

# **Exploring the Correlates, Aetiology and Preventive Measures of Internet Addiction: A Review Article**

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#### KEYWORDS ABSTRACT

Technology, Internet, Excessive Use, Negative Consequences. Technology has made a huge growth and impact on human's life, and it has profoundly changed the experience of our life in day-to-day basis. This technology has facilitated us and improves our everyday lives in various ways. With the technological advancement the popularity of Internet as a source of communication, entertainment, networking, etc is also becoming an ever-increasing part of people's life. But at the same time excessive use of Internet is also intruded the life of the users in persistent negative consequences such as academic failure, job loss, procrastination, social problems, poor health, disruptive sleep, etc especially in the adolescents and young adults which has become the major concern and challenge across various countries including India. In this view, present research article focuses on predicting factors of internet addiction, its aetiology and preventative measures. Literature review shows some prominent associated factors of internet addiction but contextual factors also play vital role. Large scale based empirical studies are suggested to achieve the clear understanding.

#### Introduction

In the past ten years, Internet usage has exploded, not just in India but also over the world. With almost 120 million internet users in 2011, India now boasts the largest national digital population in the world. The number of internet users in India has increased five-fold since 2005. Mobile Internet usage is expanding at annual rate of nearly 85% per annum, with nearly 75% of non voice usage dedicated to entertainment, particularly music and video streaming which are the main drivers of growth (Chandra, et al., 2012). Due to the widespread availability and affordability of Internet access, there has been a significant increase in excessive Internet usage. In the past decade, as the Internet has become more popular, there has been a gradual rise in the number of research studies focusing on Internet Addiction. However, despite this, there is debate going on in the scientific community over the classification of Internet Addiction. Consequently, with the numerous terms are used to define Internet Addiction as "Internet Dependency" (Wildt, 2011), "Internet Addiction" (Young, 1998), "Compulsive Internet Use" (Meerkerk et al., 2006, 2009, 2010), "Internet related problems" (Widyanto et al., 2008), "Problematic Internet Use" (Caplan, 2002), "Pathological Internet Use" (Davis, 2001), "Virtual Addiction" (Greenfield, 1999), and "Internet related Addictive Behaviour" (Brenner, 1997).

Goldberg (1995), a New York Psychiatrist was the first to propose that addiction to the Internet existed. In 1995, he elaborated a symptom list for what he called 'Internet Addiction Disorder', analogous to the criteria for substance dependence from DSM–IV (Wildt, 2011). However, it was Kimberley Young (Young, 1998) who first systematically investigated this phenomenon, categorizing individuals as either Internet 'dependent' or 'non-dependent' based on modified criteria for DSM–IV pathological gambling.

The term 'Internet Addiction' has been defined as "excessive or poorly controlled preoccupation, urges, or behaviours regarding computer use and internet access that lead to impairment or distress" (Shaw & Black, 2008). Young asserts that the term "internet addiction" is



inclusive of a variety of behaviour patterns and problem with heightened impulsivity (Widyanto & Griffiths, 2006).

'Internet Addiction' is a pathological habit which is hard to control as it gives immediate gratification and a sense of pleasure to the user which interfere the biological and nervous system negatively. The excessive use of Internet leads to develop various psychological, social, occupational and behavioural problems. De Postis and others (2009), stated that addiction occurs when; an individual's behaviour affects mental, physical, and social health; damages relationships with family and friends; it disrupts with work; it causes financial instability; It encourages criminal activity. However, certain distinctive elements can be recognized, which help identify behaviors at risk of Internet Addiction. Salience, frequency, duration, intensity, withdrawal symptoms, conflict, and relapse are some of these components.

