

RAMLAU, Natalia, CYRULIK, Michalina, PRAGER-ZIMNY, Marta, IMBIRSKA, Beata, JANISZEWSKA, Michalina, SIMACHI, Michalina, HLADKI, Michal, PODOLAK, Marcin, FISCHER, Zuzanna and KOLENDA, Dominika. The Impact of Social Media on the Mental Health of Young Children and Adolescents. *Journal of Education, Health and Sport*. 2025;86:67495. eISSN 2391-8306.
<https://doi.org/10.12775/JEHS.2025.86.67495>
<https://apcz.umk.pl/JEHS/article/view/67495>

The journal has had 40 points in Minister of Science and Higher Education of Poland parametric evaluation. Annex to the announcement of the Minister of Education and Science of 05.01.2024 No. 32318. Has a Journal's Unique Identifier: 201159. Scientific disciplines assigned: Physical culture sciences (Field of medical and health sciences); Health Sciences (Field of medical and health sciences). Punkty Ministerialne 40 punktów. Załącznik do komunikatu Ministra Nauki i Szkolnictwa Wyższego z dnia 05.01.2024 Lp. 32318. Posiada Unikatowy Identyfikator Czasopisma: 201159. Przypisane dyscypliny naukowe: Nauki o kulturze fizycznej (Dziedzina nauk medycznych i nauk o zdrowiu); Nauki o zdrowiu (Dziedzina nauk medycznych i nauk o zdrowiu). © The Authors 2025; This article is published with open access at Licensee Open Journal Systems of Nicolaus Copernicus University in Torun, Poland Open Access. This article is distributed under the terms of the Creative Commons Attribution Noncommercial License which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author (s) and source are credited. This is an open access article licensed under the terms of the Creative Commons Attribution Non commercial license Share alike. (<http://creativecommons.org/licenses/by-nc-sa/4.0/>) which permits unrestricted, non commercial use, distribution and reproduction in any medium, provided the work is properly cited. The authors declare that there is no conflict of interests regarding the publication of this paper. Received: 15.12.2025. Revised: 21.12.2025. Accepted: 28.12.2025. Published: 31.12.2025.

The Impact of Social Media on the Mental Health of Young Children and Adolescents

Natalia Ramlau, ORCID <https://orcid.org/0009-0006-3595-1529> naramlau@gmail.com

University Hospital in Poznań

Przybyszewskiego 49, 60-355 Poznań

Michalina Cyrulik, ORCID <https://orcid.org/0009-0008-9174-801X>
michalina.cyrulik@onet.pl University Hospital in Poznań

Przybyszewskiego 49, 60-355 Poznań

Marta Prager-Zimny, ORCID <https://orcid.org/0009-0000-6412-3745>
marta.prager98@gmail.com

University Hospital in Poznań

Przybyszewskiego 49, 60-355 Poznań

Beata Imbirska, ORCID <https://orcid.org/0009-0002-2941-3418> beata.imb@gmail.com

Regional Hospital in Poznań,

Juraszów 7/19, 60-479 Poznań

Michalina Janiszewska, ORCID <https://orcid.org/0009-0001-1321-8565>
janiszewska.michalina@gmail.com University Hospital in Poznań

Przybyszewskiego 49, 60-355 Poznań

Michalina Skrzypek, ORCID <https://orcid.org/0009-0002-9137-0535>
skrzypem97@gmail.com

University Hospital in Poznań

Przybyszewskiego 49, 60-355 Poznań

Michał Hładki, ORCID <https://orcid.org/0009-0000-2420-2203> hladki.mt@gmail.com

Medical Center HCP

28 czerwca 1956 r. nr 194, 61-485 Poznań

Marcin Podolak, ORCID <https://orcid.org/0009-0000-2839-728X>
marcin.podolak2@gmail.com

Medical Center HCP

28 czerwca 1956 r. nr 194, 61-485 Poznań

Zuzanna Fischer, ORCID <https://orcid.org/0009-0008-3530-5660>
zuzannakrysiak@gmail.com Hospital in Ostrow Wielkopolski

