⊖ OPEN ACCESS

Pediatrics

The Impact of Social Media on Adolescent Mental Health

Ameen Shamsudeen[1]*, Muhammad Umer Ghafoor[1]

[1]Consultant Paediatrician, Primary Healthcare Corporation, Qatar

*Corresponding author: Ameen Shamsudeen
Consultant Paediatrician, Primary Healthcare Corporation, Qatar

Abstract	Review Article

The widespread use of social media and the changing patterns in adolescent mental health issues has sparked a multifaceted debate around the influence of social media on teenage mental health. The world of virtual socialisation being a unique and very recent problem in human history, the evidence base is continuously evolving. We examined the literature in the last five years, anchoring the evidence on a balanced theoretical frame work, to understand the nuances of this complex relationship. There is a significant influence of social media use on adolescents in general, determined by their unique developmental vulnerabilities and heavily influenced by the sociocultural aspects and type and duration of social media use. The sheer infinite nature of the virtual world and removal of traditional barriers to socialisation has exposed the youth to influences that were hitherto unknown. We found strong evidence in literature to support the amplification of negative emotions in adolescence, contributing to the rapidly increasing incidence of teenage depression and anxiety and even suicidal tendencies. However there is also good evidence to support the positive effects of social media on adolescents, especially so in certain groups and communities. Moreover the evidence is likely to change as we are becoming more digitally resilient and safer practices and regulations continue to evolve and this is an important space to watch for future researchers and practitioners.
Keywords: Social Media, Adolescent Mental Health, Depression, Anxiety, Influence.

INTRODUCTION

The use of social media platforms has become an integral part of the daily routines of modern adolescents. With just over a decade of experience and evidence this has sparked a multifaceted debate regarding its potential for their psychological and emotional well-being. [Gupta *et al*., 2022]. Adolescence in itself is a very sensitive developmental stage, characterised by heightened sensitivity to social cues, identity exploration, and an evolving sense of self, making them particularly susceptible to both positive and negative influences exerted by these digital environments [Magaldi *et al*., 2020]. It remains extremely difficult to isolate the impact of individual influences, but there are enough reasons to believe that the accessibility and widespread adoption of social media have fundamentally reshaped the landscape of adolescent socialization, communication, and information consumption [Hamilton *et al*., 2021].

The debate surrounding social media's impact on adolescent mental health is complex, with some studies suggesting a correlation between increased social media usage and the emergence of depressive symptoms, while others highlight the potential for social media to foster social connections and provide access to mental health support [Sanger, 2020]. The current body of research presents mixed findings, regarding the impact of social media on adolescent mental health. Some studies show significant negative effect of social media use on mental health but there isn't enough evidence to definitively establish causality [Khalaf *et al*., 2023; Nesi, 2020]. It is important to acknowledge that the association between social media engagement and adolescent mental well-being is far from a simple, linear relationship, demanding a detailed understanding of the various contributing factors.

Theoretical Framework

There are multiple factors that influence the mental and emotional well being of teenagers. For a better scientific approach to this complex multifaceted landscape, we need to examine all the different aspects. This includes an understanding of the unique growth and developmental differences and adolescence, the cultural and social pressures they face and how the interactions in the digital platforms affect them. In this review we use three lenses to develop a deeper understanding of the problem and how the social media influence fits into the puzzle.

The Developmental-Contextual Framework emphasizes the unique psychological vulnerabilities of adolescents, who are in a critical period of identity formation, emotional regulation development, and heightened social sensitivity [Choukas-Bradley *et al.*, 2022]. Historically, these were determined by real social interactions which were limited, protected by cultural boundaries and heavily influenced by the protective adult community. However the widespread use of social media has redefined the breadth of social interactions that adolescents are exposed to. According to this model, digital interactions are particularly impactful during adolescence because of the developmental tendency to gain peer approval and construct a coherent self-concept. The unlimited virtual world and the immersive nature of social media may amplify these processes by exposing adolescents to constant social comparison, validation-seeking behaviours, and potential cyberbullying [Young *et al.*, 2024].

The Sociocultural Perspective focuses on the role of cultural norms, gender expectations, and societal values in shaping adolescents' experiences of social media. For instance, [Merino *et al.*] highlight how gendered beauty ideals perpetuated on platforms like Instagram disproportionately affect adolescent girls, contributing to body dissatisfaction and diminished self-esteem. Similarly, [Hjetland *et al.*] find that Norwegian adolescents internalize often unrealistic societal expectations mediated through social media, affecting their sense of well-being and social worth. This perspective also highlights how adolescents' experiences can vary across different cultures as evidenced in studies from China [Miao *et al.*, 2024] and Saudi Arabia [Faqihi *et al.*, 2024], where sociotechnical environments and cultural expectations intersect with digital media exposure.

