

Review

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[Abhinandan Patil](#) *

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Review

Psychology in the Age of Technology Dependence and the Mobile Dilemma

Abhinandan Patil *

D. Y. Patil Education Society, (Deemed to be University), Kolhapur

* Correspondence author- abhisirdyp@gmail.com

Abstract: The relationship between child psychology and the widespread usage of mobile devices in the modern day is examined in "The Mobile Dilemma: Child Psychology and the Era of Technological Dependence." The abstract serves as a brief synopsis of the work, highlighting its important ideas and arguments. Concerns concerning the effects of excessive time spent on mobile devices on children's mental health and development have arisen in this age of technology dependency. The essay opens by pointing out the importance of investigating the psychological effects of kids' exposure to mobile gadgets. The effects of mobile phone addiction on learning, memory, and social and emotional health are investigated. The neurodevelopmental implications are explored further in the abstract, with a focus on the impact of mobile technology on brain plasticity and the formation of the developing brain. It offers advice on how to establish appropriate limits for children's screen time, encourages the development of digital literacy, and promotes responsible behavior. The pros and cons of using mobile devices in the classroom are also examined, along with their effects on students' ability to study and the risks and difficulties that could arise from implementing such a strategy. The emotional and social impacts of mobile device addiction are discussed in the abstract. This includes the impact on one's social life, empathy, ability to communicate, and sense of self-worth. The abstract also stresses the importance of interdisciplinary efforts involving parents, teachers, psychologists, and legislators to combat mobile device addiction through intervention and preventative techniques. Future directions are highlighted, with a focus on topics such as mobile technology development, digital well-being, privacy protection, mental health implications, screen time limits, digital literacy, and the impact of cultural and socioeconomic variables.

Keywords: mobile; addiction; child psychology; mental health; social impact

Introduction

Many more kids than ever before have access to smartphones, tablets, and other portable electronics thanks to the widespread availability of these devices in the modern digital age. Children's everyday experiences with mobile devices, including communication, education, and socialization, have been revolutionized as a result. This growing dependence on technology raises serious concerns about the long-term effects on children's mental health and growth ¹.

Children's use of smartphones and tablets has skyrocketed in recent years. Recent data suggests that a large majority of children have access to, if not their own, smartphone or tablet. These gadgets give kids access to a world of media and entertainment, capturing and holding their interest. Children of all ages rely heavily on mobile devices for their primary means of communication, education, and recreation. While there is no denying the positive effects of technology progress in areas like communication, education, and entertainment, there are also legitimate worries about the risks that these developments pose. The emotional effects of children's over-reliance on their mobile devices are becoming an increasingly pressing issue for researchers, teachers, and parents. There are many ways in which mobile gadgets affect kids. One the one hand, they provide ease of use, speedy communication, and entry to a variety of knowledge that can improve academic performance and

open up new perspectives. When utilized with intention and proper direction, mobile technology has the ability to encourage the development of creative, analytical, and problem-solving abilities. However, children's health and development may suffer if they spend too much time glued to their phones. Decreased physical activity, disturbed sleep patterns, and sedentary behaviors have all been linked to excessive screen usage. In addition, children's attention spans, cognitive capacities, and academic performance may all suffer from too much time spent in front of screens. Children's psychological and interpersonal growth may also be affected by their exposure to mobile technology's virtual environment. The development of crucial social skills like empathy, cooperation, and conflict resolution may be stunted by excessive usage of mobile devices. Isolation, cyberbullying, and low self-esteem are a few other possible outcomes. There has to be more investigation into this topic because of the potential psychological effects of children's heavy use of mobile gadgets. Studying the complex dynamic between kids and mobile devices can help us better comprehend the difficulties and possibilities of today's technologically dependent world. This knowledge can help shape plans to encourage beneficial digital behaviors, encourage moderation in screen time, and optimize the advantages while minimizing the risks of mobile device reliance ²⁻⁵.

