

# Effect of Internet Addiction on Social Relations

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**Abstract-** Internet addiction is a pathological condition that drives a person to use technology excessively. Internet addiction can cause problems among adolescents to lose interest in everyday life and triggers social interaction problems. Internet addiction disorder (IAD), more commonly called problematic Internet use (PIU), is generally characterized by hyper-ritualistic involvement with the internet, social failure, withdrawal symptoms on abstinence and poor impulse control. It refers to excessive internet use that interferes with daily life. In simple terms Internet Addiction is best described as an impulse control disorder, where the internet users may develop an emotional attachment to on-line friends and activities they create on their computer screens. Internet users may enjoy activities over internet that allows them to meet, socialize, and exchange ideas through the use of chat rooms, social networking websites, blogging etc, and spending endless hours online researching on topics of interest. IAD is often divided into subtypes by activity, such as gaming; online social networking, blogging, email, excessive, overwhelming, or inappropriate internet pornography use or internet shopping addiction. Similar to other addictions, those suffering from Internet Addiction use the virtual fantasy world to connect with real people through the internet, as a substitution for real-life human connection, which may be otherwise difficult to achieve normally.

**Keywords-** internet, addiction, social, interaction, performance, compulsion, stress, anxiety

## I. INTRODUCTION

Social media addiction can be viewed as one form of Internet addiction, where individuals exhibit a compulsion to use social media to excess (1). Individuals with social media addiction are often overly concerned about social media and are driven by an uncontrollable urge to log on to and use social media (2). Studies have shown that the symptoms of social media addiction can be manifested in mood, cognition, physical and emotional reactions, and interpersonal and psychological problems (3). It has been reported that social media addiction affects approximately 12% of users across social networking sites (4). Many studies on social media usage and mental health have shown that the prolonged use of

social media such as Facebook is positively associated with mental health problems such as stress, anxiety, and depression and negatively associated with long-term well-being (5). For example, the time spent on social media was positively related to depressive symptoms among high school students in Central Serbia (6) and among young adults in the United States (Lin et al., 2016). Furthermore, certain categories of social media use have been shown to be associated with reduced academic performance (7). For example, it was found whereas using social media for academic purposes did not predict academic performance indexed by the cumulative grade point average, using social media for nonacademic purposes (video gaming in particular) and social media multitasking negatively predicted academic performance. A large sample ( $N = 1893$ ) survey conducted in the United States also found that the time students spent on Facebook was negatively associated with their total GPAs (8). Laboratory experiments have provided further evidence for the negative relation between social media use and academic outcomes. For example, it was found that multi-tasking via texting, email, MSN, and Facebook had negative effects on real-time learning performance. It has been found that the use of Weibo, the Chinese equivalence of Twitter, had negative effects on information comprehension.(1,2,3)



Importantly, frequent social media usage does not necessarily indicate social media addiction (9) and therefore does not always have negative implications for individuals' mental health (10) or academic performance (11,12,13).

## The Role of Self-Esteem

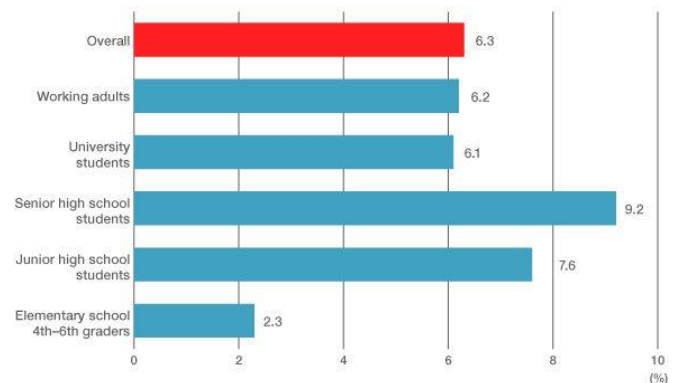
One factor that may underlie the negative effects of social media addiction is self-esteem. Although viewing or editing one's own online profile enhances self-esteem, according to the Hyperpersonal Model (7), social media users are frequently exposed to others' selective and glorified online self-presentations, which can, in turn, reduce the viewers' self-esteem (8). For example, frequent Facebook users believe that others are happier and more successful than themselves, especially when they do not know well the other users offline (9). Vogel, Rose, the people suggest that the extent of upward social comparisons on Facebook is greater than the extent of downward social comparisons and that upward social comparisons on social media may diminish self-esteem. Empirical studies have provided support to this proposal. For example, a study by (2,14,15) showed that the use of Facebook was correlated with reduced self-esteem, such that individuals who spent a greater amount of time on Facebook per session and who made a greater number of Facebook logins per day had lower self-esteem. Another study found that adolescents' self-esteem was lowered after receiving negative feedback on social media (2). Moreover, recent studies have revealed a negative relation between addictive use of social media and self-esteem (2). A considerable number of studies have shown that low self-esteem is associated with many psychological dysfunctions such as depression and anxiety (2). Self-esteem has also been shown to be positively associated with academic performance (8) and further serve as a protective factor against adversities in aiding academic and emotional resilience (7). It is possible that social media addiction contributes to lower self-esteem, which, in turn, leads to a decrease in mental health and academic performance. In other words, self-esteem may play a mediating role in the relations of social media addiction to mental health and academic performance.(8,9,10)

