

Digital Engagement and Screen Addiction among Adolescents: Emerging Psychosocial Challenges

Besty John

MSW Student, Vimala College (Autonomous), Thrissur, Kerala

Abstract

In the contemporary digital environment, screen use has become an integral aspect of adolescents' daily lives, influencing their learning patterns, social relationships, and identity development. The COVID-19 pandemic further intensified and normalized prolonged screen engagement, as education, communication, and leisure activities increasingly shifted to digital platforms. While moderate screen use can offer educational and social benefits, excessive and poorly regulated use has emerged as a significant psychosocial concern among adolescents, often conceptualized as screen addiction. This phenomenon is associated with impaired self-regulation, emotional difficulties, sleep disturbances, academic disengagement, and strained interpersonal relationships, thereby posing risks to overall mental health and wellbeing. According to the World Health Organization (2022), problematic social media use among adolescents has increased from 7% to 11%, with approximately 12% identified as at risk of problematic gaming behaviour. If unaddressed, unhealthy screen habits developed during adolescence may become entrenched, adversely affecting long-term health, productivity, and social functioning. Early identification and preventive interventions are therefore essential to mitigate these risks and promote balanced digital behaviours. From a psychosocial and mental health promotion perspective, families, schools, and communities play a critical role in fostering healthy screen practices. Social work professionals are particularly well-placed to intervene through casework, group work, community organization, and policy advocacy. There is also a clear need for multidisciplinary collaboration involving educators, mental health professionals and policymakers. However, although international agencies have initiated responses to this challenge, there remains a strong need for context-specific, indigenised research and interventions tailored to the Indian socio cultural context. Strengthening research, revisiting existing policies, and developing comprehensive frameworks can contribute to safeguarding adolescent wellbeing and promoting mental wellbeing.

Keywords: Screen addiction, psycho social well being, adolescents, Digital engagement

Introduction

Digital devices and online spaces, primarily, are considered one of the fundamental aspects of the current generation's existence. From smartphones and tablets to computers and televisions, digital devices serve as tools for work, entertainment, education, and social interaction. As our reliance on digital devices grows, so the need to understand their impact on our physical, social, and psychological state becomes necessary. Modern neuroscience has revealed that the human brain is highly adaptable, constantly rewiring itself in response to our behaviors and environments; this phenomenon is known as neuroplasticity. This adaptability, while key to learning and development, also means that neural pathways are influenced by screen usage. Digital engagement provides valuable opportunities for cognitive stimulation, skill-building, and maintaining independence. Active use of digital technologies can foster continuous learning, curiosity, and social connectivity, which are critical factors supporting cognitive resilience. However, constant exposure to devices like smartphones, personal computers, and television can severely affect mental health, leading to increased stress and anxiety. Risk factors for obesity and cardiovascular disorders, including hypertension, poor regulation of stress, low HDL cholesterol, and insulin resistance, are among the physical health repercussions observed. The psychological health effects include suicidal tendencies and symptoms of depression, which are associated with digital device dependency, screen-time-induced poor sleep quality, and content-influenced negativity. Often, it can induce a state of hyper-arousal, increased stress hormones, desynchronisation of the body clock (circadian cycle), altered brain chemistry, and a drag on mental energy and development. A better physical and psychological state results in healthy social functioning for individuals. If unaddressed, unhealthy screen habits developed during adolescence may become entrenched, adversely affecting long-term health, productivity, and social functioning. The last two decades have seen an explosion in the use of digital technology. It has accelerated humans' exposure to prolonged screen time which is becoming a growing concern. Digital technology is essentially the use of electronic devices to store, generate, or process data; it facilitates communication and virtual interactions on social media platforms using the internet (Vizcaino et al., 2020). Electronic devices include computers, laptops, smartphones, tablets, or any other similar devices with a screen. They are a medium of communication, virtual interactions, and connectedness between people. Social connection is fundamental to humans. In addition, social connectedness also enhances mental well-being. The COVID-19 pandemic has imposed digital platforms as the only means for people to maintain socio-emotional connection (Kanekar and Sharma, 2020).

