

What is the Suitable Age for Children to own Smartphones?

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### Abstract

Smartphones at the present time are attracting current young generations and gradually become an essential part of many children's life since smartphones have countless advanced features compare to mobile phones from a decade ago. Children may achieve their various daily tasks by using smartphones, but smartphones may not be suitable for all ages. In order to find out helpful and harmful aspects of smartphones on children, reviewing studies about the relationship between children and smartphones is necessary. Analysis from various studies showed children use smartphones for different purposes, and smartphones can cause positive and negative effects depending on the way children use them. By reviewing different studies, the result indicated that some children are encouraged by their instructors to use the Internet through smartphones to do research and homework. Also, parents can give children smartphones as a tool so that parents can use the Internet to contact and track their children. However, some other studies showed that children can be easily addicted to smartphones comparing to adults, and using smartphones for a long time can be harmful to both children's physical and mental health (Abu-Shanab, 2015; C Park and Y Park, 2014; Gowthami and VenkataKrishnaKumar, 2016; Smith, 2013; Vandoninck, Haenens, & Ichau, 2014).

*Keywords:* children, smartphone, mobile phone

### What is the Suitable Age for Children to own Smartphones?

Most people would not ask their children to stop playing mobile phones 20 years ago since mobile phones were not ubiquitous; nonetheless, many people are worried whether their children use smartphones too much nowadays. Mobile phones are simple mobile devices that can make calls and send texts. With the advance in technology, mobile phones are replaced by smartphones completely. Modern days smartphones are used by almost everyone thanks to their user-friendly designs and many convenient functions. Unlike mobile phones, smartphones can be used to text messages, make calls, or listen to music. Other than that, smartphones have many interesting features, such as gaming, social networking, food ordering, and blogging, which are trending among young people.

Smartphones are ubiquitous, and various contents in the smartphones can be easily approached by anybody especially for young children and adolescences who are curious about new technologies. A study of Golden (2019) reported that 95% of Americans possess phones, and nearly 80% of the phone users use smartphones. The study further stated that in Philadelphia, 77% families with children owned a smartphone, and 96.6% of the children in those homes admitted regularly using smartphones. Since most children and teenagers are still developing their views of the world and forming their morality, they may access or receive some harmful or misleading contents in smartphones. For instance, the study of Vandoninck et al. (2014) showed that among 3500 European children, one quarter of them had upset experiences because they were treated in hurtful ways by others including strangers while using smartphones. In my opinion, talking to strangers online may help children make more friends, but strangers sometimes can be caitiff who have dangerous thoughts, thus bring risks to children's life. Moreover, there are also concerns about how smartphone influences both physical health and

mental development of infants and toddlers. Hence, parents may ask for a suitable age for children to own smartphones, and this research analyzes and reviews several studies about the relationship between children and smartphones in order to conclude a satisfying range of age for children to own smartphones.

## **Literature Review**

### **Concerns of smartphones on toddlers**

Children who are younger than 5 years old are one of the age groups worth investigating independently because they are still developing their skills and knowledge, and there are many smartphone applications are designed for young children who have not yet attended school. Parents can use their smartphones as a tool to help toddlers to learn vocabulary, music, and poems. For the infants who are under 2 years old, Zimmerman, Christakis, and Meltzoff (2007) carried out a survey about media viewing and language development in infants. There are 1008 parents of children under the 2 years old participated the survey, and the result suggested that there was no significant relationship between children's language development and media exposure. The study of Radesky and Christakis (2016) also indicated that infants under 2 years old are not suitable for expose to digital screens because digital screens are able to hurt infants' eyesight. This evidence suggests that letting children who are younger than 2 years old expose to smartphone screens is not recommended.

As for the toddlers who are 3 to 5 years old, Radesky and Christakis (2016) suggested that some television programs, such as Sesame Street, can facilitate children's cognitive, literacy, and social skills for 3 to 5 years old children. Nevertheless, in the same study, authors also found that

young children from 2 to 5 should not use digital devices for more than an hour a day because excessive digital media using can cause negative effects on young children's language and cognitive development as well as higher the chance to get obesity. Indeed, parents may let their children to interact with smartphones by play television shows which are designed for children or simply give children smartphones as toys. Children can obtain basic cognitive and language skills by watching educational television programs, but children expose to digital devices' screens for hours a day can cause opposite effects on their cognitive and language skill development. Therefore, young children who are 3 to 5 years old should not use smartphone or other electronic devices for more than an hour. In addition to the smartphones' impacts on infants and toddlers, the rest of the research paper will be focus on investigating children who are 6 to 18 years old.

### **Basic mobile phones functions will not be a burden for children**

The primary functions of a phone are calling and texting. Functions such as mp3, cameras, and Bluetooth are also part of the basic mobile phone functions. In order to find out the risks in smartphones, primary smartphones functions such as calling, texting, and music player etc., are the first part we need to investigate. Nielsen (2017) gathered 4646 parents with children between ages of 6-12 and found that 90% of parents gave their children phones because phones can help parents to reach out to their children easily. Indeed, while children are outside of their home alone, parents can dial their children's phone number so that they will know their children's status. In addition, Haddon and Vincent (2009) carried out a study on 48 children and teenagers aged 11-16 in a school located in the south of England. They found that the broadening range of functions and applications among mobile phones would not be burdened for children and

teenagers in 2007; instead, they were accepting and adopting new mobile phone features such as mp3, Bluetooth, and cameras quickly. Overall, this study was conducted more than a decade ago and showed that mobile phone functions such as music and cameras seem safe for children to use. Nonetheless, the functions stated above are mobile phone functions, but modern smartphones can do more than just those. Thus, the research also needs to investigate the effects of advanced smartphone functions on children.

