
The Digital Addiction of Children to Smartphones: An Exploration of Causes and Solutions



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Abstract:

This study aimed to identify the factors contributing to smartphone addiction among children in Batna province and propose solutions to prevent and address this issue. The research question was: What are the causes of smartphone addiction in children and what are the proposed solutions to address this addiction?

A descriptive approach was employed using participant observation with a sample of 20 children aged between 2 and 8 years from Batna province. This purposive sampling method was selected to ensure the collection of comprehensive data. The study found that the primary causes of smartphone addiction stem from parental behavior, both intentional and unintentional, as well as the influence of peers. The proposed solutions include providing children with more opportunities for outdoor play and physical activity and encouraging parental control over smartphone usage.

Keywords: Addiction; smartphones; children; causes; solutions.

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Introduction:

The rapid advancements in information and communication technologies over the past few years have given rise to a new communication phenomenon that heavily relies on smartphones as the latest technological tools. These smartphones have emerged as a result of successive and integrated developments in these technologies, echoing the predictions made by physicist Nikola Tesla in 1926, who envisioned them as a convergence of television, wired and wireless communications, and landline telephones.

Perhaps no device in history has imposed itself more pervasively into the daily lives of users than the smartphone. It has become an indispensable companion, accompanying individuals everywhere and at all times. Some individuals even find it impossible to part with their smartphones for even a single day. Smartphone usage has become routine, employed for a wide range of tasks, often surpassing the capabilities of personal computers.

This excessive use has had a cascading effect on children as well. They are surrounded by individuals who are excessively attached to these devices, from parents to other family members, neighbors, and even in public spaces. Children perceive these devices as essential tools for adults, arousing their curiosity and desire to explore and experiment. Consequently, most children today spend a significant amount of time using smartphones, whether with parental consent or against their wishes. This often leads to addiction and an inability to disengage from these devices despite the potential dangers associated with excessive use. Researchers in this field have warned about the risk of smartphone addiction among children. Numerous studies and research papers have highlighted the impact of these devices on children, encompassing psychological, physical, social, and even academic aspects. Therefore, safeguarding children from this new phenomenon presents a daunting challenge, especially when these children are unsupervised by parents. Children view smartphones as a source of entertainment that occupies their time and fulfills their daily needs, particularly in the absence of adequate play spaces and parental engagement.

This prompts the following question: ***What are the causes of smartphone addiction among children, and what are the proposed solutions to address this addiction?***

Study Objectives: Through this study, we aim to achieve the following objectives:

1. **Identify the Key Causes of Smartphone Addiction in Children:** This will be accomplished by observing children in their natural environments and monitoring their interactions with these devices to gain insights into their attachment to smartphones.

2. **Propose Solutions to Prevent or Reduce Excessive Smartphone Usage in Children:** We will explore strategies to help children disengage from smartphones or minimize their excessive use.

3. **Understand the Challenges Faced by Parents in Regulating Children's Smartphone Usage:** This will involve identifying the difficulties parents encounter in guiding their children's smartphone use and assisting them in developing effective solutions to prevent addiction.

Significance of the Study: This research holds significant value in addressing a growing social phenomenon that threatens future societal well-being. By investigating the root causes of smartphone addiction among children, who represent the future generation and active members of society, we aim to raise awareness about this potential threat to social stability and order. Additionally, the findings of this study, particularly the proposed solutions to prevent smartphone addiction in children, will empower parents with strategies to minimize the negative impacts of smartphones on children under ten years of age, which will be elaborated upon in the study.

Research Methodology and Tools: This study employs a descriptive research methodology, which aims to describe specific phenomena or events, gather facts and information about them, and analyze the surrounding circumstances to accurately represent their current state. Descriptive research often extends beyond mere description and diagnosis to suggest how the phenomena or events under investigation should ideally be. This is done in light of specific values or criteria, proposing steps or approaches that can be taken to achieve this ideal state based on these standards or values.

To gather data and information in descriptive research, various methods and tools are employed, including observation, interviews, tests, and surveys (Abdul Hamid, 2000, p. 33). In this study, we will use observation as a primary tool to diagnose the phenomenon of smartphone addiction among children, uncover its underlying causes, and propose solutions to mitigate this issue.

Observation is a direct investigative technique commonly used to observe a group of individuals directly to gather qualitative information for understanding situations and behaviors. It takes various forms, including participant observation, non-participant observation, covert observation, and overt observation (Angers, 2006, p. 184).