In conclusion, a comprehensive investigation of the psychological consequences of children's heavy use of mobile devices is warranted by the phenomenon's rising popularity among this demographic. Children's health and development may be negatively impacted by the use of these devices, despite their outstanding benefits. Knowing how mobile technology and child psychology interact can lead to better decisions, more successful treatments, and more well-rounded approaches to mobile use.

Children's Mobile Device Use: A Look at Current Trends, Integration, and Habits

In recent years, the proliferation of mobile technology has had a profound impact on children's lives, altering the ways in which they learn, play, and connect with the world around them. It is important to study how youngsters are using mobile devices as this technology becomes more commonplace in their daily lives. To fully grasp the influence of mobile technology on children's mental health and development, it is crucial to have a firm grasp on how children engage with this technology, including the frequency and duration of their device use.

It's astonishing how pervasive mobile phone use is among young people. These days, it's hard to find a kid without a smartphone, tablet, or some other form of portable electronic gadget. From daily communication and enjoyment to education and research, these gadgets have become an inseparable part of their life.

Numerous studies have been undertaken by researchers investigating the trends and usage patterns of children's mobile device use to acquire insights into the scope of the problem. Children's usage of mobile devices is pervasive and on the rise, according to the data. Children of all ages, from the very young to those well into their teenage years, are frequently using mobile devices. Children of different ages have different patterns of mobile device use, although many spend considerable time doing so. According to research, kids spend an average of several hours every day in front of electronic screens. Concerns have been raised concerning the effects of children's excessive use of mobile devices on their health and growth in all areas of development, including their physical, mental, and emotional health. Several factors, such as age, access to technology, and parental direction, affect how often youngsters use mobile devices. In general, older children and teenagers use mobile devices for social connections, media consumption, and information collecting, while younger children and toddlers may rely on them more for fun and education. Furthermore, older children and teenagers are using mobile devices more frequently due to the availability of internet connectivity and the rising popularity of social media platforms. Another important factor in children's technological participation is the length of time spent on mobile devices. According to studies, many children use mobile devices for long periods of time, spanning from a few minutes to several hours at a time. Sedentary behavior, decreased physical activity, and disruption of necessary rhythms like sleep and eating times are all possible outcomes of excessive screen usage ⁴⁻⁷.

To fully grasp the effects of mobile technology on youngsters, we need to have a firm grasp on how this medium is being used by this demographic. Insights about how often and for how long people use their mobile devices will help scientists and parents weigh the pros and cons of encouraging their children to adopt this technology. This information can be used to create recommendations, tactics, and interventions that encourage children to use mobile devices in a responsible and healthy way. Ultimately, the widespread availability of portable electronic gadgets has changed the way kids go about their daily lives. The impact of mobile technology on children's health and development can only be understood by gaining insight into the norms and habits of these young users. By investigating how often and for how long kids use their mobile devices, we may learn more about their relationship with technology and take steps toward helping them develop a healthy and thoughtful relationship with their devices. Children's mobile phone addiction and its impact on their minds, attention spans, social skills, and mental and emotional health⁸.

Concerns concerning the mental health effects of children's heavy smartphone use have been brought to the forefront by the phenomenon's meteoric rise. There has to be research on how much time kids spend on their phones and how it can influence their brain development, attention span, social skills, and emotional health. With a deeper appreciation of these mental after-effects, we may better manage the difficulties associated with too much time spent on mobile devices and create methods to encourage children to form positive digital habits⁹.

The effect of children's mobile phone use on their brain growth is a source of concern. Studies have shown that mental processes including memory, problem solving, and critical thinking might suffer from too much time spent in front of a screen or glued to a mobile device. Children's cognitive development may be stunted by the frequent stimulation and multitasking associated with mobile device use. Overuse of mobile devices also has negative effects on attention span. Kids in today's world of continual digital stimulation and the promise of rapid pleasure may have trouble focusing for long periods of time. Shorter attention spans and increased difficulty keeping focus for extended durations in offline activities, such as reading or classroom learning, may be a result of the rapid and frequent shifts in attention expected by mobile devices. Overuse of mobile devices may also have an effect on children's social skills. The acquisition of soft skills such as empathy, teamwork, and clear expression cannot be substituted without face-to-face interaction. Children's social development can be hampered by excessive screen time since it reduces their chances to participate in face-to-face interactions. Furthermore, children's capacity to navigate social relationships effectively may be impacted by the prominence of social media and online platforms, which can lead to virtual socializing taking precedence over real offline ties. The impact of cell phone addiction extends to one's mental health. Children who use their phones too much are more likely to experience stress, anxiety, and depression. Increased emotional fragility may result from prolonged contact with digital media, social pressures, and cyberbullying. Furthermore, the addictive nature of mobile devices may cause problems with self-regulation and emotional control, which may have a negative effect on children's mental health⁹⁻¹⁴.

