
Management of Inter-relationship between Technology & Mental Health

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Abstract: In this modern world, full of technology, mental health is affecting the most. Various factors are there that are influencing the mental health such as stress, social media, personal life issues, tension about maintaining the social image, and many more similar factors are there that hamper the mental health of people these days. Some factors are controllable but some are really not. This research paper is all focused about to study and realize the management of inter relationship between mental health and use of technology along with its impact. In this research paper, a general counselling is done on youth and teenagers aging from (15-30 years) with the help of questionnaire and personal interview of individuals. This analysis helps in understanding the management done by different people. From future perspective, this study may help researchers to better understand about how to make balance between technology and mental health in life.

Keywords: Impact of Technology, Mental Health, Management, Health Care, Futuristic Technology.

INTRODUCTION

In the modern world full of technology and smart gadgets, humans are surrounded by various technologies that makes our life easy and effortless. These technologies reduced human efforts and minimized manual errors up to an extent. There are multiple examples of technologies that people are using frequently on daily basis such as smart phones, smart entry pass cards, biometric attendance, wireless car music system, wireless charging of smart watches and smart phones [1]. These technologies are capable of set up a virtual communication independent of geographical location of people. According to a study, there discussed about the addiction of technology has become common problem in many countries and generally found in youth which hampers their studies and future too. There are various factors that comes under use of technology. Various examples are illustrated in Figure 1.

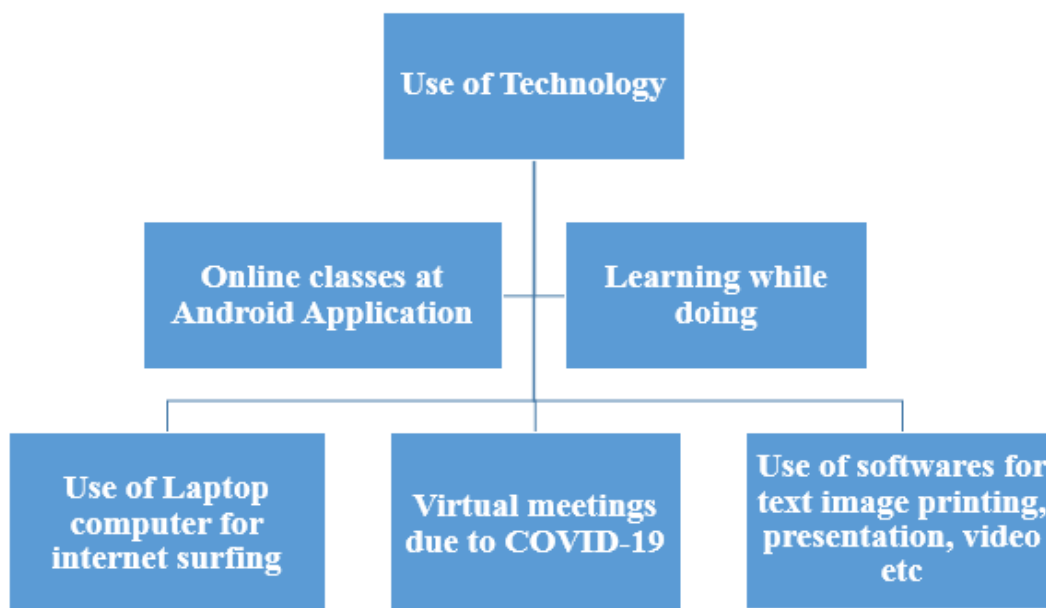


Fig.1: Various Needs Where Use of Technologies Is Required.

