



A study regarding effects of mobile phones on physical and mental health of children with special reference to kids under 3 to 12 years of age

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Abstract

In this modern world communication plays a very important role and mobile phones play a vital role in the field of communication. In India regardless of the income group mobile phones can be seen in each and every hand. Even children are not left untouched with the aura of mobile phones. A major point of argument nowadays is whether mobile phone is a boon or bane especially in the case of kids? Mobile phones have various side effects on physical health of children like children are especially at risk when it comes to negative effects of blue light exposure, lack of physical activity is also seen in case of kids which leads to obesity in them. Mobile phones also affect mental health of the kids. Various studies show that children who use mobile phones have a possibility of developing nonmalignant tumor in brain and ear. Not only this mobile phones also distract the academics of children and they face problem to concentrate. Among the kids some behavioral problems like aggressive behavior and mood swings are also seen who use mobile phones a lot.

Keywords: radiation, health hazards, carcinogenic, disability, aggressive behavior

Introduction

In this modern world communication plays a very important role and mobile phones play a vital role in the field of communication. In ancient times the pigeons were the first means of communication, then slowly letters began but it took a lot of time to send letter from one place to another sometimes a week and sometimes even more than that. To make people happy, telegram and speed posts were introduced. This made the delivery of letters even faster, around 3-4 days. Later, even this started to seem time taking, so to render that the landline phone communication started and that enabled people to communicate even more efficiently than ever before. But it is human nature to never be satisfied and with time we get bored with the same things. As the time passed people started finding these fixed line phones quite inconvenient as it was not possible to carry them wherever people would go. Necessity has always been the mother of inventions. The technological advancement that had started taking place around that time lead to many experiments and finally came the wireless world. Hence, the technology of advanced cell phone was invented. In April 1973, Motorola engineer Marty Cooper made the first call from " a real handheld " portable cell phone, a point he made very clear during that historic conversation with Joel Engel, the head of rival research firm Bell Labs.

Since then there is a long list of cell phones which came up as the mobile phones that evolved with the advancement in technology. Fast forward to June 29, 2007 and the iPhone was born. Nowadays mobile phones are as important as food, clothing and shelter. In India regardless of the income group mobile phone can be seen in each and every hand. Even children are not left untouched with the aura of mobile phones.

Effects of mobile phone on children

Is knife a useful instrument or a perilous weapon? It

depends on how it is used, and the same implies on the use of technology. The greatest inventions are those which affect quite a large number of people and among those inventions is cell phone. It would be ungrateful on our parts not to recognise how imperative they are to us.

Nowadays, what we observe very often is as the child starts growing the first gadget which they are attracted to are the mobile phones. Even a one or two month old infant gets attracted to a mobile phone. As a baby cries, mother plays some nice kids musical rhymes and the kids get quite and happy. As they grow and start understanding the pictures and sounds they start watching kids videos of rhymes on it. As the child cries or disturbs the parents in their work parents give them a phone in their hand, make the child busy and get back to their work. In a way it is us who make our kids addicted to the mobiles unaware of the harmful environment we are providing to them.

A major point of argument is whether mobile phone is a boon or bane? Well, we can easily make an argument for either side of this issue. On the boon side we can say that mobile phones have made our life very convenient for many of us. They allow parents to be always in touch with their children. They allow people to keep doing business while they are travelling as well. They can even be used in the developing countries as a way to store and transfer money from one person to another, thus making it easier for people to do business in such countries. The most revolutionary application that all of us have received through mobile phone is Google which is quite known because it answers to all the queries, searches and doubts in any field. You name it and Google finds it. But every coin has two sides to it. With all the goodness it also has flaws with it. Like, mobiles have taken away much of our privacy. We can no longer enjoy time away from work with the bosses unable to contact us. The applications available in mobiles have enabled people to know the whereabouts of the places they have been and where they are. This leads government and

advertisers to easily use that data. This is just a basic problem since mobile phones use has become very common they are used by different kinds of people which have increased the chances of cyber crimes such as wrong messaging, cyber bullying, troubling girls through social media etc.

Above all these issues, the biggest one that is most harmful is being caused to the kids. These days we find kids getting easily addicted to mobiles. It influences them a lot as their precious time is wasted on mobile phones. Since kids lack maturity as compared to the elders so it is difficult for them to differentiate between what's good for them and what's bad, due to which their studies are being affected. Even the toddlers are attracted towards mobile phones as they love to watch cartoon videos available on the internet. They don't understand how harmful it is for their eyes. In addition to all these are the bad radiations emitted from the mobiles which are equally harmful for the kids as well as adults.

Effects of mobile phones on physical health of children

1. Effect on eyes

According to experts, children who use smartphones and tablets are at risk of irreversible eye damage. Kids as young as 3 years of age face eye problems because of watching videos, T.V and movies. Parents even complain that children do not eat if they are not given mobile phones. Research put blue light as most powerful in suppressing melatonin, the hormone that control the sleep - wake cycle. Children are specially at risk when it comes to negative effects of blue light exposure. Doctors add that nowadays lots of homework is done on mobile phones so children use mobile phones for longer period of time. It is also found in studies that exposure to blue light for a couple of hours before bedtime suppress melatonin and delays deep sleep significantly. A child needs at least 8 hours of peaceful sleep daily to remain fit and active. The effect of blue light on vision can be wide ranging depending on how much time a child spends staring at the screen. If we look at the harmful effects from a long term perspective it may lead to a Juvenile muscular degeneration and soon, a point may come when the eye cannot see the real colour properly. Short term and immediate effects include formation of red eye, lack of concentration and sleep, body ache, change in psychological attitude etc.

