

Indulgence of Children and Adolescent in Digital Devices during COVID-19 Pandemic in Nepal

Puspa Dhakal¹, Subarna Raj Dhakal²

Author Info:

¹Hamro School of Nursing,
Purbanchal University,
Biratnagar, Nepal

²Adjunct faculty, Shikshadeep
Higher Secondary School,
Satyanarayan Secondary
School, Biratnagar, Nepal.

Corresponding Author:

Puspa Dhakal

Email/Contact:

smilypuspa14@gmail.com

ABSTRACT

The COVID-19 pandemic is an ongoing global pandemic, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). As a measure to break the chain of transmission, the Government of Nepal has declared full phase lockdown with the shutdown of schools, restrictions on mass gathering, and public transportation and sealing of international borders. With the shutdown of the school and colleges, Children and adolescents are forced to spend most time indoors. Lack of physical activity, outdoor sports, and limited social interactions and the provision of digital learning has a rapid rise in screen time. Staying Indoor increases digital games among children and adolescents as there's a ubiquitous leisure activity. Children and adolescents of this era are bingeing on digital stuff and this review reveals it has dramatically escalated during the lockdown period. Furthermore, it proclaims increased access to digital devices associated with various risks affecting their physical, mental and social well being. The unpredictable changes due to COVID-19 Pandemic has a great impact on children as they are adopting unhealthy behavior. This has highlighted the urge to focus on health and sensible strategies and manage screen time to improve quality of life.

Keywords: Adolescents, Children, COVID-19, Digital Device, Mental Health, Pandemic, Screen time

QR Code



 View PDF

Scan Me for Full Text

Article Info

Received: 14 July 2020; **Accepted:** 8 September 2020; **Published Online:** 9 September 2020

How to cite this article in Vancouver Style?

Dhakal P, Dhakal SR. Indulgence of Children and Adolescence in Digital Devices during Pandemic.. *Europasian J Med Sci.*2020;2(2): 136-141. <https://doi.org/10.46405/ejms.v2i2.147>

Disclaimer:

Conflict of Interest: None Declared;

Source of Support: Nil

Copyright: © 2020 by author(s). This is an open access article distributed under the terms of the [Creative Commons Attribution International License 4.0](https://creativecommons.org/licenses/by/4.0/)  which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Publisher's Note:

The Europasian Journal of Medical Sciences (EJMS) remains neutral with regard to jurisdictional claims in published articles and institutional affiliations.

INTRODUCTION

Nepal is a low-income country with a total population of 29 million, of which 40% (12 million) are younger than 18 years of age.¹ Childhood and Adolescence period is a unique stage of human development and a window of opportunity for laying the foundation of good health and wellbeing that benefits lifetime.² Nepal Government officially declared the shutdown of all educational institutions and postponement of the academic exam, as to prevent the spread of COVID-19. The shutdown of educational institutions, home confinement, provision of E-learning has risked children with over access on the internet and social media.² During COVID-19 Pandemic social media has become an essential source that facilitates the sharing of ideas, thoughts, and information through the virtual networks and communities via the digital device as a computer, tablet, or smartphone or web application using social media platforms.³ The widely used social media apps are Facebook, YouTube, Whatsapp, Wechat, Instagram, QQ, TikTok, Twitter and LinkedIn.⁴ Relatively using social media platforms are becoming more dominant than traditional leisure pastime such as sports, outdoor activities, reading, storytelling, socializing, and libraries visit. The COVID-19 outbreak has created multiple consequences on the lives of children and adolescents leading to acute and chronic stress. Excessive Internet usage includes four main components: (a) Internet overuse and loss of sense of time, (b) withdrawal symptoms; tension or depression when use is limited, (c) tolerance; as a need for more time online and (d) negative effects on social functioning.⁵ However, digital addiction covers a wider scope than just gaming. Albeit related to gaming, the World Health Organization (WHO) indicates a serious sign of the impact of digital technology on human wellbeing, including 'gaming disorder' as a disease.⁶ This review aims to highlight the involvement of children and adolescents in the digital device during the COVID-19 Pandemic. National and international reports, along with journal articles on the related topic been reviewed for writing this narrative review.

