Addiction to Technological Gadgets and Its Impact on Health and Lifestyle: A Study on College Students

(Thesis submitted for the partial fulfilment of

Master's Degree in Development Studies)

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<u>DECLARATION</u>

I hereby declare that I have completed my project on "**Addiction to Technological Gadgets and Its Impact on Health and Lifestyle: A Study on College Students**" at National Institute of Technology, Rourkela, Odisha in the academic year 2013 − 2014. The work submitted here by me is true and original to the best of my knowledge.

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This is to certify that the dissertation entitled, "Addiction to Technological Gadgets and Its Impact on Health and Lifestyle: A Study on College Students" submitted by Jyoti Ranjan Muduli as a partial fulfilment of the requirement for the degree of Master in Arts in Development Studies of the Department of Humanities and Social Sciences, National Institute of Technology, Rourkela, is an authentic work carried out by him under my supervision. To the best of my knowledge, the matter embodied in the dissertation has not been submitted to any other university/ institute for the award of any degree or diploma.

(Dr. Ramakrishna Biswal)

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Contents

Chapter 1- Introduction   1-7

Chapter 2- Review of Literature   8-13

Chapter 3- Methodology   14-16

Chapter 4- Results and Findings   17-35

Chapter 5- Discussion and Conclusion   **36-39**

List of Tables

List of Figures

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 and life style. Using structured questionnaire, unstructured interviews and observation by the researcher, primary data were collected from 150 respondents of NIT, Rourkela. Findings of the study showed that most of the young respondents spend a large amount of their time with their tech-gadgets and services provided by them. The purposes of use in most cases are pleasure driven rather than necessity driven. Again, it reveals that addiction to tech-devices has many negative impacts on the aspects relating to mental health of the respondents and has become a causal factor in the change of life style of young participants. The results are interpreted based on the current theories and implications for future are pointed out.

Key words: Addiction, Lifestyle, Mental Health, Technological Gadgets and Services

CHAPTER I

Introduction

The term technology comes from the Greek word "techne", 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 organisation (Liddel, 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.

1.1 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 behaviour 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 behaviour 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 favour 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.

1.2 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. Latter 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.

1.3 Life Style

Another aspect on which the technology addiction has an effect is the life style of an individual. As in case of addiction to technological gadgets time and choices are the concerned factors, the lifestyle is necessarily affected by the same. Life style is nothing but the way of life of an individual or a group of individuals or the society as a whole. Somebody's attitudes, values, world views etc are reflected by his/ her life style. So life style means making some sense of the self and creating some cultural symbols which will reflect the identity of a person. All the aspects of life style may not be voluntary in nature because one is associated with the society and that surrounding plays an important role in shaping the choices of an individual's life style. Accordingly the individual creates the symbols of life style by which he /she project the self before the world and also before himself (Spaargaren & Van Vliet, 2000). The aspects like views on politics, society, health, intimacy and many more play an important role in shaping the life style of a person (Giuffrae & DiGeronimo, 1999). Life style is dependent upon both seen and unseen factors. The former includes the demographic profile of the individual and the latter includes the psychological status of an individual. The life style is always a changeable concept because the choices of human beings and also the natural environments are changeable. Depending upon the changing mood individuals select their activities and fix their timing to those.

The discussions above led to the ideas about the impacts of the addiction to the technological gadgets and services. Addiction to technology has a negative impact on mental health and it also affects the social behaviour of the individual by being the cause of change in his life style. The current study is on the interrelation of the above three concepts. It will focus on the impact of the addiction to technological gadgets and services on mental health and life style of the youth. The study is on the youth of a premier engineering institute of Eastern India towards the use of the tech-gadgets and services.

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

<u>**Mobile/cell phone**</u>

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).

<u>**Computer/laptop**</u>

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).

<u>**Smart Phone**</u>

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,

90 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

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).

CHAPTER II

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.

2.1 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, Flicker, 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).

2.2 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.

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,

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).

2.3 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

above we can overcome the negative impacts of internet technology and can use it for development rather overtaken by it (Chou, Condron & 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.

2.4 Impact of Technology on Health and Life-Style

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

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).

2.5 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.

2.6 Objectives of the study

Following are the three specific objectives of this study.

1. To examine the time spent by the youth with their tech-devices.

2. To examine the intentions behind use of tech-devices and services.

3. To study the impacts of the addictive use of the tech-gadgets and services on mental health and life-style.

CHAPTER III
Methodology

This study is based upon the intensive fieldwork conducted in NIT, Rourkela. The fieldwork was conducted during the month of December, 2013 to February, 2014. A pilot study was conducted in the month of September, 2013 before the commencement of the fieldwork. Depending on the pilot study conducted NIT campus was chosen for the conduct of the fieldwork. The choice of both the study area and purpose are also dependent upon the previous observation. The sampling method used to select the study area was purposive one. Both the quantitative and qualitative methods were used for the analysis of the data. Ms Word and Ms Excel were used for the data analysis.

3.1 Study Area

The study is conducted in NIT, Rourkela. National Institute of Technology Rourkela was formerly known as Regional Engineering College Rourkela, is a public funded institute of higher learning for technology and engineering. It is situated in the steel city Rourkela of the state Odisha of India.

3.2 Sample

A purposive sampling method was followed to collect information from 150 students of the institute out of which 90 were male and 60 were female students. The age range varies from 18 to 26 years. The average age of the total sample was 21 years. The average age of both male and female sample is 21 years. Being a technical institute the representation of the female students is less. That is why there is a disparity in the number of samples of male and female students in present study. The education of the sampled students varies from B.Tech (Engineering) to Ph.D (Engineering, Science and Social Sciences). The numbers of participants from each category of courses are 80, 65 and 5 respectively. In the present study participants, students and respondents are used interchangeably.

3.3 Methods of Data Collection

The questionnaire used in this study is a structured one. The first part of the questionnaire is consisting of the declaration and the demographic profile of the participants followed by four sections. The latter four sections were containing close ended questions regarding the use of the technological gadgets and the present health status of the participants.

Section-A of the questionnaire contains questions regarding the use of the gadgets in a tabular form. The time spent with the gadgets and services by the respondents was asked provided options like 1-2 hrs, 2-4 hrs, 4-6 hrs and >6 hrs against each gadgets and services. Time spent for the purposes of use of the gadgets and services was also asked. The percentage calculation of the respondents was made as per the time spent with the gadgets and time spent for the purposes. In the present study the use of the gadgets for more than 6 hours is regarded as addictive use by the respondents.