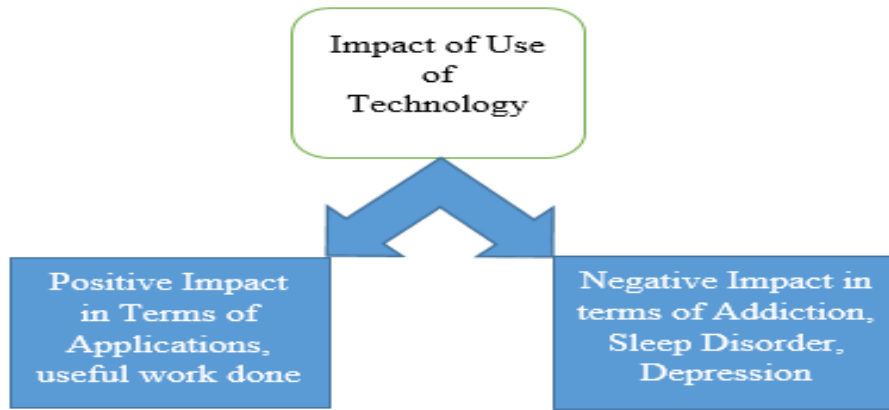


Fig.2: Two types of impact of use of technology

Impact of use of Technology

These are the examples where humans interact with technology. Not only smart phones but smart devices such as smart vehicles, smart gadgets such as Alexa, IoT based devices of communication and other social media platforms like Instagram, YouTube, Facebook etc. these are the applications meant to be used for entertainment and to be connected virtually but, the truth is, people misuse these technologies either by getting addicted or by bullying online, cybercrime, online harassment. These are some examples that shows the excessive use of technologies and effect mental health of users. The main role play of using these technologies is consumption of time. Figure 2 shows the two types of impact of use of technology, general good impact and bad impact are there. Bad impact can be of any type such as blackmailing, female misbehave, etc. In general travel mostly people are found to be busy in their smartphones using any kind of social media platform. The time that is invested in such type of activities can be saved and invested in somewhere in task or work done or in self health improvement to increase productivity every day. In a study, a model is briefly explained which targets the mental health improvement and the consequences of using technology and social media in such a way that benefits the overall health of users. The influential effect is shown in terms of positive affective states and health promoting behaviors along with various endocrine responses. All these factors collectively effect on mental health [2].

Along with the addictive or excessive use of technology, everybody come across this technology for personal and professional use. But the main problem is that it is very difficult to establish a management between the mental health and use of technology in daily routine and personal life. According to a study, 1/3 symptoms of somatic symptoms cannot be explained in terms of medical terminology and these symptoms may effect mental health and physical health as well. it is stated that mental disorders may affect physical health and can cause various health problems such as communicable diseases, cardiovascular diseases and even cancer too. In this study, approximately 15% of the patients are found to be in primary care who were suffering from medically unexplained factors and found to be seeking for kind help and behavior. These people found to be more suffering from psychological stress and anxiety. In regards of diabetes, there are found in studies a no. of cases that shows that, depression increases the risk of diabetes and lifestyle factors in US. During a meta-analysis it has been analyzed that out of 20 cases, 11 cases were found who lied in between two conditions. There is certain ratio given such as 2.0 (95% CI 1.8-2.2). the ratio remains same and do not change with types of diabetes [3].

Effect of Social Media on Mental Health

In this section, the effect of excessive use of technology on mental health and well-being is elaborated. The effect of social media can be explained by considering the factors that influence the health and personal well-being. Generally, females are found more influenced by online harassment and this type of bullying. These days' social media are used for raising a voice against anything wrong happened with someone. In Figure 3, effect of social media on mental health is illustrated in different terms.

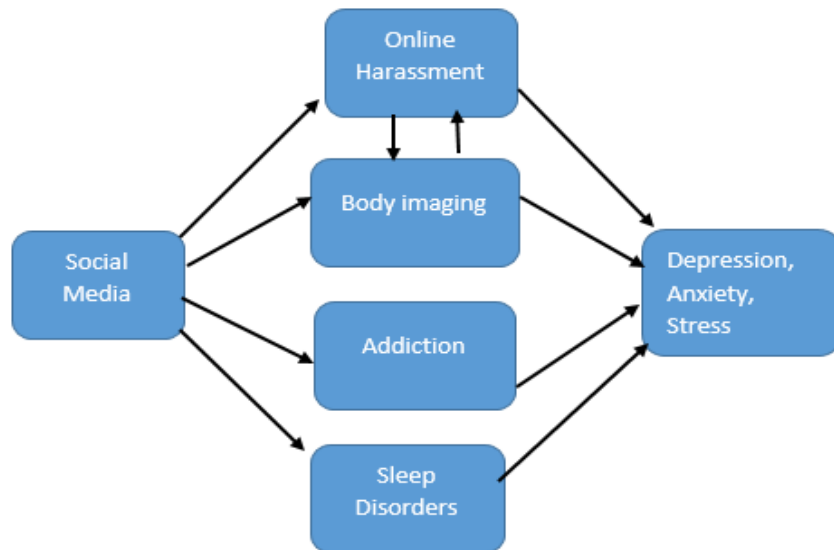


Fig.3: Effect of social media on Mental Health.