It is crucial for parents, teachers, and researchers to have an understanding of the psychological repercussions of children's cell phone reliance. We can lessen the harm to children's intelligence, focus, social abilities, and mental health if we are aware of the hazards and adopt preventative measures. Children can build a healthy connection with mobile technology through the implementation of standards for responsible device use, the encouragement of offline activities, the promotion of face-to-face contacts, and the promotion of digital literacy and resilience. In conclusion, children's mental health may suffer from prolonged exposure to electronic devices, which may have far-reaching effects on their growth and development. Concerns have been raised about the potential negative effects of excessive mobile phone use on children's brain development, attention span, social skills, and psychological health. Children's well-being can be bolstered and they can learn to use technology responsibly and mindfully if we acknowledge these consequences and employ techniques to promote healthy gadget use¹⁴⁻¹⁶.

Children's Cognitive Development, Attention Span, Social Skills, and Emotional Well-Being in Relation to Excessive Use of Mobile Devices

Concerns regarding the mental health effects of too much time spent in front of screens have been generated by children's extensive use of mobile devices. The effects of cell phone addiction on kids' brain growth, attentiveness, social skills, and mental health must be investigated. Insight into the difficulties caused by excessive mobile device use and the means to encourage a healthy digital lifestyle in children can be gained through an appreciation of these psychological impacts ^{2,5,11-14}.

1. Progress in Thought:

Children's brains can be negatively affected by spending too much time on mobile devices. Studies have shown that staring at a screen for lengthy periods of time negatively impacts cognitive abilities like remembering, problem solving, and analysis. There is concern that children's cognitive development could be stunted by the continual stimulation and multitasking associated with mobile gadgets.

2. Concentration Time:

Children's attention spans may be impacted by their use of mobile devices. Kids in today's world of continual digital stimulation and immediate satisfaction may have trouble focusing for long periods of time on jobs that demand it. Rapid attention shifts required by mobile devices may shorten attention spans and make it harder to concentrate on tasks for long amounts of time that do not offer the same immediate stimulus.

3. Communication Abilities:

It's crucial to think about how kids' increased screen time affects their ability to interact with others. Interactions with others face-to-face are vital to the growth of soft skills including empathy, teamwork, and clear expression of ideas. Children's social development may be stunted if they spend too much time glued to their phones instead of interacting with other people in the real world. Furthermore, children's proficiency in navigating social interactions may be hampered by the prominence of social media and online platforms, which may elevate virtual socialization over meaningful offline connections.

4. Wellness in Mind and Heart

Addiction to mobile devices may potentially have a negative effect on kids' mental health. Children who spend too much time in front of screens may develop emotional and behavioral problems. Constant interaction with digital media, social pressures, and the risk of cyberbullying have been linked to increased emotional fragility. More importantly, the addictive qualities of mobile devices may have a negative effect on children's ability to self-regulate and manage their emotions.

Understanding the difficulties young people experience in the digital age requires an investigation of the mental effects of overexposure to mobile devices. Understanding the potential consequences for a person's intelligence, focus, social abilities, and mental health enables preventative measures to be taken. In order to assist youngsters build a positive relationship with mobile technology, it is important to implement rules for healthy device use, encourage balanced offline activities, promote face-to-face interactions, and foster digital literacy and resilience.