Or, it can be defined as directing the senses and attention towards a specific phenomenon or a group of phenomena to uncover their attributes or characteristics to gain new knowledge about that phenomenon or phenomena. (Abd al-Salam, 2020, p. 33)

Observation is a fundamental method for gathering data about human behavior, providing a qualitative dimension to behavioral descriptions. Field observation involves watching or monitoring the actual behavior of individuals in natural settings that align with the study's objectives (Abdul Hamid, 2000, p. 405).

In this study, we employed participant observation, where the researcher joins the participants during the observation period and interacts with them to gain authentic interpretations of behavioral causes by experiencing the same situations or engaging in discussions and exchanging opinions (Abdul Hamid, 2000, p. 407). This approach necessitates immersion in the lives of the study subjects while ensuring that nothing in the situation is altered (Angers, 2006, p. 186).

To achieve this, we engaged with the participants, interacted with them, and discussed and exchanged opinions with their parents. This was particularly important considering the participants were children, who could only be effectively studied through observation and monitoring of their interactions with smartphones. We adopted a covert observation approach, where the individuals being observed are unaware of their observation. This was done by concealing from the children that we were observing them for research purposes, allowing their behavior to remain spontaneous.

Sampling Approach: We employed a purposive sampling strategy, where the researcher carefully selects sample elements in a controlled manner, eliminating randomness. The researcher personally selects the elements that best represent the population, based on their thorough understanding of the research community and its key elements (Ben Morsli, 2010, p. 197).

We chose this sampling approach to enable us to observe the participants in their natural environments. Our observations focused on a group of children with whom we regularly interact in Batna Province, facilitating observation without causing them fear, intimidation, or unnatural behavior. The research participants were our children, the children of our siblings, and the children of neighbors and friends. The total sample size for this observation tool was 20 children between the ages of two and eight.

1. Conceptual Definitions:

a. Addiction Definition:

Linguistic Definition: Addiction refers to excessive indulgence in something, often associated with substances like alcohol, where individuals are unable to stop despite potential negative consequences. This definition, as described by Ibn Manzur (Vol. 13, p. 159), focuses on the behavioral symptoms, like someone persistently consuming alcohol, rather than the underlying cause. It can be used more generally to describe a strong attachment to anything, even activities, where someone "persists in it."

Technical Definition: The inability of children to do without smartphones and their continuous need for more to satisfy their needs when deprived of it.

b. Smartphone Definition: Smartphone definitions have evolved over time and throughout their historical trajectory during the past twenty years. Some of the definitions can be summarized as follows:

Oxford Dictionary Definition: "A mobile phone that performs many of the functions of a computer, typically having a touchscreen interface, internet access, and an operating system capable of running downloaded applications" (Jennifer Whyte, 2019, p1)

"It is one of the new media and means of communication, relying on wireless communication through a network of towers distributed in a specific area. It is also used as a handheld computer that the holder can use to find out the latest economic and political news...through subscribing to an internet service" (Shaqra, 2014, p41)

It is also known as A device that provides basic uses such as making calls, sending and receiving text messages, accessing the internet, receiving and sending emails, and editing documents. It also provides multimedia messages, which include pictures, video, or music. It generally works on its operating system which allows adding specific applications. Many applications can be downloaded on smartphones such as games, news channels, stock market tracking applications, entertainment applications, and social networks" (Al-Hadjar, 2011, p7)

c. Conceptual Definition of Children:

Linguistic Definition:

Child: A young boy or girl. **Plural:** Children.

Abu al-Haytham said: "A boy is called a child from the time he falls from his mother's womb until he reaches puberty." (Ibn Manzur, Vol. 11, pp. 401-402)

Technical Definition: Definitions of children vary across disciplines and laws. Some of the key definitions of children include:

UNICEF Definition: A person under the age of 18.

Oxford Dictionary Definition: Every newborn human being until adulthood, whether male or female.

Longman Dictionary Definition: A young person who has not reached adulthood. Childhood begins at birth and lasts until adulthood (Abdul Rahman, 2019, p. 10).

Stages of Childhood:

- ❖ **Infancy:** This stage begins at birth and ends at the age of two.

- ❖ **Early Childhood:** This stage spans from the age of three to five.
- ❖ **Middle Childhood:** This stage extends from the age of six to eleven.
- ❖ **Late Childhood:** This stage lasts from the age of twelve to fifteen (puberty) (Salah Abdel Hamid, 2011, p. 8).