## **Components of Internet Addiction**

Young (1996) have defined components of Internet Addiction which are classified in terms of Salience which is the term used to describe sentiments of obsession with the Internet, concealing this behaviour from others, and losing interest in relationships and other activities in favour of spending time alone on the Internet. It also implies that the person feels that life would be boring, meaningless, or devoid of fun without the Internet and that they utilise it as a mental getaway from unsettling ideas. Excessive Use which denotes a respondent who uses the internet excessively and obsessively, concealing their usage from others and frequently unable to manage their time. It also implies that if the respondent is denied access to the Internet for a long time, they can experience anxiety, depression, or rage. Neglect Work, it implies that, like a television, microwave, or phone, the respondent may view the Internet as necessary equipment. The amount of time they spend online is probably affecting their productivity and effectiveness at work or school, and they might start acting defensively or secretively when it comes to their use of the Internet. Anticipation suggests that the respondent feels obligated to use the Internet while offline and probably considers using it when not at the computer. Lack of Control which implies that the respondent struggles to set boundaries for their online time, frequently logs on for longer than planned, and may face criticism from others for their excessive online usage. Neglect Social Life, it suggests that the respondent most likely uses relationships on the internet to manage difficult situations and ease stress and anxiety. Additionally, it implies that the respondent regularly makes new friends with other Internet users and leverages the platform to build social ties that they might not otherwise have.

#### **Internet Addiction and Adolescents**

With the rise in technology and media, adolescents are increasingly being exposed to the Internet and using it without restraint. Various studies have reported internet addiction among adolescents in many countries. The health of adolescents is of paramount importance in all respects, as they represent the future of any nation. Erickson (1968), viewed that adolescence as a crucial time. He claimed that identifying the right balance between self-awareness and identity confusion is the major psychosocial challenge faced by the adolescents. There is a positive impact of internet on social, psychological and educational development in which users can learn, and share their productive impressions, ideas with others. Internet may also provide various employment options to the youth where they can get engaged themselves in doing online works, online business and get financial advantages in return. The internet has made it easier for people to find job opportunities by providing convenient access to a broad range of job postings. (Shotton, 1991). However, the impact of internet addiction is no doubt significant but it has many side effects on mental health of individual's also. It has been observed that the use of Internet is significantly increasing among the children's, adolescents and youth population now these days. It's not limited only to the usage but excessive usage of internet is becoming a major concern and challenge to us.



Despite, the positive impact the excessive use of internet, it may associate with various mental health problems also.

Research by Shotton (1989) and Young (1996), found that individuals with internet addiction tend to allocate less time to their real-life relationships, resulting in feelings of restlessness, interpersonal conflicts, and strained connections. Numerous studies have shown a link among Internet addiction and mental health issues like anxiety, depression, loneliness, and substance use disorders. Adolescents and Youths are occupied with the usage of cell phones and Internet at very early age and majorly they spent a lot of time on Facebook, Instagram, Youtube, etc. Ironically, they prefer more to stay connected with the virtual world instead of real world. Internet Addiction is becoming a serious problem because it ultimately leads to develop various behavioural and psychological problems such as short tempered due to unavailability of internet, worried, restless, frustration, social isolation, increased in level of aggression, failure to manage time, impulsivity, irregular sleep and poor self care.

A study by Laursen and colleagues (2017), argued that adolescents who maintain positive relationships with their parents tend to exhibit greater social competence and fewer conduct disorders, while those with family disputes exhibit more tendency to antisocial conduct and maladaptive behaviors. These kinds of behavior can also be extended to Internet addiction. Padwa and Cunningham (2010), explored that, the most prevalent form of Internet addiction among young individuals is addiction to online gaming. These games provide opportunity to young people to express them in a ways they can't in real life, and the enjoyment derived from these interactions can lead to addictive behaviour. Additionally, these games offer endless goals and tasks, and success within them can boost a player's sense of power and status. In other words, Internet use can become a way for individuals to temporarily address perceived deficiencies and enhance their self-esteem.

# Signs and Symptoms of Internet Addiction

The internet addiction may manifest various physical, behavioural and emotional symptoms among the adolescents and youths. An individual who is using internet excessively may develop corporal side-effects alike sleep disturbances, spinal straining, eye straining, neck pain, weight gain, impulsivity, aggression, boredom, procrastination, feeling guilty, isolation, anxiety and depression, etc. Individuals undergoing these symptoms may disconnect themselves with other individuals typically spending a lot of time in self induced isolation accompanying with alienated behaviour which negatively impacts their personal relationships and create familial problems.