To sum up, research suggests that kids' cognitive growth, attention span, social skills, and emotional well-being might all take a hit from their overuse of mobile devices. We can better address the obstacles and establish ways to encourage a healthy perspective on mobile device use among children if we have a firm grasp on the ramifications of this trend. Children's mental health can be improved via proper guidance and assistance as they explore the online world.

Neurodevelopmental Issues: How Children's Mobile Phone Use Affects Their Brains and the Idea of Neuroplasticity

There has been growing worry regarding the influence of children's widespread usage of mobile devices on their cognitive growth. Children's usage of mobile devices may modify neural pathways and cognitive processes, therefore it's important to look at neuroplasticity if we want to know how they affect kids' brains ¹²⁻¹⁵.

1. The Developing Brain and the Role of Neuroplasticity:

The term "neuroplasticity" is used to describe the brain's capacity for change and transformation in response to both internal and external influences. Significant anatomical and functional changes occur in the brain during childhood and adolescence as neuronal connections are established, pruned, and refined. Constant exposure to mobile devices during this formative era may alter these procedures.

2. Neurological Effects:

Children's brain development can be harmed by excessive time spent on mobile devices. Constant interaction with digital media has the ability to modify the brain's reward system, leading to changes in neurotransmitter release and the reinforcement of specific neural pathways. This may have effects on the parts of the brain responsible for paying attention, resisting temptation, and other cognitive tasks.

3. Mental Operations:

It's crucial to think about how using a mobile device affects your brain's cognitive functions. Multiple studies have shown that prolonged smartphone use negatively affects cognitive abilities like short-term memory, focus, and reaction time. Understanding how the usage of mobile devices may influence the growth of these cognitive processes is important because of the fundamental roles they play in academic success, problem solving, and decision making.

4. Language and Interpersonal Skills:

Children's development of language and communication abilities may also be affected by their use of mobile gadgets. While active apps and instructional content can help with language learning, spending too much time in front of a screen can hinder both language development and social relationships since it eliminates the chance for people to interact with one another in person.

5. Disruptions in Sleep:

Another factor to think about is how using a mobile device affects your sleeping habits. Children's sleep can be negatively impacted by the use of electronic devices, exposure to screens (and the blue light they create), and the availability of stimulating content. Cognitive performance, emotional stability, and general health are all vulnerable to disruptions in sleep.

It is critical for parents, teachers, and scientists to understand the impact that mobile gadgets may have on children's brain development. Informed judgments may be made about children's screen time, and methods can be developed to improve cognitive and neurological development, if we understand the notion of neuroplasticity and how use of mobile devices may affect the developing brain.

In conclusion, there are consequences for cognitive maturation associated with mobile device use among young people. It's crucial to have a firm grasp on neuroplasticity and the ways in which mobile device use might potentially alter neural connections and mental processes. We can help kids' brains grow in a healthy way and use tech to their advantage in school and in life by encouraging them to practice moderation when using mobile devices.

Parenting in the Digital Age: Finding the Sweet Spot of Device Supervision and Freedom for Your Kids

Managing their kids' mobile device use while encouraging independence and digital literacy is a tough balancing act in today's technologically advanced world. When it comes to children's safety and development in today's technologically advanced environment, striking the correct balance between supervision and freedom is crucial. This article dives into the ways in which parents may help regulate their kids' mobile device use by exploring techniques for establishing appropriate limits, encouraging youngsters to become tech literate, and encouraging responsible behavior online

15-24.

1. Setting Acceptable Limits:

It's vital to establish firm guidelines for how much time can be spent on mobile devices. Parents can set restrictions on their children's screen usage by establishing tech-free zones at mealtimes and

before bed. Creating a healthy balance between screen time and other activities can be facilitated by setting guidelines on when and where gadgets can be used.

2. Promoting Frequent and Open Conversation:

It's crucial to have honest and on-going discussions with kids regarding their mobile device use. Concerns about excessive screen time, cyberbullying, or inappropriate information can be addressed through conversations between parents and their children about the pros and cons of technology. Young people can benefit from having a place where they can talk freely about their thoughts and feelings about technology.