## II. OBSERVATIONS

The symptoms of Internet addiction or Pathological Internet Use include "obsessive thoughts about the Internet, tolerance, diminished impulse control, inability to cease using the Internet, and withdrawal" [5]. Beard and Wolf [2] have also proposed a set of diagnostic criteria for Internet addiction. The characteristics of Internet addicts are described below, with references to previous empirical studies. Internet addicts spend almost more than triple the number of hours in Internet use than non-Internet addicts [4]. Young also found that the average number of hours per week using Internet by Internet dependents was 38.5 hours, while the nondependents spent only an average of 4.90 hours [2]. According to a survey by Hong Kong Youths Association in 2005 [9], young people of ages 10 to 29 spent an average of 18.4 hours per week in Internet use. About one tenth (9.9%) of the sample spent 42

hours per week, that is, an average of six hours per day on line. In some sense, Internet use is the most important or salient activity in the addicts' daily life, and they usually stay on line longer than they originally expected.[4,16,17]

Internet addiction rate by age group



Source: Survey conducted in February 2013 by the Hashimoto Laboratory and the Institute for Information and Communications Policy, Ministry of Internal Affairs and Communications

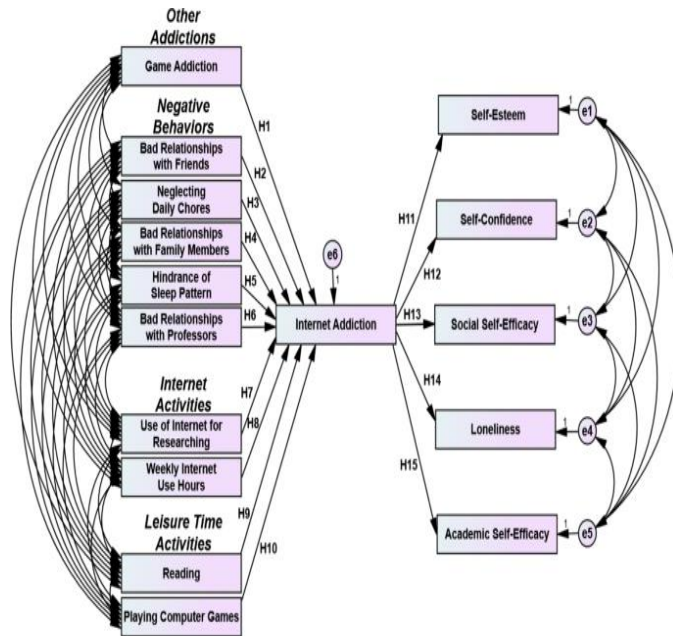
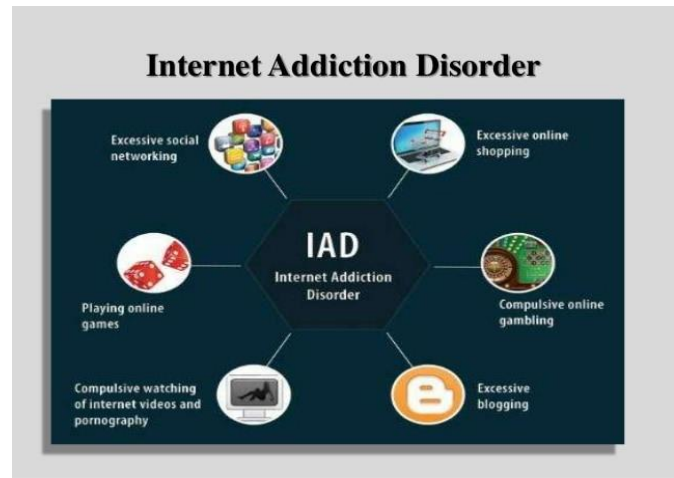
The addict "is preoccupied with the Internet (thinks about previous online activity or anticipates next online session)" [1] and is unable to refrain from thinking about the Internet most of the time when he or she is awake. People have a lot fun by using Internet. The Internet exposures of the Internet addicts appear to be pleasurable, entertaining, interactive, and relaxed [8]. Overall speaking, the addicts enjoyed the Internet experiences, and the enjoyment and pleasure would drive them to be addicted to Internet use. The withdrawal symptom of the addicts refers to the unpleasant feeling (restless, moody, depressed, or irritable) when the Internet activity is being stopped or cut down. The impact on the daily life and study of the Internet addicts is usually negative [4]. The addicts may sometimes risk the loss of a significant relationship, educational or career opportunity because of the Internet. They may lie to others because of their over involvement with the Internet, and they also use Internet as a means to escape from problems or to settle one's unpleasant emotion such as helplessness, anxiety, guilt, or shame [3].

