

# Possible Ways to Manage the Excessive use of Electronic Gadgets

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# ABSTRACT

The use of technology in the home and classroom for various purposes is become increasingly commonplace every day in the twenty-first century. Technology is advancing so quickly that the use of gadgets has skyrocketed. A rising global worry is the use of electronic devices, particularly mobile phones, by young people everywhere. In recent times, innovations such as Bluetooth, video calls, video games, mobile data, cameras, and email have gained popularity. The majority of health issues, including headaches, sleeplessness, eye problems, fatigue, and restlessness, have been linked to prolonged use of electronics and may be a result of psychological anguish, social isolation, and loneliness. This review article's objective is to examine the research and enumerate the issues related to extended use of electronic devices. It would be feasible to develop interventions and offer strategies for controlling excessive device use if one were aware of the repercussions of gadget use.

**Keywords:** Electronic Devices, Health Impacts, loss of Hearing, Yoga, Meditation

# Introduction

In this day and age of computers and smartphones (Figure 1), smart phones are becoming more and more common among all people, even kids. Electromagnetic fields are produced in the environment by machinery, electronic equipment, home appliances, gadgets, accessories, associated components, integrated parts, and electronic systems (Figure 2). Our perspective of the world has evolved as a result of social networking sites, texting, mobile phones, and the internet. The world is become smaller thanks to mobile phones. It has affected bhaviour patterns and relationships. <sup>1,9</sup> Texting, gaming, social networking, and music listening are becoming more and more common uses for a mobile phone that was originally designed for making calls. Almost as many people use mobile phones as there are people on the planet 7 billion. There is now more

people using mobile phones, which has increased Internet access. They have evolved into private tools that offer multiple pleasures and serve as status and social indicators.



Figure 1.Excess use of computer

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Figure 2.Excess use of mobile phone

A smartphone is actually a cell phone with sophisticated functionality. In addition to being able to send and receive email, transmit and receive videos, play games, record audio, send and receive images, and browse the web wirelessly, smartphones also include built-in apps for social media websites. The same factors have made smartphones popular among consumers and have led to their usage in businesses. Constant use of electronics has been linked to a number of documented health issues, including sleep disruptions, backache, neck pain, finger pain, and eye strain. Virtual meetings, video calls, and social media are widely used for a variety of reasons. Use of mobile phones has been linked to health problems such as headache, earache, neck discomfort, aching fingers, weariness, eye symptoms, restlessness, and sleep disturbances. 10,14

# Effect of Electro-Magnetic Waves on Human Brain

Mobile communications technology has advanced quickly. One source of electromagnetic wave prominence is the cell phone. Research on the effects of dangerous radiation waves released by cell phones is currently ongoing. Youngsters use technology for a variety of activities, such as playing games, seeing movies, listening to music, communicating with friends, and visiting several websites. 15,19 The majority of their time is spent in these activities, and they neglect to consider how their posture, the brightness of the screen, and the distance of the screen from their eyes affect their eyesight and overall health. There are reports that those who use media gadgets more frequently feel bored or depressed. Skeletal abnormalities are observed in those who use electronic gadgets excessively. Pain, weakness, and numbness can result from repetitive strain injury, a chronic disorder caused by continuous, strong, or uncomfortable hand movements that injure the muscles and nerves in the hand, neck, shoulder, and forearm. Extended usage of electronic devices can have negative effects on the eyes, neck muscles, arm, and wrist. Due to their decreased in-person interactions, people who use their smartphones excessively are likely to feel that their social relationships are not fulfilling and encouraging, nor that they are actively promoting the happiness and well-being of others (Figure 3). This review article's objective is to examine the literature, enumerate the issues related to extended use of electronic devices, and provide strategies for reducing the symptoms brought on by increasing screen time.



Figure 3.Harmful impacts of over use of smart phone **Effect on Eyes** 

"Computer vision syndrome," which presents as eye strain, dryness, irritation, burning feeling, redness, blurred vision, and double vision, is brought on by prolonged use of electronic devices. According to the National Eye Institute, computer users should abide by "the<sup>20,20,20</sup> rule," which suggests that after using a device continuously for 20 minutes, take a 20-second break and blink frequently to prevent dry eyes and further strain on the eyes.

#### **Neck Pain**

The muscles in your head have to work harder to keep your head up the more you stare down. When we stare down at our laptops, desktops, or smartphones all day, our muscles can become strained and uncomfortable. The main cause of the pain is bad posture or computer handling skills. Using a computer is among the most frequent causes. Individuals who spend a lot of time in front of a computer should practise good posture, look for new, ergonomic gadget designs, and perform stretch exercises as a way to relieve tension and discomfort without sacrificing productivity. Additionally, they ought to take sufficient breaks whenever they can.