3. Acting as an Example:

When it comes to how their kids use technology, parents set a significant example. Children's perspectives on mobile device use can be shaped by their parents' examples of appropriate and thoughtful technological habits, such as limiting personal screen time and prioritizing face-to-face interactions.

4. In order to promote digital literacy,

To help kids become responsible digital citizens, it's crucial that we encourage them to learn basic computer skills. In order to help their children use mobile devices safely and responsibly, parents should teach them to think critically about what they see online, identify dependable from dubious sources, and safeguard their personal information.

5. Control & Supervision for Parents:

Tools for monitoring and controlling children's access to mobile devices can be useful for parents. Parents may monitor their children's screen time, restrict their access to inappropriate content, and control which apps their kids can use with the help of these tools. It is important to supervise children as they get older, but it is also important to respect their desire for privacy.

6. Promotion of Non-Online Passivity:

In order to discourage excessive screen usage and encourage healthy growth, it is important to encourage a wide variety of offline activities. Children can benefit from a well-rounded and fulfilling upbringing when they are encouraged to participate in sports, hobbies, reading, and social interactions with others.

7. Cooperation Accords:

Children can learn to take control of their technology use by participating in group efforts to establish ground rules for the use of mobile devices. Talking about and compromising on restrictions can help kids buy into the reasoning behind limits and make them more likely to follow them.

In conclusion, modern parents must strike a balance between limiting their children's screen time and allowing them some degree of independence. Supporting children's well-being and teaching them to navigate the digital world safely requires setting appropriate limits, encouraging digital literacy, and encouraging responsible use. Parents may help their children establish healthy and responsible mobile device habits by talking to them about their experiences and modeling those habits themselves.

The Pros and Cons of Using Mobile Technology in the Classroom and How It Affects Student Achievement

There has been much discussion regarding the pros, cons, and risks of allowing students to use their own mobile devices in the classroom. The effects of mobile technology on student achievement are the focus of this article. The successful implementation of mobile devices in classrooms can be better understood by investigating both the benefits and drawbacks¹⁹⁻²⁵.

1. The Value of Mobile Devices in the Classroom:

The use of mobile devices has many advantages in the classroom. They offer a wide variety of academic materials, so students can learn about many different subjects and get the most recent research. In addition to promoting active student engagement and boosting motivation, mobile

technology encourages interactive and individualized learning experiences. The use of digital resources and instructional apps on mobile devices has also been shown to improve students' abilities to work together, communicate effectively, and think critically.

2. Mobile technology integration difficulties:

There are some difficulties associated with using mobile devices in the classroom. The requirement for consistent internet availability, difficulties of device accessibility for all students, and the risk of student distraction are all issues that crop up frequently. Likewise, educators may have trouble rethinking their pedagogical approaches in light of the advent of mobile devices.

3. Effects on Educational Outcomes:

The effects of mobile technology on academic performance have been studied with varying degrees of success. While some research shows improvement in student interest, motivation, and knowledge retention, other studies show little change or perhaps the opposite. There are many determinants of successful mobile device integration into the classroom, including pedagogical style, teacher preparation, and goal alignment.

4. Possible Dangers and How to Avoid Them:

There are concerns that must be addressed when bringing mobile technology into the classroom. Distraction, insecurity, harassment, and isolation online are all issues that could arise. Schools can help children who may be negatively affected by technology by implementing digital citizenship programs, teaching them how to use technology responsibly, enforcing internet safety policies, and offering counseling services.

5. Help for Educators in Their Professions:

Teachers need proper training and continuing assistance to successfully implement mobile devices in the classroom. Mobile devices have the potential to improve teaching and learning, but teachers require training on how to best manage classroom technology use and overcome any obstacles that may arise. Best practices can be disseminated and mobile technology integration can be continuously improved through collaboration between teachers, administrators, and technology specialists.

6. Finding a Happy Medium Between Online and Offline Time

The health and happiness of today's students depends on their ability to strike a balance between online and offline pursuits. Breaks, physical activities, and offline learning experiences can all be built into a school's daily routine to promote a healthy work-life balance. The use of mobile devices for education and entertainment should supplement existing strategies rather than serve as a replacement for them.