In section-B of the questionnaire some questions were asked about the dependency of respondents on the technological gadgets and services. Out of 10 questions, question number 5, 8 and 10 were negative statements and therefore were reverse coded for calculation. All questions were in 5-point Likert-scale, where 5 refer to strongly agree and 1 refers to strongly disagree. The score in this 5-points scale varied from 10 to 50. The score from 34 to 50 is regarded as high, from 17 to 33 as moderate and from 10-16 as low dependency. As dependency determines the addictive behaviour, so the more the dependency the more will be the addiction among the respondents.

In both the sections-C and D some questions regarding the present health status and social behaviour were asked. The percentage of the respondents having health problems and problematic social behaviour was calculated. Finally the results yielded from these two sections were compared with the results of section A and a comparative analysis was made to

know the impacts of the addictive use of tech-devices on mental health and lifestyle of the respondents.

Semi-structured and unstructured interviews were conducted with the students regarding the use of the tech-gadgets and services and its impact on their health and social status. These types of interviews were chosen for this study because the study deals with the youth and it also consists of the information about health. On spot changing of the question is required for getting correct information from the participants. The data collected through this process was helpful for qualitative analysis in the study.

CHAPTER IV

Results and Findings

4.1 Socio-economic Profile of the Respondents

Economic status of the participant is useful information for the analysis of the data. An economically sound person is assumed to possess more than one technological device. Generally the gadgets (mobiles, laptops, smart phone etc) are of higher cost rather than other consumer goods in the market. The data signify that the parental income of the students that vary from 10 thousand to 1.5 lakhs approx. per month. Average parental income of the participants is 35 thousand per month approximately. This means that most of the students belong to middle class family; it is not so difficult for their parents to afford them at least two tech-devices. Again some participants are of rich class family capable of affording more than two to three gadgets.

4.2 Possession of Technological Gadgets

To analyse the addictive use of the tech-devices it is necessary to consider the possession of them by the youth. The more number of gadgets one will have the more time of him/ her will be spent with those. It is clear from the data that all most all of the respondents i.e. up to 99% of them are having at least two gadgets. Among them 45.7% respondents have two gadgets, 37% have three and 16.3% of them have more than three gadgets (Fig No 1.1). It shows the fondness of the young participants towards the tech-devices and services.
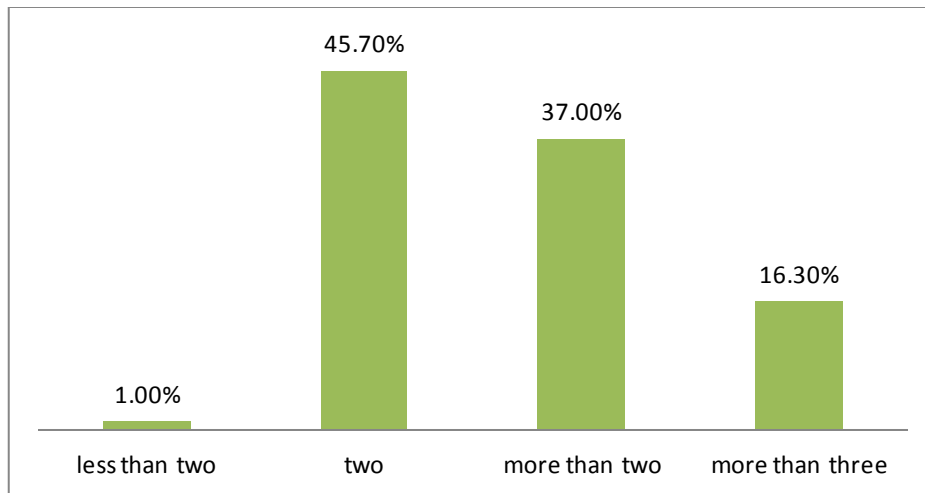
Fig No 1.1 Possession of the Gadgets by the Respondents

The availability of something always forces the use of that product as it is the nature of the human being to do so. In other words, the more one can have the more one can use. So due to this availability the use of the tech- gadgets are increasing in significant manner. One of the interesting features of new gadgets is that they provide lots of fun and amusement with each new edition. This keeps the youth hooked to the gadgets for a longer period of time.

4.3 Time Spent to Avail the Services

After the possession of the number of gadgets the next important information is the time spent by the respondents to use them. Even to claim that somebody is addicted to certain thing the time factor is very important for analysis. The diagram in the fig 1.2 shows how much time the respondents are devoting towards the gadgets they are using. The tallest bar in the diagram signifies the amount of the participants using their devices for more than 6 hours. Their percentage is 67.4% i.e. nearly 68% of the total respondents are spending more than 6 hours per day with their technological devices and enjoy the services out of them. This also means ¼th of their time is spent with their gadgets and services. Where 20% participants are using the gadgets for 4-6 hours per day and 7% of them are using these for 2-4 hours. The amount of participants those spend 1-2 hours per day with their gadgets is very less i.e. only

18

5% (Fig No 1.2). This statistics from of the data shows the voracious use of the devices by the young respondents. 6 hours or above is a large time period for a student even if for anybody.
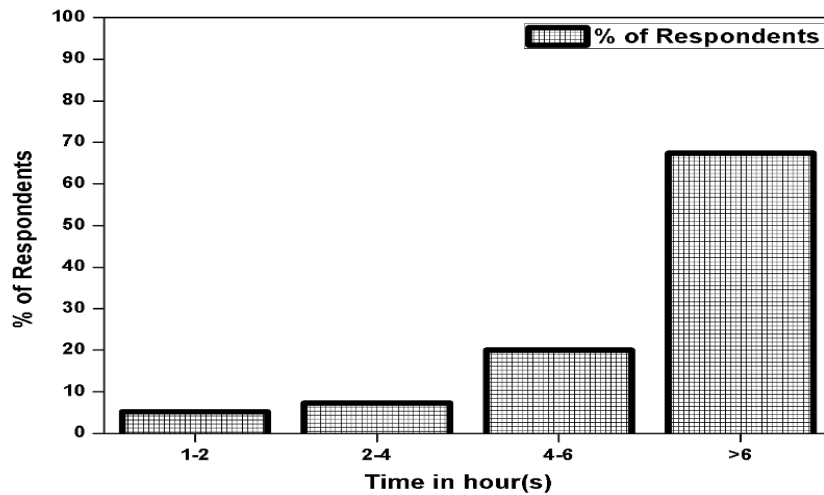
Fig No 1.2 Time Spent with the Gadgets by the Respondents

If it is analysed it can be understood that beside their college hours, sleeping hours and the daily activities the participants are using all their time in making themselves busy with the gadgets and services (internet, social sites, gaming etc). So it can be even told that gadgets are the best friend of the present youth to spend time with them. The analysis of this data symbolises that the degree of use of the tech-gadgets and services among these young mass is very high, leading to the addiction towards the technological devices. The user can be claimed as an addict here, as having the knowledge of the consequences of the excess use of the services they are using them up to such extent. Needless to say that, this section of the society is the highly educated mass.