Internet addicts spent less time with their parents and other family members and tended to have tension with them [2]. Internet addicts tend to have less friends and romantic relationships [1]. They are more lonely and solitary. Internet addicts are less healthy than nonaddicts, and they are also less willing to seek medical treatment and less motivated to develop stress-relieving practices [2,18,19].

## III. DISCUSSION

Internet addiction is a broad term that covers a range of behaviors and impulse-control problems involving internet, personal computer, and mobile technology. While there is yet

no officially accepted criteria to diagnose an internet addiction, researchers have identified 5 subcategories of specific types of computer and internet addictions. A cybersex addiction is one of the more self-explanatory internet addictions. It involves online pornography, adult websites, sexual fantasy/adult chat rooms, and XXX webcam services. An obsession with any of these services can be harmful to one’s ability to form real-world sexual, romantic, or intimate relationships. Treatment options are available for those with cybersex addictions, typically in the form of intervention followed by ongoing inpatient or outpatient therapy.[11]



Net compulsions concern interactive activities online that can be extremely harmful, such as online gambling, trading stocks, online auctions (such as eBay), and compulsive online shopping. These habits can have a detrimental impact on one’s financial stability and disrupt job-related duties. Spending or losing excessive amounts of money can also cause stress in one’s relationships. With instant and easy access to online casinos and stores, it is easy for those who are already susceptible to a gambling or spending addiction to get hooked online. Cyber or online relationship addicts are deeply involved with finding and maintaining relationships online, often forgetting and neglecting real-life family and friends. Typically online relationships are formed in chat rooms or different social networking sites but can occur anywhere one can interact with people online. Often people who pursue online relationships do so while concealing their real identity and appearance; this modern phenomena led to the creation of the term “catfish.”[12,20,21]

The internet provides users with a wealth of data and knowledge. For some, the opportunity to find information so easily has turned into an uncontrollable urge to gather and organize data. In some cases information-seeking is a manifestation of pre-existing, obsessive-compulsive tendencies. Compulsive information-seeking can also reduce work productivity and potentially lead to job termination. Depending on the severity of the addiction, treatment options can range from different therapy modalities — which target changing compulsive behavior and developing coping strategies — to medication.[13] Computer addiction, sometimes referred to as computer gaming addiction, involves online and offline activities that can be done with a computer. As computers became more widely available, games such as Solitaire, Tetris, and Minesweeper were programed into their software. Researchers quickly found that obsessive computer game playing was becoming a problem in certain settings. Office employees would spend excessive amounts of time playing these games, causing a notable decrease in productivity. Not only are these classic games still available today but so are thousands of new ones, and the condition of computer gaming addiction is as prevalent and harmful as ever.[11]

