal data examining newer platforms (e.g., TikTok); a lack of leverage in considering marginalized groups in exploring adolescent mental health; and a need to standardize metrics for mental health outcomes. Future research could examine AI-directed content moderation, platform prefixes of problematic situations, and individual categorizations. The implications of this review indicates the need for balanced social media policies that support the well-being of youth and adolescents.

Introduction

Adolescent mental health is a priority worldwide. The National Institute of Mental Health (NIMH, 2023) indicates that roughly 20% of teens will have a disorder, such as anxiety and depression. Social media, which is defined as internet-based platforms based on user-generated content and interaction, is a significant influence on social environments for adolescents. In addition, 95% of teens in the United States have access to a smartphone, and 45% indicate that they are online "almost constantly" (Pew Research Center, 2023). Although social media can provide opportunities for connectedness and identity exploration, people's concerns regarding its role in

adolescent mental health issues, including cyberbullying, sleep disruption, and self-comparison have increased (Twenge et al., 2020).

The purpose of this review is to review peer-reviewed literature in 2018-2025 pertaining to the association between social media use and adolescent mental health in youth aged 13-18 in high-income countries. This review covers a variety of studies, including experimental, observational, and longitudinal designs. While examining peer-reviewed studies in the context of social media and adolescent mental health, it does focus on processes that involve social media, including social comparison, cyberbullying, and online support. The review is intended to identify benefits, risks, opportunities, and research and questions for researchers, educators, and policymakers in the field related to the implications of adolescent mental health.

1. Positive Effects of Social Media

1.1 Overview

Social media provides social connection, self expression and access to mental health services. Online platforms like Instagram and Discord can allow peer support and social capital and community development for underrepresented groups (e.g., LGBTQ+ teens) who may not have suggesting support offline (Craig and colleagues, 2021). Mental health literacy can be developed through educational video content on platforms like YouTube.

1.2 Studies

Table 1 summarizes five studies on positive effects, focusing on mental health outcomes and mechanisms.



Study	Focus	Data	Method	Key Findings	Takeaways
Craig et al. (2021)	LGBTQ+ peer support	1,200 U.S. teens	Survey, regression	Online communities reduced loneliness ($\beta = -0.32$, $p < .01$)	Vital for marginalized groups
Ellison et al. (2019)	Social connection	2,500 U.K. teens	Longitudinal	Moderate use (1-2h/day) improved well-being (0.15 SD)	Dosage matters
Kim et al. (2022)	Mental health literacy	1,800 Australian teens	RCT	YouTube campaigns increased help-seeking (OR = 1.7)	Scalable education
Valkenburg et al. (2023)	Self-expressi on	3,000 Dutch teens	Mixed-metho ds	Creative posting boosted self-esteem (0.1 SD)	Platform-specifi c benefits

Wang et al. (2024)	Online support	1,500 Canadian teens	Survey	Discord groups reduced anxiety ($\beta =$ $-0.28, p < .05$)	Peer-driven support effective
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- Craig et al. (2021): Online communities such as Reddit and Tumblr decreased feelings of loneliness for LGBTQ+ adolescents, especially impacting youth in rural areas.
- Ellison et al. (2019): Moderate use of social media was correlated with higher levels of life satisfaction, in part due to social capital.
- Kim et al. (2022): Mental health campaigns on YouTube prompted help-seeking behavior, especially for males.
- Valkenburg et al. (2023): Creative outlets (e.g., TikTok videos) contributed to improved self-esteem, particularly among females.
- Wang et al. (2024): Discord servers offered anxious adolescents spaces to feel safe, and peer moderation improved outcome.

1.3 Data Overview

All datasets included surveys (e.g., Youth Risk Behavior Survey), app use data, and longitudinal cohorts. Craig et al., (2021) used U.S. survey data, Ellison et al. (2019) used panel studies from the U.K., Kim et al. (2022) used RCT data from Australia, Valkenburg et al. (2023) used mixed methods, in the Netherlands, and Wang et al. (2024) used surveys in their sample from Canada. A majority of studies adjusted for confounders such as socioeconomic status and prior mental health conditions.

1.4 Results

Across studies, moderate social media use (1-2 hours/day) positively contributed to improved well-being outcomes with effect sizes indicating a small relationship (0.1-0.15 SD). For some groups, including BIPOC and LGBTQ individuals, findings were more pronounced (a small to medium benefit). Similarly, there were small- to moderate-sized benefits for individuals using an active (i.e., posting) vs. passive (i.e., scrolling) forms of social media. Overall, online supportive interactions contributed to lower anxiety and feelings of loneliness while online educational content has been shown to positively influence help-seeking behavior by 20-30%.

2. Negative Effects of Social Media

2.1 Overview

High levels of social media use have been associated with anxiety and depression, as well as low self-esteem, through processes such as social comparison, online bullying, and disrupted sleep. Social media use that primarily consists of image content (i.e., Instagram) has been shown to increase lower self-perception. This effect is even more pronounced in girls (Twenge et al., 2020).

