

IMPACT OF DIGITAL DEVICES ON CHILDREN

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Abstract

As parents and children are forced to stay at home and online classes became the only option left for education, children are free to use mobile phones or any other digital devices freely. Many parents are concerned about its potential side effects, both short term and long term. There are many factors like parental use of mobile phones and easy accessibility which influence the digital devices use of children. It can help to develop a child-parent relationship or may deteriorate it based on their use. Children can get new ideas through the use of these devices and help them in their social and emotional wellbeing if use it properly. However, there are many issues like sleep disturbances and problematic internet use reported by the use of these digital crafts. Parents and children need to practice healthy use of this equipment and this can bring benefits to children. Current evidences are not sufficient to argue that digital devices have any major negative impact on the development of children. So, further researches required in this area to identify how children adapted to online classes and digital devices and its long term impacts on them.

Keywords: *Digital devices, Children, Health, Wellbeing, Mobile phone, Impacts, Internet, Online classes*

Introduction

UNICEF executive director Henrietta Fore says “Under the shadow of Covid-19, the lives of millions of children have temporarily shrunk to just their homes and their screens. We must help them navigate this new reality”¹. Many parents who restricted the use of smartphones and digital devices for their children are now forced to train their children to use these devices as the introduction of online classes became mandatory. They are worried about the handling of the mobile phones and tablets by children and are concerned about the potential health hazards. Many parents are in a dilemma as mobile phones often represented as the villains between them and their children. But as the Covid-19 become an issue for regular

classes, online classes became the new normal, and parents are left with no choice but to introduce it to their children.

Methods

Articles were extracted using MeSH words like digital devices, children, impacts, screen time, mobile phone, health, management, etc. from PubMed, online magazines, newspapers, journals, and websites.

Factors influence the use of digital devices in children

Studies show that many children and teens own a smartphone and they can use it in their personal space. This comfort and feasibility make children to use it whenever they are free. When parents use these devices frequently they are unable to put on any restriction on children for their mobile phone uses too. Many parents consider mobile phones as a soothing device while crying and so children become habituated to its use while growing up. Parents permit children to use or watch the digital devices during mealtime and it became a requirement to eat food for many children later. Elder family members who are supposed to set an example for children often use it even during family time and the children follow this. Sometimes people do not like to spend time with their family members and children are left with mobile phones or tablets^{2,3}.

There are many other factors like a child-parent relationship, quality time parents spend with children, restriction in outdoor activities, easy accessibility, learning objectives also influence mobile devices to use in children.

Influence of digital devices on the parent-child relationship

Parent-child relationships may be influenced healthily or it may distract the relationship by the use of digital devices. When parents and children spend time together watching the programs and further discussion regarding this, it helps them to develop the interpersonal relationship. They can help children to relate what they are seeing on the screen to the world around them. Parents became media mentors for their children and teach them how to use it as a tool to create, connect, and learn⁴. However, when a parent pays attention to his mobile phone or tab while with the child, he may not be paying attention to what the child is saying or playing and so they cannot engage with the child⁵. Parental interaction with a child is very important in the overall development of children and these disturbances may have short term and long term negative effects in children.

Benefits of digital devices for children

Digital devices can be helpful for children in many ways. It helps children to get new ideas and information and update them with current affairs and issues around the world. It provides an opportunity for community participation and engagement with society. Helps the children in their education to collaborate with others and on completing their assignments and projects. It has made it possible to communicate and be in connection with their family members and friends even from a distance. For parents and children who are away from each other, it helps to connect through video chats and so it helps in building the emotional health of children. Digital devices help in accessing touch with valuable support networks during disability or illnesses. It also provides readymade health information from their comfort zone. Digital devices facilitate the feelings of social inclusion among those who feel excluded from society like transgender, lesbians, bisexuals, etc. If used effectively it can support healthy behaviors like cessation of smoking and maintaining a healthy diet⁵

Some studies have proved that mobile phones can be used effectively in the management of depression and anxiety⁶. Many children use mobile phones to effectively utilize their free time by playing online games or by surfing the internet and acquiring new information. In the case of small children, mobile phones may be used to comfort them during medical procedures or examination⁷.

Issues related to digital devices use in children

There are several problems attributed to the use of digital devices in children

1. Obesity: children who are glued to screens are at risk of obesity as they are exposed to the advertisements of high caloric foods and snacks or they may overeat while watching screen media. Physical activities become less and they tend to be obese
2. Conduct problems and hyperactivity: studies reveal that excessive mobile phone use can result in behavioral problems and can result in hyperactivity too. Children who watch fast-paced programs will not be able to focus their attention on classes that they feel slow moved and results in inattention.
3. Loss or damage issues: Children who are not able to keep their things like books and stationaries may not handle the costly devices safely. The loss or damage of these devices may cause anxiety and depression in children and can further lead to many problems.
4. Sleep problems: Many children reported sleep disturbances. Quality of sleep is often affected. Many face difficulty to fall in sleep and to maintain sleep properly. The

brightness, especially the blue light and the stimulating content from screens delay and disturb sleep and can harm their daily activities