Table: Research-based prevalence rate of Internet addiction

Country or region	Rate or population	Sample	Year	Instrument
Global	6%	A meta-analysis-based estimate	1994–2012	YDQ & IAT
Asia				
Asia	20%			
Pakistan	9%	231 Medical students	2020	IAT
China	10.4%	10,158 adolescents	2016	IAT
Hong Kong	17–26.7%	Over 3000 high school students	2009–2015	IAT
Taiwan	13.8%	1708 high school students	n.a.	YDQ
South Korea	2.1%	An estimate based on Korean population aged 6–19 years	2006	
Japan	2.0%	853 adolescents aged 12–15 years	2014	IAT
Europe				
Europe	4.4%	11,956 adolescents in 11 European countries	2009–2010	YDQ
Germany	1.5 million	An estimate based on German population	n.a.	
Spain	16.3%	40,955 school adolescents aged 12–17 years	2016	PIUS-a
Norway	0.7%	3399 individuals aged 16–74 years	2007	YDQ
UK	18.3%	371 college students	n.a.	PIUS
Russia	7.1%	4,615 adolescents aged 12–18 years	2019	CIAS
North America				
USA	0.3–0.7%	2513 adults	2004	Non-standard

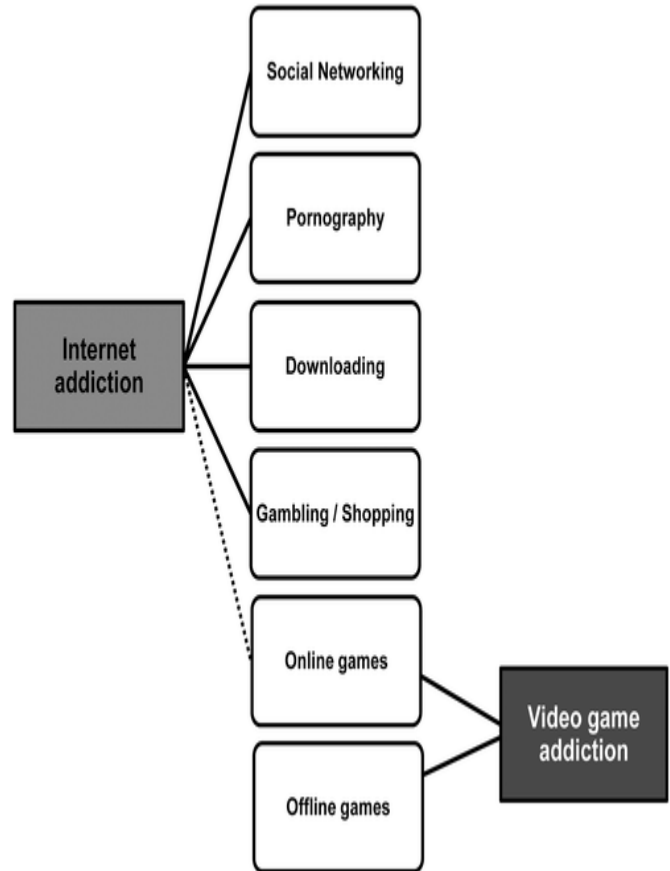
Different samples, methodologies, and screening instruments are employed across studies.

#### IV. RESULTS

The present paper aimed to assess Internet use/abuse in adolescents from a community sample. In particular, our study aimed to investigate differences between boys and girls in different development stages in Internet use/abuse, their attachment to parents and peers, and their psychological profiles. Furthermore, we wanted to verify whether attachment to parents and peers influenced adolescents’ Internet use/abuse, considering adolescents’ psychopathological risk.[12]Furthermore, analysis showed that early adolescents show higher scores than late adolescents on Internet use/abuse. Previous research has reported mixed findings: some studies have underlined a significant higher incidence of Internet use/abuse during middle adolescence [7] or late adolescence [9], but other studies did not report age differences [8]. In our sample, early adolescents reported higher levels of use/abuse of Internet. This result may depend on changes occurring during early adolescence and the immaturity of self-regulation abilities, factors that may increase vulnerability to addictions [3].

Moreover, analysis showed that girls had higher levels of communication with mothers than boys, but also higher levels of alienation with fathers and mothers. This is consistent with previous studies that have reported a perception of higher quality of communication with mothers [88] and higher levels of alienation to parents [4] among female adolescents, suggesting that girls are more susceptible to parental response, especially maternal.