Adolescents

Adolescence is the phase of life between childhood and adulthood, from ages 10 to 19. One in six people is aged 10–19 years. It is a unique stage of human development and an important time for laying the foundations of good health. Adolescents experience rapid physical, cognitive and psychosocial growth. This affects how they feel, think, make decisions, and interact with the world around them. There are more adolescents in the world than ever before: 1.3 billion, totalling one sixth of the global population. This number is expected to rise through 2050, particularly in low- and middle-income countries where close to 90% of 10- to 19-year-olds live (2025). Adolescence is a crucial period for developing social and emotional habits important for mental well-being. These include adopting healthy sleep patterns; exercising regularly; developing coping, problem-solving, and interpersonal skills; and learning to manage emotions. Protective and supportive environments in the family, at school, and in the wider community are important. Multiple factors affect mental health. The more risk factors adolescents are exposed to, the greater the potential impact on their mental health. Factors that can contribute to stress during adolescence include exposure to adversity, pressure to conform to peers, and exploration of identity. Media influence and gender norms can exacerbate the disparity between an adolescent's lived reality and their perceptions or aspirations for the future. Other important determinants include the quality of their home life and relationships with peers. Violence (especially sexual violence and bullying), harsh parenting, and severe socioeconomic problems are recognized risks to mental health. A recent study states that screen-based activities have a strong risk of eliciting self-harm and suicidal behaviors among young people due to cyber- attacks and cyber-bullying (Chen et al., 2024).

Screen Addiction

Screen time refers to the amount of time spent and the diverse activities performed online using digital devices (DataReportal, 2020). Screen addiction is a pattern of excessive and compulsive screen-based behavior characterized by impaired control, increasing priority given to screen use over other activities, and continuation despite negative consequences. Screen use is considered addictive when it shows behavioral addiction characteristics, similar to gambling disorder or internet gaming disorder, such as: use is compulsive and uncontrollable, The person cannot reduce or stop, despite wanting to, Screen use interferes with daily life (sleep, academics, work, relationships, health), There is psychological distress when access is restricted. High screen time alone does not equate to addiction. Impaired control combined with negative consequences constitutes addiction. Some of the key signs to identify screen addiction: 1) Preoccupation: Screen use becomes the most important activity in life; constantly thinking about being online; planning the day around screen access. 2) Loss of control: Inability to limit screen time—'Just 10 minutes' turns into hours. 3) Tolerance: Needing more time, more stimulation, or faster content for satisfaction; increased use over time. 4) Withdrawal symptoms: When screen use is restricted, they show: Irritability, Anxiety, Restlessness, Low mood, etc. 5) Conflict: Screen use causes problems with: Family, Friends, Academics or work, Physical health, and mental health.

6) Continued use despite harm: Poor sleep, declining grades, eye strain, headaches, loneliness, suicidal ideations; still unable to stop or reduce use. Healthy use is always purposeful, controlled, balanced with life, and can be stopped easily when desired by the individual; however, when it becomes problematic, it should be addressed by a mental health professional. There is currently no official medical diagnosis called screen addiction in the DSM-5 or ICD-11. More research and studies are needed in this particular area, and it should be considered specifically. This concern presents a challenge in diagnosis itself. Moreover, there is controversy about whether the addiction is to the device (mobile phone, computer, tablet) or to the content consumed (video games, social networks, etc.). Some authors suggest that there is a "pathological use of the internet", which is considered a behavioral addiction defined as the loss of control over one's technology use and connection-seeking behavior that generates negative consequences and the impossibility of curbing the impulse or desire to do so. Behavioral addictions officially recognized include Internet Gaming Disorder (DSM-5, for further study) and Gaming Disorder (ICD-11). "Screen addiction" is often a broader, umbrella term for problematic digital use, not a formal clinical label. Researchers often adapt the DSM-5 criteria for Internet Gaming Disorder (IGD) to define screen-related addictive behaviors. According to such adapted criteria, a person is considered to have addictive screen use when they show behavioral addiction features similar to IGD such as: Preoccupation with screen use, Withdrawal symptoms (irritability/anxiety when not using), Tolerance (needing more time to feel satisfied), Failed attempts to cut down, Continuing use despite negative consequences, Loss of other interests, Use to escape feelings, Deception about use, Problems in relationships, school, or work. If an individual meets five or more of these criteria over 12 months, this can indicate addiction. Currently existing assessment materials scale severity into categories like low, moderate, and severe use. However, the term 'screen addiction' is broadly used to refer to related addictions. Statistics from WHO state that: Statistics of WHO states that: Europe reveals a sharp rise in problematic social media use among adolescents, with rates increasing from 7% in 2018 to 11% in

2022. This, coupled with findings that 12% of adolescents are at risk of problematic gaming, raises urgent concerns about the impact of digital technology on the mental health and well-being of young people. More than 1 in 10 adolescents (11%) showed signs of problematic social media behavior, struggling to control their use and experiencing negative consequences. Girls reported higher levels of problematic social media use than boys (13% vs 9%). Over a third (36%) of young people reported constant contact with friends online, with the highest rates among 15-year-old girls (44%). A third (34%) of adolescents played digital games daily, with more than 1 in 5 (22%) playing for at least 4 hours on days when they engage in gaming. 12% of adolescents are at risk of problematic gaming, with boys more likely than girls to show signs of problematic gaming (16% vs 7%)(WHO, 2022).