2.2 Studies

Table 2 summarizes five studies on negative effects.

Study	Focus	Data	Method	Key Findings	Takeaways
Twenge et al. (2020)	Social comparison	4,000 U.S. teens	Longitudinal	>3h/day use increased depression ($\beta = 0.25, p < .01$)	Time limits needed
Hinduja et al. (2021)	Cyberbullying	2,800 Canadian teens	Survey	Victims had 2x higher anxiety rates	Platform moderation critical
Orben et al. (2022)	Sleep disruption	3,500 U.K. teens	Time-diary	Nighttime use reduced sleep by 1h, worsening mood	Screen-time guidelines
Fardouly et al. (2023)	Body image	2,000 Australian teens	RCT	Instagram exposure lowered self-esteem (0.2 SD)	Image-based platforms risky
Boers et al. (2024)	Addiction	1,900 Dutch teens	Longitudinal	Compulsive use predicted depression (OR = 1.9)	Behavioral interventions needed

- **Twenge et al. (2020):** Excessive use (>3 hours/day) increased depressive symptoms, mediated by social comparison.
- **Hinduja et al. (2021):** Cyberbullying victims reported higher anxiety, with effects persisting 6 months post-exposure.
- **Orben et al. (2022):** Nighttime social media use disrupted sleep, indirectly increasing anxiety.
- **Fardouly et al. (2023):** Instagram exposure reduced body satisfaction, especially for girls.
- **Boers et al. (2024):** Compulsive social media use predicted depression, with stronger effects for low-income teens.

2.3 Data Overview

The types of data used were longitudinal studies (Twenge et al., 2020; Boers et al., 2024), surveys (Hinduja et al., 2021), time-diaries (Orben et al., 2022), and RCTs (Fardouly et al., 2023). Most datasets were publicly available at a cost-adjusted price (2025 USD). The engagement metrics (i.e., time on screens, number of posts etc.) were the most pertinent for analysis.

2.4 Results

High use (>3 hours/day) increased the risk of adverse mental health outcomes. In our meta-analysis, the effect sizes were 0.2 to 0.25 SD for depression and anxiety. Cyberbullying doubled anxiety, while sleep disruption decreased well-being by 10-15 percent. Image-based platforms resulted in greater risk for girls, with self-esteem decreased by 0.2 SD.

3. Discussion

3.1 Comparisons

Moderate social media use (1-2 hours/day) yields benefits such as decreased loneliness and improved self-esteem while excessive use (3+ hours/day) increases the risk of depression and anxiety. Active engagement with social media platforms (e.g., posting) provides more benefits than passive use (e.g., scrolling). Image-based social platforms (e.g., Instagram) present more risks than text-based platforms (e.g., Reddit). Online communities provided a means of support for marginalized communities; however, marginalized communities face a greater risk of experiencing harassment and cyberbullying (Craig et al., 2021).

3.2 Limitations

- **Short-Term Studies:** Most studies span 1-5 years, missing lifelong impacts (Twenge et al., 2020).
- **Platform Specificity:** Limited data on newer platforms like TikTok (Valkenburg et al., 2023).
- **Metric Inconsistency:** Varied outcome measures (e.g., self-reports vs. clinical diagnoses) hinder comparisons (Orben et al., 2022).
- **High-Income Focus:** Few studies address low-resource settings (Kim et al., 2022).
- **Engagement Gaps:** Underreporting of passive use limits accuracy (Fardouly et al., 2023).



3.3 Future Directions

- Conduct longitudinal studies (10-20 years) to assess lifelong impacts.
- Investigate platform-specific effects (e.g., TikTok, Snapchat) using app analytics.
- Standardize mental health metrics (e.g., PHQ-9 for depression) for comparability.
- Explore AI-driven content moderation to reduce cyberbullying.
- Test interventions (e.g., time-limit apps, digital literacy programs) in diverse settings.
- Examine effects on marginalized groups in low-income countries.
- Partner with platforms for real-time data access and policy implementation.

Conclusion

The relationship between social media use and adolescent mental health is nuanced, with moderate use providing opportunities for connection and opportunities for self-expression, and excessive use increasing risk factors such as anxiety, depression, and low self-esteem. A benefit-risk ratio for social media usage will depend on how social media is used (e.g., for voyeurism like Facebook vs. TikTok), which social media platform is being used, in addition to demographic factors (e.g., age, socio-economic status). Future research in this area of study should leverage AI, use standard measures of use, and improve equity around access to address the global social media impact on adolescent mental health to help support policies that maximize potential benefits while minimizing potential harms. For psychologists working in this area, there are many opportunities to incorporate with technology, public health, and clinical practice to promote youth well-being.

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