# **Affecting Ears**

Over use of earphones and headphones can lead to hearing loss, ear infection etc. Limit the amount of time you spend with music devices.

# **Back Pain**

Young people who use electronic devices for extended periods of time and adopt bad posture while doing so can develop back pain.

# **Eating Habits**

Many people begin to overeat when utilising electronic devices as a form of enjoyment, and lethargy brought on by addiction can also result in obesity.

# **Sleeplessness**

One of the symptoms of withdrawal is being unable to fall asleep due to a fixation with a device. Increased screen time also contributes to insomnia.

#### Headache

Screen time appropriate for a person two hours after work. But most people spend more than two hours in front of a screen, which causes headaches and migraines.

#### **Mental Health**

Adults are more likely to overuse their smartphones, and this behaviour is linked to anxiety, overuse syndrome, sadness, tension, and low self-esteem. Silence on mobile phones can cause upset, insomnia, irritability, and stomach issues. Numerous research' findings indicate that mobile phone radiation alters gene regulation and contributes to headache, hot sensation in the ears, memory loss, weariness, and issues with hearing and vision. Additionally, research revealed that continuous cell phone use is linked to brain tumours. There have been a few studies conducted among college students that discuss the uneasiness or anxiety that comes with misplacing or momentarily being without a cell phone and are believed to be connected to overuse of these devices.

People use electronic devices, which are readily available in the market, for a variety of purposes in their daily lives. Human health is impacted by electromagnetic waves produced by electronics and electric currents that travel through the environment. Electronic devices such as televisions, laptops, cameras, ovens, smart phones, washing machines, fans, cell phones, play stations, printers, tablets, pen drives, projectors, CD/DVD players, inverters, radios, electronic watches, phone chargers, cameras, and recorders, remote controls, refrigerators, phones, hair dryers, air conditioners, headphones, artificial intelligence, imaging machines, health care devices, diagnostic devices, etc. can release radiations that force people to assume certain postures for extended periods of time or create conditions that increase the risk of accidents or chemical or physical harm. While many of these gadgets are helpful, there are potential health risks. As a result, using these in court can stop related diseases. Overuse and inappropriate use of electronic gadgets, appliances, and machinery at home can pose risks and hazards to human health. Overly The bright screens on electronics can lead to headaches, sleeplessness, fatigue, and dizziness. Back, neck, and shoulder pain can result from sitting and resting posture while using electronics. Nerve damage are particularly common in those who work long hours without shifting their posture. Using devices can lead to accidents. Long-term earphone use might result in either temporary or permanent hearing loss. There are instances of people utilising earbuds and crossing roadways or railway tracks and getting into accidents. In addition to the radiation from

telecommunications towers and cosmic rays falling from the sky, internet services also have an impact on people's health. Depending on the types of exposure, devices used, and length of exposure, radiation can result in burns, heat exhaustion, and cancer (Figure 4). Relationship problems, poor diet, worry, stress, and inactivity can all exacerbate illnesses and disorders brought on by exposures. Absence of yoga, meditation, physical activity, healthy diet, and prolonged use of electronics can lead to addiction from exposure. Therefore, it is advised that we limit our daily screen time to 30 to 60 minutes in order to protect ourselves from the negative effects of technology. We may also improve our health by practising yoga, exercising, breathing techniques, meditation, and eating a balanced diet.



Figure 4.Symptoms and prevention of electronic gadget over use

### **Solutions for Electronics Addiction**

The issue of internet addiction is widespread and has the same potential for harm as traditional forms of addiction. There are a number of techniques you can employ to reduce your internet consumption if you think you might be overly reliant on it. First, set limits on the times you will allow yourself to use the internet. You may do this by designating specific times for yourself to log on and by keeping a journal of the things you do online. Turning off devices can also help you resist the urge to use them for online activities. You can feel better and reduce your internet usage by forming healthy habits.

When participating in social events, turn off your computer, tablet, and smartphone. Turn off your phone, or at least put it on mute, put it somewhere out of sight, or take it into another room when you're spending time with family or friends.

If you frequently use your phone to browse the internet while in bed, stop yourself by charging it in a different part of the house. To aid you at night, try reading a book or a magazine or practising a relaxation method. Put timewasting websites behind a browser block. By adjusting your browser's settings, you can block websites that use a lot of your time if you'd like to avoid visiting them. You might discover that you are spending less time online if you disable time-wasting websites like social networking.

Switch out your internet use for a healthy hobby. Engaging in physical activity, reading literature, writing, studying, knitting, and crossword puzzles are all more beneficial than idly perusing the internet. Reduce tension and anxiety by using relaxation techniques. When you're feeling anxious, deep breathing, gradual muscle relaxation, yoga, and meditation are all excellent methods to unwind (Figure 5).