Operational Definition of Child: In this research, I define a child as an individual between the ages of two and eight, belonging to the early childhood stage.

2. The Child and the External Environment:

Children are highly susceptible to external influences. Therefore, the responsibility for their upbringing and guidance falls on their parents, who are primarily responsible for them. During this stage, children acquire their values, behaviors, habits, attitudes, and personality traits. Most of their characteristics are crystallized during this time.

Children are always drawn to connect with the external environment to explore and learn about it through questions and inquiries directed to those around them, which helps their mental development. Bloom pointed out that 50% of a child's mental development occurs between birth and four years old, and 30% occurs between the ages of four and eight years. During this stage, children acquire a vast amount of information and develop various cognitive concepts (Al-Dilmi, 2012, pp. 37-40).

Modern technology in all its forms, which has become one of the most important components of contemporary society, is among the most significant influences that attract children's attention to their environment. They seek to explore and interact with it as an essential part of their daily lives, especially smartphones, the most prominent technology that has permeated our daily lives and those of our children. Children have become excessive users of smartphones because they contain everything that captures their attention. They watch cartoons, download their favorite games, watch entertaining and educational videos, and interact with their peers or even their parents through the remote communication features that these devices have made easy and continuous. Thus, smartphones offer children many services to help them interact with their external environment.

3. Benefits of Smartphones for Children:

Smartphones offer several advantages for children, including:

Creative Tools and Enhanced Thinking Skills: Research suggests that smartphones can provide children with creative tools and foster new thinking approaches, particularly through interactive games. These devices also present opportunities for strong educational engagement and comprehension of modern

concepts. Smartphones can facilitate the acquisition of knowledge in various fields and introduce children to different cultures. (Belkasmi et al., 2021, pp. 79-80)

Strengthened Family Bonds: Smartphones can sometimes contribute to stronger family relationships when parents engage with their children in electronic games. This allows parents to guide their children toward appropriate behavior and critical thinking about the content they consume. (Belkasmi et al., 2021, pp. 79-80)

Academic Support and Hobby Development: Smartphones can assist children in researching information to complete school assignments and pursue their interests. (Janidi, 2018, p. 41)

Language Learning and Cognitive Development: Smartphones can facilitate language learning and provide access to information and ideas that stimulate intellectual growth and skill development, including self-learning abilities and technological proficiency.

Entertainment and Relaxation: Smartphones offer a readily available source of entertainment and relaxation during leisure time. They provide a user-friendly platform with diverse content that caters to children's recreational needs.

Educational and Cultural Engagement: Smartphones can connect children to Quran memorization and educational groups, opening doors to participation in learning and cultural activities that nurture their thinking and creative abilities.

4. Signs of Smartphone Addiction in Children:

Several signs can indicate smartphone addiction in children, including:

Sleep Disruptions or Sleep Deprivation: Children may experience sleep difficulties or a lack of sleep due to excessive phone usage, becoming unable to fall asleep despite feeling fatigued and drowsy.

Deterioration of General Health and Signs of Exhaustion: Prolonged sitting while using smartphones can lead to a decline in overall health and visible signs of exhaustion.

Reduced Communication and Social Withdrawal: Smartphone addiction can cause children to become preoccupied with their devices, even when not actively using them, leading to reduced social interaction and participation. (Hachem, 2018, p. 2690)

Loss of Interest in Social Interaction and Play: Children may lose interest in socializing with others and engaging in traditional playtime activities, showing a diminished desire for other forms of entertainment.

Academic Decline and Impaired Focus: Smartphone addiction can negatively impact academic performance, leading to difficulty concentrating and completing schoolwork effectively. (Ben Aboud et al., 2020, p. 27)

Anger, Irritability, and Emotional Outbursts: Children may exhibit anger, frustration, or even severe crying episodes when prevented from using their smartphones or when these devices are taken away from them.

Excessive Smartphone Use and Loss of Time Perception: Children may become engrossed in their smartphones for extended periods, losing awareness of their surroundings and the passage of time, neglecting even basic physiological needs like eating or sleeping.

5. Negative Effects of Smartphone Addiction in Children:

The continuous use of smartphones by children can lead to negative effects on several aspects, which can be summarized as follows:

Attention Deficit: Deep focus while using the smartphone can make it difficult for the child to divert their attention the longer they use it, which leads to the child's inability to pay attention to others or respond to them while talking, causing neurological deficiencies. Additionally, using electronic games on smartphones can destroy mental abilities, as they affect the child's ability to pay attention, focus, and remember. (Ben Aboud et al., 2020, pp. 19-20)

Exposure to Inappropriate Content: Unintentional exposure to pornographic websites, which in turn affects the child's psychological, behavioral, and moral aspects.

