

CHAPTER 1: INTRODUCTION

Internet has made the world a much smaller place full of opportunities to prosper with minimum resources. It has exposed vulnerable people to a deep dark world of web where they are 'suffering' rather than "benefitting" from internet (Rao, Bansal, & Chandran, 2018). Compulsive use of internet leads to pathological behaviours and individuals are not able to control their internet use, facing social problems as well as school or occupational difficulties. Excessive use is also associated with the presence of psychological problems. Chances are more to overuse internet in the presence of co-morbid factors like depression, anxiety, low self-esteem, and high level of stress. Depression, loneliness, social phobia, hostility, and symptoms of ADHD are seen as co-morbid conditions to problematic internet use. Individuals suffering from these issues reported a greater feeling of comfort when socializing online compared to face-to-face communication (Das et al., 2019; Morahan-Martin & Schumacher, 2003; Whitty & McLaughlin, 2007). Millions of people use internet in their private and public life for various academic and work purposes. Internet has given us many benefits, like accessing useful information, shopping, and communicating with others for personal and professional reasons. These and many other usages have increased the number of internet users dramatically. The subject of internet usage is an emerging topic for researchers to explore. However, despite its advantages, internet causes some severe problems like an overload of information, where it is challenging to decide which information is reliable and which is not. All sources on internet not necessarily give authentic information. Pornography is another disadvantage of internet; accessing it, is an offense in many countries. Interestingly internet addiction is very similar to other compulsive consumer behaviors, and studying it as a type of an irrational consumption behavior could be an interesting matter (S. Kim, R. Kim., 2002). This study will try to provide understandings of the status and causes of internet overuse.

In the multiplicities of internet addiction, the social consequences of internet overuse, which could be called addiction is a growing concern among students. Considering what individuals experience, and academic studies on internet overuse, it is understood that internet is deleteriously addictive, but at the same time, portraying internet as addictive is seriously deceptive. There is a difference between dependence and addiction. Many individuals rely so much on internet for communication and recreation that they can be called

compulsive users of internet. Heavy internet users also use internet for communication and recreation, but they do not exhibit enough destructive consequences which typical genuine addicts show. So-called "internet addiction disorder" is compared with gambling disorder to demonstrate that internet is not so harmful. Moreover, time spent online can be productive; it keeps distant individuals connected and helping them to acquire knowledge about anything and everything under the sun (Johnson, 2009).

1.1 Similarity between internet overuse and other addictions

The term “addictive behavior” usually includes addiction to alcohol, drugs, and smoking, i.e., use of chemical substances, and the effects of these substances could vary from person to person. The diagnostic criteria for substance use include functional impairment, use in dangerous situations, and continue using them despite knowing that they cause serious problems (Johansson, & Götestam, 2004). Another type of ‘addictive behavior’ is excessive gambling, which does not involve a chemical substance and can have similar effects like substance abuse. Pathological gambling means gamble excessively, beyond the limit or over-gambling. In DSM-IV, ‘pathological gambling’ is put under ‘impulse-control disorders’ but looking at its similarities with substance use disorders, in DSM-5 it is under substance-related and addictive disorders, subcategory; ‘non-substance related disorders.’ Pathological gambling shares a few of the substance use disorder criteria. The revised diagnostic criteria for pathological gambling in DSM-IV were developed from substance dependence (American Psychological Association, 1994). The main concern with gambling is the monetary loss. The gambler gets preoccupied with gambling; he tries to hide the problem, is playing with big amounts to win big amounts, and tries to get money from different sources irrespective of its legality. An individual could bankrupt if he uses all his money for playing; he lost his property also in gambling. Although there is no reinforcing drug to stimulate gambling behavior, the patterns of operant reinforcement are very much the same; ‘to win’ is the primary, motivating reinforcer (Griffiths, 1995). Overuse of internet use can also have consequences like pathological gambling. Though the person is not getting any monetary reward, the behaviour of overusing internet is maintained because of the patterns of operant conditioning. Internet dependence and addiction are having almost the same meaning in the literature and sharing similar symptoms, while excessive internet use shows a lower degree of use or problems. However, there are no DSM-IV diagnostic criteria for internet addiction (Johansson & Götestam, 2004).