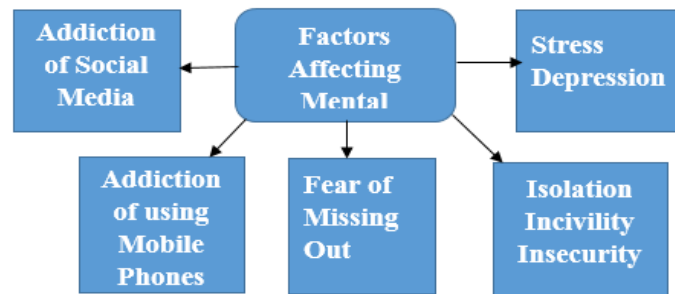


Fig.4: Factors affecting Mental Health

Figure 4 shows the social media factors that affect the mental health in many ways. The addiction of using social media and craze for getting viral is so trending these days that, most of the time has been invested using mobile phones and in making videos that, personal health and wellbeing is not considered as priority. Where it is well said that, there is no wealth without mental health. Therefore, the ratio of priority between technology and its use with physical and mental health should be the top most priority [4]. Nowadays, health is being monitored with the help of IT that is information and technology such as computer based software that prepares test reports like blood test report are the trending methods of using health and technology collectively. For various severe diseases like cancer, tumor, skeleton x-rays internal organ inspections, computer-software based technologies are being used for the ease of examination and eliminating manual human error [5][6]. These are some common examples that affects the mental health a lot. The worst factor is addiction and depression due to which patient suffer a lot and start living in an imaginary world.

LITERATURE REVIEW

Kate Magsamen-Conrad et al, presented a research paper in which the discussion is focused on the addiction of technology and its contribution towards mental wellbeing. In this research work, the author examined the effect of use of internet and social capital along with its negative effect. Author describes various communication technology addiction which includes, communication platforms such as chatting, video calling, messaging etc. Collectively internet addiction, online social addiction, are taken under consideration for this study [7]. Author shared views about self-concealment and wellbeing which is the role of mediated communication. To deal with all this, a model is purposed by author which consists of method of assigning various hypothesis. This method is being used to examine how the rate of increased communication via non face to face means of communication, having positive effect.

Rüstem Mustafaoğlu et al, presented a research work & discussed about the negative effect of using technology on child development and health. According to author, use of digital technology among children had been increased a lot and in US more than 1000, parent’s complaints about their children for using excessive use of technologies [8]. According to study, less than 6years old children are using technology for approximate two hours on average. Author mentioned various tools and their effects such as TV, Computer, Internet, Video games, smart phones and digital toys. Along with all these, different health issues are also, mentioned such as

digital technology and corresponding effect on behavior, musculoskeletal system, physical in activities, obesity, sleep quality are the main effected areas due to excessive use of technology.

Caroline Free et al, conducted a research work regarding effectiveness of mobile on health and technology based health behavior change. Author took disease management interventions for health caring for consumers as an important factor for this study. Author mentioned that near about 22 million people died worldwide by chronic diseases and cardiovascular disease, HIV & diabetes. Mobile technologies give a huge impact on our health therefore, therefore, author conducted a health survey including, women and men of any age and considered them with different mobile phone interventions such as mp3 players, Mp4 player, PDA, PSP ETC. to examine the behavioral changes. All the result of analysis is calculated and analyzed in STATA v11 & the calculations were done for risk factor and standard mean difference. A random effects meta –analysis is used to give pool estimated for two or more than two trials and targeting the same diseases [9].

Annemarie Mantler et al, discussed the relationship between natural environment and mental health. Author mentioned that rapid rate of so called development generally urbanization and loss of bio diversity and eco system service for the promotion of environmental factors. Author discussed about ancestral experience considering generation gap and along with this, contemporary implication. There is a brief explanation about theoretical constructs and the basic primary mechanism & psychological connection of all these factors to nature. Author discussed different residential proximity to natural environments. The importance of green spaces and vulnerable population is discussed in terms of residential areas with disproportionate of industries and factories along with high traffic areas, bus stops and liquor shops, that disproportionate the residential areas. For a healthy living the residential areas should be designed and constructed at a certain distance from noise and industrial area. Urban vegetation is one of the essential service to ecosystem as per this study [10].

METHODOLOGY

For the analysis of management techniques used to balance between technology and health a manual survey has been done on 300 samples including males and females considering youth, teenagers and adults too. A questionnaire is prepared and shared with samples so that on the basis of their responses, it could be easy to analyze that how people do management between their health and technology. In Table 1, the data depicts that there is various type of samples that uses technology such as smart phones, computer laptops and there is approximate time duration of usage along with time invested in social media.