Internet addiction manifests through various symptoms. These include developing tolerance, need of more internet time to feel satisfied, compulsive use, withdrawal, and negative impacts on family, relationships, and work or school performance. Additionally, Hall and Parsons (2001) described further symptoms under the term 'Internet Behaviour Dependence' (IBD). These include neglecting major responsibilities, prolonged use despite diminishing enjoyment, restlessness and anxiety when offline, unsuccessful attempts to reduce usage, and continued use despite awareness of associated physical, psychological, or social problems.

## **Aetiology of Internet Addiction**

A psychological escape mechanism to overlook the underlying issues is sparked by the urge to utilise the Internet. According to research, persons with internet addiction are more likely to have thought patterns that are largely negative, which are more likely to result in low self-esteem and pessimistic attitudes (Hall & Parsons, 2001). The anonymous interaction with an unknown person over the internet also uplifts self-imposed shortcomings in the users. Twenty years ago, youth who used poetry, music, and sports to communicate their wants and feelings were more inclined to turn to online activities to make up for their identity (Tao, 2005).



This tendency to seek distraction leads a person to escape an unpleasant and unwanted reality in order to create a virtual "ideal self" free from the stress and limitations of real life (Li et al., 2011).

Escapism has been identified as one of the most common reasons people engage in online gaming. Researchers have closely studied the association between the internet addiction and the interactions between psychosocial disorders and motivations for use as a form of relief. In a study, Winther (2014), explored the link between stress and online gaming, which is moderated by motivation for escapism. (Zanetta-Dauriat et al., 2011; Lemenager et al., 2013) have reported some similar findings in their study among players of massive multiplayer online role-playing games. These results imply the need for additional research to further identify motivations for gaming and psychosocial wellbeing conjointly.

Further social media related study shows that expanding social networks to form connections is considered as a strategy for enhancing one's self confidence, social skills and social support (Smahel et al., 2012). Peoples with high levels of social anxiety and uncontrolled individuals perceive that this kind of communication as a more acceptable form of interaction because they have greater control over their image and a smaller risk of receiving negative feedback that could lead to internet addiction (Lee & Stapinski, 2012). Individuals experiencing an identity crisis benefit from the online environment by strengthening or altering their personality and giving them the opportunity to build their identities in advantageous or sometimes unfavourable way. They use social networks to investigate the psychological implications of a profound and compelling need to feel emotionally familiar to others. Preoccupation with online sex is another cause, possibly because many adult websites are loaded with sexual content with the aim of arousing sexual interest (Cooper, 1998). Because of online pornography, its accessibility, affordability, and anonymity, may lead to internet addiction (Southern, 2008). Researchers consider internet addiction to be a spectrum, ranging from poorly controlled urges that cause distress to severe psychopathological conditions (Young, 2009).

Internet addicts have more freedom for imagination since sex addiction is akin to gambling addiction (Young, 2008). Typically, it relates to online viewing, downloading pornographic content, participating in adult discussion forums, or downloading adult content for commercial purposes (Binachi & Phillips, 2005; Brey, 2006). Internet users who are addicted to this subgenre are attracted to this type of cyber addiction since accessing pornography is simple to replace while remaining anonymous (Young, 2004). The majority of the people in this generation find that the online environment gives them a platform to express them and to find the lack of acceptance in their lives. Body image issues and the avoidance of real-life issues and interactions due to guilt about one's body image are two additional factors that may contribute to internet addiction (Rodgers et al., 2013).

#### **Internet Addiction and Personality Traits**

The Five-Factor Model suggests that most individual differences in personality can be categorized within these five broad domains. So, when examining Internet addiction, researchers consider how these personality traits intersect with online behaviors and usage patterns. (Gosling, et al., 2003). Although studies have identified various factors contributing to internet addiction, personality traits emerge as particularly significant. Studies show that internet use is adversely correlated with neuroticism and openness to new experiences, but positively correlated with extraversion, conscientiousness, and agreeableness. According to these researches, it is argued that extroverts more frequently feel the urge to interact with others than introverts; as a result, they utilize the internet for interactive purposes more frequently. The internet, on the other hand, appears to be mostly used by introverted people since it lowers the anxiety of being rejected or ridiculed, and allows users to hide their identities (Batıgün, & Kilic 2011; Samarein 2013; Ahlan, 2013; Mehroof,



& Griffiths, 2010). Recent researches have shown a reverse association between various types of internet use and personality traits, despite the fact that personality traits and internet use are linked.