Limanowskiego 20-22, 63-400 Ostrów Wielkopolski

Dominika Kolenda, ORCID <https://orcid.org/0009-0007-9243-6723>
dominika.kolenda98@gmail.com S.T. Dąbrowski Hospital in Puszczykowo

Józefa Ignacego Kraszewskiego 11, 62-040 Puszczykowo

Abstract

Introduction

Adolescents are among the most active users of emerging digital technologies, especially social media platforms. The rapid development of social media has significantly reshaped how young people communicate, build relationships, and shape their identities. At the same time, questions about the impact of social media use on mental health have raised due to increasing rates of anxiety, depression, sleep problems, and disturbed body image. This review explores the intricate association between social media engagement and adolescent mental health. It highlights both disadvantages, as well as possible benefits of social media use.

Aim of the study

This review examines the influence of social media on adolescents and its diverse connection with mental health. While the current body of research provides valuable insights, it also reveals unexplored areas that should shape the direction of future investigations.

Materials and methods

We searched the following databases: PubMed, Web of Science, Google Scholar, clinical trial registry platforms, using key terms such as “social media”, “mental health”, “social media addiction”, “adolescents”.

Conclusion

This review highlights both the risks and benefits of adolescent social media use, emphasising its impact on mental health.

While over-consumption is linked to anxiety, depression, and sleep disruption, social media can also promote support, self-expression, and connection. Understanding factors is essential for developing effective clinical, educational, and policy-based interventions.

Key words: Social media, mental health, adolescent, depression, anxiety, sleep, self-esteem, internet, social media addiction, connection

Introduction

The rapid integration of digital technologies into everyday life has significantly shaped the developmental setting of adolescence. Among leading changes is the extensive use of social media, which now plays a central role in how young people communicate, form relationships and perceive themselves. A growing body of research indicates that frequent social media use may be associated with changes in various aspects of adolescent's well-being. Specifically, studies have linked high levels of exposure with mental-health problems [1,2,3], lower academic performance [4], and worsened social functioning [5].

Social media platforms have become indispensable in adolescent life. In Europe, it is reported that

80% of youth aged 9 to 16 use a mobile phone daily to access the internet. (6,7) In the United States, data shows that the vast majority of adolescents—approximately 95%—own at least one mobile device, with 89% owning smartphones. (7, 8)

On a global scale, although digital access remains disparate across socioeconomic strata and geographical areas, children and adolescents constitute a significant portion of internet users: approximately one-third of all users globally are under the age of 18. (9) Furthermore, younger individuals—particularly those under the age of 35—are consistently found to be the most active users of digital technologies across both established and emerging markets. (10)

This extensive connectivity is happening during a life stage already characterised by profound physical, mental and social change. Adolescents are not only navigating the complex transition to adulthood but are also immersing themselves in digital environments that shape their social experiences in novel ways. (11) Social media platforms have become key arenas where young people express themselves, seek social validation, and engage in peer interaction. These platforms offer new opportunities for connection but also introduce unique psychological

pressures, including the need to remain constantly available, the experience of social comparison, and potential exposure to harmful or distressing content.

While numerous studies have demonstrated correlations between social media use and adverse mental health outcomes, such as increased symptoms of depression, anxiety, sleep difficulties, and reduced self-esteem, there remains limited understanding of how adolescents themselves perceive and interpret the role of social media in their emotional and psychological lives. (12) This subjective dimension is crucial to examine, as adolescents' individual experiences with social media—such as how they engage with content, the emotional valence of their interactions, and their motivations for use—may significantly influence whether their online activity has a positive or negative impact on their well-being. (12)

The main point of this review is to highlight the dual nature of social media's influence on adolescent mental health. To explore this further, the present analysis integrates findings from a range of studies, focusing specifically on adolescents' perspectives and the themes that emerge from their reported experiences.