Services Provided by the Gadgets

The more prominent service provided by the gadgets in current generation is the internet. All most all the people using tech-devices are accessing the service. Nearly 24.6% of the

19

respondents are using internet more than 6 hours per day and nearly 34% of them are using it from 4-6 hours. 2-4 hours per day is devoted for it by 33.3% of the respondents and only 8.1% of the respondents are using it for 1-2 hours (Fig No 1.3). This shows popularity of internet among these young mass. In fact, internet provides the ways and means of entertainment for the youth.
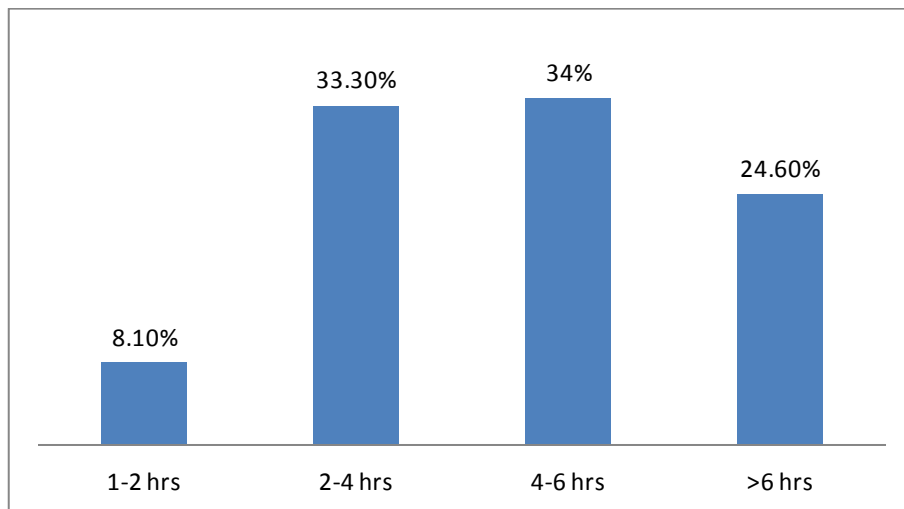
Fig No 1.3 Use of Internet by the Respondents

The internet has a wide range of effect on the youth. The same is being generally used for the purpose of social networking, gaming, watching movies, sports and news etc. This suggests that maximum number of youth use internet for relaxation and amusement and buying products online i.e. the online shopping.

The source data reveals that nearly 99% of the respondents are having accounts in social networking sites and also almost all of them are visiting them regularly and spending nearly 1-2 hours per day with them. Only 1% of them are not having any social networking accounts. When interviewed, they also informed that most of them are having accounts in 2-3 social networking sites (face-book, twitter, we-chat etc). When asked they were claiming that, they are using this for communication purpose and maintaining social relations. They are busy on the sites for making face book friends.

4.4 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. Here the purposes are categorised into three categories such as study, communication and entertainment.
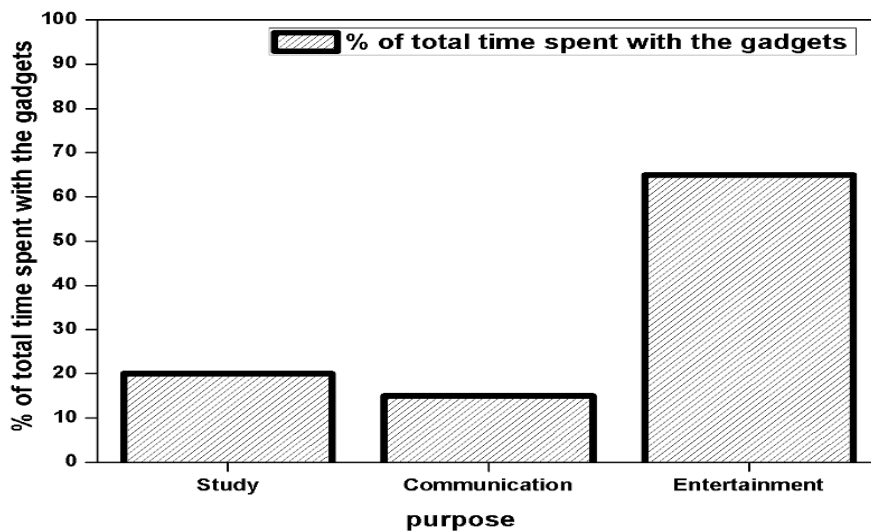
Fig No 1.4 Purpose of Use of the Gadgets

The diagram in the fig 1.3 shows how much time the respondents are giving to the respective purposes out of the total time devoted to their gadgets and the services provided by them. That means it signifies that how much time the respondents are using their gadgets and the services for which purposes. Nearly 65% of their total time spent for the gadgets the respondents are giving for the purpose of entertainment and nearly 20% of the time they are spending for the purpose of study. They are spending nearly 15% of their time out of the total time spent with their gadgets for the purpose of communication (Fig No 1.4). For students staying outside the home study and communication (up to a limit) can be considered as the necessity. But entertainment is generally regarded as the sense of pleasure for a student and even for an individual. Here, the entertainment factor contain the activities like watching

movies, sports, gaming in the internet, social networking, chatting with friends on social medias etc and the study contain the reading of the texts regarding the course of study, gaining outward knowledge, watching news etc. So by analysis of this source data it can be understood that the voracious use of the tech-devices and services are pleasure driven rather than necessity driven. As here most of the students are using 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.