Risk is less in adult eyes which have a natural defence. As we age the lens starts getting yellowish which partially blocks the blue light. But since children's eyes are still developing blue light is able to penetrate much more efficiently and directly into the retina thereby causing stress, cataract, unstable concentration, headache and retinal degeneration.

Youngsters are advised to spend less time on video gaming and watching videos. They should wear protective glasses, reduce brightness of the electronic devices, avoid small screen phones and they should keep the font big to avoid strain on the eyes.

2. Lack of activity

As the kids are getting addicted to mobile phones another big problem which is coming up is lack of physical activity. Earlier when mobile phones were not that common the kids in their free time used to play various kinds of games with their friends but today's kids as they are free they get access of the phone and engage in various gaming apps on videos. This has restricted the physical activity of kids to great

extent which is also one of the major reason for kids obesity and it is becoming very common nowadays. This further leads to various medical problems which were never seen in kids earlier.

Effects of mobile phones on mental health of kids

1. Effects of mobile radiation

This 21st century generation of children is growing up in a radio frequency environment that never existed in human history before. The radiations emitted by mobile phones can have adverse effects on children. Few of the major effects are the following:

Health hazard

In the recent years, there has been a lot of speculations about the impact of cell phones radiation on our body. A study by the Journal Of The American Medical Association stirred the debate when it investigated the repercussion the mobile phones could have on the brain activity. The possible health hazards of mobile phones for children are as follows

a. Non-malignant tumors

The study has shown that children who use mobile phones have a possibility of developing non - malignant tumor in brain and ear.

b. Cancer

The WHO has classified cell phone radiation as 'possibly carcinogenic to humans'. Children absorb more than 60% of the radiation into the brain than adults. Their brain's skin, tissues and bones allow them to absorb the radiations twice then the grownups. Their developing nervous system makes them more vulnerable to this 'carcinogen'.

c. Effect on the brain

Scientists have discovered that just 2 minutes of the phone call can alter the electrical activity of the kid's brain for up to an hour. The radio waves from the mobile penetrate deep into the brain, not just around the ear. The disturbed brain activity could impair children's learning ability and give rise to other behavioural problems. It could even affect their mood and ability to learn in the classroom if they have used the phone during the break time. Cell phones and PDA are linked to "Brain Ageing" (early onset of Alzheimer's disease and other brain damage) as well as DNA damage. Based on the research of a Swedish neurosurgeon, Leif Salford, MD, it is concerned that a whole generation of mobile phone users may suffer negative side effect in the middle age. A study in the "Journal of Craniofacial Surgery" suggest that EMF may also have harmful effects on bone density making it better to keep mobile phones as far as possible.

Effect of mobile phones on academics of kids

The major effect that everyone can see these days among children from teenagers to adolescents is on the studies. The academics is quite effected because of the distraction due to social media, games, videos, etc.as everything is accessible through the mobile phones easily. Following are the few major effects on academics due to the use of mobile phones.

1) As a distraction

Children just like teens, are addicted to mobile phones. They play games, chat and talk to their friends on their mobile

phone all the time. Along with the school supplies, many children spend their precious time with their mobile phones. They talk to their friends or even if they are studying a ring message alert is enough to disturb them and they get busy in chatting. Thus, they miss their learning lessons and fall behind other students.

2) Inability to concentrate

The brain develops many problems when it is continuously exposed to harmful radiations. The normal functioning of brain is hampered with over usage of mobile phones. Kids always think of things going on in their mobile phone. They cannot concentrate on their studies as a result their marks start falling. They start facing embarrassment from their parents as well as their teachers. They become frustrated and develop psychiatric problems.

3) Learning disability

Because of the advancement of technology, kids are forgetting the normal ways of learning. Everything has been made easier with the advents of newer technology. All kinds of mathematical problems can be solved with through mobiles which are more like mini computers. Ask a child to manually calculate, he or she will want to take help of mobile phone, even to solve simplest of problems. Mobiles are hampering the normal learning ability in kids.

Effect of mobile phones on behaviour of kids There are certain paradigms that are still under the research scanner that support the behavioral changes that kids incur due to the use of mobile phones in early years. Some of the following behavioral problems that are discussed occur due to mobile phones

a) Aggressive behaviour

As mobile phones are keeping the brain continuously busy without any rest, kids tend to be more annoying and at the top of their temper. They tend to be more violent and irritated even at a normal discussion. This in turn hampers their social life. They cannot become normal and candid easily with others. They prefer to remain more alone and be with their own selves without interacting with others.

b) Mood swings

Mobiles are the main reasons behind mood swings in almost all kids. Kids trying different applications on Hi-Tech phones are more prone to these kinds of problems.

Mobile phone safety for kids

As a parent we must take preventive measures to minimise our child's exposure to the harmful effects of mobile phones. These include:

1. Do not give cell phones if a child is under 16 years of age. A child's brain is too sensitive to withstand the effects of mobile radiations.
2. Do not let a child to hold a phone directly up to his head. Use an air tube headset instead.
3. Do not let our child make calls in bus, trains, cars and elevators. The mobile phones work harder to get signal out through metal which increases the power level.
4. Limit the use of cell phones around children.
5. Make sure that there is no mobile phone mast or tower near our home or our kid's school.
6. Do not let a child take mobile phones to school.
7. Do not leave mobile phones in a children's room at night.

Conclusion

In today's world it is really difficult to live without the technology and mobile phones are definitely a boon if used properly specially in the case of kids. So let's make it a boon for kids for today, tomorrow and ever after.

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