1. Mechanisms of Social Media's Impact on Mental Health

1.1 Social Comparison and Well-being

The World Health Organization defines mental health as a state in which an individual becomes aware of their abilities, copes with the normal stresses of life, works productively and contributes to their community. (13)

The psychological effects of social media use among adolescents are complex and inseparable from their developmental stage. Social media platforms—defined as digital spaces enabling user interaction through sharing images, comments, and reactions (14)—have become a routine part of daily life for most teenagers. (15) Given this, understanding how these platforms influence mental health and psychological well-being during adolescence is critically important. Numerous studies have found consistent associations between high levels of social media use and negative mental health outcomes, particularly among adolescents. This includes increased incidence of depressive symptoms (16), lower self-esteem, difficulty in sleeping and anxiety. (17) However, emerging research highlights that the way adolescents use social media may be more significant than the amount of time they spend online. In this regard, screen time alone has not been shown to have a strong causal effect on psychological well-being. (18) Instead, the motivations, emotional context, and patterns of engagement play a more direct role in shaping mental health outcomes. (12)

Offline vulnerabilities—such as low self-esteem, social anxiety, or difficulties with peer relationships—often carry over into online environments, where the effects can be intensified.

Research has called for greater attention to the interplay between online and offline experiences, particularly to understand how adolescents who face challenges in real life may be more susceptible to digital harm. (11)

1.2 Overstimulation and Information Overload

The adolescent brain is going through dynamic and critical changes during the teenage years, making young individuals particularly sensitive to environment. Research indicates that this period is described by significant alteration of brain regions involved in decision-making, emotional regulation, and reward processing. The prefrontal cortex, which governs rational judgment and impulse control, remains immature during adolescence. (19)

Unlike traditional media, social media delivers an unfiltered stream of content, ranging from personal updates and news to distressing images. Excessive exposure to such information can reinforce patterns, particularly due to processes such as synaptic pruning, which shapes the adolescent brain by strengthening frequently used neural connections. (20) Repeated engagement with certain types of content during adolescence may entrench maladaptive patterns more deeply, potentially worsening symptoms.

2. Social Media, Depression, and Anxiety

A growing body of evidence highlights a significant relationship between social media use and increased symptoms of depression and anxiety among young people. (21)

Adolescents who spend more time on social media, particularly during nighttime hours, and those who are more emotionally invested in online interactions tend to report poorer sleep quality, lower self-esteem, and elevated levels of anxiety and depressive symptoms. (17) The adolescent period is inherently sensitive, making young people vulnerable to emotional dysregulation and low selfworth. (21, 22)

Emerging research shows that not only the quantity but also the quality and emotional impact of social media use matter. Adolescents with greater emotional dependency on social media platform such as needing feedback to feel validated or experiencing distress when disconnected exhibit stronger associations with anxiety and depressive symptoms. (17)

Furthermore, constant exposure to notifications, messages, and alerts generates psychological pressure to remain constantly available, which creates anxiety, restlessness, and compulsive checking behaviours. (17)

Adolescent women, who use social media the most, have shown the sharpest increase in symptoms such as depression, loneliness, and suicidal ideation. (23, 24, 25) These trends are particularly alarming given concurrent national data indicating a rise in depressive symptoms (18) and suiciderelated behaviours. (26, 27)

Even though platforms offer privacy settings, users report experiences of photos or posts being shared without their consent, which weakens their sense of control and security. This contributes to heightened anxiety, particularly concerning the risk of personal data remaining permanently online.

(28)

3. Sleep Disturbances and Circadian Rhythm Disruption

Sleep is a critical component of adolescent development, playing a fundamental role in emotional regulation, cognitive functioning, and general wellbeing. (17) Research has drawn attention to the ways in which social media use, particularly during nighttime hours, disrupts healthy sleep patterns among adolescents. One key finding is that night time-specific social media use predicts poorer sleep quality, even after accounting for co-occurring mental health symptoms such as anxiety, depression and low self-esteem. (29) This suggests that the timing and emotional intensity of social media engagement, rather than bare screen time, are significant predictors of sleep disruption.

