

# Smartphone Usage and the Addiction Behavior among Children – A Global Study

**Seetharaman R<sup>1</sup>,**

Research scholar,

College of Management,

SRM Institute of Science and Technology,

Kattankulathur, Tamil nadu, India, 603203

[seetharr1@srmist.edu.in](mailto:seetharr1@srmist.edu.in)

**Rajeswari PS<sup>2</sup>,**

Associate Professor,

College of Management,

SRM Institute of Science and Technology,

Kattankulathur, Tamil nadu, India , 603203

[rajeswap1@srmist.edu.in](mailto:rajeswap1@srmist.edu.in)

## Abstract

The root causes and consequences of children's smartphone addiction were analysed in this study. The precursors of smartphone addiction among children were separated using children and parental characteristics. Children are probably to become hooked to smartphones while the education, income, age of the parents is greater, the lengthier their parents use smartphones, the more lenient their parenting style is, and the better their attitudes toward smartphones are in a dual-income home. Young children, fewer brothers and sisters, and attending an educational institution all indicate smartphone addiction. Children those who are addicted to their smartphones are having issues with their intellectual and physical growth. Consequences and additional research are proposed based on the conceptual model.

**Keywords:** Smartphone addiction, children, parents, addiction behaviour

## Introduction

Smartphones have been increasingly popular in recent years. There are around 32,730,000 smartphone users in Korea, with greater than 50% of the population utilising smartphones on a daily basis. Many individuals are using smartphones as a outcome of its appearance of low-cost

smartphones that are 50% lower when compared to the smartphones have a one-of-a-kind pricing. Smartphones have evolved into a necessary tool in daily life as well as a portable tool that anyone may utilize. Smartphones, in particular, are not only for grown-ups to approach and use, but also for young children. Smartphones are simply accessible to the children, who are using them as toys. As the working parents can easily provide smartphones to their children, young children are more likely to use them, which can develop to smartphone addiction. According to the National Information Society Agency's '2012 , Survey of Addiction to internet, the internet addiction rate with the internet users aging from 5 to 49 is 7.2 percent, with 223,000 persons addicted to the internet in Korea. Teenage addiction was the most common, accounting for 10.7% of all cases. The twenties had 9%, and small children aged 5 to 9 had 7.3 percent. However, the rate of addiction among younger children foregoing to school has risen from 3.6 % last year to 4.3 % this year. According to research, this has negative physical and mental consequences. According to a brain wave test, smartphone addiction among young toddlers reduces right brain function. Furthermore, as it is a highly passive device, the smartphone does not fit the early childhood development stage, that requires simply sitting and engrossing information. The major function of the frontal lobe of the brain, that is associated with the thinking ability, judgment, and focusing, is impaired, preventing proper brain development. According to researchers, the brain structure resembles that of a 'popcorn brain,' which is boring in comparison to reality. According to study, smartphones promote Attention Deficit Hyperactivity Disorder. Similarly, one out of every three teens in the United States is at danger of smartphone addiction, according to a current study by the National Youth Policy Institute. The Ministry of Science, '2012 Survey of Internet Addiction' finds that the smart phone addiction rate among children is two times more than that of adults. According to research conducted by game auditing committee, the average age at which people begin playing games has reduced from 2009 5 to 2012 4.8 as a result of the introduction of educational applications. From the ages of 3 to 9, the typical amount of games played per week is 3.7, and from the ages of 9 to 18, it is 3. Excess usage of a smartphone might result in Visual Display Terminal, that necessitates the use of special clothing by young children. Corporeal activity has also reduced, interfering with corporeal development and growth. Adolescents glued to their smartphones or video games fail their ability of learning. to empathize with the children and developing hostile, creating it difficult forming friends. These undesirable findings suggest that computers must not be used for caring the children. This study will provide a conceptual framework for the smartphone addiction causes and effects in early childhood.

Globally, smartphone ownership and usage are fast increasing. Smartphone ownership in the United States climbed significantly from 35% in May 2011 to 45 percent in May 2013 and 77