Figure 5.Green solution to excess use of electronic gadgets

### **Conclusion**

Although advancements in communications and electronic devices make life easier, there may be drawbacks as well. People's health has suffered as a result of using electronics for learning and entertainment more frequently. Thumb pain is a result of the hand function being affected by smartphone overuse syndrome. Although overusing social networking sites might have certain negative effects, they offer a useful and engaging tool to support communication, which is a basic human need. Although advancements in communications and electronic devices make life easier, there may be drawbacks as well. People's health has suffered as a result of using electronics for learning and entertainment more frequently. Thumb pain is a result of the hand function being affected by smartphone overuse syndrome. Although overusing social networking sites might have certain negative effects, they offer a useful and engaging tool to support communication, which is a basic human need. Consequently, reducing or removing technology might not be the best course of action, but regulating it to the right extent would. People should be informed about the negative consequences of using electronics excessively. It's also critical to know how to reduce the negative impacts of using gadgets, such as increasing the frequency of your blinks, setting screen time limits, and choosing comfortable seating positions. The failure to maintain constraints is the primary source of most harmful health impacts. When practised in conjunction with family members, nutrition, physical activity, breathing exercises, meditation, pranayama, and yoga will help keep the physical dimension of health within a normal range. Eating with family members will also help maintain the spiritual dimension of health within a normal range, as will offering prayers to God and Surya Namaskar. Thus, we can finally draw the conclusion that minimising the amount of time spent using electronics, gadgets, and appliances, minimising the amount of time spent on screens to view social media updates, eating well, interacting with family, praying, visiting places of worship, and travelling to areas rich in natural resources such as dense forests, waterfalls, rivers, dams, mountains, beaches, etc. can all help maintain mental health.

# References

- 1. Sigman A The impact of screen media on children: A Eurovision for parliament. Improving the Quality of Childhood in Europe 2012; 3: 88-121.
- Bian M, Leung L. Linking loneliness, shyness, smartphone addiction symptoms, and patterns of smartphone use to social capital. Soc Sci Comput Rev 2015: 33:61–79.
- Cheever N, Rosen L, Carrier LM. et al Out of sight is not out of mind: the impact of restricting wireless mobile device use on anxiety levels among low, moderate and high users. Comput Human Behav 2014; 37:290–297.
- Jacobs K, Baker NA. The association between children's computer use and musculoskeletal discomfort. Work 2002; 18:221–226.
- 5. Elhai JD, Levine JC, Dvorak RD. Fear of missing out, need for touch, anxiety and depression are related to problematic smartphone use. Comput Human Behav 2016; 63:509–516.
- Zhao TY, Zou SP, Knapp PE. Exposure to cell phone radiation up-regulates apoptosis genes in primary cultures of neurons and astrocytes. Neurosci Lett 2007; 412:34–38.
- 7. Billieux J, van der Linden M, Acremont M. Does impulsivity relate to perceived dependence on and actual use of the mobile phone? Appl Cogn Psychol 2007; 21:527–537.
- Chou C, Condron L. A review of the research on Internet addiction. Educational Psychology Review. 2005; 17(4):363-388.
- 9. Van den Bulck J. The effects of media on sleep. Adolesc Med State Art Rev. 2010; 21:418-29.
- Weaver E, Gradisar M. The effect of presleep videogame playing on adolescent sleep. J Clin Sleep Med. 2010; 6:184-9.
- 11. Cain N, Gradisar M. Electronic media use and sleep in children and adolescents: a review. Sleep Med. 2010; 11:735-42.
- 12. Revathi KS, Nair S, Achuthan A. Influence of technological gadgets on health and lifestyle of medico. Natl J Physiol Pharm Pharmacol. 2020; 10(3):201–5.
- 13. Esen BK, Gundogdu M. The relationship between internet addiction, peer pressure and perceived social

- support among adolescents. Int J Educ Res. 2010; 2(1):29–36
- 14. Simuforosa M. The impact of modern technology on the educational attainment of adolescents. Int J Educ. Res. 1(9):1–8
- 15. Khan AR, Zaman N, Muzafar S. Health hazards linked to using mobile cellular phones. J Inf Commun Technol JICT. 2(2):8.
- 16. Roberts J, Yaya L, Manolis C. The invisible addiction: Cell-phone activities and addiction among male and female college students. J Behav Addict. 2014; 3(4):254–65.
- 17. Khurana VG, Teo C, Kundi M, et al. Cell phones and brain tumors. Surg Neurol., 2009; 72 (3): 205-14.
- 18. V Kumar, R Vats, S Goel. et al. Interaction of electromagnetic radiation with human body, Indian J.radio space phys., 2008; 37, 131-134
- 19. Binorkar SV Yoga-The non-pharmaceutical approach for lifestyle disorders. Yoga Phys Ther 2014; 4: 4.