Table 1: content related to samples and consumption of time using technology.

S. No.	Sample (n=300)	Average time spent on mobile phone per day (In Hours)	Time spent on social media (In Hours)
1.	School students	4-5	3-5
2.	College student	3-4	2-4
3.	Coaching students	6-7	5-6
4.	Private job employees	4-5	2-3
5.	Govt. Job employees	2-3	1-2
6.	Shopkeeper/small business	5-8	5-7
7	Labor worker	2-3	1-2

If data is analyzed, it is found that difference between average time consumption using technology and time spent on social media is very less. In Table 2, data depicts about samples related health issues and causes of this along with, status of physical activity such that, the reason could be find out for such health issues faced by samples. Various health issues are caused due to multiple causes which includes use of technology and addiction of smart phones. Health related issues faced by various samples shows that there is lack of physical activities and these concerns are not considered as serious problems by many of the people.

Data Analysis

The analysis of collected data related to 300 samples and their health related issues can be done by comparing their status of how much physical activity is done by them in order to maintain their health and diet. Bad eating habits and lack of willingness towards good health and maintaining a good physique is found to be less preferable by most of the people. On the other hand, lack of physical exercise can be maintained in different

aspects of health and life but the priority and preferences is not being assigned by many of the people. People who suffer from sleep disorders are found to use mobile phones and laptops ta late night and this disturbs sleep pattern. Disturbance in sleep pattern may cause eye irritation and drowsiness to those who generally do driving. The major effect of disturbed sleep pattern can be seen in drivers who awake for 15 hours long or more.

Table 2: Various health issues faced by samples.

Serial No.	Sample Count	Health Related Issue	Cause/ Precaution	Status of exercise and
1.	20	Diabetes, vision problem	Due to bad eating habits in market	Almost zero physical activity
2.	35	Obesity, overweight	No management of diet	Lack of exercise and stamina
3.	42	Sleep disorder	Addiction of mobile phone	Hardly, 1 hour of walk in whole day
4.	12	Mild headache or body pain due to long sitting	Due to repetitive check of notification on phone	Mild work out
5.	17	Lack in studies and academic score	Lack of will power and	Lack of sports activity
6.	28	Eye strain/	Use of laptop in night for long time	Lack of time management and
7.	57	Physical inactivity	Due to Long time sitting	Excessive use of car / bike even for small distance
8.	26	Focus and attention behavioral problem	Deeply involved in social media and attached with its influence	Half an hour of stretching
9.	35	Lack of mental peace and addiction of mobile phone	Addiction of Smart phone and social media	Eye fatigue due to lack of natural environment
10.	28	Anxiety, stress, depression	Excessive use of screen devices	Sleep deprivation and lethargic body whole day.

This disturbed sleep pattern can cause serious problems to health and also increases the chances of drowsy driving car crash and major accidents too. For students, focus and paying attention towards studies is the most important priority for good academic score. But due to trending social media applications students gets attracted more towards these such time consuming applications which ultimately hamper their studies. Some shopkeepers who keep sitting for long 6 to 8 hours on their shops for effective sales of products in order to earn a good income also suffers from obesity and overweight. These people are surveyed deeply and regarding these, it has been analyzed that these people do not give preference to their health and also, do not pay attention towards physical activity and exercise. Therefore, the combination of multiple factors illustrated in Figure 5 collectively results in such health issues.

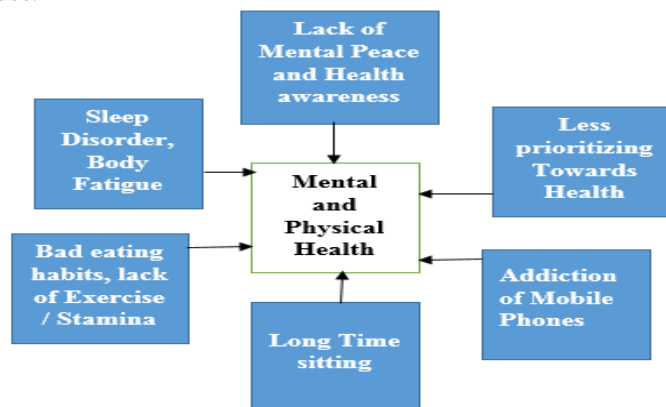


Fig.5: Status of physical activity that directed towards mental and physical health.