Gender Difference in the Purpose of Use

The purposes behind the use of the tech-devices in case of male participants differ from that in case of female participants. The male respondents are giving 70% of time for entertainment purpose, 17% for study purpose and 13% for communication purpose where in case of female respondents; it is 55%, 25% and 20% respectively (Table No 1.1). From the results, it is evident that females use the services slightly more for studies and communication than their male counterparts. However, male students use the services mostly for entertainment.

Table No 1.1 Purpose of Use as per Male and Female Respondents

Purpose	Male	Female
Study	17%	25%
Communication	13%	20%
Entertainment	70%	55%

The fig 1.5 below shows that, female respondents are devoting more time to study and communication compared to the male respondents. Males give more priority to entertainment.
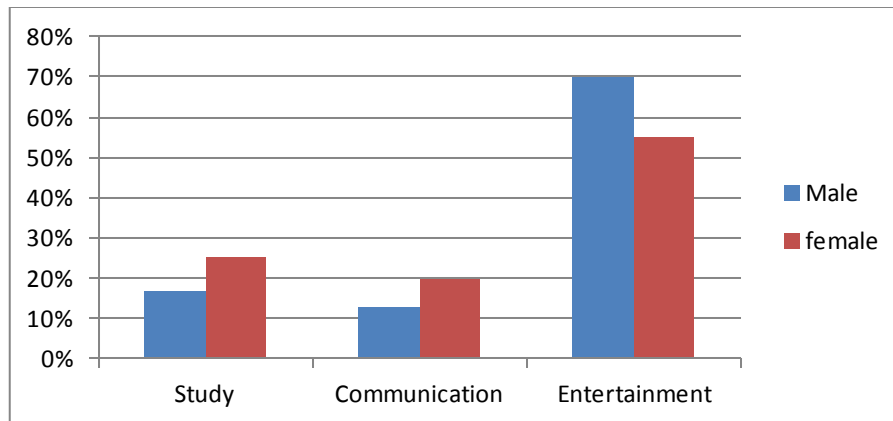
Fig No 1.5 Time given to the Purposes by Male and Female Respondents

4.5 Level of Dependency on Tech-Gadgets and Services

In order to determine whether the level of dependency is High, Moderate or Low, ten questions were asked to the participants. As discussed in chapter 3 (Methods of Data Collection) about 63.3% of the respondents obtained high dependency score, 36.7% of the respondents obtained moderate dependency score. Surprisingly, the percentage of students obtaining low dependency score was nil. So, the information from this section of the questionnaire shows high degree of dependency on tech-devices and services among the respondents. This also suggests that participants who show high level of dependency on the use the devices and services are becoming addicts of technological devices. Hence, it may be assumed that there would be some health problems of this excessive use of technological devices and services. The next section deals with whether addictive use of technology has any adverse effects on health in general and mental health in particular.

4.6 Health Impacts of Excessive Use of Tech-gadgets

If the impact of the use of something or any activity is not a negative one on the user then it will be a matter of silly to claim the use as an addictive use. So, it is necessary for the study to take into account the aspect of the impacts of the excessive use of the tech devices. Here all the students under the study are of the same institute i.e. living in the same environment

and getting the same facility and also the impacts on health those will be analysed are not chronic in nature. So other factors those are affecting the health are nearly controlled and are same for every respondents. Following paragraphs describe the ill impacts of overuse of tech-devices and services.

Physical Health Problems

Use of Ear Phones and Its Impacts on Hearing Capacity of the Respondents

One of the eye-catching information in the source data is about the use of the ear phones or head sets by the participants and its impact on their hearing capacity. Data implies that about 72% of the respondents who are using ear phone or head sets for more than 6 hours per day are having significant hearing problem. The percentage of respondents having hearing problems decrease in the case of the users using ear phones for less time period. It is 54% for the users of 4-6 hours, 13% in case of the users of 2-4 hours and for users using the same for 1-2 hours it is only 12% (Table No 1.2). It signifies that the higher the degree of the use of the ear phones the higher the hearing problems of the students. We know that as earphones are electronic devices and have radiation effect, they can affect the hearing system of the human body. This analysis from the source data supports the existing knowledge and can be regarded as a practical example of this.

Table No 1.2 Respondents having hearing problems

Respondents as per the use of ear phones per day	% age of the respondents having hearing problems
1-2 hr	12%
2-4 hr	13%
4-6 hr	54%
>6hr	72%

Physical Discomfort

As per the prior knowledge pain, aches (basically headaches) are some symptoms of weak health. Regular headaches are also having problems on mental health of the individual. Repetition of the same thing for a long period of time may cause headaches for somebody. Also constant use of a particular object can have aches. Generally pain and aches will be there when movement of both body and mind is restrained in one place. According to the data nearly 78% of the respondents whose time period of using gadgets is above 6 hours are having headaches and pain on a regular basis. The statistics for the latter three categories on the basis of time period of using gadgets is like this: 42% for users of 4-6 hrs, 17% and 13% for 2-4 and 1-2 hrs respectively (Table No1.3). The lights and the radiations coming out of the gadgets may be the causes of headaches. This analysis according to the data supports those known facts as a large portion of the participants addicted to tech-devices are suffering from regular headaches.

Table No 1.3 Respondents having Regular Headaches

Respondents as per the use of gadgets per day	% age of the respondents having regular headaches
1-2 hr	13%
2-4 hr	17%
4-6 hr	42%
>6 hr	78%

Sleep

About 60% of the respondents who are using their gadgets for more than 6 hours have stated that they have sleeping problems i.e. they face problem in falling asleep or staying asleep. But in case of other respondents the problem is not of considerable. 7%, 3% and 2% are the scores for the latter three categories (Table No 1.4). This symbolises that the young

respondents who are using the tech devices for a limited period of time have a sound sleep in the night rather than the respondents engaged to the addictive use. Less sleeping can affect their health in a long run. It has negative impacts on both on mental and physical health of the individual. So it is one of the most negative impacts of the technological addiction. Sleeplessness itself is considered as a disease by the health experts.

