

# ADDICTION OF SMARTPHONES AND ITS IMPACT ON HUMAN HEALTH

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## ABSTRACT

In the present era the introduction of modern technological gadgets has captured the attention of global population. The dependency of people on these technological gadgets and services provided by these has reached at such level that, without these, they can't think a step forward in the direction of their growth. The degree of dependency is leading to addiction of the tech-devices and services. Youth is the most vulnerable group among the population to be addicted to technology. The study was designed to examine the use of tech-devices by youth i.e. the time spent with the gadgets, the purposes behind use, and its impacts on mental health. The purposes of use in most cases are pleasure driven rather than necessity driven. The present paper methodically reviews how addiction of smartphones and gadgets cast its impact on human health and well-being.

## Introduction

The term technology comes from the Greek word "techno", which means the art or skill used in order to solve a problem, improve a pre-existing solution to a problem, achieve a goal, handle an applied input/ output relation or perform a specific function; technology is the making, modification, usage and knowledge of tools, machines, techniques and method of organization (Liddell, Scott, Jones & McKenzie, 1940). That means, it can refer to the collection of tools, including machinery, modification, arrangements and procedures. Over the last 200 years there has been a significant change in the term technology. In the 20th century i.e. during the industrial revolution the term has gained its popularity worldwide (Cradock & Baldwin, 1833). Technology is the energy that acts as the driving force to drive or to run our lives. It is nothing but the results of the innovations and creativity of human beings. It converts the natural resources into consumer goods which are

used by the society and human beings. It has brought the automation level into such a height that human effort and his time has been saved to a great extent. Due to this, the access to information has now become easier and the distant locations are getting closer. IT and communication system has provided such facilities that the world is now feeling like a small globe virtually. However not all technology has been used for peaceful purposes. The development of weapons of mass destruction has created serious threat to society throughout history.

### **-Addiction to Technological Gadgets and Services**

Recently, every other day information technology or IT invents lucrative gadgets are attracting the attention of the present generation. As a vulnerable group, the youth becomes the largest consumer of such devices and services, which in turn makes them addicted to them at some point of time. Addiction is the continued repetition of a behavior or an activity, independent upon the adverse or negative consequences of the same (Angres & Angres, 2008) or it can be a neurological impairments which leads to such behaviours (American Society for Addiction Medicine, 2012). There is no such limitation of the use of the term addiction to some specific behavior such as drug addiction, food addiction etc.

Psychological control over substance and behaviour, preoccupation with the subject and the continuation of activities despite consequences are generally the symptoms of addiction (Morse & Flavin, 1992). Actually the term addiction means the high degree of likeness towards a particular thing or subject. So if somebody is addicted towards something then he loses control over his own mind and faces difficulties to get rid of the claws of that object.

Most of the teens today spend too much of their time with their faces buried in technological gadgets. According to Kimberly Young (1998), addiction to technology is a habitual compulsion to engage in using technology instead of using it to address life's problems. They use technology as a coping mechanism to avoid conflict. Long term compulsions can lead to psychological problems such as insomnia, irritability and depression. For example, compulsion to use technology in favor of rare and exciting life events such as parties or vacations might signify addiction. Attitude changes in teens, sudden depression, loss of self esteem and problems in paying attention to study, are often symptoms of Internet addiction (Young, 1998). According to Young, teens are particularly vulnerable to technology addiction. Teens have poor coping mechanisms. When they face stress, they often chose what is comforting to them, usually something easy to focus on such as online videos or social media sites. Also in the teen years, self-identity is uncertain. Most teens struggle to understand how to present themselves and by the mean time technology help them in doing so.

## **-Mental Health**

The concept mental health comes from the corresponding concept of mental hygiene. The term “mental hygiene” had been suggested to Clifford Beers by Adolf Meyer (Howels, 1975) and gained the popularity by the creation of the National Commission of Mental Hygiene in 1919. Later the International Committee on Mental Hygiene was created and after that superseded by the World Federation of Mental Health. Mental health is not just the absence of mental illness. It is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make contribution to his or her community (WHO, 1950). Mental health is about how we feel about ourselves, how we feel about others, and how we are able to meet the demands of life. Mental illness refers to kind of general mental health problems we can experience in certain stressful circumstances. For example work pressure can cause us to have poor concentration, mood swings and sleep disturbance. Such problems being temporary in nature are relative to the demands of a particular situation makes on us and generally respond to support and reassurance. Though almost everybody suffers from mental health problem at times, such temporary problems do not lead to mental illness. However being mentally unhealthy affects our potential as human beings and may lead to more serious problems. Mental illness can be defined as the experiencing of severe and distressing psychological symptoms to the extent that normal functioning is seriously hampered. Examples of such symptoms include anxiety, depressed mood, obsessive thinking, delusions and hallucinations etc. The recovery always needs some professional help. These helps may be counselling or psychotherapy, drug treatment or lifestyle changes etc (Kitchener, Jorm & Kelly, 2002). The consequences of addiction i.e. addiction to technology is the effect of it upon health, particularly on mental health.