Goldberg (1996) gave the diagnostic criteria for internet addiction. They defined internet addiction based on DSM-IV definition of pathological gambling. Young (1998) said, justifying for using pathological gambling as a template that it was the disorder which is very close to internet addiction in terms of etiology. Pathological gambling and internet overuse can be defined as impulse control disorders, as no intoxicant is involved in both. According to Goldberg (1996) important criteria for internet addiction are tolerance, salience, withdrawal, mood modifications, and frequent time of distortion. Young and Goldberg both constructed tools to measure internet addiction. Internet overuse is affecting in both positive and negative ways to individuals of all age groups and both males and females. Students' lives are getting affected the most because of internet, and one of the salient impacts is increasing use of internet in every field. Many reports are available regarding the unhealthy internet use among students, but more research is required on internet overuse. The research available at present has mainly focused on the online tests of internet overuse, where the participant answers the items on his own without any supervision or guidance (Wang, 2001).

1.2 Types of internet use

Many individuals use World Wide Web for various things like to access news, sports, weather reports, to get information about various tourist destinations, to plan vacations and many more things that interest them. Individuals use multiple applications for chatting, messaging, and email services to make new friends and stay in touch with them irrespective of their geographical status. Facebook, Twitter, and MySpace have entirely changed the paradigm of socialization. Sites like LinkedIn encourage professional connections. Internet is also used for leisure activities, such as internet pornography, online gambling, and multiplayer gaming. Internet usage and users' loneliness are correlated. Lonely individuals tend to use internet to vent out their feelings and to share their experiences with others (Widyanto & Griffiths, 2006).

Individuals who overuse internet are very well aware of its consequences. Every day new users log onto internet, and every day some of them have problems related to the time they spend on online activities. They may suffer from internet addiction (Anderson, 2001; Brenner, 1997; Davis et al., 1999; Goldberg, 1996; Young, 1996, 1998) or Pathological Internet Use (PIU) (Davis, 2001; Davis et al., 2002). There are controversy and debate on the idea that individuals could get addicted to internet, same as the individuals with pathological

gambling or drug addiction. Internet overuse has been researched and studied in different ways: some researchers focused on how individuals become addicted to internet. Some others are concerned with, should PIU be added to the next revision of DSM-V as a clinical disorder, how is it related to other disorders, and shares the symptoms or diagnostic criteria of other disorders.

1.3 Defining Internet addiction

The most challenging task regarding internet addiction is to arrive at a definition of internet addiction, which includes almost all the effects of internet addiction. There is no consensus among researchers for a term that can define internet overuse and can describe its concepts. One example of these differences is the terminology which can describe behaviours related to internet overuse. Internet is used for various activities, and some of those activities are making individuals get hooked to internet. This affects their lives negatively. We need various terms to describe each of these behaviours, as one term could not include all types of online activities and their consequences. Six different terms have been given to describe internet overuse. They are; “Internet Addiction Disorder (IAD),” “Pathological Internet Use,” “Problematic Internet Use,” “Excessive Internet Use,” and “Compulsive Internet Use,” “Internet and Computer Addiction” (Widyanto & Griffiths, 2006). These are broad terms, while some other terms like cyberspace addiction talk about addiction to specific online activities (Davis et al., 2002; Hur, 2006). The relationship between addiction and compulsive behavior is also creating confusion to define internet addiction because one definition of addiction is "compulsive behaviors that persist despite serious negative consequences for personal, social, or occupational function." Compulsive behavior is very much a part of addiction. If internet overuse is considered as an addiction, then the behaviors individuals exhibit because of internet overuse should be called compulsive behavior. Another term is internet Gaming Disorder. In DSM-5, Sec III, it is a condition warranting more clinical research and experience before formal Disorder (APA, 2013). Internet Addictive Disorder or internet misuse, problematic computer use or pathological computer use are some other terms which are given to describe overuse of internet. The term "addiction" is avoided as these are not limited to any single cause.