Table No 1.4 Respondents having Sleeping Problems

Respondents as per the use of gadgets per day	% age of respondents having sleeping problems
1-2 hr	2%
2-4 hr	3%
4-6 hr	7%
>6 hr	60%

Fig No 1.6 bellow shows the negative impacts of excessive use of the tech-gadgets on hearing, physical comfort and sleep of the respondents. The more time spent with the gadgets leads to more problems in the above aspects.
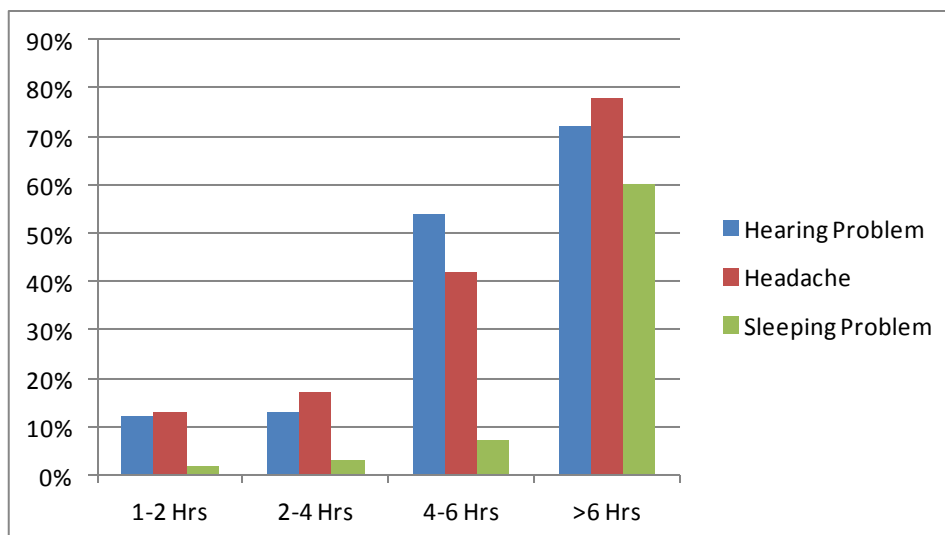
Fig No 1.6 Respondents having Hearing Problem, Headache and Sleeping Problem

Mental Health Problems

Anxiety or Stress Level

Anxiety, nervousness or stresses are generally considered to be the characteristics of ill mental health of an individual. The more the degree of these characteristics the more unhealthy the person would be. A healthy mind is required to possess fewer amounts of these symptoms.
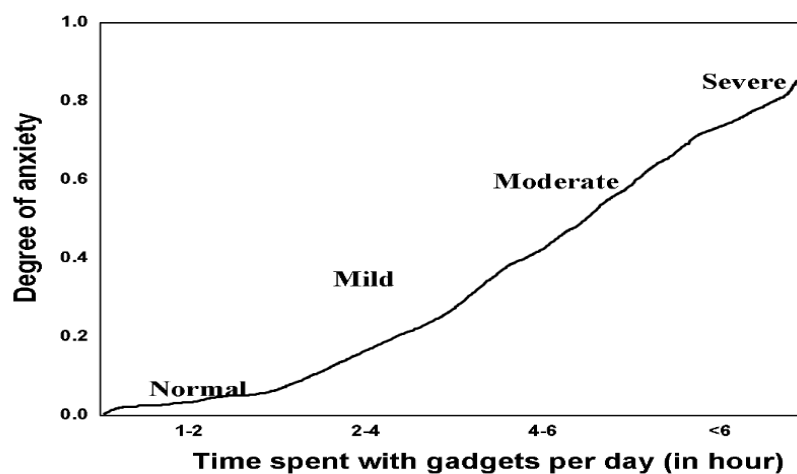
Fig No 1.7 Impact of Addiction on Anxiety Level

According to the source data over use of the technological devices by the respondents has a greater effect on the anxiety and stress level of them. From the graph in the fig 1.7 it is clear that there is direct relation between the use of gadgets and the level of anxiety and stress. It shows that the degree of the anxiety or nervousness is normal in case of the low users of the devices and it increase with the increase of time period of use from mild to severe. Most of the users using the gadgets for more than 6 hours are anxious and nervous. The reason of this anxiety may be the mentality of the users of gaining speed in every work which is the effect of gamming and use of internet. Everybody in the tech world wants the fast motion in every work. And when they can't achieve that, it becomes the very cause of their nervousness.

Logical Thinking and Memory

A healthy and sound individual is expected to think about the things he comes across, logically and clearly. That means the functioning of his memory is well enough to think something. But the disorder in it can be considered as a mental health problem for the individual. The source data reveals that 40% of the respondents using the gadgets for more than 6 hours are having problem in logical thinking, whereas this problem is limited to 15% of respondents using the gadgets for 4-6 hours and is 10% in the case of the users of 2-4 hours and 7% for 1-2 hour users (Table No 1.5). This problem is seen to be normal in the latter three cases but in the first case it is significant.

Table No 1.5 Respondents having Problems in Logical Thinking

Respondents as per the use of gadgets per day	% age of respondents having problems in logical thinking
1-2 hr	7%
2-4 hr	10%
4-6 hr	15%
>6 hr	40%

The respondents who are the users of more than 6 hours are more vulnerable towards the problem in logical thinking. In their case they may face problems in analysing the situation surrounding them i.e. sometimes their mind may fail them to think about the thing or the situation. The users of this group are generally less exposed to their outward surrounding and always expected to be in their virtual world i.e. in the imagination of their internet world. So this may be one of the major factors due to which when they are exposed to their surrounding they may have difficulties in handling the situation around them. This can affect the mental health of this type of individuals in the long run.

Mood

The less should be the depression level the more healthy and happy the individual will be. So the sadness or the depression is having an impact on the mental health of an individual. The data represents here shows how the addictive use of the gadgets by the students is controlling the depression level of them. The data reveals that among the users of >6 hours, 83% are depressed in their lives. Whereas the percentage of the respondents having depression in case of the users of 4-6 hrs is 50% and for 2-4 hrs & 1-2 hrs users it is 21% and 14% respectively (Table No 1.6). Again the degree of depression varies from lower to higher as per the increasing order of the time period of the use of gadgets. It may be the result of social isolation of the students due to the devotion of large amount of time towards the technology. Although the gadgets are providing happiness to the students but after all these are the machines only and have no emotions and presence of mind. They work according to the data fed to them. So for cheeriness in life the interaction with the human beings is necessary and from which the addicts are deprived of and leading a depressed life.