Psychological, physiological and social impacts of screen use

Psychological: Adolescence is a sensitive developmental phase characterized by emotional regulation, identity formation, and increased vulnerability to mental health problems. Excessive or addictive screen use disrupts these processes by over stimulating reward pathways in the brain, leading to dependence-like behaviors such as compulsive checking, loss of control, and distress when screen access is limited. Over time, this can impair self-regulation and coping skills. High exposure to social media intensifies social comparison, where adolescents evaluate themselves against idealized online images, contributing to low self-esteem, body dissatisfaction, and depressive symptoms. Continuous online engagement also increases exposure to cyberbullying, online harassment, and harmful content, which are strongly associated with anxiety, emotional distress, self-harm, and suicidal ideation. Sleep disruption is a critical psychological pathway. Late-night screen use suppresses melatonin production, resulting in poor sleep quality, which worsens mood instability, irritability, concentration difficulties, and emotional exhaustion. Persistent sleep deprivation is a well-established risk factor for depression and suicidal behavior, making excessive screen use a serious mental health concern.

Screen use and digital engagement can support adolescents' psychological well-being in several ways when used meaningfully: Digital platforms allow adolescents to express emotions through writing, art, videos, creating short-form videos and social interaction, reducing emotional suppression. Adolescents often find peer groups online that share similar interests, identities, or experiences. This is particularly beneficial for marginalized or socially anxious adolescents who are not inclined to come forward, and this helps to reduce loneliness and improve self-acceptance among them. Digital media provides easy access to mental health education, self-help resources, crisis helplines, and peer support communities. Early exposure to such resources can increase mental health awareness, reduce stigma, and encourage help-seeking behavior. Educational apps, games, entertainment videos, and interactive media can enhance problem-solving skills, creativity, and multitasking abilities, supporting cognitive development.

Physiological: Excessive screen use profoundly affects individual lifestyles. It significantly reduces physical activity levels during the adolescent period which is critical for physical growth and development. This increases the risk of overweight, obesity, and metabolic problems, which may extend into adulthood. Reduced outdoor activity also limits exposure to sunlight, potentially affecting vitamin D levels and bone health. Prolonged screen exposure causes digital eye strain, characterised by dry eyes, blurred vision, headaches, and eye fatigue. Poor posture during device use leads to musculoskeletal problems such as 'text neck', particularly neck, shoulder, and lower back pain, often referred to as 'text neck'. These physical complaints are increasingly reported among adolescents with high daily screen time. Sleep-related physical consequences are particularly concerning. Disrupted circadian rhythms lead to chronic fatigue, weakened immunity, reduced energy levels, and impaired growth patterns. Irregular eating habits, such as skipping meals or consuming high-calorie snacks while using screens, further contribute to poor physical health outcomes.

Screen use can also contribute positively in certain contexts: guidelines for dietary plans, guided meditations and yoga, brain-stimulating exercises, fitness tracking through fitness apps, sleep trackers, and similar tools.

Social: Excessive digital engagement (high but potentially controllable screen use) can significantly affect adolescents' social development. Over-reliance on online interactions, gaming, and gambling often reduces face-to-face communication, limiting the development of essential social skills such as empathy, conflict resolution, and emotional expression. This can result in social withdrawal, loneliness, and weakened peer relationships. Family relationships may also suffer. Conflicts between adolescents and parents over screen limits are common and may lead to reduced family cohesion and communication breakdowns. Excessive screen use can displace family time, shared activities, and emotional bonding, increasing feelings of isolation within the household. Online spaces expose adolescents to cyberbullying, peer pressure, risky online behaviors, and exploitation, which can damage social identity and trust. Fear of missing out (FOMO) further drives compulsive engagement, reinforcing unhealthy digital habits and social anxiety.

Proper screen use offers several social benefits: It enhances social connectivity, which enables the maintenance of relationships with peers and family over time, especially when physical interaction is limited such as through video conferences, WhatsApp messages, etc. This continuity of connection can protect against social isolation. Digital platforms expose adolescents to social issues, global events, and advocacy movements, fostering empathy, social responsibility, and rapid civic participation.