Goldberg (1995) has introduced the term Internet Addiction Disorder (IAD) and Young (1996) has done extensive research on that. It is defined as “the compulsive overuse

of internet and the irritable or moody behavior when deprived of it” (Mitchell, 2000). Beard (2005) preferred a more comprehensive definition of the term, which includes the user’s mental and emotional states, with academic, occupational, and social life hampered by internet overuse. Different researchers have given different definitions of internet addiction. Rice (2005) defines internet addiction as an inclination toward compulsive use of internet that obstructs one’s ability to live a normal life. Problematic internet use is conceptualized as an “impulse control disorder in which an individual experiences rising tension or arousal before internet use and a sense of relief or pleasure after completion of the behavior” (Shapira et al., 2003). These authors also suggested the diagnostic criteria based on the symptoms of impulse control disorders given in the diagnostic and statistical manual of mental disorders, fourth edition, text revised (DSM-IV-TR) (APA, 1994). Pies (2009) defined internet addiction as individuals’ inability to control their internet use, which results in functional impairment in daily life. These researchers agree on the impairment caused by internet overuse, but they still differ on the nature of internet overuse, i.e., addictive, impulsive, or compulsive.

1.4 Various models and theories to study addiction

There are psychological theories to describe most of the addictive behavior, in the same way; few psychological theories have also been proposed to describe internet overuse. However, from the clinician’s point of view, it is best to conceptualize the cause of internet addiction as bio psychosocial in nature.

1.4.1 The Five-Factor Model:

This model is based on personality and not emphasizing much on the relation of internet overuse with specific personality traits. The Five-Factor Model or the Big Five (Goldberg, 1990) measures the personality on five decisive factors; extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience (McCrae & Costa, 1987). Many researchers have validated these five factors, and they have been tested in many cultures, which have proved that this model is adaptable. Some important variables like the time individuals spend online, the adverse effects of internet overuse on their performances in personal and professional life, gender differences in terms of activities males and females are involved in, are studied extensively (Goldberg 1990; Buchanan et al. 2005; Landers & Lounsbury, 2006).

Researches show that individuals higher on the factor of openness but lower on the factor of agreeableness are more attracted to violent video games. Charlton and Danforth's (2010) study, where personality variables are correlated with internet overuse, showed that emotional stability, a negative value, and attractiveness were the only independent predictors (Nicolović et al., 2012). Individuals who are introvert, shy, and lonely use internet for a variety of activities to a larger extent than extroverts who prefer face-to-face communications (Morahan-Martin & Schumacher 2000; Moody 2001; Scealy et al. 2002; Chak & Leung 2004; Landers & Lounsbury 2006).

1.4.2 Psychological model:

According to this model, addictive behaviour is a way for addicts to cope with stress and to maintain equilibrium between their emotions and personal satisfaction while the bio psychosocial model combines all; stress, emotions, and satisfaction (Jussim et al., 2019). Addictive behaviour shares the same developmental characteristic and approach, which works in counseling the substance abusers. Therefore, Erikson's (1963) developmental view could be helpful, which accepts the bio-psychosocial parameters like strengthening ego and combining identity towards the development of psychosocial maturity (PSM). Individuals with sound PSM level in accordance with their developmental level will be less likely to suffer from addiction because they are psychologically healthy and possess the ability to resist stress. Self-efficacy is also recognized as a decisive factor in getting recovered from addiction. When individuals' self-efficacy is high, they can deal with any kind of problem and will succeed mostly in finding the solutions irrespective of their knowledge or skills to solve that problem. The relationship between self-efficacy and IAD has been studied by a few researchers (Wang, 2001).

1.4.3 Etiological model:

Many theories have been given to explain addictive behaviors. A series of psychological and behavioral theories have also been constructed to give more clarity on internet overuse. Learning theory emphasizes the principle of operant conditioning where internet user feels euphoric, healthy, and happy because of internet, which are the positive reinforcing effects of internet overuse (Wallace, 1999). Introvert or anxious individuals use internet to avoid situations and events which could provoke anxiety, such as meeting others in person. Food, water, and sex are natural positive reinforcers that are necessary for survival.

The reward circuit in our brain is stimulated by these natural reinforcers. Unnatural reinforcers like drugs, alcohol, gambling, and internet could be more powerful and can cause individuals to avoid natural reinforcers. The reward deficiency hypothesis says that individuals, who do not get enough satisfaction from food, water, and sex, turn to substances to get an increased level of stimulation (Blum, Cull, & Braverman, 1996). Internet use is one of those unnatural reinforcers which provide immediate reward without delay, and the stimulation is almost similar to that of alcohol and drugs. Impulsivity is a decisive factor in the development of addiction. Individuals are not able to control their impulsiveness and turn to the substance. Shaffer (1996) has suggested that internet use is also related to such behavior where an individual looks for sensation. Looking for sensation is one of the traits of impulsivity. Impulsive individuals use internet to get the sensation and eventually get addicted to it.