Table No 1.6 Respondents having Depression

Respondents as per the use of gadgets per day	% age of the respondents depressed
1-2 hr	14%
2-4 hr	21%
4-6 hr	50%
>6 hr	83%

Mental Stability

Weak minds are generally getting worried even if in small matters. It signifies the patience level of the individual, which s much required for the stability of a person in the society. The

patience of an individual may be considered as the symbol of the presence of him in the real world.

Table No 1.7 Respondents Worry Excessively

Respondents as per the use of gadgets per day	% age of respondents worry excessively
1-2 hr	9%
2-4 hr	13%
4-6 hr	30%
>6 hr	59%

These type worried personality are vulnerable to any reverse situation in life. According to the data addiction to technological gadgets is one of the causal factors for the worries of the respondents. Out of the participants using gadgets above 6 hours nearly 59% worry excessively even if on silly matters. Whereas the amounts decrease in case of 4-6, 2-4 and 1-2 hrs users gradually. The scores are 30%, 13% and 9% respectively (Table No 1.7). By analysing it can be known that the age to get maturity is increasing due to the addictive use of the young respondents.

Consciousness Level

About 65% of the addictive users i.e. the user group of >6 hrs are low consciousness about themselves and have problems in taking any kind of decisions. For the users of 4-6, 2-4, and 1-2 the score is 25%, 15% and 10% respectively (Table No 1.8). That means the addiction to tech-gadgets also have negative impacts on conscious level of the respondents.

Table No 1.8 Respondents having Low Consciousness

Respondents as per the use of gadgets per day	% age of respondents having low consciousness
1-2 hr	10%
2-4 hr	15%
4-6 hr	25%
>6 hr	65%

Fig No 1.7 shows the bad impacts of excessive use of the tech-devices on logical thinking, mental state, mental stability and consciousness level of the respondents. The more the respondents use the tech-devices, the more they have problems in logical thinking, depression, worry, and have low consciousness.
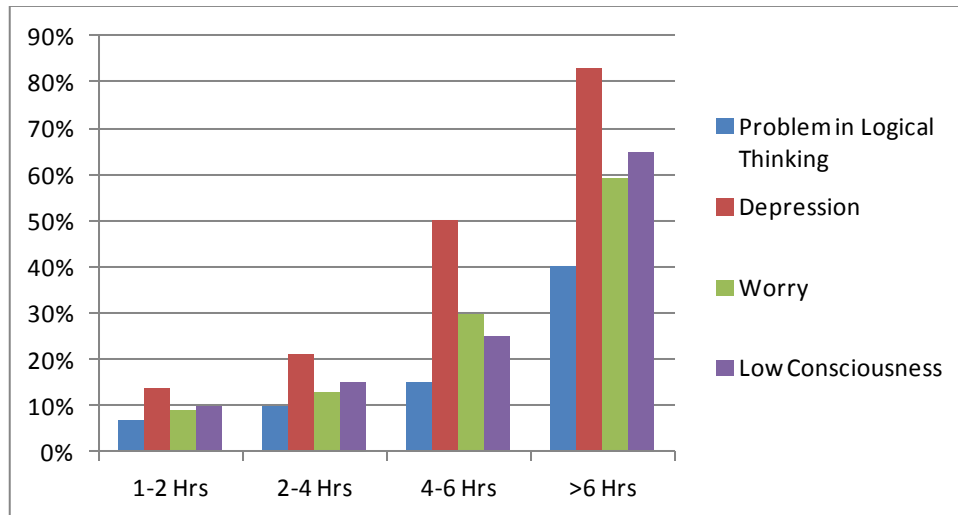
Fig No 1.8 Respondents having Problem in Logical Thinking, Depression, Worry and low Consciousness

Social Health Problem

Public Speaking

Man being a social animal should interact with each other which provide a feeling of oneness and also feeling of security. The mutual interaction built the confidence inside the individual which a requisite to live in the society. It symbolises a social behaviour of an individual. But it is difficult to cope with the society when somebody is afraid of public speaking. It is difficult to express one's view without communication and that to be the direct communication. It creates the situation of loneliness and affects therefore mental health of an individual in long term perspectives.

Table No 1.9 Respondents afraid of public speaking

Respondents as per the use of gadgets per day	% age of respondents afraid of public speaking
1-2 hr	5%
2-4 hr	8%
4-6 hr	30%
>6 hr	55%

About 55% of the addictive users (>6 hrs) are afraid of public speaking which is a great threat for these young mass in case of social perspective. Also 30% of the users of the group 4-6 hrs are afraid of the same. Other categories have fewer problems in this aspects represented by the values 8% and 5% respectively (Table No 1.9). The cause of the above problems may be the spending of less time with others.
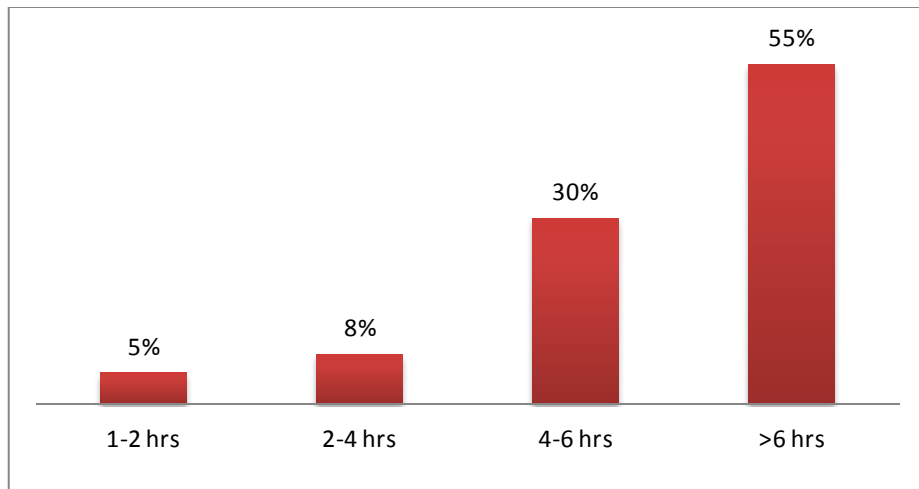
Fig No 1.9 Respondents Afraid of Public Speaking

For this they are less aware about the non verbal communication which is a requirement for public speaking social interaction. Fig 1.9 bellow shows the excessive use of tech-gadgets on the capacity of public speaking of the respondents.