Across the globe, some distinct regulatory approaches have emerged to tackle this issue:

China, South Korea, and increasingly Japan have strict time limits enforced at the platform level, Mandatory real-name verification systems, curfew hours when services are unavailable to minors, significant financial penalties for corporate non-compliance, national digital ID systems to enable enforcement. South Korea's Game Shutdown Law (expanded in 2024) prevents users under 16 from accessing online games between 10 PM and 6 AM, while China's anti-addiction system limits users under 18 to 3 hours of gaming weekly. These measures are enforced through mandatory ID verification. The EU Digital Wellbeing Act, along with complementary legislation in the UK and Switzerland, emphasizes: mandatory usage dashboards with time alerts, prohibition of specific addictive design features, required "cooling off" periods after extended use, algorithmic transparency requirements, parental controls with minimum standards. Rather than imposing strict limits, this model aims to empower informed choice through awareness and reduced manipulation. The UK's Online Safety Act requires platforms to provide users with clear information about time spent and implement mandatory break reminders after 45 minutes of continuous use.

U.S. regulation, fragmented across state lines but showing emerging patterns, focuses on: age verification requirements (particularly California's Age-Appropriate Design Code), opt-out systems that default to protective settings, educational initiatives within school systems, platform liability for algorithmic harm to minors, parental consent requirements for users under certain ages. This model generally avoids direct time limitations in favor of informed parental choice and platform accountability. Maryland's Digital Wellness Act requires platforms to disable autoplay features, scrolling content feeds, and push notifications by default for minor users, requiring explicit opt-in. Countries including India, Brazil, and Kenya are pioneering approaches that frame digital overuse as a public health issue: integration of digital wellbeing into public health systems, school-based digital literacy and health programs, public awareness campaigns about digital addiction, community-centered digital wellness initiatives, telecom-level implementation of reminder systems. India's Digital Public Health Framework requires service providers to send automated health warnings after two hours of continuous use and provides free consultation services for digital addiction through its national healthcare system.

Role of social worker

Early identification and preventive interventions are essential to mitigate these risks and promote balanced digital behaviors. From a psychosocial and mental health promotion perspective, families, schools, and communities play a critical role in fostering healthy screen practices. Social work professionals are particularly well placed to intervene through casework, group work, community organization, and policy advocacy. There is also a clear need for multidisciplinary collaboration involving educators, mental health professionals, and policymakers. They play a critical role in addressing screen addiction through preventive, promotive, and rehabilitative approaches. *Micro-level Interventions:* At the individual and family level, social workers engage in assessment, counseling, and psycho education. Cognitive- behavioral strategies, family therapy, and digital detox plans can help adolescents develop self- regulation skills. *Mezzo-level Interventions:* School social workers can implement group interventions, peer education programs, and life skills training. Collaborating with teachers to integrate digital well-being into curricula is essential. *Macro-level Interventions:* At the policy level, social workers advocate for child-centred or adolescent-centred digital policies, regulation of harmful online content, and equitable access to mental health services. Community awareness campaigns and collaboration with NGOs further strengthen preventive efforts. Although international agencies have initiated responses to this challenge, there remains a strong need for context-specific, indigenized research and interventions tailored to the Indian socio-cultural context. Strengthening research, revisiting existing policies, and developing comprehensive frameworks can contribute to safeguarding adolescent well-being and promoting mental well- being.

Screentime recommendations by age

Babies 0-18 months :None: None except video chat with an adult. **Toddlers 18-24 months: <1 hr:** Less than 1 hour co-watching educational programs with a caregiver. **Children 2-5 years: 0- 3 hours:** 1 hour or less each weekday and up to 3 hours each weekend day. **Kids &teens 16-17 years: 2 hours:** Aim for 2 hours or less of recreational screen time use per weekday, focusing on maintaining healthy limits and making time for other important activities like physical activity and sleep. **Teens & adults 18**

and up: 2-4 hours: keep to 2-4 hours of recreational screen use per weekday. Take frequent screen-free times and zones. Make time for physical activity. Source: *American academy of child and adolescent psychiatry* (2022)