Up to 86% adolescents report sleeping with their phones in their bedrooms, often placing them under their pillows or holding them in their hands. (30) Constant proximity to devices enables the interruption of sleep by alerts, notifications, or messages throughout the night. (31, 32)

The blue light emitted from screens contributes by interfering with melatonin production, which is essential to regulate the circadian rhythm. Dysregulation of circadian rhythm causes poorer sleep and fatigue during daytime hours. (33)

When overall social media use correlates with poorer sleep quality, nighttime-specific social media use demonstrates an even stronger relationship . Adolescents with high emotional investment in social media, experience significantly poorer sleep quality. (17)

Adolescents who experience anxiety or arousal may turn to social media during the night as a coping mechanism, particularly when they are unable to fall asleep. (34) In such cases, digital media use may be a symptom rather than a cause of disturbed sleep, although it can create a negative feedback loop. (35)

Additionally, the content experienced on social media can alone influence sleep. Adolescents report that disturbing or violent can cause intrusive thoughts or nightmares that make it difficult to relax and fall asleep. (36) Stimulation from blue light and emotional engagement represents how social media usage in the evening hours interferes with healthy sleep.

4. Body Image Disturbances and Self-Esteem

Adolescence represents a critical period where body image is highly sensitive to external feedback and social comparisons. During this stage, adolescents are especially prone to low self-esteem. (22)

Evidence from recent studies indicates that overall social media use, as well as nighttime-specific use and emotional investment in social media, are all associated with reduced self-worth. (37)

Posting ‘selfies’, a frequent behaviour among adolescents, reinforces the externalisation of self-esteem. Girls, in particular, reported experiencing greater pressure to share selfies that meet conventional beauty standards, often coupled with stronger privacy concerns (38), they also frequently interpret likes on visually appealing images as confirmation of conforming to

body ideals, largely shaped by traditional and digital media portrayals of attractiveness. (39)

Even when adolescents are aware that images are digitally altered, they still engage in damaging comparisons that lower self-esteem and misrepresent body perception. (39)

5. Harmful Content: Self-Harm and Risk Behaviours

One of the most concerning aspects of social media use is the prevalence of harmful or triggering material, such as posts promoting self-harm, eating disorders or substance use.

The term ‘psychological harm’ in this context includes feelings of threat, intimidation, exclusion and distress, with outcomes varying depending on individual vulnerability and protective factors.

(40)

The possibility of staying anonymous in digital environments enables more extreme forms of victimisation compared to face-to-face interactions. According to research, cyberbullying's repetitive and detached nature can intensify psychological harm. Victims often feel helpless due to the permanence of online content. (41) This leads to various forms of cyberbullying, including name-calling, shaming, and public contempt, all of which have been linked to increased anxiety and

distress among adolescents. (42)

Victims of cyberbullying describe experiencing confusion and emotional isolation as a result of repeated psychological abuse. (43) Many teens accept online harassment as something they must endure or ignore, believing there are limited options for support or intervention. (44)

Beyond bullying, adolescents frequently reported unintentional or targeted exposure to highly triggering content. This includes posts with self-harm, which are especially dangerous for youth with pre-existing mental health conditions. (45)

In addition to mental health risks, social media also plays a role in promoting substance use. Adolescents who watched such content reported increased intention to use e-cigarettes, as well as lower substance use risk. (46) This relationship was significantly stronger among adolescents who were very frequent daily users of social media.

In younger adolescents, who may lack the cognitive and emotional maturity to critically evaluate harmful messages or regulate their exposure, the relationship between heavy social media use and psychological distress is significantly stronger. (47)

6. Protective Factors and Intervention Strategies

While much attention has been directed toward the risks associated with social media use, research highlights its dual potential, indicating that outcomes are not universally negative.

The relationship between social media and adolescent well-being is highly context-dependent, influenced by factors such as national culture, personal resilience, family support, and social environment. In fact, in some national contexts, adolescents who used social media intensively reported higher life satisfaction and stronger perceived support from family and peers. (48) Moreover, online communication can reinforce offline friendships, enhancing intimacy and providing spaces for emotional expression and support. (49)

Many adolescents describe social media as a platform for connection and comfort, especially during periods of distress. Studies have shown that individuals with mental health concerns often use digital platforms to search for information, share experiences, and access peer support, offering a crucial form of informal help-seeking. (50)