In conclusion, mobile technology in the classroom has the potential to improve student achievement, participation, and teamwork. However, difficulties and hazards must be overcome if advantages are to be fully realized. The educational potential of mobile technology can be fully realized, while the risks can be minimized, if schools invest in teacher professional development, create responsible technology usage regulations, and promote a balanced approach to integrating mobile devices.

Social and Emotional Consequences: Balancing Online and Offline Interactions in the Age of Mobile Obsession

Concerns concerning the impact of children's heavy reliance on their mobile devices on their psychological and social growth are warranted. This article explores how kids' reliance on their mobile devices affects their connections with others, their capacity for empathy and communication, and their sense of self-worth. We can learn about the social and emotional issues kids encounter in today's digital world if we investigate the tension between online and offline relationships²⁴⁻³³.

1. Effects on Social Interactions:

When kids use their phones too much, it can hinder their capacity to connect with others. Children may develop a sense of social isolation or disconnection as a result of the attractiveness of virtual relationships and online activities. The growth of social abilities, empathy, and a sense of belonging can only occur through the cultivation of meaningful in-person connections.

2. Feelings of Compatibility and Understanding:

Children's social and emotional development may be stunted by their frequent use of virtual environments. Empathy and emotional understanding are greatly aided by the use of nonverbal indicators such as facial expressions and body language. Children's capacity to read and respond empathically to the emotions of others may be hampered if they are not exposed to enough of these nonverbal clues, which may be the result of an overreliance on digital communication.

3. Competence in Communicating:

Children's ability to interact with others, both online and in person, may be impacted by their reliance on mobile devices. Although there is the potential for collaboration via digital channels, these exchanges may lack the complexity and depth of in-person meetings. The overuse of electronic means of communication has been linked to a decline in interpersonal skills such as active listening, empathy, and dispute resolution.

4. Confidence and Virtual Personas:

Children's sense of identity and self-esteem may be affected by their use of mobile devices and the internet. Unrealistic comparisons and demands can result from regular exposure to social media, where curated profiles and idealized depictions of life are widespread. Adherence to perceived norms on the internet can have a negative impact on children's sense of identity and well-being.

5. Promoting Good Online Conduct and Digital Citizenship

To be successful in cyberspace, one must appreciate the significance of digital citizenship and appropriate online conduct. Kids require education on issues like online safety, cyberbullying, and the effects of their activities. Teaching kids about digital citizenship helps them develop good habits on the internet and gives them the tools they need to make smart choices when interacting with others online.

6. Moderation in eating and lifestyle:

Finding a happy medium between online and offline interactions is crucial. A child's social and emotional development can benefit from being exposed to a variety of offline activities, interactions, and connections. Children can make informed decisions about their mobile device use and place a higher value on face-to-face interactions if they have the digital literacy, critical thinking, and self-regulation abilities necessary to do so.

A protein- and probiotic-rich diet will assist a youngster maintain optimal mental and physical health.

Conclusion

Child psychology and our current era of technological dependence are intricately linked, and "The Mobile Dilemma: Child Psychology and the Era of Technological Dependence" explains this. In this post, we've discussed the many ways in which kids' overuse of mobile devices can affect their mental health, and we've stressed the importance of taking a measured, mature approach to their mobile device usage. There has to be more research into how kids' exposure to mobile devices affects their brains, attention, relationships, and mental health now more than ever. We've talked about how to deal with the difficulties of parenting in the digital age by establishing good limits and encouraging digital literacy. In addition, this article has discussed the advantages and disadvantages of using mobile devices in the classroom, stressing the importance of striking a balance between taking use of their benefits for better learning outcomes and dealing with the hazards that come along with their widespread adoption. The effects of children's mobile device addiction on their social and emotional development, including their interactions with others, their capacity for empathy and communication, and their sense of self-worth, have also been studied. In order to foster sound