Regarding peers, girls showed more trust and communication. This is in line with previous studies that have reported a higher level of peer attachment among teenage girls [5]. Some authors have explained these gender differences on the basis of evidence that girls are more relationship oriented, and they search for closer peer relationships to share emotional issues. In contrast, boys are more object oriented and form relationship primarily to share activities [6].



International studies have widely evidenced that during adolescence emotional-behavioral functioning is hyperactivated [6] and many young people may excessively use Internet to cope with negative emotions resulting from attachment situations and to lighten psychological suffering [7]. Indeed, many studies have shown that a low quality of parental attachment is related to adolescent behavior addiction, including IA [4]. Also, several empirical studies have evidenced that quality of attachment to parents and peers was associated with adolescent’s psychological adjustment [9] and that these factors influence each other.

On the basis of these theoretical and empirical premises and in order to be able to assess the possible influence of attachment to parents and peers on the use and abuse of Internet, hierarchical regression analyses were conducted, assessing the moderating effect of the



psychopathological risk.[2] Analysis showed that adolescents' attachment to parents (but not to peers) influenced Internet use/abuse. Furthermore, moderation analysis suggested that adolescents' psychopathological risk had a moderating effect on the relationship between attachment to mothers and the use of Internet. Although this result is significant, the effect size is not great ( $\text{change} = .0042$ ). In fact, results showed that a higher attachment of adolescents to the mother predicted less Internet use/abuse, but this predictive effect is reduced by the presence of adolescents' psychopathological risk. Overall, our results evidenced the crucial role played by attachment on adolescent's Internet use. These findings suggest that unpleasant feelings of isolation, anger, or detachment experienced in attachment relationships with parents may predispose adolescents to cope with these emotions through an excessive use of Internet, in order to avoid and/or reduce the distress resulting from adverse attachment experiences [5,19,20].

## V. CONCLUSION

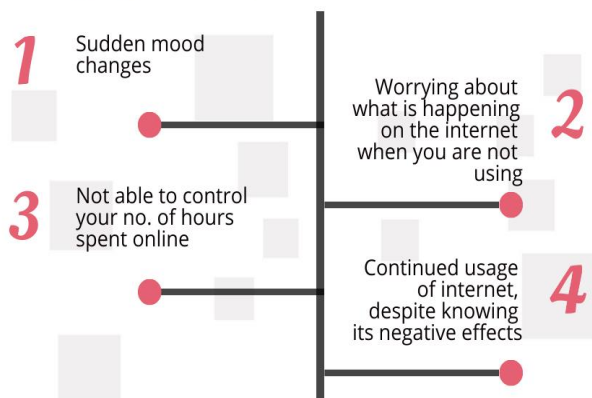
This is the first model of its kind and the most effective type of therapy for Internet addiction that is focusing on cognitive behavioral therapy (CBT). Researchers have documented that using cognitive behavioral therapy (CBT) is an effective treatment for Internet addiction [5]. The CBT in general helps addicts to realize addictive feelings and actions, while learning new coping skills and methods to prevent a relapse. The CBT usually takes 3 months of treatment or approximately 12 weekly sessions. The focus of this therapy is to assess the client's patterns of use and then develop new schedule to change the past formed patterns. External influences such as activities that demand the addict to leave Internet could be applied. There are also treatment programs that help the client in identifying goals about the time needed for using the Internet.