Screen Time Guidelines by Age

The American Academy of Pediatrics (AAP) and the World Health Organization (WHO) recommends no screen time besides video chatting with relatives under the age of 18 months. Toddler's screen time has to be limited to less than an hour. Preschoolers can enjoy screen time up to 1 hour

per day. Likewise, Elementary School-aged screen time has to be limited 1 to 1.5 hours per day. Similarly, Middle School aged for 2 hours per day. Other family members have to limit screen time to 2 hours per day.^{7, 8} On the other hand, time spend on homework or other educational activities does not need to be limit as time spend playing video games.⁹ Excessive or poor quality screen time links with physical, mental, psychosocial, and behavioral problems. Apart from this quality of social media, children's exposure is more important than the types of technology or the amount of time they spend.¹⁰ Unstructured playtime is important for a young child's cognitive development than electronic media. Thus, attention is required to maintain the quality of social media during the COVID-19 Pandemic.

Use of Social Media

COVID-19 pandemic is the global health crisis of this era. The pandemic is also an unprecedented socioeconomic crisis. It has been the greatest challenge to the world since world war II ¹¹ The pandemic has carried the whole world to a relative standstill, influencing millions worldwide.¹²

During the lockdown, social media has been an ideal platform for individuals for multiple tasks socializing entertaining, learning, and even online shopping.⁵ In the tech-savvy world, digital gadgets as computers, tablets, and mobile phones intertwine with children's growth and development.¹³ Children and adolescents socially connect and play with their friends and peers through social media. Worldwide with 3.8 billion social media users, and is highest among the age group of 18-29. Staying-at-home and quarantine times has increased access to social media apps for entertainment, particularly virtual games, online gaming, sports viewing and video game streaming ^{14,38} due to surplus leisure time among children and adolescents. Extensive closure of educational centers, schools, and colleges have transitioned to virtual and online classes, which necessitate using screens. The remote learnings are conducted on-screen thus screen time has surged. ¹⁵ The leap of the digital environment is undeniable during the pandemic worldwide. ¹⁶

In Italy during the COVID-19 outbreak, the growth of online audience of 13-17 years has increased by 66%.¹⁷ During the lockdown in India online gaming have increased by 50-75% and video streaming spike by 35%.⁵ gaming addiction rise by 30%, those who have managed to cut their screen and gaming time is relapsing²⁰ and Nepal is no more aloof of this. After the lockdown Internet usage has been

increased by 30-40% with YouTube the most views, followed by Facebook and TikTok.¹⁸ The online-based survey by ChildSafeNet includes 1,228 respondents of all provinces, reveals more than half (60.58 %) are of age group 13-24 years and 2.28% respondents under 12 years. The survey explores 73.9% that use the internet for entertainment, 72.6% seeking news and information, and 63.2% connecting with friends and relatives. Furthermore, the survey states most used sites during lockdown are YouTube and Facebook by 79.6% and 74.3% respectively, 44.8% visit Nepali News Portals, 20.8% visit school/college sites, 18% uses TikTok, 9.9% plays PUBG, 9.9% plays other online games and 3.2% plays free fire. Among the participants, 71.4% accept children at higher risk of online abuse and exploitation during the lockdown.¹⁹ The COVID-19 Pandemic sparks the rise of digital indulgence as it provides enjoyment and an escape from reality minimizing the stress of coronavirus.²⁰