psychological and social growth, it is essential to value and cultivate offline relationships. Intervention and preventive efforts for mobile device addiction should entail partnerships between parents, teachers, psychologists, and policymakers. We can help children learn to use their mobile devices safely and establish a healthy digital lifestyle if we all work together. We need to think about how the future of mobile technology may affect children psychologically. There is a need for more study and preventative action in the areas of mobile technology development, digital health, privacy protection, mental health consequences, recommended screen time, digital literacy, and cultural and societal aspects. The conclusion of "The Mobile Dilemma: Child Psychology in the Age of Technological Dependence" stresses the importance of taking a deliberate and well-informed stance toward children's use of mobile devices. To make sure that mobile technology contributes positively to children's development and well-being while limiting potential concerns, we need to understand the psychological repercussions, treat addiction, and be watchful about future improvements.

References

1. Alavi SS, Ferdosi M, Jannatifard F, Eslami M, Alaghemandan H, Setare M. Behavioral addiction versus substance addiction: correspondence of psychiatric and psychological views. *Int J Prev Med*. 2012;3:290–294.
2. Arefin S, Islam R, Mustafi MAA, Afrin S, Islam N. Impact of smartphone addiction on business students' academic performance: a case study. *Independ J Manage Prod*. 2017;8:955–975.
3. Augner C, Hacker GW. Associations between problematic mobile phone use and psychological parameters in young adults. *Int J Public Health*. 2012;57:437–441.
4. Baert S, Vujić S, Amez S, Claeskens M, Daman T, Maeckelberghe A, et al. Smartphone use and academic performance: correlation or causal relationship? Bonn: IZA, Institute of Labor Economics; 2018. (Discussion paper series, IZA DP No. 11455).
5. Boumosleh J, Jaalouk D. Smartphone addiction among university students and its relationship with academic performance. *Global J Health Sci*. 2018;10:48–59.
6. Boumosleh JM, Jaalouk D. Depression, anxiety, and smartphone addiction in university students- a cross-sectional study. *PLoS ONE*. 2017;12(8):e0182239.
7. Brian SJ. Two days with no phone. *Scholastic Action*. 2013 Sep 2;4–6.
8. Cha S-S, Seo B-K. Smartphone use and smartphone addiction in middle school students in Korea: prevalence, social networking service, and game use. *Health Psychology Open*. 2018;2018:1–5.
9. De-Sola Gutiérrez J, Rodríguez de Fonseca F, Rubio G. Cell-phone addiction: a review. *Front Psychiatry*. 2016;7:175.
10. Jones T. Students' cell phone addiction and their opinions. *Elon J Undergrad Res Commun*. 2014;5(1):74–80.
11. Lepp A, Barkley JE, Karpinski AC. The relationship between cell phone use and academic performance in a sample of U.S. college students. *Sage Open*. 2015;2015:1–9.
12. Li L, Wu C, Gan Y, Qu X, Lu Z. Insomnia and the risk of depression: a meta-analysis of prospective cohort studies. *BMC Psychiatry*. 2016;16:375.
13. Negi KS, Godiyal S. College students' opinion about cell phone usage. *Int Educ Sci Res J*. 2016;2(10):35–38.
14. Ng FS, Hassan NSIC, Nor NHM, Malek NAA. The relationship between smartphone use and academic performance: a case of students in a Malaysian tertiary institution. *Malaysian Online J Educ Technol*. 2017;5(4):58–70.
15. Nishad P, Rana AS. Impact of mobile phone addiction among college going students: A literature review. *Adv Res J Soc Sci*. 2016;7(1):111–115.
16. Parasuraman S, Sam AT, Yee SW, Chuon BL, Ren LY. Smartphone usage and increased risk of mobile phone addiction: A concurrent study. *Int J Pharma Investig*. 2017;7:125–131.
17. Reinecke L, Aufenanger S, Beutel ME, Dreier M, Quiring O, Stark B, et al. Digital stress over the life span: the effects of communication load and internet multitasking on perceived stress and psychological health impairments in a German probability sample. *Media Psychol*. 2017;20:90–115.
18. Rosen LD, Whaling K, Carrier LM, Cheever NA, Rökkum J. The media and technology usage and attitudes scale: an empirical investigation. *Comput Human Behav*. 2013;29:2501–2511.
19. Schoeni A, Roser K, Rösli M. Symptoms and cognitive functions in adolescents in relation to mobile phone use during night. *PLoS ONE*. 2015;10(7):e0133528.
20. Thomée S, Härenstam A, Hagberg M. Mobile phone use and stress, sleep disturbance, and symptoms of depression among young adults-a prospective and cohort study. *BMC Public Health*. 2011;11:66.
21. Zamani BE, Abedini Y, Kheradmand A. Internet addiction based on personality characteristics of high school students in Kerman, Iran. *Addict Health*. 2011;3(3-4):85–91.