## **-Some Facts about the Tech-gadgets and Services Used by the Present Generation**

### **Mobile/cell phone:**

Mobile phone or cell phone is a device that can make and receive telephone calls over a radio link while moving around a wide geographical area. Besides telephony it can also provide a variety of other services like text messaging, playing music, e-mail, internet access, infrared, Bluetooth, business applications, gaming and photography etc. It was first introduced in 1973 and in 1983 the first mobile phone was commercially available (Heeks, 2008). From 1990 to 2011, the number of world-wide mobile phone users grew from 12.4 million to over 6 billion, covering about 87% of the global population (Saylor, 2012).

### **Computer/laptop:**

Computer is a general purpose device that can be programmed to carry out a finite set of erythematic and logical operations. Computer can solve more than one kind of problem at a particular time as a sequence of operations can be readily changed. A laptop is a type of computer that can be folded and easily carried out due to its' small size and battery support for energy, required to run it. **The first laptop was invented in 1979 by British Designer Bill Maggridge.** For the laptop producers the year 1989 was quite successful. Now the laptops are generally used for making programs, storing data, entertainment (music, videos), accessing net etc. Currently the number of computer users in the world is 900 million to 1 billion i.e. around 80% of the world population are using or having computers (Woyke, 2012).

### **Smart Phone:**

A smartphone, or smart phone, is a type of mobile phone built on a mobile operating system with more advanced computing capability and connectivity than a feature phone. In early 2013 worldwide sales of smart phones exceeded those of feature phones. As of July 18, 2013, 69 percent of global handset sales are attributed to the purchase of I-Phone and Android smart phones (The Gurdian, 22 Dec, 2013).

### **Services: Internet:**

The internet is a huge network that links computers together all over the world using a range of wires and wireless technologies. The World Wide Web is the collection of linked pages those are accessed using the internet and a web browser. The purposes of using internet are online shopping, social networking, games, news, travel information, business, advertising and much more. One of the best common ways of finding information on the web is through the search engines like Google, Bing. Currently the most popular search engine is Google which is receiving hundreds of millions of search queries in a day. In the years 2005, 2010, 2013 the percentage of the world population using internet is 16%, 30% & 39% respectively. In the developing world it is 8%, 21% & 31% and in the developed world it is 51%, 67% & 77% (ITU, 2013). A social networking service is a platform to build social networks or social relations among people who, for example, share interests, activities, backgrounds, or real-life connections. Social networking sites allow users to share ideas, pictures, posts, activities, events, and interests with people in their network (Boyd & Nicole, 2008). Some of the popular social networking sites used currently is such as Face book, Google+, Orkut, Twitter etc. Face book was founded by Mark Zuckerberg in February 2004 (Carlson, 2010). As of September 2012, Face book has over one billion active users, of which 8.7% are fakes. May 2011 Consumer Reports survey reveals that, there are 7.5 million children under 13 with accounts and 5 million under 10, violating the site's terms of service (Thompson, 2012). Twitter was created in March 2006 by Jack Dorsey and by July, the social

networking site was launched. The service rapidly gained worldwide popularity, with over 500 million 7 registered users as of 2012. It is generating over 340 million tweets daily and handling over 1.6 billion search queries per day. Twitter has become one of the ten most visited websites on the Internet after its launch (Twitter.com, march21, 2012).

## **Review of Literature**

There are several studies which show the positive impacts of the technological gadgets and services. Other studies reveal the negative impacts of these tech-products. Some of the studies take both the positive and negative impacts of these technologies into consideration and some others show a balanced approach regarding the use of the tech-gadgets and services.

### **-Positive Impacts of Technology**

In fact the use of the tech-gadgets and services by the present generation has a positive impact on IT markets and therefore it is beneficial for the economy. Tech-devices and gaming may have positive effects on investigating skills, strategic thinking and creativity potential of the individuals. These tech devices and services are better sources for learning for the youth and these are the sources of fun and entertainment which help them distract from daily stresses of life. The digital behaviour of the youth makes them sit at one place for a long period of time and the eye, hand and mental coordination is maintained during that period. To cross the levels step by step in the games may improve the engineering skills among the youth and it may also help in building up good attitudes of moving ahead in life in spite of any obstacles. Following studies support the positive effects of the tech-gadgets and services. Internet continues to grow beyond our belief. About 32.7% of the world's population has access to the social networking sites like Face book, Twitter, Linked-In, YouTube, Flickr, blogs, wikis, and many more which let people of all ages rapidly share their interests of the moment with others everywhere. So the interconnectedness throughout the world is growing rapidly due to internet use (Tsitsika & Janikian, 2013).