percent in 2017. In 2012, 53.4 percent of Koreans used smartphones, followed by 68.4 percent in 2013, 76.1 percent in 2014, and 88.7 percent in 2016. In a national survey of Koreans conducted in 2019, the occurrence of challenging smart-phone use for people of all the agegroups was found to be 20.2 percent. The pervasiveness of PSU is 22.9 % in children and 30.2 % in adolescents, correspondingly. The use of cellphones by newborns and toddlers is fast expanding, and the age of first experience to mobile devices is decreasing. Most children in the US begin before using mobile media devices they turn one year old, and they use them every day by the age of two. In Korea, interactive and mobile media instruments like the smartphones have been progressively popular in the recent years, with 31.3 percent of children using cellphones before they are 2 years old. Children's use of mobile devices has been linked to bad outcomes in several researches. Adolescents who used smartphones excessively showed inadequate reasoning-expressive regulation mechanisms, and they suffered from sadness, nervousness, and daily dysfunctions as a result of their use. Excessive screen use, especially among youngsters, has been linked to socio-emotional developmental delays and/or behavioral difficulties as early as age two. Excessive screen usage in early children has also been linked to impairments in cognitive development, including language problems. As a result, as awareness of excessive smartphone usage has grown, many countries have developed rules for permissible smartphone usage for children and teenagers. Previous research has indicated that the age at which a child first used the internet was a strong predictor of teenage internet obsession. Smartphones are a common way to access the internet, thus the younger someone is exposed to them, the greater the danger of developing an internet addiction. As a result, the age at which youngsters initially use the internet is a significant predictor in their chances of developing a smartphone addiction and developing mental health problems. Many factors influence children's screen time. It's usually linked to the family environment, such as parental factors (addictions, depression, parenting style). We looked into whether a parent's smartphone addiction was linked to her young children's smartphone usage.

### **Review of literature**

There have been various research on adult smartphone addiction [1]-[3]. However, both domestically and internationally, research on smart phone addiction in early children is scarce [4]. Because these events are new, there are a few articles [5], [6] discussing them, but there are few academic papers. Similarly, multiple studies on internet addiction in youngsters [7]-[21] as well as studies on game addiction [14], [22]-[26] were identified in abundance. The possessions of anxiety and expressiveness on smartphone dependence with the elementary school pupils were researched by Jung and Ha [4]. They exposed that the more the study-related stress and adverserresponsive expression, the greater the hazard of smartphone addiction. Kang and Park

created and validated a smart phone addiction rating scale [22]. As a result, a link is between smart phone addiction and melancholy, impulsivity, and absence of control. The component that causes smart phone addiction, according to Lee, is continuous overuse owing to the suitability and liveliness of smartphones, clues to life hitches [3]. As a result, the antecedents of smart phone addiction in early infancy will be divided into parental and child variables and the effects on the addiction of smartphone on children's mental and corporal growth will be inspected. Family has a significant influence on children's game addiction [22], and it has a comparable influence on children's smartphone addiction. Education, age, wealth, whether or not parents work together, parenting attitude, smartphone views, and predisposition are the total elements that impact the addiction to the smartphones. Many studies have found that the slighter the parents' wealth and academics [18], the greater probable their children will be having problems [27]. Parents with poorer levels of education are less aware about the seriousness of addiction to smartphone, creating it simpler to handle their children a smartphone, causing in a greater level of smartphone addiction. Since the poor income parents are not able to afford a costly smartphone, their children are unlikely to develop a smartphone addiction. Because the adoption rate of smartphones among adults has nearly reached 90%, and non-adoption is limited to the elderly, nearly all the poor-income parents now having smartphones. Due to a deficiency of possessions, parents frequently let their children to use smartphones, which is similar to children's game addiction [26]. As a result, the lesser the parents' income, the greater their children's rate of smart phone addiction. Young people effortlessly use and adapt smartphone technology regularly than older parents. At the end, their children are more expected to be exposed and use smartphones, leading to an increase in smartphone addiction [7]. Children pertaining to double-income households their parents are more accommodating to their children's needs since they spend more time alone. because these people don't have enough time to care for them [11]. Resulting that, they are more likely to let their children to use cellphones, increasing smartphone addiction. Authoritarian, permissive, and responsive parenting are the three types of parenting [28]. Authoritarian parenting is a one-way, rigid approach to child rearing in which parents strictly manage their children. Permissive is affectionate, inconsistent, and laid-back. Responsiveness, on the other side, means concerning children's independence and being reliable. Authoritarian children lose their aims or verdicts, and are exclusive and hostile. Lenient parents' children are impetuous, self-centered, persistent, and hysterical. Those children with receptive parents are more likely to have pleasant and harmonious interpersonal connections because they have defined goals and make their own decisions, are self-regulated, and have high self-trust. As a result, lenient parents are more likely to produce children who are addicted to their smartphones [27]. Furthermore, just as with children's internet addiction,

parents' approaches regarding smartphones or habitual practices probably having prejudiced their children's smartphone addiction level [9]. When parents have a good attitude about smartphones, they let their children to use them more freely, leading to a greater level of smartphone addiction. Moreover, if the parents are addicted to smartphones, their children are more likely to bear with them, increasing the risk of smartphone addiction. A child's smart phone addiction is influenced by their age, sex, siblings, and going to school. The younger a child's mental development, the more easily he or she will become involved in technology. [10]. In addition, boys are more interested in tools and the desire for trial. Boys are also more distracted and less self-control [14], making them more susceptible to smartphone addiction. While having more siblings increases the likelihood of engaging with others, having fewer siblings implies spending more time alone, which increases the risk of being addicted to digital devices such as smartphones [15]. Furthermore, children who attend educational organizations such as kindergarten or preschools are probably to be under the supervision of teachers and have more time to connect with classmates, resulting in a reduced likelihood of smart phone addiction. Children who do not attend any educational institutions, on the other hand, spend more time alone at home and are more likely to develop a smartphone addiction due to a lack of parental resources.