Impact on Children's Health: It affects the health of children's eyes, as excessive use of these devices leads to redness and dryness of the eyes, and may lead to weak eyesight or some other eye diseases such as blurred vision. It also affects memory and causes a lack of focus and attention, and in many cases, it causes weight gain or obesity.

Psychological Impact: It causes anxiety, insomnia, lack of sleep, and some other psychological disorders such as autism, nervousness, violence, and anger.

Social Impact: It affects the child's social communication, causing them to become withdrawn and unable to interact with other individuals due to their immersion in the phone and their inability to communicate with those around them. Sometimes it also causes speech delay and difficulty in pronunciation for children under three years old.

Academic Impact: It affects the academic achievement of the schooled child, as it causes a lack of interest in education and neglect of homework due to the laziness, sluggishness, and exhaustion that the child suffers from after using the

smartphone, which leads to a weakness in their scientific and cognitive knowledge base.

6. Study Findings:

a. Reasons for Smartphone Use among Children: Through observations of the participants' behavior and discussions with their parents, the reasons for smartphone use and addiction can be categorized into two groups: those applicable to children living with only their parents, and those applicable to children living in extended or multi-generational families.

1. Children Living with Only Their Parents: These are children who are raised and brought up only by their parents and are attached to them constantly. Their relationships with others are kinship relations manifested in family visits and limited contact, or limited interaction with those around them from neighbors and friends. Their attachment is primarily with their mothers – by being with them all day long – than with their fathers due to their limited presence at home. Through observation of these children and directing some questions to their mothers, the reasons for their addiction to the phone are as follows:

Their use of the phone is linked fundamentally to the parents allowing it from the beginning. Some parents hand their children the phone at a very young age, even before the age of two, to distract them, especially mothers so they can free themselves from their daily chores and keep the child away from them. This forms the beginning of a connection between the child and the phone at a very young age.

Some mothers used the phone as an alternative to weaning from breastfeeding, or as a method to help with weaning, which worsened this problem as the child began to see it as a refuge and escape for sleep. Thus, their connection to it became psychological, not just physical. Consequently, the child became addicted to this device which was a substitute for their connection with their mother.

Among the reasons is also the parent's preoccupation with the phone considerably, which – as we indicated previously – carries over to the children. The child tries to follow their parents' lead and discovers this device that distracts their parents from them and finds in it what facilitates their process of addiction.

The child's lack of social interaction: Often, the child who is raised only by their parents and lacks social interaction leads to a weakness in interacting with members of the society around them and a fear of others. The phone becomes their only refuge for them.

The parents' lack of organization or control over this use and allowing it for them, especially in the case of the child's insistence on it and their continuous

crying, which sometimes weakens the mothers to the point of falling into the trap of silencing the child and fulfilling their desire with the phone. This is one of the most important mistakes I noticed in this study.

Some parents acquire a tablet device for their children at a young age, which exacerbates the crisis because the child will see it as their device and have the right to use it whenever they want, and therefore a lack of rationalization of use.

2. Children Living in Extended Families: These are children who have constant interactions with extended family members such as uncles, aunts, paternal and maternal uncles, and aunts. They either live directly within the extended family or have continuous and constant interactions with them, either due to living close by or frequent and continuous visits, especially in the case of the mother working. Through observing these children and talking with their families, the reasons can be identified as follows:

Influence of Peers: When their parents prevent them from using smartphones, they find another child from the family (cousin, aunt/uncle's child) using a smartphone and sit with them to watch the phone and discover this inspiring innovation where they find what entertains and distracts them, and they are in the company of their friends. Therefore, it becomes difficult to monitor them, especially if their relationship with the children of the family is strong.

Abundance of Smartphones: The presence of numerous individuals who own smartphones makes it challenging for parents to control their children's smartphone usage. If parents restrict their children's access to smartphones, they find other individuals who allow them to use their phones, such as uncles, aunts, paternal and maternal uncles and aunts, and grandparents (if they own smartphones). Consequently, the abundance of smart devices in the house necessarily allows the child to use and discover them.

Monitoring Difficulties: The abundance of smartphones and multiple locations of use make it difficult for parents to constantly monitor their children to prevent them from using them. The children will find a way to access one of the phones and hide to use it.

