

The Impact of Social Media on Youth Mental Health: Challenges and Opportunities

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The technology landscape has rapidly evolved in recent years, with social media now playing a central role in the lives of youth. Social media has created both significant new challenges and exciting opportunities. Research is beginning to uncover how specific social media experiences may influence youth mental health.

Digital technologies have become a universal feature of young people's lives. Exposure to screens begins early in life for many youth, with US children under age two spending an average of 42 minutes per day with screen media [1]. By the time youth reach adolescence, most are fully immersed in a world of smartphones, computers, and social media. Recent nationally representative statistics suggest that 95% of adolescents aged 13-18 have access to a smartphone and 88% have access to a desktop or laptop at home [2]. In 2018, 45% of US adolescents reported that they were online "almost constantly," up from 24% only three years prior [2]. The pervasiveness of new media has created an increasingly complex environment for youth, parents, health care providers, and policymakers to navigate. Indeed, while this media environment has introduced numerous new challenges and risks for youth mental health, so too has it presented considerable benefits and opportunities.

Adolescence and the Media Landscape

Today's media landscape is larger and more diverse than ever before, with youth having access to an unprecedented volume of digital content across numerous devices, including smartphones, tablets, computers, laptops, and gaming consoles. Social media represents a central component of this landscape. Broadly, social media is defined as any digital tools or applications that allow users to interact socially [3], and can be distinguished from traditional media (eg, television) by the fact that users can both consume and create content. Under this broad definition, "social media" may include social networking sites (eg, Instagram, Snapchat, Facebook, TikTok), text messaging and messaging apps, social gaming tools, YouTube, and more. Any comprehensive understanding of contemporary adolescents' mental health requires a consideration of the role of social media.

Adolescence represents a period of heightened risk for the onset of mental illness, with nearly 1 in 5 adolescents suffering from a diagnosable mental disorder [4]. Notably, the incidence of certain mental health concerns, such as depression [5] and suicide [6], have increased significantly among adolescents in recent years, with rates of suicide among youth aged 10-24 increasing 56% from 2007 to 2017 [6]. Given that this increase has coincided with the widespread adoption of social media, this has led to concerns regarding a potential link. In addition, technology use tends to increase over the course of childhood, with adolescents using new media, and social media in particular, at higher rates and with greater frequency than younger children [7]. Nearly all adolescents aged 13-17 use some form of social media, with the most popular sites currently being YouTube (85%), Instagram (72%), Snapchat (69%), and Facebook (51%) [2]; however, new platforms are frequently introduced, with some (ie, TikTok), quickly gaining traction among young people.

Furthermore, social media may uniquely appeal to adolescents given the characteristics of this developmental period, making teens particularly susceptible to both the opportunities and risks of new technologies. During adolescence, rapid development of the brain's socioaffective circuitry may heighten sensitivity to social information, increasing the drive for social rewards and concern over peer evaluation [8]. Important developmental tasks of adolescence include the establishment of intimate peer relationships, increasing independence from adults, and the exploration of identity [9]. Social media offers a prime context for navigating these tasks in new, increasingly complex ways: peers are constantly available, personal information is displayed publicly and permanently, and quantifiable peer feedback is instantaneously provided in the form of "likes" and "views" [10].

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Understanding the Impact of Social Media on Youth Mental Health

Research on social media and adolescent mental health has proliferated in recent years, with many studies exploring whether more frequent use of social media is associated with various mental health concerns, including depression [11], body image concerns and disordered eating [12], and externalizing problems [13]. In general, findings from these studies have been mixed, with many revealing a small but significant negative effect of social media use on mental health. A growing body of work now seeks to build on these studies with more nuanced investigations of *how*, *why*, and *for whom* social media use may have positive or negative effects on youth development. Social media comprises a vast array of digital tools, and thus characterizing its overall effect on youth remains challenging. First, it is important to understand individual strengths and vulnerabilities that may predispose certain adolescents to engage with and respond to social media in adaptive or maladaptive ways. In addition, it is critical to identify how *specific* social media behaviors or experiences may put adolescents at risk.

Potential Risks of Social Media for Adolescent Mental Health

Adolescents' peer experiences play a critical role in the onset and maintenance of psychopathology. Within the social media environment, peer interactions can occur with increased frequency, immediacy, and intensity [10]. Specific online peer experiences have been identified in prior work as potential risk factors for mental health concerns. Cybervictimization, or the experience of being a victim of bullying by peers online, has been consistently found to be associated with higher rates of self-harm and suicidal behavior [14], as well as internalizing and externalizing problems [15]. Other types of social media peer experiences, such as social exclusion and online conflict or drama [16], also may put youth at risk. Peer influence processes may also be heightened online, where youth may access a wide range of their peers in addition to potentially risky content. Youth who are exposed to social media content depicting risky behaviors (ie, alcohol and other substance use) may be more likely to engage in these behaviors themselves [17]. Content related to suicide and self-injury may also be read-

ily available online, potentially increasing suicide risk among youth who are already vulnerable. In a recent study of over 400 youth who were psychiatrically hospitalized due to risk of harm to self or others, a small but meaningful proportion of youth reported viewing online content that promoted suicide (14.8%) or self-injury (16.6%) during the two weeks prior to their admission [18].