The positive psychological effects which include increased self-esteem and social support are especially important for adolescents navigating complex social and emotional transitions. (51) Experimental studies further demonstrate that virtual communication can reduce psychological distress and restore feelings of belonging after experiencing exclusion. (52)

Social media enables peer-to-peer interaction, strengthens existing friendships, and provides access to communities that offer both emotional and informational support. (53) Furthermore, adolescents frequently experience less pressure communicating online than in person, which facilitates disclosure and connection. (54)

Platforms can support mental health awareness and education. Adolescents have described feeling less isolated after viewing celebrity recovery narratives or connecting with others experiencing similar symptoms. (55) Online support networks, including moderated forums led by healthcare professionals, have been praised for offering safe environments to share feelings, reducing stigma, and encouraging professional help-seeking. (56)

Socioeconomic status also plays a role: youth from low-income backgrounds report more negative spillover from online to offline settings, including conflict and disciplinary issues at school. (11) In contrast, youth from more supportive and well-resourced families tend to experience more positive online interactions, due to parental guidance. (6)

Given these disparities, intervention strategies should focus on maximising protective factors while mitigating risks. These include digital literacy education, equipping adolescents with skills to navigate platforms safely and critically. (55)

Finally, there is a need for research that incorporates underlying mental health risk factors, such as family history or genetic vulnerability, to better understand how pre-existing traits interact with digital behaviour and shape outcomes. (11)

Nonetheless, protective factors such as body positivity education and critical media literacy can buffer the harmful effects of social comparison and appearance-based victimisation. Initiatives that encourage adolescents to deconstruct unrealistic media representations and promote acceptance of diverse body types may foster resilience and more stable self-esteem. (39)

7. Limitations of Current Research

Determining relationship between social media use and mental health remains challenging. Many studies rely on cross-sectional designs and small, non-representative samples, limiting their clinical significance. (57)

Studies based on total time spent online or on specific platforms may overlook the qualitative aspects of digital interaction that are more relevant to psychological outcomes. There is a small but statistically significant association between social media and depressive symptoms (57), which needs further investigation.

Additionally, adolescents' behaviour is shaped by peer feedback: receiving 'Likes' and comments can trigger repeated cycles of modifying self-presentation, followed by compulsive checking and short-lived gratification. (45, 54, 58)

Cultural context further complicates findings. Various behaviours may lose their negative connotations when widely accepted in a given society. As such, national differences in mobile internet access, cost, and prevalence social media can affect whether these behaviours correlate with well-being. (48)

Summary

Social media has both positive and negative effects on adolescent mental health. While it can offer connection and support, it also contributes to low self-esteem, anxiety, cyberbullying and sleep problems, especially with nighttime use. Individual traits and context strongly influence

these outcomes. The complexity and variability of usage make it difficult to draw causal conclusions. There is a clear need for further longitudinal and qualitative research to better understand these dynamics and inform effective interventions.

1. Patient consent: Not applicable

2. Data were obtained from
PubMed, Google Scholar, Web of Science

3. Author Contributions:

1. Conceptualization: Natalia Ramlau

2. Methodology: Natalia Ramlau

3. Software: Michał Hładki, Marcin Podolak

4. Check: Marta Prager, Zuzanna Fischer

5. Formal Analysis: Michalina Skrzypek

6. Investigation: Michalina Janiszewska, Marcin Podolak

7. Resources: Michalina Cyrulik, Michalina Janiszewska

8. Data Curation: Beata Imbirska, Zuzanna Fischer

9. Writing- Rough Preparation: Dominika Kolenda, Beata Imbirska

10. Writing- Review & Editing: Michalina Skrzypek, Michalina Cyrulik

11. Visualization: Dominika Kolenda, Michał Hładki

12. Supervision: Marta Prager

12. Project Administration: Natalia Ramlau

4. Funding:

This research received no external funding.

5. Ethical Assessment and Institutional Review Board Statement.

Not applicable, this article involves a review and synthesis of existing literature.

6. Data availability statement:

Not applicable.