When students use laptops and other tech-devices by the instructor's advice they are connected to course learning objectives. The classroom learning and engagement of the young students can be impacted positively by the use of these digital devices (Samson, 2010). Individuals who are engaged in high level of technical activities through the digital devices are better in performing cognitive tasks. The effective use of the gadgets may have positive impacts on cognitive thinking and also makes them master multitasking (Ophir, Nass & Wagner, 2009). In the medical set up the use of digital devices may help to a great extent. Easy storage, searching and sharing of patient information through the computers and accessibility of knowledge regarding

recent health related inventions through internet, have made the work of the medicos easier (Sellen & Harper, 2002).

### **-Negative Impacts of Technology**

Although the use of tech-gadgets and services has many positive impacts, they are short lived. In long run it has negative impacts on the individuals. The digital activities make the youth strong in technical skills but make them weak in real life practical skills. It takes the young mass away from the reality helping them to live in their imaginary world. Due to the time spent on the devices the youth are refrained from some outdoor activities with friends and family. The indulgence in violent games may create more violence in their mind. The more they use the gadgets, the more they are crazy about it which may distract them from study. During the time of playing games when they can't achieve the set target, it may raise their anxious level higher. After all addiction to the devices may develop unhealthy lifestyle, poor time management and poor eating habits among the youth. Following studies highlight some of the negative effects of the tech-devices and services. 10 It would have been a lot better if the drawbacks or the negative impacts of the use of the digital services would have been known before some years. As the use of the digital services has negative impacts students should minimise the use of these tools and should aware about its use (Walsh, 2012). The voracious use of tech services has negative impacts on the youth. Due to these effects youth want to do things faster, easier and cheaply. Everybody wants to do things according to their own schedule and pace, failing in which they become anxious. Face to face communication is avoided by the young mass, which is not good for the society (Erickson, 2012). Generation-Y i.e. the present generation is psychologically addicted to the social Medias like face book, Twitter, Linked In etc. The addiction causes intra-psychic conflicts such as intolerance and relapse among the youth (Cabral, 2011). Internet gaming and shopping is causing depressive symptoms among the college students. Implementation of programmes is needed to detect and decrease these activities among them (Cotton, 2001). The addictive internet use has negative impacts on mental health. There is a positive relationship between Internet addiction and psychiatric disorders like depression, bipolar disorder, obsessive-compulsive disorder, attention deficit disorder, etc. So the addictive internet use should need clinical help (Young, 1998). Excessive internet use not only generates disorders but it can sometimes be distressing and disabling (Shapira et al., 2003). Technological addiction is growing day by day in the countries like Italy, Pakistan, Czech Republic. Indian youths are no less than them in technological addiction. Online games have caused serious health problems in China (BBC, 11 2007), Korea (Hur, 2006) and Taiwan (Lee, 2007). About 10% of China's more than 30 million internet gamers are said to be addicted (Ko, Yen, Yen, Lin & Yang, 2007). Excessive technology use may affect academic performance, relationships, as well as overall development among youth. Such baffling

technology use has been identified as technology addiction and has many negative impacts on health and social behaviour (Young, 2004).

### **-Technology has Both Positive and Negative Impacts**

Some studies focus on both the positive and negative consequences of use of the tech-devices and services and provide a balanced approach regarding the use of the same. Technology is an integral part of our everyday life as people are dependent on it from all over the world for communication, organization and employment etc. One cannot stay away from technology even for a day. Not even a single day goes without a cell phone in hand or without laptop and net surfing. Although technology being at its best there are basic problems that follow us everywhere and generally it has drawbacks in the areas of health, public safety and education (Saez, 2010). Students should be encouraged to develop in a technological world. The necessity of social networking, computer games or digital habits of them should be understood by the elders. But simultaneously the consequences of those habits should also be studied. It is better to study the relationship between technology, child development and the popular culture. Parents should facilitate a healthy and balanced relationship between technology and their children helping them to use the social media effectively (Mitchel, 2012). The studies in the field of internet addiction are conducted by expertise of multiple fields like academicians and health professionals, etc. The impacts of the same should be investigated and the problems related to internet addiction should be addressed. By doing the 12 above we can overcome the negative impacts of internet technology and can use it for development rather overtaken by it (Chou, Condrón & Belland, 2005). As human beings are regularly trying to reinvent themselves and adopting new and improved ways of lifestyle, this phenomenon has increased the use of technological gadgets and services up to the extreme. The use of these tech products has a positive impact on the mass market consumption. Side by side the never-ending conflict of pop culture is advancing through these activities of the individuals (Watkins, 2003). Technology is a double edged sword. From the above reviews, it is clear that the youth of today are the principal consumers of technology. This mixed set of research findings led to think how the youth is using the technology to bring about positive changes in their lives and avoids the negative consequences of using technology excessively. Based on the review of literature, the statement of the problem has been formulated.