Effects of Increased Screen Time

Technology is a moiety of healthy childhood as long as this privilege isn't abused. Appropriate use of social media provides valuable opportunities to learn, play, socialize with friends and peers, and access information and support, which reduces their feelings of social isolation and social anxiety.²¹ Apart from this, playing online games develop

cognitive skills such as reasoning, spatial awareness, and problem-solving.²² Concurrently, it raises the screen time with associated risks. Utilization of excessive screen time associates with physical inactivity, obesity, musculoskeletal problems visual issues, and sleep disruption.^{23- 25} leading to greater vulnerability of mental health problems in children and adolescence.²⁶ The systematic review reveals time spent and invested in social media correlates with the level of depression, anxiety, psychological distress, and associates with sleep problems.^{27, 28} The survey among 8,079 adolescents age 12-18 years in China reports prevalence of depression (43%), anxiety (37%), and combined depression and anxiety (31%) during the COVID-19 outbreak.²⁹

Children's and adolescent's online risk to offline vulnerabilities. The online risks include cyberbullying, online sexual abuse in the form of pictures and videos of themselves with sexual content. In addition to this physical distancing and lack of face-to-face interaction, children's and adolescent's risk-taking behavior increases, leading to criminal consequences. Children and adolescents knowingly or unknowingly may be exposed to harmful content. The privacy of children may be at greater risk. These risks emanate from strangers, or from whom they may know online or offline. Exposure to the screen should be reconsidered and

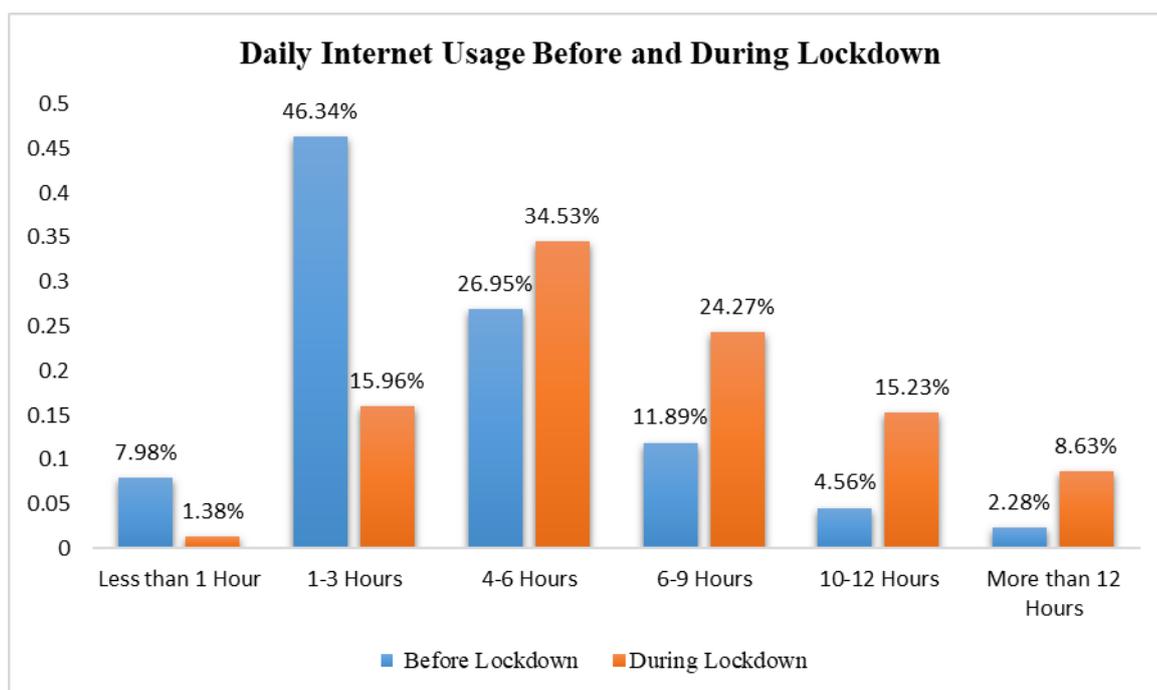


Figure 1: The usage of the internet before and during the lockdown reported by CybersafeNet