22. Malla MA, Dubey A, Kumar A, Patil A, Ahmad S, Kothari R, Yadav S. (2021). Optimization and elucidation of organophosphorus and pyrethroid degradation pathways by a novel bacterial consortium C3 using RSM and GC-MS-based metabolomics. *Journal of the Taiwan Institute of Chemical Engineers*. 144:104744.
23. Munot N, Kandekar U, Rikame C, Patil A, Sengupta P, Urooj S, Bilal A. (2022). Improved Mucoadhesion, Permeation and In Vitro Anticancer Potential of Synthesized Thiolated Acacia and Karaya Gum Combination: A Systematic Study. *Molecules*. 27(20):6829.
24. Munot N, Kandekar U, Giram PS, Khot K, Patil A, Cavalu S. (2022). A Comparative Study of Quercetin-Loaded Nanocochleates and Liposomes: Formulation, Characterization, Assessment of Degradation and In Vitro Anticancer Potential. *Pharmaceutics*. 14(8):1601.
25. Manikyam HK, Tripathi P, Patil SB, Lamichhane J, Chaitanya M, et al. (2020). Extraction, purification, and quantification of hesperidin from the immature *Citrus grandis*/maxima fruit Nepal cultivar. *Asian Journal of Natural Product Biochemistry*. 20(1).
26. Patil A, Munot N, Patwekar M, Patwekar F, Ahmad I, Alraey Y, Alghamdi S, et al. (2022). Encapsulation of lactic acid bacteria by lyophilisation with its effects on viability and adhesion properties. *Evidence-based Complementary and Alternative Medicine*. 2022.
27. Nalawade AS, Gurav RV, Patil AR, Patwekar M, Patwekar F. (2022). A comprehensive review on morphological, genetic and phytochemical diversity, breeding and bioprospecting studies of genus *Chlorophytum* Ker Gawl. from India. *Trends in Phytochemical Research*. 6(1):19-45.
28. Patil KG, Balkundhi S, Joshi H, Ghewade G. (2011). MEHSANA BUFFALO MILK AS PREBIOTICS FOR GROWTH OF *LACTOBACILLUS*. *International Journal of Pharmacy and Pharmaceutical Research*. 1(1):114-117.
29. Das N, Ray N, Patil AR, Saini SS, Waghmode B, Ghosh C, Patil SB, et al. (2022). Inhibitory effect of selected Indian honey on colon cancer cell growth by inducing apoptosis and targeting the β -catenin/Wnt pathway. *Food & Function*. 13(15):8283-8303.
30. Patil MJ, Mali V. (2021). The Diverse Cytotoxicity Evaluation of *Lactobacillus* Discovered from Sheep Milk. *Acta Scientific Pharmaceutical Sciences*. 5(12):69-70.
31. Abhinandan P SP, John D. (2020). Probiotic potential of *Lactobacillus plantarum* with the cell adhesion properties. *Journal of Global Pharma Technology*. 10(12):1-6.
32. Patil A, Pawar S, Disouza J. (2018). Granules of unistain lactobacillus as nutraceutical antioxidant agent. *INTERNATIONAL JOURNAL OF PHARMACEUTICAL SCIENCES AND RESEARCH*. 9(4):1594-1599.
33. Patil A, Mali V, Patil R. (2019). Banana fibers camouflaging as a gut worm in a 6-month-old infant. *Iberoamerican Journal of Medicine*. 2(3):245-247.

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