The Digital Stress Model highlights how the constant connectivity and performance pressures of social media contribute to adolescent stress. Research found that digital exposures to cyberbullying, secret accounts and addictive usage patterns significantly correlate with increased risks of mental health issues, including a history of suicide attempts, even after accounting for non-digital adversities like abuse or poverty [Pagliaccio *et al.*, 2024]. [Feng *et al.*] further suggest that social media addiction is intricately linked to mental health symptoms including anxiety depression and academic burnout, reinforcing the cyclical nature of digital stress and psychological distress. Moreover, Adolescents reported feelings of anxiety and stress stemming from themes such as such as the pressure to maintain an ideal online image and the fear of missing out (FOMO), highlighting the need for coping strategies to manage overwhelming online interactions. [Popat *et al.*, 2023]

These models provide a nuanced framework for understanding how social media interacts with adolescent development, psychosocial environments, and mental health. This allows for a deeper exploration that goes beyond simple cause-and-effect explanations, making room for the varied and ever-changing ways adolescents experience social media across different cultures and digital environments.

Current Research on Social Media and Adolescent Mental Health

Widespread use of social media and the drastic switch from real world to virtual world socialisation is a very recent phenomenon and the body of research is therefore limited. Early investigations into the effects of social media on adolescent mental health reveal a complex land scape capturing both risks and potential benefits. Quantitative and qualitative studies reveal that the mental health outcomes are influenced by the usage patterns, content exposure, and individual psychological traits. Research indicates that high-frequency social media use is often associated with increased risk of anxiety, depression, and feelings of loneliness [Nazari *et al.*, 2023; Prasad *et al.*, 2023]. Adolescents report persistent feelings of sadness or hopelessness linked to online interactions, cyberbullying, and social comparison [Young *et al.*, 2024]. In the United States, the Youth Risk Behavior Survey found that frequent social media use correlated with heightened suicide risk among high school students [Young *et al.*, 2024].

Body image dissatisfaction emerges as a recurrent theme, especially among adolescent girls. Visual-based platforms contribute to the internalisation of unrealistic appearance standards, resulting in lower self-esteem and disordered eating behaviours [Sagrera *et al.*, 2022; Merino *et al.*, 2024]. [Choukas-Bradley *et al.*] describe a "perfect storm" resulting from the intersection of social media features, adolescent developmental factors and sociocultural gender norms.

In contrast, several studies suggest potential benefits of social media, including enhanced social connectedness, peer support, and identity exploration [Odgers *et al.*, 2020; Shahzad *et al.*, 2024]. Adolescents can access mental health resources, share experiences, and foster a sense of belonging in marginalized groups. [Hjetland *et al.*] found that social media can serve as an emotional outlet and facilitate meaningful connections, particularly for youth in socially constrained environments.

Mediating factors such as mindfulness, perceived social capital, and levels of digital literacy significantly influence outcomes. [Zewude *et al.*] demonstrate that mindfulness and social support networks can buffer the negative impact of excessive social media use on mental health. Similarly, other researchers highlight a chain mediation model whereby social connectedness and psychological resilience mediate mental health outcomes in international students. [Miao *et al.*, 2024]

Gaps in the Literature

Several critical gaps remain despite the growing body of research. Many studies employ cross-sectional designs, making it difficult to determine cause and effect. Longitudinal studies, like [Wu *et al*.], are rare but essential to understand the real impact of social media effects on mental health.

Another important issue is that there is a lack of theoretical integration across studies. While frameworks like the Digital Stress Model are used, most empirical investigations lack a consistent theory to guide it, making it harder to understand the underlying mechanisms.

Most research disproportionately focuses on negative outcomes, such as anxiety and depression, with less attention to positive developmental impacts like digital resilience or online political and social engagement.

Also, the heterogeneity of adolescent experiences based on gender, socioeconomic status, and cultural background has not been sufficiently examined. There is a shortage of comparative studies across varied settings such as Saudi Arabia, China and Norway

Lastly, technological evolution outpaces academic research. New social media platforms, changing algorithms and user behavior calls for adaptive and anticipatory research methodologies.