Self-esteem is critical during the initial developmental stages of life. A child who does not get strong parental or peer support will have low self-esteem because of which he can feel inadequate and worthless. This might provoke individuals to use internet through which they can avoid reality and can find a safe place where nobody is threatening or challenging them. According to Shotton (1991), males who are introvert, educated, and technologically sound are more vulnerable to pathological internet use. Individuals who have low self-esteem are more susceptible to internet addiction. Shy individuals lack social and communication skills and social relationships. They use internet to improve these skills (Murali & George, 2007). Many etiological models have tried to explain the nature of internet overuse, but it is not enough. More research is required to get clarity on the concept of internet overuse, the factors which make internet users get addicted to it.

1.4.4 Cognitive-Behavioral Model of Problematic Internet Use (PIU)

According to this model, an individual may get addicted to internet when some psychological factor makes him prone to be dependent on some new content on internet. Obsessive thoughts about that new material follow; feelings develop where the person starts perceiving internet as a friend or companion, which leads to more problematic behaviors (Yellowlees & Marks 2007). Davis (2001) proposed a cognitive-behavioral theory of problematic internet use, which results from internet related thoughts and behaviors. Results from a few studies agree that loneliness, depression, and such other psychosocial problems are associated with PIU (Caplan, 2002, 2003; LaRose, Eastin, & Gregg, 2001; Kubey, Lavi,

& Borrows, 2001; Morahan-Martin, 1999; Morahan-Martin & Schumacher, 2000, 2003; Shapira et al., 2000). According to Davis (2001), psychosocial problems, occur because of internet overuse, increase the possibility of maladaptive behaviours and thoughts, which will lead to adverse outcomes. One example of a negative cognitive symptom of PIU is feeling more positive about one's self when online rather than offline (Davis, 2001; Caplan, 2003). An individual feels calmer and more confident when online compare to when he is offline. Regarding the maladaptive behavior, Davis (2001) proposed that when an individual is suffering from PIU, he experiences negative outcomes in personal, professional, academic life and relationships because of compulsive internet use. Another reason for PIU is social skill deficits. Individuals suffering from social anxiety and PIU have the same psychosocial problems, including depression (Segrin, 1998; Segrin, & Flora, 2000; Wierzbiki, 1984; Wierzbiki & McCabe, 1988), loneliness (Jones, Hobbs, & Hockenbery, 1982; Spitzberg & Canary, 1985; Spitzberg & Hurt, 1989), and social anxiety (Leary & Kowalski, 1995; Segrin, 1996; Segrin & Kinney, 1995). Scholars also said that well-being and social skills are related to each other. They have proposed the social-skills-deficit vulnerability hypothesis, which states that incompetence in interpersonal skills will jeopardize one's psychosocial well-being (Lewinsohn et al., 1980; Segrin, 1990, 1993, 1996; Segrin & Flora, 2000; Youngren & Lewinsohn, 1980). In general, social skill means one's ability to interact with others effectively and appropriately. When individuals are not confident about the self-presentational skills which they possess, they suffer from social anxiety (Leary & Kowalski, 1995; Segrin & Kinney, 1995; Schlenker & Leary, 1985). A study by Segrin and Kinney (1995) showed that, though there is no significant difference between individuals' behaviour suffering and not suffering from social anxiety, individuals with social anxiety negatively perceived their social skills.

Individuals who are lacking social skills need communicative channels to increase their ability to present themselves and to decrease social risk. That will help them to reduce costs and increase their restricted abilities. They are more likely to get attracted to online social relations because of the anonymity internet provides (Bargh, McKenna, & Fitzsimmons, 2002). Internet also helps them to control over self-presentation and formation of positive "likable" impression (Bargh, McKenna, & Fitzsimmons, 2002; O'Sullivan, 2002), and less perceived social risk (Morahan-Martin & Schumacher, 2000). Davis et al. (2002) argued that for many internet users internet is a kind of cushion which protects them from threatening social interactions.