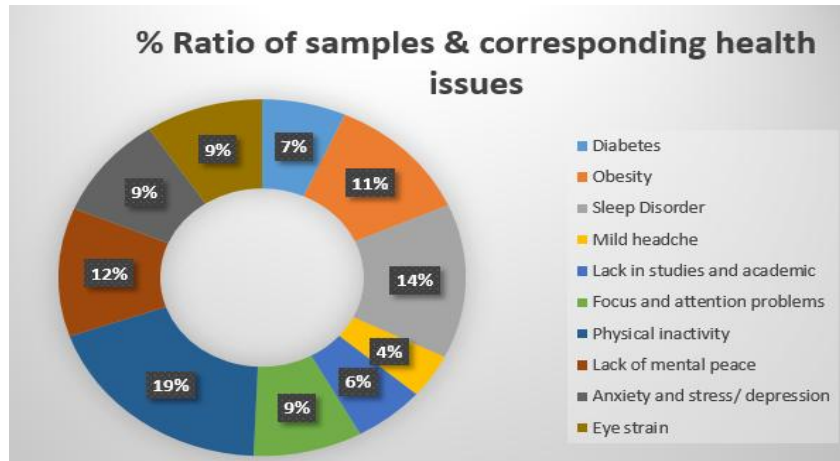


Fig.6: % Ratio of health issues of sample.

Graphical representation of data analyzed from above survey and questionnaire experiment for 300 samples can be illustrated as in Figure 6. This ratio shows that, there is highest % of the samples who are lacking physical health due to lack of physical activities and exercise. These are the people who avoid doing any work out for body fitness and experiencing obesity and overweight problems. Due to these health related issues, the risk of serious health problems is increased and life cycle decreases. In Figure 7, correlation between health and technology is being illustrated.

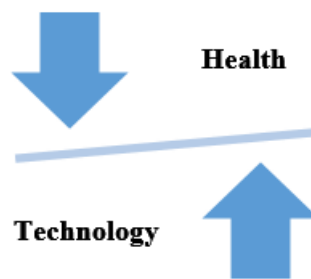


Fig.7: Correlation between technology and health.

There is an inverse dependency relation between technology and health. As much we are growing towards advancement in technology, we are lacking in health day by day. Therefore, some suggestions are provided here.

Suggested Solutions

There are various methods suggested for establishing a well-defined balance in between health and technology. Some of the methods are making a time management that helps in betterment of sleep. Try to track the time consumption while using mobile phones. Tracking of time will help to find out how much time is wasted on social media, how much time is invested on useful and productive applications so that, time invested at wrong place can be utilized towards health by performing such activities like, exercise, yoga, walk, sports etc. tracking of bad eating habits and changing them into good one for management of over weighted persons can help in balancing of health. Avoiding late night use of phone and excessive use of internet may ruin the thinking capacity of someone and leads to depression and stress as well. Therefore, use of smartphones for tracking health tips and reading can be a beneficial change in context of use of technology. Making efficient use of technology and balancing the good habits for better health will overall benefits the people to manage life in a better way.

DISCUSSION

From above study and experiment, it is clearly analyzed that factors such as eating habits, sleep, health is seriously affected by these and can cause health related issues. Somewhere, the effect of excessive use of technology is the biggest factor behind declination of health these days. People are failing to manage between health and technology because of less awareness and less prioritizing towards health and investing more time towards social media and technology such as using smart mobile phones, computers, laptops for long times.

These are the factors that affect the human health when used for a long time. Their small time effects usually not reflected but in long run, their effects reflect in terms of body pain, fatigue, drowsiness, lethargic body, eye irritation and straining, obesity and headache etc. in nutshell the use of such technology should be done in a proper manner for effective use and applications only, otherwise the excessive or misuse of these technology based devices may result into serious health issues which may leads to depression or anxiety as well.

CONCLUSION AND FUTURE PERSPECTIVE

It can be concluded that, no matter what, excessive use of technology based devices such as mobile phones, computer/ laptops, surfing internet for long hours continuously and getting influenced by social media, these are the factors that, affects human health a lot. Where on other end, humans are failing to establish a management in between the technology and health. Increase in use of technology may leads to increased misuse as well and as we all know health is wealth, which states there is no wealth without health especially mental health. Therefore, the first priority should be given to health. A healthy body and healthy mind can produce fruitful thoughts. There should be a well-defined management in between use of technology and personal health. There are various methods that helps in maintaining a balance between health and technology suggested above are quiet useful and beneficial that helps in management of personal life health and professional use of technology in future and also helps learners to better understand the facts and importance about health and technology.

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