Suggestions

1. **Implement Comprehensive Digital Literacy Programs in Schools:** Schools should incorporate digital literacy training into curricula, focusing on safe and responsible social media use. Key topics include privacy management, recognizing misinformation, and cyber bullying prevention. Studies show that digital literacy training helps adolescents critically assess online content and engage safely on socialmedia, supporting their mental health and development.
2. **Encourage Parental Involvement and Digital Education:** Educating parents on digital safety is essential in fostering responsible social media habits. Providing resources, workshops, and tools to help parents set guidelines for social media use enables them to supervise their children's online activities effectively. Evidence indicates that parental engagement helps reduce excessive social media use and fosters a healthier digital environment.
3. **AdvocateforAge-AppropriatePlatformSafetyFeaturesandPrivacyControls:** Social media platforms should adopt age-specific safety features, such as content filters and privacy settings, to create secure environments for younger users. Collaboration with technology companies on features like AI-driven monitoring and cyberbullying detection would help safeguard adolescents on digital platforms.
4. **Develop School-Based Programs Promoting Balanced Social Media Use:** Schools play a critical role in teaching adolescents about balanced social media use. Workshops on screen time management, fostering offline relationships, and recognizing signs of social media addiction can help young users maintain a healthy relationship with digital technology. Structured programs within schools provide guidance on positive online behavior, reinforcing skills for balanced social media use.
5. **Establish Peer Support Networks and Digital Well-being Campaigns:** Peer-led initiatives, such as digital ambassadors and support groups, foster positive social media habits by encouraging safe online practices. Adolescents often find peer influence relatable, and support from peers can strengthen mental resilience and promote responsible social media use.
6. **Implement Gradual and Flexible Age-Based Access to Social Media:** A flexible approach to age-based restrictions, which allows controlled access for younger adolescents with gradually increasing privileges, can provide a balanced solution. This model helps adolescents build digital resilience and skills over time, aligning with their developmental needs. The gradual access approach also provides opportunities for education on responsible digital behavior.
7. **Strengthen Adolescent Data Privacy and Protection Policies:** Strong privacy protections are essential to safe online experiences for adolescents. Policymakers should enforce strict data protection policies to secure adolescents' data, build trust in online platforms, and form a foundation for effective social media regulation.

Conclusion

Digital engagement is now an integral part of adolescents' lives, influencing learning, social interaction, and emotional development. While digital technologies offer educational and social benefits, excessive and poorly regulated use can lead to screen addiction. Screen addiction among adolescents is characterized by loss of control, compulsive use, tolerance, withdrawal symptoms, and continued engagement despite negative consequences. This paper highlights that screen addiction contributes to psychological distress, sleep disturbances, reduced physical activity, academic difficulties, family conflict, cyberbullying, and increased risk of self-harm. Adolescents are particularly vulnerable due to ongoing brain development and emotional sensitivity. Therefore, prevention, early identification, and balanced regulation are essential. Social workers, families, schools, and communities play a key role in promoting healthy digital habits and preventing screen addiction.

References

- All About Vision.(2022,September). Screentime recommendations by age.
- American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). American Psychiatric Publishing.
- Chen, Z., Liao, X., Yang, J., Tian, Y., Peng, K., Liu, X., & Li, Y. (2024). Association of screen- based

- activities and risk of self-harm and suicidal behaviors among young people: A systematic review and meta-analysis of longitudinal studies. *Psychiatry Research*, 338, Article 115991.
- DataReportal.(2020).Digital2020:Globaldigitaloverview.
- Dienlin, T., & Johannes, N. (2020). The impact of digital technology use on adolescent well-being. *Dialogues in Clinical Neuroscience*, 22(2), 135–142.
- Gupta, R., Grover, S., Basu, A., Krishnan, V., Tripathi, A., Subramanyam, A., ... Avasthi, A. (2020). Changes in sleep pattern and sleep quality during COVID-19 lockdown. *Indian Journal of Psychiatry*, 62(4), 370–378.
- Kanekar, A., & Sharma, M. (2020). COVID-19 and mental well-being: Guidance on the application of behavioral and positive well-being strategies. *Healthcare*, 8(3), Article 336.
- Nakshine, V. S., Thute, P., Khatib, M. N., & Sarkar, B. (2022). Increased screen time as a cause of declining physical, psychological health, and sleep patterns: A literature review. *Cureus*, 14(10), e30051.
- Pandya, A., & Lodha, P. (2021). Social connectedness, excessive screen time during COVID-19 and mental health: A review of current evidence. *Frontiers in Human Dynamics*, 3, Article 684137.
- Twenge, J. M., & Campbell, W. K. (2018). Associations between screen time and lower psychological well-being among children and adolescents: Evidence from a population-based study. *Preventive Medicine Reports*, 12, 271–283.
- Vizcaino, M., Buman, M., DesRoches, T., & Wharton, C. (2020). From TVs to tablets: The relation between device-specific screen time and health-related behaviors and characteristics. *BMC Public Health*, 20(1), Article 1295.
- World Health Organization.(2021).Adolescent health.
- World Health Organization.(2025).Mental health of adolescents.
- Vizcaino, M., Buman, M., DesRoches, T., & Wharton, C. (2020). From TVs to tablets: the relation between device-specific screen time and health-related behaviors and characteristics. *BMC Public Health*, 20(1), Article 1295.
- World Health Organization.(2025).Mental health of adolescents.