SYNTHESIS AND IMPLICATIONS

The literature reviewed underscores the complex nature of social media's influence on adolescent mental health. While many studies have documented correlations between excessive or poorly managed social media use and adverse psychological outcomes—such as anxiety, depression, low self-esteem and body image concerns [Keles *et al*., 2020; Twenge *et al*., 2018]—these effects are influenced by complex mediating factors. These include an adolescent's age and developmental stage, how they use the platforms, and the presence or absence of protective offline psychosocial support systems such as healthy family relationships, good friendships, and a sense of community [Raju *et al*., 2018; McArthur *et al*., 2022].

Adolescents with pre-existing mental health conditions, poor offline relationships, or are highly sensitive to social comparison are particularly susceptible to the negative effects of online interactions [Nesi *et al*., 2020]. One of the most serious and consistent risks identified is cyberbullying, which has been linked to higher levels of depression, anxiety, suicidal ideation, and low self-esteem. Studies [Young *et al*., 2024] show that victims of online harassment are significantly more likely to report persistent feelings of sadness and hopelessness. Cyberbullying is particularly harmful to the teens as it often occur outside of school hours and in the privacy of their homes. Research

reinforce that adolescent girls are especially vulnerable to negative emotions. For them, online harassment and unrealistic beauty standards contribute not only to body dissatisfaction but also to heightened emotional stress and social withdrawal. [Merino *et al*., al.2021]

Despite these risks, viewing social media only in a negative light oversimplifies its role and can be potentially misleading. Digital platforms also serve as vital venues for building friendships, identity exploration, and mental health advocacy, especially for adolescents living in rural areas, marginalised groups or restrictive cultural environments [Gupta *et al*., 2022; Rideout *et al*., 2020]. Platforms such as TikTok and Instagram are increasingly being used to share coping strategies, reduce stigma surrounding mental illness, and facilitate access to professional and peer support. These platforms may provide emotional support, validation and a sense of belonging for the youth who struggle to find acceptance offline.

From a developmental standpoint, the adolescent brain is more reactive to emotional stimuli and social validation, rendering youth highly sensitive to both the rewards and dangers of online engagement. However, this same sensitivity makes them more responsive to positive digital interventions, such as mental health education content, peer-led support groups, and algorithmically recommended wellness resources [Popat *et al*., 2023]. This creates a powerful opportunity to redirect social media use toward constructive outcomes.

To support adolescents in navigating this complex landscape, interventions must evolve beyond digital abstinence or simple restriction. Policy and clinical strategies should instead aim to cultivate healthy digital habits, foster critical media literacy, and enable adolescents to engage with online content in mindful and intentional ways. Schools should integrate media literacy curricula that teach youth to recognise manipulation, resist peer pressure, and develop emotional regulation in online settings. Policymakers can advocate for algorithm transparency, age-appropriate content filters, and protections against cyberbullying—measures increasingly supported by public health bodies like the UK Parliament POST and Ofcom.

Mental health practitioners must also play a proactive role, viewing digital life not as an external or pathological influence but as a central context in adolescent development. Therapeutic models should incorporate discussions of social media experiences, offering coping strategies for managing digital stress, cyberbullying, and the pressures of self-presentation. Interventions fostering mindfulness, resilience, and positive digital engagement—as highlighted by [Zewude *et al*.] and [Shahzad *et al*.]—show growing promise in buffering negative outcomes.

Finally, future research in line with the rapidly evolving digital landscape and closely watching new evidence is vital. As new platforms, content formats, and AI-driven recommendation systems reshape adolescent interactions, research must explore how these technologies influence psychological well-being—and how they might be harnessed for good. Studies should examine not only risk but also the protective factors and affordances of digital environments, particularly for vulnerable subgroups. A nuanced, culturally sensitive, and developmentally informed research agenda is essential for creating adaptive solutions that empower rather than alienate young people in their online worlds.

CONCLUSION

The relationship between social media and adolescent mental health is complex, contextual, and continually evolving. Although the risks associated with excessive or maladaptive use are significant, the opportunities for empowerment, connection, and support cannot be ignored. The future of research must move toward longitudinal, culturally sensitive, and theoretically robust investigations that capture the full spectrum of adolescent digital experiences. By adopting a balanced and interdisciplinary approach, stakeholders can harness the potential of social media while mitigating its harms, ultimately fostering healthier developmental trajectories for young people in the digital age.