limited.³⁰

Sedentary Behavior/Physical Activity

Schools promote health-conscious schedules including physical activity. School closure and home confinement for a prolonged period in COVID-19 Pandemic have posed a significant challenge for remaining physically active and focus on mental well-being as living, working, or studying is taking place in the same space.³¹ Sedentary behavior and lack of physical activity based on screen-time associate with multiple health problems.³² Adequate and regular physical activities are limiting in children and adolescents which are important for good health, wellbeing and development.³³ WHO recommends at least 60 minutes of moderate to vigorous-intensity physical activities daily involving mainly varieties of aerobic activities such as brisk walking or running, jumping, skipping. Physical activities greater than 60 minutes daily offer added health benefits.³⁴

During the lockdown period, children and adolescents are adopting unhealthy behaviors and feeding habits, inadequate physical activities. The mental health effects of lockdown are not much known. Practicing a healthy habit during pandemic avoids the installation of new unhealthy habits or routines that Children and adolescents could keep after lockdown ensuring a better resilience of the way out of lockdown.³³

Managing Screen Time at During Lockdown

Increasing over-indulgence with digital devices and technologies are the reality and indomitable. The screen time needs to be more productive with the following tips at home. Parental behavior is one of the most effective ways to help children develop a positive digital mindset, thus leading by example is valuable. Parents need to be informed and remain up-to-date about the latest cell phone app and the social media craze. Creating "Technology-Free Zones" in the dining room and bedroom can be great. Setting limits for screen time and sticking to the daily limit is important. During Lockdown the boundary between work and family life is getting blurred when the home is also a workplace and school interaction within the family is foremost. Train children and adolescents to earn screen time but do not allow them to earn extra time as a reward. Child and adolescents need to be cognizant about screen time is a privilege but not their right.³⁵ Parents need to review and research, Video, and computer games before permitting children and adolescents to play. Even playing with

children sounds beneficial and spending screen time together is advantageous. The screen needs to place in a typical area where anybody can envision what youngsters are seeing or playing. Utilizing leisure time cognitively in stimulating activities, such as reading, board games, and puzzles games are utmost. Brisk walking around or walking in the small space within the home can help to stay active. Maintaining social distance, if walks and exercises are held outside the home. Deep breathing exercises, Meditation, and Yoga can help to stay calm promoting mental health during this lockdown. Involving children and adolescents in performing age-appropriate domestic chores helps to stay active at home.³⁶ Lastly, parents and caregivers need to teach children and adolescents about internet safety at their level of knowledge and understanding and making sure children are aware of the content risks, contact risks, and conduct risks regarding social media platforms.³⁷

CONCLUSION

Digital Technology is enhancing human life in many ways but at the same time having a negative impact in different ways. Despite the negative consequences and risks, technology use and exposure cannot be avoided as many aspects of modern life rely on it and the digital age is a reality. Children and adolescents are at higher risk of the digital device but, study regarding indulgence in digital devices among children and adolescents is next to know. Extended periods of social isolation and technology-based activities are posing the threat of cementing an unhealthy lifestyle leading to multiple health problems. Parent's role in minimizing risks and maximizing opportunities in children and adolescents is most that have been raised due to the digital environment. Parents should act as a role model, practice healthy habits, and promote healthy behavior in children to adjust when COVID-19 pandemic passes.

Recommendations:

Internet safety awareness programs need to be conducted using social media platforms including all duty bearers. Parents are to be acquainted with the parent control system in their device to manage unnecessary applications and sites. Apart from this Online Safety Helpline systems need to be operated to provide appropriate services as a requirement. Also, law enforcement needs to strengthen and an accessible reporting system of abuse harassment should be started throughout the country.

Acknowledgement: Our sincere gratitude to the helping hands who contributed to the completion of this review.