Lack of Awareness: Most people around the children lack awareness of the device's dangers to children. Often, individuals are not aware of the extent of the danger of smartphones, which makes them contribute in some way to the children's addiction to phones because they see it as a beneficial tool for them to learn many things.

Inability of Adults to Use Smartphones: Some individuals, especially the elderly, struggle with smartphones and rely on children for assistance when they want to do something on the phone and cannot. Children are often more capable of doing

so. Consequently, the child tries to control this device and tries to barter with its owner by giving them a chance to use it in exchange for help whenever this user needs it.

Lack of Outdoor Activities: Today, children often spend prolonged periods indoors, especially those not attending school, due to various social factors, primarily safety concerns. This restriction of physical activity and interaction leads them to rely on smartphones as a form of entertainment and play.

b. Proposed Solutions to Address Smartphone Addiction in Children:

1. Create a Public Space Outside the Home: Provide children with a space outside the home to distract them and allow them to engage in their natural childhood activities, playing and interacting with their peers, fulfilling their psychological needs for such activities.

2. Set Usage Time Limits: Establish strict time limits for smartphone usage and ensure adherence to these limits. Do not allow children to exceed the allotted time. Time monitoring apps or parental control settings can be helpful.

3. Monitor Content Consumption: Monitor the content children view on their smartphones to ensure its suitability for their age. Utilize parental control apps to restrict access to inappropriate content.

4. Encourage Social Interaction: Encourage social interaction in children by engaging in regular conversations and interactions, strengthening their relationships with extended family members, and involving them in recreational activities that foster bonding. Alternatively, schedule social activities without using smartphones.

5. Reduce Parental Smartphone Usage: Parents should strive to reduce their smartphone usage to avoid modeling smartphone behavior for their children. Set a positive example by limiting parental smartphone use for extended periods. Establish strict rules prohibiting smartphone usage during specific times and locations.

6. Encourage Family Gatherings: Encourage children to participate in family visits and gatherings with extended family members. Engage children in playing, pursuing hobbies, or engaging in games, and discourage smartphone usage during these interactions.

7. Maintain Strictness in Allowing Usage: Parents should maintain strictness in allowing smartphone usage. Do not give children the opportunity to rebel or insist on using smartphones excessively. This will enable control over their reactions.

8. Explain Smartphone Risks: Explain the risks of smartphones to children in a simplified manner that helps them regulate their usage and accept parental refusal.

9. Avoid Distracting with Smartphones: Avoid distracting children with smartphones, as this can lead to habituation. Smartphones have a remarkable ability to capture children's attention and divert their focus, especially when used excessively.

10. Spend Quality Time with Children: Parents should spend more quality time with their children by engaging in conversations, pursuing hobbies together, and playing with them. Additionally, organize weekly outings if possible and involve children in physical activities.

11. Encourage Face-to-Face Communication: Encourage face-to-face communication, which develops a child's language more effectively than screen interaction. Engage children in reading stories and novels, if possible, to enhance their abilities.

12. Set Phone Passwords: Set phone passwords to enable parental control over usage time. This ensures children cannot use the phone unless parents unlock it.

13. Encourage Reading for School-Aged Children: Encourage school-aged children to read by providing them with stories and participating in reading sessions. Schedule specific times for reading during their leisure time.

Conclusion:

Children's early and frequent use of smartphones can lead to addiction due to their appealing features and widespread use in society. The ease of access, constant presence, and primarily entertaining nature of smartphones, especially for children, make them highly addictive. Uncontrolled smartphone usage can have significant negative impacts on children's psychological, physical, academic, and social well-being. Therefore, it is crucial to exercise caution when introducing children to smartphones, delaying their exposure as long as possible and establishing clear guidelines for usage time and duration to prevent addiction.

The primary reasons for smartphone addiction in children stem from parental permission or inability to regulate usage, the influence of the surrounding environment, and the device's ability to captivate children's attention through entertaining images, videos, and games. While we do not advocate for a complete ban on smartphone usage, it is essential to establish clear limits and schedules for usage, ensuring that it does not exceed scientifically recommended guidelines to avoid negative psychological, health, and social consequences. Additionally, it is important to guide children towards positive uses of smartphones, such as

educational and informative websites and applications, intelligence-enhancing games, and skill-building tools that promote sensory, behavioral, and social development.

Smartphones, when used appropriately, can be valuable tools for learning and education. By harnessing their potential, we can assist children in acquiring new skills and knowledge, whether related to their studies and curriculum or fostering new cultures and perspectives.

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