7. The authors declare no conflicts of interest.

References

1. Primack BA, Escobar-Viera CG. Social Media as It Interfaces with Psychosocial Development and Mental Illness in Transitional Age Youth. *Child and Adolescent Psychiatric Clinics of North America*. 2017 Apr 1;26(2):217–33.

2. Kelly Y, Zilanawala A, Booker C, Sacker A. Social Media Use and Adolescent Mental Health:

Findings From the UK Millennium Cohort Study. *EClinicalMedicine*. 2018 Dec;6:59–68.

3. Twenge JM, Joiner TE, Rogers ML, Martin GN. Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time. *Clinical Psychological Science*. 2018 Jan 1;6(1):3–17.
4. Al-Menayes J. Social Media Use, Engagement and Addiction as Predictors of Academic Performance. *International Journal of Psychological Studies*. 2015 Nov 11;7(4):p86.
5. Underwood MK, Ehrenreich SE. The Power and the Pain of Adolescents' Digital Communication: Cyber Victimization and the Perils of Lurking. *Am Psychol*. 2017;72(2):144–58.
6. Spina G, Bozzola E, Ferrara P, Zamperini N, Marino F, Caruso C, et al. Children and Adolescent's Perception of Media Device Use Consequences. *Int J Environ Res Public Health*. 2021 Mar 16;18(6):3048.
7. Milosevic T, Kuldass S, Sargioti A, Laffan DA, O'Higgins Norman J. Children's Internet Use, Self-Reported Life Satisfaction, and Parental Mediation in Europe: An Analysis of the EU Kids Online Dataset. *Front Psychol*. 2021;12:698176.
8. Villanti AC, Johnson AL, Ilakkuvan V, Jacobs MA, Graham AL, Rath JM. Social Media Use and Access to Digital Technology in US Young Adults in 2016. *J Med Internet Res*. 2017 Jun 7;19(6):e196.
9. UNICEF, Children in a digital world. New York, NY: UNICEF; 2017. (The state of the world's children).
10. Schuster AM, Cotten SR, Meshi D. Established Adults, Who Self-Identify as Smartphone and/or Social Media Overusers, Struggle to Balance Smartphone Use for Personal and Work Purposes. *J Adult Dev*. 2023;30(1):78–89.
11. Odgers CL, Jensen MR. Annual Research Review: Adolescent mental health in the digital age: facts, fears, and future directions. *J Child Psychol Psychiatry*. 2020 Mar;61(3):336–48.
12. Popat A, Tarrant C. Exploring adolescents' perspectives on social media and mental health and well-being - A qualitative literature review. *Clin Child Psychol Psychiatry*. 2023 Jan;28(1):323–37.
13. Who.int Adolescent mental health. <https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health>
14. Trunfio M, Rossi S. Conceptualising and measuring social media engagement: A systematic literature review. *Italian Journal of Marketing*. 2021;2021(3):267–92.