Authors' contributions: PD has conceptualized and is a major contributor in writing, SRD gave inputs in Conceptualization and for the improvement of the article. Both authors reviewed and approved the final manuscript.

REFERENCES

- UNICEF. Children in Nepal. UNICEF. 2020 Accessed 08 August. [\[Link\]](#)
- UNHCR. Child and Adolescent Development module.2018. Accessed 01 August 2020. [\[Full Text\]](#)
- Dollarhide ME. Social Media.. 2020.Accessed 25 August 2020. [\[Link\]](#)
- Edwards M. Top 10 Most Popular Social Media Apps to Follow. The Marketing Scope. 2020. Accessed 25 August 2020. [\[Link\]](#)
- Live Uttar Pradesh English. Gaming and entertainment applications gain unaccepted hike during lock down. Accessed 02 August 2020. [\[Link\]](#)
- Bhandari K. Fatal Digital Addiction. 2020. Accessed 01 August 2020. [\[Link\]](#)
- AAP, WHO. Screen Time Guidelines by Age. 2020. Accessed 01 August 2020. [\[Full Text\]](#)
- Nemours KidsHealth. Screen Time Guidelines for Teens (for Parents). 2020. Accessed 01 August 2020. [\[Link\]](#)
- Nemours KidsHealth. Healthy Habits for TV, Video Games, and the Internet (for Parents). 2020. Accessed 01 August 2020.[\[Link\]](#)
- Mayo Clinic. Healthy Lifestyle Children's Health. Tips to manage kids' screen time. 2019.Accessed 25 August 2020. [\[Link\]](#)
- UNDP. Coronavirus disease COVID-19 pandemic. 2020.Accessed 31 July 2020.[\[Link\]](#)
- BBC News. Coronavirus pandemic: Tracking the global outbreak. 2020. Accessed 29 August 2020. [\[Link\]](#)
- Vogels E, Perrin A, Rainie L, Anderson M. 53% of Americans Say the Internet Has Been Essential During the COVID-19 Outbreak. 2020.Accessed 31 July 2020. [\[Link\]](#)
- King DL, Delfabbro PH, Billieux J, Potenza MN. Problematic online gaming and the COVID-19 pandemic. *J Behav Addict.* 2020;9(2):184–6. <https://doi.org/10.1556/2006.2020.00016> [\[Full Text\]](#)
- Nagata JM, Abdel Magid HS, Pettee Gabriel K. Screen time for children and adolescents during the Coronavirus disease 2019 pandemic. *Obesity (Silver Spring).* 2020;28(9):1582–3. <https://doi.org/10.1002/oby.22917> [\[Full Text\]](#)
- Domingues-Montanari S. Clinical and psychological effects of excessive screen time on children: Effects of screen time on children. *J Paediatr Child Health.* 2017;53(4):333–8. <https://doi.org/10.1111/jpc.13462>
- Coppola D. Italy: online audience during coronavirus by age 2020 | Statista [Internet]. 2020. Accessed August 29 2020. [\[Link\]](#)
- Prasain K. Internet slows as Kathmandu residents grounded by the lockdown turn to the web en masse. *The Kathmandu Post* . 2020. Accessed 02 August 2020. [\[Link\]](#)
- Pandey A. ChildSafeNet Provides Insights on Changed Online Behaviour During COVID-19 Lockdown in Nepal. 2020. Accessed 02 August 2020. [\[Link\]](#)
- Menon R. Coronavirus era sparks rise of the gaming addict. 2020. Accessed 31 July 2020. [\[Link\]](#)
- Nemours KidsHealth. How Media Use Affects Your Child (for Parents). 2020. Accessed 01 August 2020. [\[Link\]](#)
- Bowen, L. Video game play may provide learning, health, social benefits, review finds. *Monitor on Psychology.* 2014.Accessed 28 August 2020..[\[Link\]](#)
- Nuyens FM, Kuss DJ, Lopez-Fernandez O, Griffiths MD. The empirical analysis of non-problematic video gaming and cognitive skills: A systematic review. *Int J Ment Health Addict.* 2019;17(2):389–414. <https://doi.org/10.1007/s11469-018-9946-0> [\[Full Text\]](#)
- Ayenigbara, I. O. Gaming disorder and effects of gaming on health: An overview. *J Addict Med Ther Sci.* 2018;001–3. <http://doi.org/10.17352/2455-3484.000025> [\[Full Text\]](#)
- Zirek E, Mustafaoglu R, Yasaci Z, Griffiths MD. A systematic review of musculoskeletal complaints, symptoms, and pathologies related to mobile phone usage. *Musculoskelet Sci Pract.* 2020;49:102196. <https://doi.org/10.1016/j.msksp.2020.102196> [\[ScienceDirect\]](#)
- Sharma S. Social media and digital mode is ensuring youth well-being during Covid-19. *The Hindustan Times* 2020.Accessed 31 July 2020. [\[Link\]](#)
- Keles B, McCrae N, Grealish A. A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents. *Int J Adolesc Youth.* 2020;25(1):79–93. <https://doi.org/10.1080/02673843.2019.1590851> [\[Full Text\]](#)
- Barry CT, Sidoti CL, Briggs SM, Reiter SR, Lindsey RA. Adolescent social media use and mental health from adolescent and parent perspectives. *J Adolesc.* 2017;61:1–11. [10.1016/j.adolescence.2017.08.005](https://doi.org/10.1016/j.adolescence.2017.08.005) [\[Full Text\]](#) [\[ResearchGate\]](#)