4.7 Impacts of Use of Tech-gadgets on Life Style

As life style concept is qualitative in nature, for the analysis of this aspects one has to depend upon the data collected from interviews and observations. The interviews are also of unstructured in nature. The change in the life style of any individual happens in a particular interval but it is dependent upon some driving force, which may be the cause behind changing pattern in their life style. From the information gained through the observations and interviews it can be said that use of technological gadgets has an important role in the change in life style of the respondents. The respondents who spend large amount of time to their tech-devices always use them at night. They remain awake till late night due and generally are late to leave the bed. Many of them also bunk classes of the morning hours. Most of these respondents are having sleeplessness into higher degree. This observation supports the source data.

The over users of tech-gadgets are generally observed not to be active in any physical exercise. They are also remaining away from sports. Physical fitness of these youth is generally very low. When interviewed many of the respondents told that they hardly spend time in playing outdoor games and exercise. They claim that we have no time for this and that requires physical labour. According to them what is the necessity of these when they are getting amusements from technology. So it can be understood that the habits of the young mass are changing day by day due to inclination towards the tech gadgets.

When interviewed the respondents of addictive use of the gadgets, they informed that they hardly have any time for their friends for amusements and interaction. Even they meet their friends twice or thrice in a week. But in case of other students the meeting with friends is very frequent i.e. almost every day they are meeting their friends for amusements. The former type of respondent is in favour of maintaining friendship through social media. They prefer indirect communication rather than direct one. This signifies that life style of the respondents is changing by the influence of the technology. Most of the respondents are not visiting their home even for a long period of time. When asked they claim that they stay in contact with their family over phone.

Use of technological gadgets and services has reduced the effort of the young mass significantly. Most of the participants do online shopping of any kind of product. Many of the students prefer typing rather than writing. And also they generally use soft copy of the study materials rather the hard copies like books. Even the professors provide soft copies of most of the study materials (Interview).

The respondents consider Google as the storehouse of knowledge. It is observed that most of them are searching for the internet even for general knowledge. When interviewed they admitted that technology is the best source of knowledge (Supports the source data).

During observation it was observed that the anxiety level of the respondents is very high and they are anxious about their gadgets. They become worried when they are away from their gadgets and their rigidity level goes higher in case of any disturbances during the time, they spent with their gadgets. This observation supports the source data.

The results from quantitative data and qualitative information gained from the participants complement each other in the sense that students use the technology for making their lives smoother, they like the advancements in the technological world and get immense benefits also. However, the other side of the story is not that rosy. When they use tech-devices and services beyond a specific time, they are more likely to suffer from various physical, mental and social health problems. Overuse of technology also affects their life style seriously. Hence, using technological devices and services in need should guide our behaviour of using them. Excessive use of them may have a disastrous effect on our health and life style.

CHAPTER V
Discussion and Conclusion

The present study conducted at NIT campus Rourkela, India, where 150 students had participated. Among the 150 participants, 90 were male and 60 were female respondents. The age ranges of the students vary from 18 to 26 years with an average age of 21 year. The average parental income of the respondents is about 35,000 /- per month. Most of the respondents possess two or more than two technological gadgets. Most of them are using their gadgets above 6 hours. Most of the respondents use internet for a large period of time. The respondents give most of their time of the total time spent with the gadgets, for the purpose of entertainment. The degree of dependency of the respondents on their tech-gadgets is higher. The findings of the present study partially support earlier studies in other countries (Young, 2004, Ko et al., 2007).

The respondents using the gadgets for a long period of time have negative impacts on their health. Most of the respondents using ear phones for more than 6 hours have hearing problems compared to the others. The respondents are busy with their gadgets for more than 6 hours are having several problems like problems in logical thinking, headaches, depression, anxiety, etc. The respondents of the same category also have problems in sleeping, worry excessively, are afraid of public speaking and have low consciousness. But these problems are seen less in the respondents using the gadgets below 6 hours. The problems faced decreases with the decrease in time spent with the gadgets. The present study agrees with earlier studies confirming over use of the tech-devices and services leads to addiction to the gadgets and has impacts on mental health of the respondents (Cabral, 2011, Cotton, 2001, Young, 1998).

Again, the study shows that addiction to tech-gadgets has impacts on the life style of the respondents. The respondents using the gadgets for more time are observed to do less

physical work as compare to others. These respondents of this category often spend less time with their friends and the frequency of visiting their home is low. They prefer indirect communication i.e. through social media than direct interaction with others. The current study draws support from Erickson's (2012) study.

In this era of technology, the dependency of the present generation on the tech- devices and the services provided by them is in the peak position, and they can't be refrained from their use completely. It will be an impracticable idea to think so. As we know it takes a lot of time to make a habit and even take more time to get rid of it. Whatever positive available in the world, we must practise that. This is also true in case of using the technological gadgets. Their use should be need driven rather than luxury driven and they should not compromise with other necessary activities of daily living. In other word, a limit in the use of everything is desired. The individual who knows this limit remains happier in the long run. So the issue of this technological addiction among the youth should be addressed as youth is the foundation of any society to grow or develop. It can't be told about the western countries. They are the developed ones and more dependent on the technology. So it will be too difficult for them to reverse back. Still they should consider about this addictive behaviours towards technology. But, it is serious concern for the developing country like India and its youth. They are in a stage of adoption of the new technology and therefore they can control and regulate the use of the technology in a constructive way. The unlimited use of the technology is leading us directly or indirectly to become more self-centred which is a threat to our cultural belief of togetherness and the values of sharing and caring. As Ayn Rand has truly said, "One can avoid the reality but one can't avoid the consequences of avoiding the reality." So, the youth of the present generation should be aware about the hard facts of doing or practising anything extremely.

5.1 Significance of the Study

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 studies are based upon the western/ modern culture and the availability and facility of the tech-gadgets and services are large in those country. Comparatively fewer studies are being conducted in the developing countries like India related to this area of study and those fewer studies are even conducted in the metro cities. This study is conducted in NIT campus which comes under a developing city called Rourkela. This study will be an additional knowledge in the respective field of research for the upcoming researcher. It will provide important information regarding the students to the educational institutes like NIT, Rourkela and will help them in formulating their policies regarding the controlled use of tech-gadgets of the students. It may also help students to understand the impacts of the addiction to the tech-gadgets and services and make them aware about the control of the use of the devices.