15. Toh SH, Howie EK, Coenen P, Straker LM. "From the moment I wake up I will use it...every day, very hour": a qualitative study on the patterns of adolescents' mobile touch screen device use from adolescent and parent perspectives. *BMC Pediatr*. 2019 Jan 24;19:30.
16. Lin LY, Sidani JE, Shensa A, Radovic A, Miller E, Colditz JB, et al. ASSOCIATION BETWEEN SOCIAL MEDIA USE AND DEPRESSION AMONG U.S. YOUNG ADULTS. *Depress Anxiety*. 2016 Apr;33(4):323–31.
17. Woods HC, Scott H. #Sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. *J Adolesc*. 2016 Aug;51:41–9.
18. Kaye, L. K., Orben, A., Ellis, D. A., Hunter, S. C., & Houghton, S. (2020). The conceptual and methodological mayhem of "screen time". *International Journal of Environmental Research and Public Health*, 17(10), 3661
19. Casey BJ, Getz S, Galvan A. The adolescent brain. *Developmental Review*. 2008 Mar 1;28(1):62–77.
20. Selemon LD. A role for synaptic plasticity in the adolescent development of executive function. *Transl Psychiatry*. 2013 Mar;3(3):e238–e238.
21. McLaughlin KA, King K. Developmental Trajectories of Anxiety and Depression in Early Adolescence. *J Abnorm Child Psychol*. 2015 Feb;43(2):311–23.
22. Orth U, Maes J, Schmitt M. Self-esteem development across the life span: a longitudinal study with a large sample from Germany. *Dev Psychol*. 2015 Feb;51(2):248–59.
23. Mojtabai R, Olfson M, Han B. National Trends in the Prevalence and Treatment of Depression in Adolescents and Young Adults. *Pediatrics*. 2016 Dec;138(6):e20161878.
24. Twenge JM, Joiner TE, Rogers ML, Martin GN. Increases in Depressive Symptoms, SuicideRelated Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time. *Clinical Psychological Science*. 2018 Jan 1;6(1):3–17.
25. Pop LM, Iorga M, Iurcov R. Body-Esteem, Self-Esteem and Loneliness among Social Media Young Users. *Int J Environ Res Public Health*. 2022 Apr 21;19(9):5064.
26. Burstein B, Agostino H, Greenfield B. Suicidal Attempts and Ideation Among Children and Adolescents in US Emergency Departments, 2007-2015. *JAMA Pediatr*. 2019 Jun;173(6):598–600.
27. 1Naghavi, M. (2019). Global, regional, and national burden of suicide mortality 1990 to 2016: systematic analysis for the Global Burden of Disease Study 2016. *BMJ*, 364, 194

28. Wang CW, Musumari PM, Techasrivichien T, Suguimoto SP, Chan CC, Ono-Kihara M, et al. "I felt angry, but I couldn't do anything about it": a qualitative study of cyberbullying among Taiwanese high school students. *BMC Public Health*. 2019 May 28;19(1):654.
29. Jackson ML, Sztendur EM, Diamond NT, Byles JE, Bruck D. Sleep difficulties and the development of depression and anxiety: a longitudinal study of young Australian women. *Arch Womens Ment Health*. 2014 Jun;17(3):189–98.
30. Doane LD, Gress-Smith JL, Breitenstein RS. Multi-method assessments of sleep over the transition to college and the associations with depression and anxiety symptoms. *J Youth Adolesc*. 2015 Feb;44(2):389–404.
31. Eggermont S, Van den Bulck J. Nodding off or switching off? The use of popular media as a sleep aid in secondary-school children. *J Paediatr Child Health*. 2006;42(7–8):428–33.
32. Van den Bulck J. Television viewing, computer game playing, and Internet use and self-reported time to bed and time out of bed in secondary-school children. *Sleep*. 2004 Feb 1;27(1):101–4.
33. Cain N, Gradisar M. Electronic media use and sleep in school-aged children and adolescents: A review. *Sleep Med*. 2010 Sep;11(8):735–42.
34. Bergfeld NS, Van den Bulck J. It's not all about the likes: Social media affordances with nighttime, problematic, and adverse use as predictors of adolescent sleep indicators. *Sleep Health*. 2021 Oct;7(5):548–55.
35. Brautsch LA, Lund L, Andersen MM, Jennum PJ, Folker AP, Andersen S. Digital media use and sleep in late adolescence and young adulthood: A systematic review. *Sleep Med Rev*. 2023 Apr;68:101742.
36. Smahel D, Wright MF, Cernikova M. The impact of digital media on health: children's perspectives. *Int J Public Health*. 2015 Feb;60(2):131–7.
37. Alfano CA, Zakem AH, Costa NM, Taylor LK, Weems CF. Sleep problems and their relation to cognitive factors, anxiety, and depressive symptoms in children and adolescents. *Depress Anxiety*. 2009;26(6):503–12.
38. Berne S, Frisén A, Kling J. Appearance-related cyberbullying: a qualitative investigation of characteristics, content, reasons, and effects. *Body Image*. 2014 Sep;11(4):527–33.