### **Modern smartphones' positive and negative impacts on children**

Mobile phones do not have as many functions as modern smartphones, and the reason why modern smartphones are popular among people could be their limitless functions and applications. Among all these functions and applications, some of them are designed to help children. (Gowthami and VenkataKrishnaKumar, 2016, p.475) found that “Always connected to the Internet through a smartphone provides a great instrument for individuals for constant communication resulting in great safety for children attending schools or going outside.” Indeed, older generation of mobile phones do not have advanced features to track somebody's location, this study proved that the Internet use on smartphones can assist parents to know their children's specific situation, which will resolve part of safety issues among children. For more positive aspects, another study by Vandoninck et al. (2014) revealed that more than 60% children are encouraged by their instructors to use Internet through smartphones to do research. Certainly, instructors can encourage students to be engaged on their classes by holding online activities, and smartphones can be helpful while children want to do research for classes they are taken.

While it may be true that smartphones can offer children assistance on education, such a powerful device can be too appealing to children. According to (Park, C., 2014; Park, Y., 2014, p147), “Among internet users from age 5 to 49, the rate of internet addiction is 7.2%, and the number of people addicted to internet are 223,000 in Korea. According to age, teenage addiction rate, 10.7%, was the highest.” In this study, we can tell that children can be easily addicted to Internet, and Internet access is one of the most important function among smartphones. As noted in Vandoninck et al. (2014), almost half of 9-12 years old children use smartphone to play games daily, and more than 70% of them use social media every day. As for adolescences, 90% of them update their statues as well as upload pictures or short videos on their social media applications. They also stated that these smartphone functions such as gaming and social networking made many children too occupied; as a result, one third of the children use smartphone excessively, and two third of the children had risky experiences like receiving bullying, or sexual messages while were using social media functions in smartphones. Kibona and Mgyaya (2015) conducted another study by interviewing 100 school-aged students about their smartphones uses, and the result shows that 65% of the students agreed that they utilize smartphones to surf social networking sites (e.g. Twitter, WhatsApp, Instagram, and Facebook) while doing their academic assignment. 48% of them spent around 5 to 7 hours per day on smartphones. This study further identified 85% of the students are addicted to their smartphones. Undoubtedly, these attractive functions in smartphones might not be harmful, but being addicted to smartphone games as well as social media can take up too much time. Additionally, children may receive some unwanted or even harmful content without intention while using social media. All these factors made smartphones become somewhat distracting. Aside from these factors, a child who is addicted to

smartphones means he or she uses smartphones for many hours in a day, and this issue will lead to children's health concerns.

### **Smartphones' effects on children's physical and mental health**

How smartphones affect teenagers' physical and mental health is another factor people need to be concerned. One study (Kim, 2013, p.85) found that "students tend to surf internet and play online games as a way to release their mental stress from the stress that they experience in term to escape from problems that they face from their friends or their schoolwork". It might be true that children can feel relaxed while they are playing smartphone games, but previous reviews show that children tend to be addicted to smartphone phone use. If children utilize smartphones too much, there should be concerns on their health issues. According to (Abu-Shanab, 2015), the author collected surveys distributed among 200 Arab school-aged students and found that utilizing the smartphone for a long period or continuously might affect a person's both physical and mental health; the person might experience headache and frequent messages and calls lead to interruption on students concentration and focus on completing their coursework which will effect negatively on their academic performance. Another study by Smith (2013) had shown that students who incline to use their smartphones more than 5 hours a day tend to have high anxiety and their GPA was low. The students mentioned that they had anxiety while they were away from their phones for a certain amount of time as they are dependent on their smartphones. Assuredly, this study indicated that using smartphones for a long period of time can cause sore head, anxiety and lack concentration. Therefore, playing games or chatting with friends utilizing smartphones for a short period of time can be a wonderful way to relax, yet using smartphones extravagantly will lead to a series of physical and mental issues.



### **Conclusion**

Recent developments in technology made many functions in smartphones feasible. In the future, more fancy smartphones and smartphone functions are going to appear. The contact between children and smartphones become inevitable. To summary the all studies above, infants under 2 years old are not suggested to utilize smartphones since Zimmerman et al. (2007)'s study showed that viewing media content among children had no clear benefits. Toddlers around 2 to 5 years old are suggested not to use digital devices for more than an hour a day yet letting them expose to smartphones' educational resources occasionally can help them develop reasoning and language skills (Radesky and Christakis, 2016). Children under 12 years old are not recommended to own smartphones, but parents may consider giving them mobile phones since these phones does not have too many functions so that children will not be too occupied (Nielsen, 2017). Teenagers who are 13-17 years old are more sophisticated and may ready to own smartphones, but some of them are lack self-control and having high risks to be affected negatively by smartphones (Abu-Shanab, 2015; Kibona and Mgaya, 2015; Smith, 2013). Hence, parents should decide whether their children are ready to own smartphones or not. If parents are not sure about it, they may consider allowing their children to have smartphones for a certain period of time and observe whether or not their children are negatively affected by smartphones.

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