5.2 Limitations and Future Directions

The sample size of the present study is not representative one. Hence, future studies may incorporate a large representative sample. Paucity of time led to restrict the study to focus on the users only. Future researches may consider a control group to have a comparative analysis of the impacts of using and not using technology excessively to confirm the findings of the current study. There may be other factors that might have influenced the mental health and social life but could not be controlled.

5.3 Conclusion

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 in using 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.

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Dear Participant,

My name is Jyotiranjan Muduli, a second year MA student of NIT Rourkela seek your kind cooperation in the survey that I am doing as a part of my Master's Project. I will be asking you some questions regarding the use of technological gadgets and health. The information collected for the survey will be kept confidential and only aggregate information will be published. If at any point of time you feel like not continuing with the survey, you may do so without assigning any reason.

Thank you very much for your willingness and cooperation to participate in the survey.

Signature of the Researcher

I understand that I will be giving some information regarding the use of technological gadgets and health as asked by the researcher. I am willing to participate in the survey.

Signature of the Participant

Name: _____ (optional)

Age: _____   Sex: M___ F___

Education (current): _____   Parental Income (p.m.): _____

Date: _____

SECTION-A

In a day how much time do you spend on the following devices and services?

Technological Devices and Services	1-2hrs	2-4hrs	4-6hrs	Above 6hrs
Mobiles				
Computers or Laptops				
Tablets				
Smart Phones				
I Phones/I Pads				
Ear Phones/Head Sets				
Calling				
Messaging				
Internet				
Social Networking				
Music/Video				
Others (Please specify)				

Purpose of using the devises and services

	1-2hrs	2-4hrs	4-6hrs	Above 6hrs
Study				
Communication				
Entertainment				
Others (Please specify)				

SECTION-B

Rate the following statements based on the 5 point scale given below.

1- Strongly disagree   2- Disagree   3- Can't say   4- Agree   5- Strongly agree

1. Survival is difficult without technological gadgets even for one day. _____
2. Technology is the best source of entertainment. _____
3. You are unaware about the surrounding while busy with your gadgets. _____
4. Music makes it easy to work. _____
5. Social relationship is ruined by social networking sites. _____
6. Internet is the ultimate source of knowledge. _____
7. Technology makes the young mass smart. _____
8. Excess use of technological gadgets is injurious to health. _____
9. Computer/IT education should be mandatory in higher education. _____
10. Technology causes generation gap between children and parents. _____

SECTION-C

Please read through all the alternative responses to each question before placing a cross (x) against the alternative (only one) which best describes **your present health**.

1. I can see that is I can read news paper and TV text (with or without glasses)

    ( ) no difficulty   ( ) slight difficulty   ( ) considerable difficulty

    ( ) cannot read papers or TV text, but I can see enough to walk about without guidance.

2. I can hear normal speech (with or without a hearing aid)

    ( ) no difficulty   ( ) little difficulty   ( ) considerable difficulty

    ( ) I hear even loud voices poorly.

3. ( ) I am able to breathe normally, that is with no shortness of breath or other breathing difficulty.

    ( ) I have shortness of breath during heavy work or sports, or when walking briskly on flat ground or slightly uphill.

    ( ) I have shortness of breath when walking on flat ground at the same speed as others of my age.

    ( ) I get shortness of breath even after light activity, e.g. washing or dressing myself.

4. ( ) I am able speak normally, i.e. clearly, audibly and fluently.

( ) I have slight speech difficulties, e.g. occasional fumbling for words, mumbling, or changes of pitch.

( ) I can make myself understood, but my speech is e.g. disjointed, faltering, stuttering or stammering.

( ) Most people have great difficulty in understanding my speech.

5. ( ) My bladder and bowel work normally and without problems.

( ) I have slight problems with my bladder and/or bowel function, e.g. difficulties with urination, or loose or hard bowels.

( ) I have marked problems with my bladder and/or bowel function, e.g. occasional 'accidents', or severe constipation or diarrhoea.

( ) I have serious problems with my bladder and/or bowel function, e.g. routine 'accidents', or need of catheterization or enemas.

6. ( ) I am able to perform my usual activities (e.g. employment, studying, housework, free-time activities) without difficulty.

( ) I am also able to perform my usual activities slightly less effectively or with minor difficulty.

( ) I am able to perform my usual activities much less effectively, with considerable difficulty, or not completely.

( ) I can only manage a small proportion of my previously usual activities.

7. ( ) I am able to think clearly and logically, and my memory functions well.

( ) I have slight difficulties in thinking clearly and logically, or my memory sometimes fails me.

( ) I have marked difficulties in thinking clearly and logically, or my memory is somewhat impaired.

( ) I have great difficulties in thinking clearly and logically, or my memory is seriously impaired.

8. I have physically discomfort or symptoms, (e.g. pain, ache, nausea, itching etc.)

   ( ) not at all   ( ) mild   ( ) marked   ( ) severe

9. I feel sad, melancholic or depressed

   ( ) not at all   ( ) slightly   ( ) moderately   ( ) extremely

10. I feel anxious, stressed or nervous.

   ( ) not at all   ( ) slightly   ( ) moderately   ( ) extremely

11. ( ) I feel healthy and energetic.

( ) I feel slightly weary, tried or feeble.

( ) I feel moderately weary, tried or feeble.

( ) I feel extremely weary, tried or feeble, totally exhausted.

SECTION-D

Please respond to the following questions.

1. Do you worry excessively on silly matters?   Yes ___ No ___

2. Do you have any problem in falling asleep or staying asleep?   Yes ___ No ___

3. Are you afraid of closed places, darkness, animals, blood, height etc?   Yes ___ No ___

4. Do you often feel pain in your neck and shoulder muscles?   Yes ___ No ___

5. Do you often suffer stomach aches, constipation, gas and diarrheas?   Yes ___ No ___

6. Are you afraid of speaking in public?   Yes ___ No ___

7. Are you too self conscious and judgmental about yourself?   Yes ___ No ___

8. Are you a perfectionist?   Yes ___ No ___

9. Do you often wash your hands, wake up in night to check whether the lights are switched off and check the locks?   Yes ___ No ___

10. Do you doubt yourself often?   Yes ___ No ___

11. Do you have any problems in taking any decisions?   Yes ___ No ___

…….…….…….…….…….…….…….…….…….…….END…….…….…….…….…….…….……..….…….…….