## **Internet Addiction and Self-Esteem**

Self-esteem is a person's whole assessment of their own value, which is derived from evaluating their characteristics and aptitudes. Our evaluation, which is grounded on our ideas, also took into account internalised social norms (Myers, 2010; Neto, 1998; Rosenberg, 1989). Self-esteem can range from poor to high. People who have poor self-esteem frequently experience difficulties in life. Their outlook on life is often negative; they experience increased levels of unhappiness, depression, loneliness, aggression, dread of others, and fear of punishment (Chabot, 2000; Myer, 2010; Neto, 1998; Reeve, 2010). Furthermore, they have a higher propensity to experience a range of clinical issues, such as addiction (Parrott, et al., 2004; Greenberg, et al., 1999).

Numerous researches have looked into the connection between self-esteem and internet addiction. This research has demonstrated the connection between internet addiction and personality features, self-esteem, and psychiatric illnesses (Griffiths, 2000). Young (1998), reported that a significant proportion of internet addicts had experienced anxiety and depression in the past, along with low self-esteem. Previous studies on the relationship between internet use and self-esteem have examined how teenagers' use of social networking sites affects their self-esteem. According to these studies, teenagers who have low self-esteem are more likely than those who have good self-esteem to spend time on social networking sites (Ellision, et al., 2007, Aydin, & Volkan, 2011).

#### **Internet Addiction and Loneliness**

Loneliness is defined as a psychological feeling. It is subjective in nature. It is an experience that is felt by an individual when he or she senses a gap between his or her actual and desired level of communication. It is also faced when one feels a sense of lacking interpersonal relationships (Ditommaso et al., 2003). Peplau and Perlman (1982), considered loneliness as an experience that is very unhappy, and it comes into existence when an individual feels a gap in his/her social interactions. It also occurs if one feels that there is a lack in quality and quantity in his/her social relations.

Adolescence age is considered as the age of storms. It is a very crucial phase of life. Adolescents are seen as going through the most challenging time in life since they are unable to take charge of their circumstances and manage them independently. This develops the feelings of loneliness, stress and anxiety. In this modern and fast-running life adolescents feel lonely. There are several other reasons to feel lonely and upset. Some of them are dissatisfaction, problems related to family, prejudice etc. People then develop a feeling that real world is full of problems, and they start searching happiness and comfort on the internet. Their attention is grabbed by the sites of social media. Students take a direction that is unethical, non-educational, and is not appropriate. They engage in time-wasting and pointless activities, such as monitoring posts and messages, instead of completing their tasks (Kuppuswamy & Shankar, 2010; Jung, 2012; Rosen et al., 2013).

When individuals experience insufficient and unsatisfactory social interactions, they tend to withdraw from their environment and society, feel isolated and lonely. Researchers stated that loneliness is perceived as a cause of sadness that results from a mismatch between the person's intended and actual social relationships (Perlman & Peplau, 1981; Kaymaz et al., 2014; Özçelik & Barsade, 2011). It is also seen as a sign of weakness. According to Brelim (1985), loneliness exacerbates emotions of inadequacy, alienation, diminished social relationships, and an increased desire for solitude. Consequently, loneliness leads individuals to retreat from real life interactions and face life's challenges alone.



#### **Internet Addiction and Stress**

Stress, according to Selye (1976) stress is the body's generic reaction to any demand. Various studies in the field have revealed that stress may lead to several issues related to anxiety and swing of mood may cause issues or problems related to behavior disorder (Lamb et al., 1998; Bhola & Kapur, 2000; Damodaran & Paul, 2015). Stress is nothing but a sense in which a person feels under high mental or emotional strain. It is the reaction of the body to any kind of change that may be internal or external and it requires adjustment. Physically, psychologically, and emotionally, the body reacts to these changes (Pariat, et al., 2014; Devi & Mohan, 2015; Bamuhair et al., 2015; Sharma & Shakir, 2017). Stress can throw the body's equilibrium or internal balance off. It also causes emotional issues like anxiety, panic attacks, and despair. Under stress, the individual becomes enmeshed in a vicious cycle, succumbing to depression and its detrimental effects, which ultimately culminate in suicide (Hodges et al., 1984; Compas et al., 1989; Banez & Comppas, 1990; DuBois et al., 1992; Nolen-Hoeksema, et al., 1992).