### **-Impact of Technology on Health**

Now we understand that use of any technology has an effect on the mental health and the life style directly or indirectly and the effect may be positive or negative. When the use takes the form of addiction then the impact may be negative upon both. The following statements also show the same. Prof. Phil Reed (2013), Professor of Psychology in Swansea University's College of Human and Health Sciences claims the net addiction as the

cause of the depression, social isolation, and disrupted sleep of the present generation. He also argues that the same has many other negative impacts on their health. Psychologist Dr Kimberly Young began to study the topic of technology addiction as long ago as 1995 and wrote about it in a book called “Caught in the Net” in 1998. She compares online addiction to drugs or alcohol because internet provides the addicted people with the same kind of high leading the dependency on it to feel normal. A study conducted in the year 2013 by Swansea and Milan 13 University shows that when the addict come offline, they get negative mood swings, increased levels of depression and impulsivity. Countries like US, China, Australia, Singapore, Japan, and South Korea have sounded the warnings that internet addiction represents a significant health threat (Boothroyd, 2014).

### **-Statement of the problem**

There are a number of research work related to this study area conducted basically in western countries and the countries having a developed society. The availability and facility of the tech-gadgets and services are large in those countries. Comparatively fewer studies are being conducted in the developing countries like India and those fewer studies are even conducted in the metro cities. The studies conducted generally focus on the timing and impact of the tech-addiction but less focus on the purpose behind it. The youth section of the society is comparatively neglected in the studies.

## **CONCLUSION**

### **Purpose of Using the Devices and Services**

Although impacts of the overuse of a subject is independent upon the purposes behind the use of that subject, in case of claiming a use as addiction the purpose behind the use has to be considered. The purposes are categorized into three categories such as study, communication and entertainment. Most of the students use their gadgets and the services provided by them for the purpose of entertainment. In this case the use of these products is satisfying the characteristic of addiction.

### **Health Impacts of Excessive Use of Tech-gadgets**

#### **Aggression**

Children become aggressive when it comes to gadgets. This is one of the effects of using gadgets.

#### **Obesity**

You become a couch potato once you have a gadget in hand. Playing a game or fiddling with a gadget makes you hungry and unknowingly you begin to binge on food without moving an inch from the couch, thus adding to the pounds of weight.



### **Sleep Disorders**

This is one of the main reasons why children should not be given any gadget until they reach a certain age. Sleep disorders are caused because of the constant use of gadgets.

### **Dry Eyes**

Do you have a constant itch in your eye? If you do, then it is because of the strain you put on your eyes. The constant strain leads to a dry eye which in turn leads to multiple eye infections.

**Hearing Problems** It is believed, according to experts, that 85 decibels could turn the microscopic hair of the inner ears into scar tissue if done habitually. This is one of the main ways how gadgets affect your health.

### **Leads To Infidelity**

Using a cellphone for more than 18 hours in the day can decrease the production of sperms in a man. This is one of the negative effects of using gadgets.

### **Cancer**

Ionising radiation is a cancer causing agent. This radiation leads to cancer like leukemia, skin, thyroid, breast and stomach cancer.

### **Stress**

Stress is developed with every gadget you use to communicate. The wait for an important phone call or a skype chat for an interview builds up that extra tension in your mind, thus leading to stress which in turn affects your health.

### **Risk During Pregnancy**

One of the negative effects of gadgets on your health is during pregnancy. The radiation from the gadget slows down the rate of brain development of the foetus and may even lead to hyper activity.

The present study is a promising study in the sense that we are living in a world of knowledge and technology. Changes in the scientific world are very fast. Keeping ones speed along with the change is definitely a challenging task. Hence, one must learn how to exercise control and to know what is important and what is not important at a specified time. Knowledge management, time management and setting the priorities of life should guide our behaviour infusing the technological gadgets and services. Last but not the least, use of any product should be necessity driven rather than luxury driven, so that we can derive maximum pleasure and happiness.

## **REFERENCE**

Beck, A.T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961) An inventory for measuring depression. Archives of General Psychiatry, 4, 561-571.

Beck, A. T., Steer, R.A., & Garbin, M.G. (1988) Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. Clinical Psychology Review, 8(1), 77-100.

Groth-Marnat G. (1990). The handbook of psychological assessment (2nd ed.). New York: John Wiley & Sons.

Hojat, M., Shapurian, R., Mehrya, A.H., (1986). Psychometric properties of a Persian version of the short form of the Beck Depression Inventory for Iranian college students, Psychological Reports, 59(1), 331-338.

Steer, R. A., Rissmiller, D. J.& Beck, A.T., (2000) Use of the Beck Depression Inventory with depressed geriatric patients. Behaviour Research and Therapy, 38(3), 311-318.