Social comparison may be another risk associated with adolescents' social media use. Individuals frequently engage in selective self-presentation on social media, resulting in a stream of posts and images that are often carefully crafted to portray users in a positive light. This may lead some youth to engage in negative social comparisons regarding their own accomplishments, abilities, or appearance. Studies have shown that higher levels of online social comparison are associated with depressive symptoms in youth [19], and that appearance-specific comparisons on social media may heighten risk for disordered eating and body image concerns [20].

Finally, a critical consideration in examining the effects of technology use on youth mental health is the issue of

displacement: what other important activities are being replaced by time spent on social media? It is well-established that sleep hygiene is essential to youth mental health and development. However, prior work has reliably demonstrated a link between mobile screen time before bed and a range of poorer sleep outcomes, including shorter sleep duration, poor sleep quality, and daytime sleepiness [21]. Notably, 40% of adolescents report that they use a mobile device within five minutes before going to sleep, and 36% report waking up to check their device at least once during the night [22]. Thus, the impact of social media on sleep quality remains a primary risk for subsequent mental health concerns among youth, and is an important area for future study.

Potential Benefits of Social Media for Adolescent Mental Health

While much of the narrative surrounding new media use among adolescents has emphasized potential risks, the unique features of the social media environment have also created new opportunities for promoting adolescents' mental

health. In general, there is a range of potential benefits associated with social media use, including possibilities for humor and entertainment, identity exploration, and creative expression [2, 16, 23]. One of the most clearly established benefits of social media use is that of social connection, with 81% of teens reporting that social media allows them to feel more connected to their friends [16]. In a recent nationally representative survey, 77% of adolescents reported that social media was at least “somewhat” important for keeping up with friends on a day-to-day basis, and 69% reported it to be at least somewhat important for having meaningful conversations with close friends [23]. Adolescents frequently cite connecting with friends and family as a primary positive aspect of social media [2], and prior work generally shows that social media use promotes individuals’ well-being when it is used to advance a sense of acceptance or belonging [24].

The public and highly accessible nature of social media also creates the possibility for establishing new connections online. This may provide opportunities to receive online social support for certain youth, particularly those who may not readily have access to communities of similar peers. For

example, youth identifying as LGBTQ have been shown to be more likely than non-LGBTQ youth to have online friends and to identify these friends as an important source of emotional support [25]. The receipt of online social support may also play a protective role for youth with mental illness, including depression and suicidality. Indeed, one study suggests that more than half (57.0%) of psychiatrically hospitalized youth report receiving social support or encouragement on social media during the two weeks prior to their admission [18].

The promise of new media for promoting adolescent mental health goes beyond its day-to-day use among youth to include novel health care applications in screening, treatment, and prevention. In regard to screening, prior work has demonstrated the potential feasibility of reviewing social media pages for signs of depression or substance abuse [17, 26]. On a larger scale, increasingly sophisticated machine learning algorithms have been developed to detect social media-based signals of mental illness, including depression, post-traumatic stress disorder, and suicidality [27]. Social networking sites like Facebook and Instagram have already implemented screening and intervention

procedures when users exhibit signs of emotional distress or suicide risk. Social media also presents unprecedented opportunities for increasing mental health awareness, and social media-based health promotion efforts have been tested for a variety of mental and behavioral health concerns [28]. The immediate accessibility and potential scale of social media offers exciting possibilities for youth mental health treatment, including the potential to serve hard-to-reach populations. While a large number of mental health mobile apps have recently been developed for youth, and initial evidence supports their acceptability, further research is needed to establish efficacy and effectiveness.

Conclusions and Future Directions

Over the past two decades, new media have established an increasingly central presence in the lives of youth, presenting both new challenges and new opportunities. An emerging body of research has begun to identify social media experiences that may contribute to adolescents' mental health. However, more research is needed as the digital media landscape continues to rapidly evolve. Much of the existing research has relied on self-report measures of adolescent media use, and has been conducted at a single time point, preventing any definitive conclusions regarding whether media use precedes and predicts mental health outcomes or vice versa. Future experimental and longitudinal studies are needed, including those that incorporate objective measures, such as direct observation of adolescents' social media pages. In addition, future investigations must continue to move beyond previous notions of "screen time" as a primary contributor to mental health, and instead consider the specific social media experiences and individual characteristics that may make certain adolescents particularly vulnerable to social media's positive or negative effects. Finally, the translation of basic social media research findings into clinical and policy application remains an area of critical need in the field. As the presence of new media only continues to grow, it will be essential to develop evidence-based approaches for encouraging healthy social media use in youth, and to effectively utilize these tools for mental health screening and intervention. *NCMJ*

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