1.5 Advantages and disadvantages of internet

Advantages: Flexibility in working hours, irrespective of the location with high-speed internet connections, is the most significant advantage of internet. Internet has made the concept of flexible working hours and work-from-home a reality; otherwise, the job was of two types only; full time and part-time on the basis of hours an employee spends at the workplace. Individuals can access internet almost from anywhere by numerous means, including through mobile internet devices. The low cost and nearly instantaneous sharing of knowledge, skills, and ideas have made the collective work quite easier. A group of individuals can communicate with little expenses and share ideas with the help of internet. Publishing a web page, webinar, a blog, doesn't cost much, and even many free services are also available. Internet is used as a teaching-learning tool. Internet creates an environment where teachers can work for more time with individual students and a small group of students because instructions are delivered via internet and are delivered in few seconds. The interaction between teachers and students is immediate and prompt because of internet. Internet is a boon for distance education. It helps individuals to guide themselves for learning or working in detail on an interesting topic from anywhere in the world. It is not possible to work without computers and internet in the corporate world. Emails and social media are excellent platforms to exchange messages quickly. These and other internet services are big grounds for making friends, connecting with different communities across the globe, and sharing ideas without much restriction. Internet helps in building new relationships through online games played in groups. Television watching has been reduced because of internet. Individuals who use internet more are watching the TV around four hours lesser per week than those who do not use internet much. Internet users are more involved in community services and politics, directly or indirectly, and they have more social contacts than nonusers have. It also helps individuals to relieve from unpleasant and overwhelming feelings like stress, loneliness, anxiety, and depression. This is where the disadvantages of internet start from (Moreno, Jelinchick, Christakis, 2013).

Disadvantages: Individuals are prompted to use internet more and more as it helps them to get relief from unpleasant feelings. An individual who is suffering from anxiety, depression, addiction, lack of social support, socially less active, or stressed, chances are more for such individuals to overuse the internet. It affects individuals socially, psychologically, and occupationally (Young, 2007). Individuals who get addicted to internet

are unable to manage essential aspects of their lives as they are preoccupied with online use. They spend less time with family and friends and gradually ignore them. Increased use of internet leads to diminishing social support, decreases the level of happiness, and increases depression and loneliness (Young, 2007). They also develop symptoms like salience, mood modifications, tolerance, and withdrawal (Griffiths, 1996). Different individuals use different applications of internet for various purposes.

The professionals who overuse internet are staying online longer than intended. They check e-mail frequently, losing sleep due to late-night log-ins, eating while surfing, and physical activity going down because of internet. They also use internet to escape from problems and get upset if they have to cut down internet use. The biggest drawback of internet overuse is spending more time on internet that leads to spending less time with family members. Severely internet-addicted users experience irregular sleep and frequent sleep disturbance episodes than moderately addicted internet users. Besides, sleep disturbance episodes increase the possibility of mental health problems and substance abuse. Internet addicted users drink and smoke more, and consume a poor quality diet, more frequently skipping meals than moderately addicted internet users. Corporate internet overuse is another consequence of internet. The American Management Association (AMA) in 2000 survey found that the majority of U. S. companies checked their employees' email and monitored internet connections. They took some strict actions like firing employees, giving reprimands, and informal warnings to control overuse of internet or using internet for personal reasons at the workplace. When employees who abuse internet at the workplace are terminated, it could create new problems like poor work performance, and inviting many legal liabilities. Inappropriate internet use affects the productivity of the workplace, and it can cost companies a big fortune. On top of that, if employees download or upload illegal material like child pornography through office computers, the employer will be at a higher risk, they could face lawsuits. Sexual harassment claims are another possible danger if any employee sends out offensive mail to coworkers in the workplace (Young & Case, 2009).