Many researches show that problematical net use is related with functional deficiency, subjective suffering, and Axis I psychiatric ailments (Shapira et al., 2000). Addiction to the Internet may also exacerbate to the symptoms of anxiety and stress (Egger & Rauterberg, 1996; Yu, 2001). People who are stressed or anxious frequently find it difficult to engage and communicate with people in a meaningful, healthy, and healthful way. These characteristics of people are thought to be important predictors of internet addiction. Due to internet addiction, people may display a range of psychological symptoms, such as sadness, anxiety, and self-efficacy (Jang et al., 2008; Ha, et al. 2007).

# **Internet Addiction and Anxiety**

Internet addicts often use their addiction as a coping mechanism for worry, such as checking emails in the middle of the night when they wake up unexpectedly or logging on to the internet as soon as they get up. A significant sensation of sadness is exacerbated by a number of factors, including a felt disconnection from reality, poor sleep, and ongoing anxiety while spending a lot of time offline, social isolation, and impairment in one's ability to perform at work. Paradoxically, akin to other types of depression, the person could depend on the internet to relieve stress, anxiety, and depression; yet this just serves to intensify the emotions, creating a vicious cycle.

Panic disorder, generalized anxiety and social anxiety (Carli et al., 2013; Adalier, 2012) have been studied extensively as co-morbid psychiatric disorders in individuals accompanying with excessive internet use (Younes et al., 2016; Azher et al., 2014). The association between anxiety levels and internet addiction were found to be positive and significant (Nima & Nazanin, 2012). Problematic internet use can increase social anxiety and develop avoidance of social interactions (Lee et al., 2012). Internet addicted adolescents show decreased functional connectivity on distributed network (Weinstein et al., 2015). There is also a significant association between childhood anxiety, depression and internet addiction. Childhood anxiety is considered to reduce risk of internet addiction (Weinstein et al., 2015). Studies have also determined that anxiety may significantly predict internet addiction (Azher et al., 2014). Social relationship and societal well-being also get affected by the internet addiction. Internet addiction makes people introvert as well as it makes people away from the society and their families too (Cardak, 2013).

# **Internet Addiction and Depression**

Internet addiction and depression have a mutually reinforcing relationship, rather than a one-way causation. Young people experiencing depression are more likely to spend increased time on the internet (Morrison & Gore, 2010; Cotton, 2004) and vice versa, those engage excessive in internet use are more prone to be depressed (Hantoushi & Abdullateef, 2014; Akin & Iskender, 2011; Rabadi et al., 2017; Sharma et al., 2016). It's important to understand that there is no clear cause-and-effect relationship between the two variables; rather, the presence of one



variable increases the risk of the other. Depression is commonly reported psychiatric indication related by net overuse (Jang et al., 2008; Yenet et al., 2007; Whang et al., 2003; Kim, et al., 2006).

Individuals who can't control themselves over extreme net use might interrupt their standards of living and relations among the members of family, and this leads to uncertainty of emotional state (Zhang et al., 2018; Reshadat et al., 2015). The problematic net use affects the mental health associated with extreme time consumed on net-related activities, this results in a negligence of defensive offline activities i.e. exercise, social activities, sleep, school attendance, and shows the withdrawal symptoms when they unable to access the net (Petry et al., 2014; Black, 2008).

Internet addiction is considered as extreme use and having an obsession toward net use that leads to ailment (Shaw & Black, 2008). The users show so many wide spread pathological symptoms which are the signs of addictive behaviours (Rehbein & Baier, 2013). Time spent on online activities leads to the depressive indications. That might lead to wrong assumptions about educational level, corporal appearance, intellect, ethical integrity, as well as many other features of virtual friends.