39. Burnette CB, Kwitowski MA, Mazzeo SE. "I don't need people to tell me I'm pretty on social media:" A qualitative study of social media and body image in early adolescent girls. *Body Image*. 2017 Dec 1;23:114–25.
40. Yoo HN, Smetana JG. Children's moral judgments about psychological harm: Links among harm salience, victims' vulnerability, and child sympathy. *Journal of Experimental Child Psychology*. 2019 Dec 1;188:104655.
41. Livazović G, Ham E. Cyberbullying and emotional distress in adolescents: the importance of family, peers and school. *Heliyon*. 2019 Jun;5(6):e01992.
42. Calancie O, Ewing L, Narducci LD, Horgan S, Khalid-Khan S. Exploring how social networking sites impact youth with anxiety: A qualitative study of Facebook stressors among adolescents with an anxiety disorder diagnosis. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace* 2017 Dec 3111(4)
43. Smith R, Morgan J, Monks C. Students' perceptions of the effect of social media ostracism on wellbeing. *Computers in Human Behavior*. 2017 Mar 1;68:276–85.
44. Wang CW, Musumari PM, Techasrivichien T, Suguimoto SP, Chan CC, Ono-Kihara M, et al. "I felt angry, but I couldn't do anything about it": a qualitative study of cyberbullying among Taiwanese high school students. *BMC Public Health*. 2019 May 28;19(1):654.
45. Radovic A, Gmelin T, Stein BD, Miller E. Depressed adolescents' positive and negative use of social media. *J Adolesc*. 2017 Feb;55:5–15.
46. Vogel EA, Ramo DE, Rubinstein ML, Delucchi KL, Darrow SM, Costello C, et al. Effects of Social Media on Adolescents' Willingness and Intention to Use E-Cigarettes: An Experimental Investigation. *Nicotine Tob Res*. 2020 Jan 8;23(4):694–701.
47. Mougharbel F, Chaput JP, Sampasa-Kanyinga H, Hamilton HA, Colman I, Leatherdale ST, et al. Heavy social media use and psychological distress among adolescents: the moderating role of sex, age, and parental support. *Front Public Health*. 2023;11:1190390.
48. Boer M, van den Eijnden RJJM, Boniel-Nissim M, Wong SL, Inchley JC, Badura P, et al. Adolescents' Intense and Problematic Social Media Use and Their Well-Being in 29 Countries. *J Adolesc Health*. 2020 Jun;66(6S):S89–99.
49. Yau JC, Reich SM. Are the Qualities of Adolescents' Offline Friendships Present in Digital Interactions? *Adolescent Res Rev*. 2018 Sep 1;3(3):339–55.

50. Pretorius C, Chambers D, Coyle D. Young People's Online Help-Seeking and Mental Health Difficulties: Systematic Narrative Review. *J Med Internet Res*. 2019 Nov 19;21(11):e13873.
51. Best P, Manktelow R, Taylor B. Online communication, social media and adolescent wellbeing:
A systematic narrative review. *Children and Youth Services Review*. 2014 Jun 1;41:27–36.
52. Dolev-Cohen M, Barak A. Adolescents' use of Instant Messaging as a means of emotional relief. *Computers in Human Behavior*. 2013 Jan 1;29(1):58–63.
53. Thomas J, Harden A. Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Med Res Methodol*. 2008 Jul 10;8:45.
54. Kennedy J, Lynch H. A shift from offline to online: Adolescence, the internet and social participation. *Journal of Occupational Science*. 2016 Apr 2;23(2):156–67.
55. O'Reilly M, Dogra N, Whiteman N, Hughes J, Eruyar S, Reilly P. Is social media bad for mental health and wellbeing? Exploring the perspectives of adolescents. *Clin Child Psychol Psychiatry*. 2018 Oct;23(4):601–13.
56. Fergie G, Hunt K, Hilton S. Social media as a space for support: Young adults' perspectives on producing and consuming user-generated content about diabetes and mental health. *Soc Sci Med*. 2016 Dec;170:46–54.
57. McCrae N, Gettings S, Purssell E. Social Media and Depressive Symptoms in Childhood and Adolescence: A Systematic Review. *Adolescent Res Rev*. 2017 Dec 1;2(4):315–30
58. Singleton A, Abeles P, Smith IC. Online social networking and psychological experiences: The perceptions of young people with mental health difficulties. *Computers in Human Behavior*. 2016 Aug;61:394–403.