One of the more consistent concerns is the presence of pornography on internet. Pornography and other related activities and interactions are probably the most common use of internet (Stern & Handel, 2001). Certain new addictions are emerging because of internet, for example, cyber addiction. Young (1998) identifies five best-known behaviors of cyber addiction: cyber sexual, cyber relational, excessive web surfing, Net gaming, and computer

gaming addiction. Pathological internet user feels competency on internet, but he is socially isolated, at the same time, less inhibited when online. Addiction to online games and gambling for money has boomed. Research scholars also use internet, but here too, it is a matter of concern as so much information is available on internet that it can overwhelm student researchers. Some students may get involved in plagiarism by using internet inappropriately. Internet is so convenient for research that traditional library-based resources are not utilized enough. Students feel the books and other resources in the form of hard copy are not worth paying attention to (Barberio, 2004). Even school students are using internet, or schools are encouraging them to use internet as it is an informative medium. Still, teachers believe that information on internet is not organized correctly, and all information on internet is not related to the school curriculum, which sometimes distracts the students and hampers students' performance. They suffer from poor study habits, lower grades, and failure in exams because of internet overuse. Some researchers say that students are highly susceptible to problematic internet use because, for them, internet is fast, free, and available all the time. They sacrifice sleep for online activities, miss classes, and even exams. However, some researchers warned that it might not be advisable to say that students are addicted to internet just because they overuse internet, sometimes it is needed to use internet for their school work (Yellowlees & Marks, 2007).

1.5.1 Social consequences of internet overuse

Researches indicate that social isolation plays a bigger role in internet overuse. Individuals who are suffering from loneliness use internet more to kill their boredom, and as they use it more, they get more isolated, away from family and friends. They use internet for social relationships like an online affair or cyber affair. Young (1998) defined cyber affair as a romantic and sexual relationship that is initiated via online contact and maintained predominantly through electronic conversations that occur through email, chat rooms, or interactive games. She further said that it might take a very long time to develop intimacy in an offline relationship, but online, it may take a few days only. Individuals are more open and honest online. They reveal personal information easily when they are online, but gradually, these seemingly harmless relationships become the reason for marital discord and other personal, social, and psychological issues. Previous studies have indicated that the kind of social support offered by cyber relationships could result in harmful additive behavior (Amichai-Hamburger & Ben-Artzi 2003; Caplan 2002; Niculović et al., 2012).

Individuals enjoy online social relations because they are immune to the social consequences of real life conversations, for example; if an individual upsets someone online, he can just change his identity online and start another relationship with a new identity. Anonymity is the biggest advantage of online relationships. This could help individuals to fulfill their needs of interpersonal relationships, but heavy dependence on internet can lead them to a failure in offline relations. Without anonymity, it would be very difficult for them to get along with others because in real-life interactions, one cannot change his identity. They get frustrated in real-life conversations and might turn to an online relationship, which is an alternative for them to offline relationships. Social-networking applications are developed to exchange information about one's own self, including personal choices such as, hobbies, habits, and interests, but this could lower their self-esteem as this information could make them conscious about their weaknesses. They could feel guilty for misrepresenting themselves, or it could raise their self-esteem as this information is selective and biased, which does not represent the real picture of the self (Walther, 1996). It is true that positive image presented online could decrease self-esteem but if individuals represent themselves carefully online, it can increase their self-esteem. While it is true that technology motivates individuals to represent themselves positively, there is a growing concern for the extent to which an individual can alter his image to present online. There is no set limit for self-representation online. Users can create the best possible but false image online, but at the same time, they should be conscious about their real selves. The least difference between real and online image will give the users more satisfaction and pleasure in the long run.

Individuals suffering from substance abuse have to quit the substance completely to get rid of the consequences of that, but in the case of internet overuse, it is not possible to stop using internet totally as internet is a vital part of one's life and nobody can deny the benefits of it. Unlike in other addictive disorders, in internet overuse, individuals have to learn to use internet rather than overusing it, and they have to learn to limit their internet usage, which is very difficult than getting abstain from the substance. It is very challenging not just for the person who overuses it but also for the professionals who will treat such individuals. DSM-5 provides diagnostic criteria for substance related disorders and gambling disorder but not for internet overuse as very less research is available on this topic; it is still debatable whether internet overuse is an addictive disorder or compulsion or something else. It is important to understand the nature of internet overuse before setting the diagnostic criteria. The research

Understanding the nature of internet overuse.....

on the same should be done on a large sample comprising various age groups with different occupations and educational qualifications. The purpose of this research is to have more clarity on the nature of internet overuse and to develop a tool that can measure different levels of internet overuse. The tool on internet overuse can help professionals to decide the course of treatment for individuals who overuse internet because of which they have jeopardized their personal, social, occupational life and relationships.