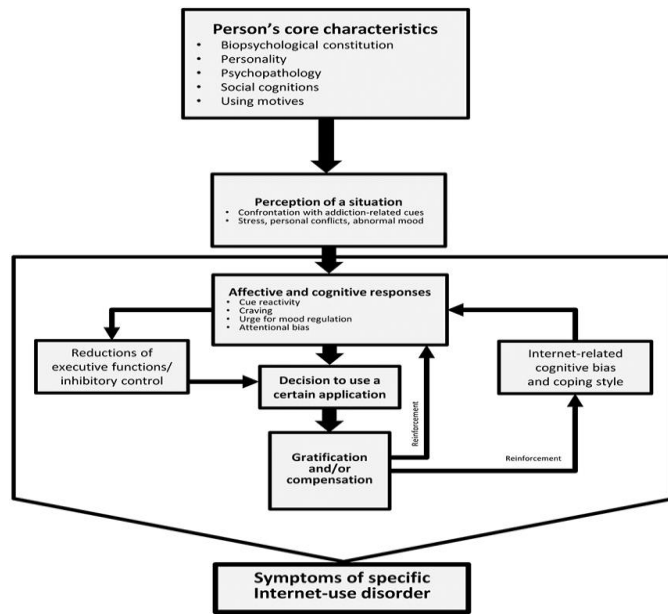
The CBT-IA model is a comprehensive approach which can be divided into phases, including (1) behavior modification, (2) cognitive restructuring, and (3) harm reduction therapy (HRT). The first phase or the early stage of therapy is behavior modification that is focusing on specific behaviors and situations where the impulse control disorder causes the significant difficulty and is used to control compulsive Internet use and reduce the time spend online by addict. The second phase is a cognitive restructuring that is applied to identify, challenge, and adjust cognitive disruptions and negative beliefs that cause a compulsive usage of Internet and effect on this behavior of addiction [5]. The third phase is harm reduction therapy (HRT) that is a new and untested therapy, which is used for continuation of recovery and prevention of relapse. The HRT is used to recognize and cure psychiatric problems related to Internet addiction and treat social problems in relationships with families, peers, and friends. We will discuss each in turn.[21]

### Behavior modification

In this phase of the CBT-IA, behavior therapy is applied to examine both computer behavior and noncomputer behavior. Computer behavior deals with actual online use, with a main purpose of abstaining from questionable applications while maintaining controlled usage of the computer for legal purposes [11]. This could be explained by the example of a university student who was addicted to Internet porn movies would need to learn to refrain from these movie Websites while still being able to use Internet for academic activities, social networking, and conducting e-mails to his contacts. Noncomputer behavior concentrates on assisting clients to promote favorable life style activities without the Internet. The activities that do not encompass the computer usage are examined and may involve activities related to social or job-related functioning [17,21].

### Symptoms of Internet Addiction





It is always important to be aware of the main goal in this phase, which is modifying unhealthful computer behavior to healthful one. In the beginning of implementation of this phase, the therapist should assess the client's present use of the Internet. A daily Internet activity diary could be adopted to evaluate client's behavior and develop a plan for treatment [221]. This diary should include date and time of each session, event, Internet activities (e.g., mailing, chatting, Web surfing, and shopping), situations, duration, feelings that trigger excessive online usage, and outcome of the Internet session (what activities were achieved, what activities were stopped while online). The recovery success among Internet addicts could be measured through reduced online hours and abstains from any contact with problematic online applications. According the results of the daily diary, therapist could review the duration and favorite times of online. The therapy classifies the maladaptive cognitions that are employed as triggers for excessive use of the Internet. For example, some addicts are suffering from distorted thoughts concerning themselves such as rumination (e.g., they are continuously thinking and concerning regarding the problems related to their Internet use) and intense self-concepts that serve their availability online (e.g., we have no value offline; however, we are other persons in online world). The Internet addicts experience distorted thoughts regarding their world, for example, "We do not like the people because nobody appreciate us" and "the Internet world is the only site where we are respected and appreciated." These extreme thoughts are distinguished by all or nothing thinking that intensifying and preserving the clients' online addiction. This could be explained by the following example: In Internet games, the addicts who carry out their goals in these games could realize the offline world as not desired, which results in psychological dependence on

using the online to enhance their self-esteem. Online addicts have a cognitive bias that they are treated with respect in their virtual world, but they feel unhappiness and lack of satisfaction with real lives. These thoughts encourage them to engage in the online. Cognitive restructuring is used to breach this pattern of behavior. In this stage, the therapist puts the addict's thoughts "under the microscope," and the addict is challenged by rewriting the negative thinking related to him/her. Moreover, CBT-IA assists addicts to recognize that they use the Internet to keep away from any situation or feeling.[21]