Socio-demographic characteristics like youthful age, psychological features like stress, loneliness, sadness, or anxiety, and familial factors are also risk factors. The effects of smartphone addiction are discussed in this chapter. Smartphone addiction has a negative impact on one's physical, mental, and social well-being. Accidents, skeletal diseases, visual symptoms such as ocular pain, eyestrain, blurred vision, and double vision, electromagnetic radiation, are among physical health repercussions. Sleep disruption is a mental health repercussion. Nomophobia, which stands for "no-mobile-phone phobia," phantom vibration syndrome, and ringxiety are various terms for the agony caused by excessive smartphone use. Social connections and academic achievement are also affected by smartphone addiction. Parents push their children to become digitally savvy in order for them to succeed in schools that are increasingly assigning academic effort through online and to make them for the upcoming digital work. At the same time, many parents are worried that their children are more linked to their smartphones than to the "real world"—that their academic work and sleep are suffering, that they are not playing outside, and sleep are suffering. Parents, on the other hand, are always associated, carrying their iPhones to the dinner table to bed. When parents profligate anxiety, children trust they are being held to a higher standard—and, in most cases, disrespect parental efforts to control their digital lives. According to a recent study, more than a third of parents supposed they have fought with their children over smartphone use, and half of teens and more than a quarter of their parents consider they are addicted to their phones.

**Mental maturation**

Children who have a greater level of smartphone addiction are more probable to have emotional instability, sadness, Concentration Deficit Hyperactivity Disorder, rage, and absence of attention [1], [4]. Since smartphones give utilitarian and fast spurs through aural and visual senses, over usage of smartphones makes psychologically premature children unstable [13], [26]. Children who are not allowed to use cellphones are more prone to develop depression [9] because smartphones are so engrossing and immersive. Aggression and inattention are also symptoms of mental immaturity. [26]. Smartphone addiction, like internet and game addiction, resulting in a lack of attention and self-control in children [19], [21].

**Physical improvement**

As with gaming addiction in children, a higher proportion of smartphone addiction forecasts issues in physical improvement like deficits in hearing and visual senses, fatness, and body imbalance [14], [22], [25], [26]. When adults gaze at a display light for over a lengthy time, their visualization is impaired, but children's vision is affected even more ruthlessly. Moreover, prolonged usage of a smartphone along with earphones is likely to cause hearing loss. Those who are addicted to smartphones have a lesser likelihood of connecting to others [25], and a reduction in physical commotion increases the risk of obesity [3]. Furthermore, using a little device with your hands for an extended period of time may cause body imbalance. Because children's physical development is yet incomplete, excessive usage of smartphones will have an adverse impact on their physical improvement in many ways.

**CONCLUSION**

This research looked into the causes and concerns of smartphone addiction among children. So far, they did not yet reach the age where they can do lucid judgments, making them vulnerable to smartphone addiction. When children operate their parents' smartphones as toys and parents practice them to upkeep for their children, youngsters are more likely to develop a smartphone addiction. Parental and child variables were used to separate the antecedents of smartphone addiction in children. When the education, income, and age of the parents are greater, children are more likely to be addicted to cellphones. In a double-income home, the longer parents use smartphones, lenient parenting elegance, and positive approaches toward smartphones are all factors. Young children, girls and boys, children with less siblings, and youngsters those are not going to school are all at risk of being addicted to smartphones. Those who are addicted to smartphones experience difficulties in their both physical and mental development. Clearly, a smartphone addict is more prone to experience emotional instability, attention deficiency, violence,

depression and a loss of control. Physical issues such as poor vision, obesity, hearing, and brain development were also noticed. Children's smartphone addiction is expected to continue a lifetime, causing enormous personal and societal harm. As a result, in order to prevent addiction, parents and society must collaborate. Parents should priorities spending huge time with the children. Parents must be mindful of the enormous effect smartphones have on their kids, and they shouldn't provide smartphones to their children casually. It's critical to note that today's convenience can have serious effects for children's smart phone addiction. Children require parental monitoring due to their lack of self-control. While parents have substantial attitudes toward smartphones, a double-income family, and a casual parenting style, more care is required. In addition, societal efforts are necessary. At educational organizations such as kindergarten and preschool, children must be taught to avoid their phones excessively. In order to prevent children from being addicted to their smartphones, smartphone carriers and app developers must devise measures to control the approach. Smartphones are undeniably valuable instruments that have improved our quality of life. This tool, though, could endanger our children and humanity's future. As the children are the most treasured future resources that cannot be substituted, the parents and society must work relentlessly to minimize the destructive impacts. This study just presented a research model through literature reviews. Further research is required to empirically verify the contents of the proposed model.

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