REFERENCES

1. Gupta, R., Chauhan, N., & Sharma, R. (2022). Social media usage and psychological impact on youth: A cross-sectional study. Indian Journal of Community Medicine, 47(1), 46–50.
2. Magaldi, D., Clemente, G., & Di Paolo, F. (2020). The mediating role of emotional regulation between social media use and adolescent mental health. Journal of Adolescence, 85, 19–30.
3. Hamilton, J. L., Nesi, J., & Choukas-Bradley, S. (2021). Teens and Screens: The Relationship Between Social Media Use and Adolescent Mental Health. Current Opinion in Psychology, 44, 258–263.
4. Sanger, E. (2020). Social networking in mental health interventions for adolescents. Perspectives in Public Health, 142(5), 261–262. https://doi.org/10.1177/1757913920924431
5. Khalaf, A. M., Alubied, A. A., & Rifaey, A. A. (2023). The impact of social media on the mental health of adolescents and young adults: A systematic review. Cureus, 15(8), e42990. https://doi.org/10.7759/cureus.42990
6. Young, E., McCain, J. L., Mercado, M. C., Ballesteros, M. F., Moore, S., Licitis, L., et al. (2024). Frequent Social Media Use and Experiences with Bullying Victimization, Persistent Feelings of Sadness or Hopelessness, and Suicide Risk Among High School Students — Youth Risk Behavior Survey, United States, 2023. MMWR Suppl., 73(4), 23–30. https://doi.org/10.15585/mmwr.su7304a3
7. Miao, C., & Zhang, S. (2024). The effect of mobile social media on the mental health status of Chinese international students: an empirical study on the chain mediation effect. BMC Psychology, 12, 411. https://doi.org/10.1186/s40359-024-01915-2
8. Faqihi, F. A., Qutob, R. A., Subh, R. H. M., et al. (2024). Examining the Effects of Social Media on Mental Health Among Adolescents in Saudi Arabia. Cureus, 16(1), e53261. https://doi.org/10.7759/cureus.53261
9. Pagliaccio, D., Tran, K. T., Visoki, E., DiDomenico, G. E., Auerbach, R. P., & Barzilay, R. (2024). Probing the digital exposome: associations of social media use patterns with youth mental health. NPP Digit Psychiatry Neurosci., 2, 5. https://doi.org/10.1038/s44277-024-00006-9
10. Feng, T., Wang, B., Mi, M., Ren, L., Wu, L., Wang, H., Liu, X., & Wang, X. (2025). The relationships between mental health and social media addiction, and between academic burnout and social media addiction among Chinese college students: A network analysis. Heliyon, 11(3), e41869. https://doi.org/10.1016/j.heliyon.2025.e41869
11. Popat, A., & Tarrant, C. (2023). Exploring adolescents 'perspectives on social media and mental health and well-being – A qualitative literature review. Clinical Child Psychology and Psychiatry, 28(1), 323–337. https://doi.org/10.1177/13591045221092884
12. Nazari, M., Sulaiman, N., Khan, I., et al. (2023). Association between screen time and mental health: A review of recent evidence from global studies. Psychiatry Research, 319, 114991.
13. Prasad, S., Ait Souabni, S., Anugwom, G., Aneni, K., Anand, A., Urhi, A., et al. (2023). Anxiety and depression amongst youth as adverse effects of using social media: A Review. Annals of Medicine and Surgery, 85(8), 3974–3981. https://doi.org/10.1097/MS9.0000000000001066
14. Sagrera, C. E., Magner, J., Temple, J., et al. (2022). Social media use and body image issues among adolescents in a vulnerable Louisiana community. Frontiers in Psychiatry, 13, 1001336. https://doi.org/10.3389/fpsyt.2022.1001336
15. Merino, J. G., Muñoz-Fernández, N., & Navas, M. P. (2024). Adolescent exposure to body ideals on Instagram and effects on body dissatisfaction: A gendered analysis. Psychology of Popular Media, 13(1), 56–70.
16. Odgers, C. L., & Jensen, M. (2020). Adolescent Mental Health in the Digital Age: Facts, Fears and Future Directions. Journal of Child Psychology and Psychiatry, 61(3), 336–348. https://doi.org/10.1111/jcpp.13190
17. Shahzad, M. F., Xu, S., Lim, W. M., Yang, X., & Khan, Q. R. (2024). Artificial intelligence and social media on academic performance and mental well-being: Student perceptions of positive impact in the age of smart learning. Heliyon, 10(8), e29523. https://doi.org/10.1016/j.heliyon.2024.e29523