5. Developmental and emotional issues: Early childhood is a time of rapid brain development when children need to spend time for play, learn to build relationships, and handle emotions. Engaging in digital devices can interfere with the development of these important activities
6. Problematic internet use: many children face problems with internet gaming disorders. They spent most of their free time online and lose interest in real-life relationships. Once it started to use the internet many children have difficulty setting limits for their use. It can result in anxiety and depression
7. Negative effects on school performance: When children spent long hours with their handsets, it steals their time for school work and other activities. It affects their school performance. Parents often face difficulty to keep their wards away from other online activities while using it for study purposes
8. Risky behavior: Children who are immersed in digital media are at the risk of substance abuse, risky behaviors like suicidal attempts, self-injury, sexual behaviors, and eating disorders
9. Sexting and privacy and predator: sexting means that sending nude or semi-nude images and sexually explicit text messages. Children may not be aware that once it is sending it is not possible to erase or remove completely from the devices. Many children are not aware of the privacy settings and sex miscreants use social media, chatting options, emails and online games to contact and utilize children for any illegal activities
10. Cyberbullying: Children who are using the interactive media without supervision are under the risk of cyberbullying and it can result in short term and long term negative implications in the social and academic life of children
11. Brain tumors: some studies were conducted to identify the risk of developing brain tumors with the overuse of mobile phones and suspect it may have some significance in the development of brain tumors if the children are exposed to so much screen time in their early developmental period⁸⁻¹².

Online classes and digital devices

Many children spend long hours in front of screens to attend their online classes and to complete their class assignments. It has become a routine and many parents are concerned

about the benefits it can bring compared to the increased screen time of students. Parents may not be able to spend long hours with their child during the entire classes and what the students will be doing in their absence cannot be monitored. Network issues for their mobile phone may lead to a lack of attendance for the children and that also worries many parents. So parents are worried about the long term impact of these new ways of learning¹³.

Healthy use of digital devices

It will not be possible to keep the children completely away from the digital media. So there are some suggestions for the healthy use of digital media without compromising the health of your children

- Firstly find out the type of media children are using and what is appropriate for the child. Place firm limit on the time for media use and the content
- Monitor the children's media use and try to be with them during that time. Explain what they are watching and how they can relate it with day to day life
- Avoid exposure to screens at least one hour before bedtime and never allow children to sleep with these devices
- Discourage handling of digital devices while doing homework
- Plan and implement media free family times to develop relationships. Earmark media-free locations such as bedrooms and dining table
- Engage children in family activities to promote wellbeing such as sports, reading and talking with each other instead of engaging themselves in the digital environment
- Parents should set examples by turning off mobile phones during family time and other families get together events
- Select the content of the shows and programs children watch and read about the impact of these programs in children
- Inform the caregivers and grandparents who take care of children regarding the set rules for digital device use and be firm with it
- Talk with children regarding safety measures and proper use of these devices like how to treat others with respect in online, when and where to report the problems they face, how to handle cyberbullying and sexting and safeguarding privacy
- Encourage "screen-free week" by school or community which encourage children to abstain from screen⁴

Areas required further studies

There are only a few studies done effectively on the impacts of mobile phone and other digital devices in children. As the use of these devices becoming common further studies in these areas are essential.

- ✚ There are limited studies on how digital media can influence the development of children. There are assumptions that it may affect their behaviors and emotional development, but there are few evidences to prove that. In a study revealed that digital devices affect the conduct and can lead to inattention. This study also states that there are no internalizing problems like peer relation issues or emotional or behavioral problems associated with screen time. It states that many other factors like socioeconomic status may influence deciding the effect of digital devices on children. So further studies required in this area of child development issues for a solid evidence^{2,9}
- ✚ Some studies were conducted on the influence of smartphones in the development of childhood tumors but there is no correlation identified. But it is strongly believed that increased radiation from the digital devices can influence the fast-growing brain development in early childhood and can lead to the development of brain tumors like gliomas. But there is no statistically significant evidences to confirm it. More evidence required in this area also to attribute the mobile phone devices to brain tumors
- ✚ Some evidences increased screen time can cause increased sedentary behavior in children and teens, decreased metabolism, disturbance in sleep cycle, more distractibility, and lower well- being. But there is no clear answer to how much screen time is too much for children. Over the past two decades, several studies have linked too much screen time with social isolation and depression, but newer studies say the link is tenuous. Digital technology use and wellbeing of children is not yet found to have any significant relationship. So there is an urgent need for more researches in this area as there is a paradigm shift in school education at least for one to two years⁷.
- ✚ Mobile phones are attributed to many health problems in children. Some studies says there may be other factors like environmental factors have more influence on children's health problems. Hence the amount of influence on children needs to be determined^{2,3}.

- ✚ Some studies document that mobile devices can be helpful in the management of some psychiatric conditions like anxiety and depression. It is often thought that mobile phone use may lead children to depression and anxiety as they hinder their opportunity for social interaction with their family and may result in social isolation. So how the mobile phone and other devices can be effectively utilized for health benefits of the children is also required further research¹²
- ✚ Other than that it is used mainly for educational purposes too. So many children are using it daily and so further studies required on what is the benefits of these devices on education and other areas of the child development

Conclusion

Of course, there are many side effects for children who are glued to screens. But the current research evidences are not enough to argue that it has any serious negative impacts on children if used judiciously. The current recommendation of online classes and relative risk of children attached to screens to be considered seriously and parents should take measures to control the use of it properly. Careful use can be beneficial for children at this time of crisis.

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