29. Zhou S, Zhang L, Wang L, Guo Z, Wang J, Chen J et al. Prevalence and socio-demographic correlates of psychological health problems in Chinese adolescents during the outbreak of COVID-19. *European Child & Adolescent Psychiatry*. 2020;29(6):749-758. [\[Full Text\]](#) [10.1007/s00787-020-01541-4](https://doi.org/10.1007/s00787-020-01541-4)
30. UNICEF. Keeping children safe online during the COVID-19 pandemic. UNICEF. 2020. Accessed 31 July 2020. [\[Link\]](#)
31. Sousa GR de, Silva DAS. Sedentary behavior based on screen time: prevalence and associated sociodemographic factors in adolescents. *Cien Saude Colet*. 2017;22(12):4061-72. [10.1590/1413-812320172212.00472016](https://doi.org/10.1590/1413-812320172212.00472016) [\[Full Text\]](#)
32. WHO. How to stay physically active during COVID-19 self-quarantine [Internet]. 2020. Accessed 31 July 2020. [\[Link\]](#)
33. Margaritis I, Houdart S, El Ouadrhiri Y, Bigard X, Vuillemin A, Duché P. How to deal with COVID-19 epidemic-related lockdown physical inactivity and sedentary increase in youth? Adaptation of Anses' benchmarks. *Arch Public Health*. 2020;78:52. [10.1186/s13690-020-00432-z](https://doi.org/10.1186/s13690-020-00432-z) [\[PMC\]](#)
34. WHO. Physical activity. 2020. Accessed 31 July 2020. [\[Link\]](#)
35. Morin A. How to Limit Your Child's Screen Time. 2020. Accessed 08 August 2020. [\[Link\]](#)
36. WHO. Technical Guidance: Stay physically active during self-quarantine. 2020. Accessed 31 July 2020. [\[Link\]](#)
37. Raising Children Network. Teens (12-18 years). 2018. Accessed 08 August 2020. [\[Link\]](#)
38. Subedi P, Thapa B, Pandey A. Use of Social Media among Intern Doctors in Regards to Covid-19. *Europasian J Med Sci*. 2020;2(1):56-64. <https://doi.org/10.46405/ejms.V2i1.41>. [\[Full Text\]](#)