### E-fasting

Cognitive restructuring will help addicts reevaluate the rationality and validity of these interpretations. For example, addict who uses Internet games to build self-esteem will begin to understand that using Internet is for the satisfaction of the unfilled needs in his or her real life. When the addicts have awareness of their patterns of mistaken thinking, they start to challenge these thoughts more independently of therapy. In this way, they will have difficulty to reason or justify their online usage and to break the cycle of connecting online usage with the best life. Through faults in addicts thinking, they feel worsted because they overestimated difficulties and lessen the potential of corrective actions. The CBT-IA assists addicts to determine the main problems or consequences caused by Internet addiction in order to help them stay concentrated on treatment goals. In addition, the therapist asks the addict to make a list of the five main problems result from Internet addiction and a list of the five main advantages for lowering or avoiding online use in order to identify consequences. Clients' reassurance is very important because it is making their decision list broad and all comprising, and it should be honest as possible. The therapist should learn the worthy skill of clear-minded assessment of consequences for any recovery from online addiction and relapse prevention.[19] It is used to deal with denial that frequently exists among Internet addicts and to resist the

defense mechanism of rationalization that clarifies excessive Internet use. Online addicts have ambivalence feelings toward treatment. They may enter the treatment sessions with mixed feelings because they are not taking responsibility for their behavior and are not certain from their desire to quit their online use. The addict considers Internet as a healthy outlet just to rationalize his behavior, “This behavior does not cause any harm to anybody else”, this is not a big deal, “The Internet is not a problem in my life, it is the stress.” They also lower from the hurt that causes to loved ones: “It is a device,” “It is not a sexual relation outside marriage,” “It is only words on the screen.”



During therapy, the addicts are faced when they conflict themselves. At the first session, they admit to have an addiction. The next session, they lower the same behavior of addiction. In this stage, the treatment assists addicts to take the responsibility of the problem. The addicts recognize that they will stick to a structured online time management plan, if they admit their addiction, which is the important focus in this stage of therapy because it remains addicts that they take a daily commitment, and if they are not ready to take this appointment for themselves, and someone else, then abstaining will be difficult to preserve.[19]

#### Harm reduction therapy (HRT)

During this stage, the therapist identifies and addresses the factors related to development of Internet addiction including personal, situational, social, psychological, or occupational issues [13]. The addicts suppose that they are recovered once stopping this behavior and say “We are recovered.” However, there is much more to complete recovery than merely stopping the Internet. Full or complete recovery means examining the fundamental issues lead to the compelling behavior and finding solutions to these issues in a healthy way; on the contrary, relapse is probable to happen. As a part of recovery, the HRT is considered as an important

method for the addict to indicate the main issues leading to the addiction [6]. It is necessary to explain that addicts begin to be dependent on the Internet because it provides an urgent and acceptable means of temporarily avoiding psychological or situational problems. The harm reduction therapy (HRT) is used to identify the coexisting issues in the online addicts’ lives. Internet becomes a fantasy world that can take them away from their problems. Through using the Internet, people recognize a safe and easily accessible way to escape. The HRT stresses on identifying and treating underlying psychiatric problems coexisting with compulsive online usage by administering, when indicated, appropriate medications. It focuses on treating dual diagnosis with depression, anxiety, or obsessive-compulsive disorder that is common among Internet addicts, as well as comorbid addiction to alcohol or drugs. Later on, 12-step recovery may be involved as part of treatment. Harm reduction focuses on the client’s strengths and capacity to change as the starting point. In this phase, the main focus of the treatment sessions is raising awareness toward the issues leading to compulsive online use. Addicts are encouraged to participate in setting up the treatment and selecting the useful goals and strategies. The addicts work to find healthy ways to deal with feelings of low self-esteem without Internet use. In addition, the addicts learn more effective stress management methods to assist them to relax instead of depending on the Internet in order to control job stress. The addicts are helped to find new jobs or career opportunities if they suffer from work difficulties. This thing minimizes the harmful consequences of Internet abuse and helps the recovered addicts develop new and healthy coping strategies.[12]

#### VI. FUTURE SCOPE

There is a review and describe epidemiological Internet addiction research. The prevalence of Internet addiction was identified, and the conceptualization of this issue was also assessed by using various assessment instruments. However, to date, there is no gold standard for Internet addiction diagnosis and assessment. Moreover, the risk factors and negative consequences were highlighted. Generally, research has suggested that CBT-IA model was effective at improving symptoms related to Internet addiction after 12 weekly sessions and over a period of time after therapy extended to 6 months. The results considered in the previous section suggest that future research for long-term effects of the model should be addressed. While the efficacy of the cognitive behavioral therapy (CBT-IA) approach described in this chapter has been relatively well documented, future studies should be conducted to compare CBT-IA with other treatment modalities to determine its therapeutic effect

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