Adolescents who are passing under some episodes of depression or psychiatric morbidity fall in the category of higher risks of their active involvement in it. Family environment is also one of the important factors that lead to the involvement of adolescents in it. For example adolescents living in abusive environment or where the environment is lacking attachment have more chances to get indulged in online or offline addictive games. They became dependent on these games and feel themselves detached from their family. Blue whale game, and Pub-G are some examples of the games by which the adolescents suffered a lot and some did suicide too.

## **Prevention and Treatment Strategies of Internet Addiction**

There is a broad consensus that interventions should not aim for complete abstinence from the internet, but rather for moderation of problematic applications and achieving balanced internet use (Petersen et al., 2009). A treatment strategy and internet addiction program is critical to minimizing the negative effects of addiction and providing maximum support to the internet addicted users. A multimodal treatment strategy is characterized by the use of various distinct types of treatment, often from different fields, such as medication, psychotherapy, and family counseling, either concurrently or sequentially.

## **Psychological Approaches**

Motivational Interviewing (MI) is an approach that centers on the client's needs while providing guidance, aiming to enhance intrinsic motivation for change by addressing and resolving ambivalence (Miller & Rollnick, 2002). It was designed to assist individuals in overcoming addictive behaviors and developing new behavioral skills. This approach employs methods like open-ended questions, reflective listening, affirmations, and summarization to help individuals express their concerns and thoughts about making changes (Miller, 2010). Unfortunately, no studies have been conducted to determine the efficacy of MI in treating IAD; however, Motivational Interviewing appears to show moderate effectiveness in treating alcohol and drug addiction, as well as issues related to diet and exercise may also be considered (Burke et al., 2003).

Peukert et al. (2010) studied that family-based intervention, such as "Community Reinforcement and Family Training" (Meyer et al., 2010) may aid in enhancing the motivation of individuals addicted to the internet to reduce their usage. However, reviewers noted that there were currently no controlled studies involving family members.

Reality Therapy (RT) aims to encourage peoples by committing to modify their behaviour in order to improve their life. It includes training in time management and sessions to demonstrate to clients that addiction is a choice; it also presents alternatives to the problematic habit (Kim, 2007). He claims that Reality Therapy is a cornerstone tool in addiction recovery with broad applications across various addictive disorders like drugs, sex, food, and internet use. Kim (2008)



discovered that 25 Internet dependent university students in Korea had a reduction in addiction level and an increase in self-esteem as a result of the RT group therapy program.

# The reSTART Program

The writers of this program are associated with the Fall City, Washington-based reSTART: Internet Addiction Recovery Programme (2009). A thorough inpatient programme called reSTART is intended to cure internet addiction. In addition to treatment for drug and alcohol problems, 12-step work, cognitive behavioural therapy (CBT), experiential adventure-based therapy, acceptance and commitment therapy (ACT), brain-enhancing interventions, animal-assisted therapy, motivational interviewing (MI), mindfulness-based relapse prevention (MBRP), and mindfulness-based stress reduction (MBSR), it also includes a technology detoxification phase (with no access to technology for 45 to 90 days).

In addition, reSTART offers interpersonal group psychotherapy, individual psychotherapy, customized treatments for co-occurring disorders, psycho-educational groups covering topics such as life planning, addiction education, communication skills, assertiveness training, social skills, and life balance planning. Aftercare services include technology use monitoring, ongoing psychotherapy, and group therapy, with continued care available through outpatient treatment, all delivered in an individualized, holistic approach.

# **Non-Psychological Approaches**

Some clinicians treat Internet Addiction Disorder with psychopharmacology despite the lack of studies examining the effectiveness of such treatments. Nonetheless, some authors emphasize the use of pharmacological therapy for Internet Addiction Disorder. Because Selective Serotonin Reuptake Inhibitors (SSRIs) have been found to be effective in treating co-morbid psychiatric symptoms of Internet Addiction Disorder, such as depression and anxiety (Arisoy, 2009 & Wieland, 2005).

Dell'Osso et al., (2008) treated 14 patients with impulsive compulsive internet usage disorder with Escitalopram (SSRI). From a mean of 36.8 hours per week to a baseline of 16.5 hours per week, internet use considerably dropped. Han et al. (2009) used the psycho-stimulant drug methylphenidate to treat 62 youngsters who played online video games and had been diagnosed with attention-deficit hyperactivity disorder. The YIAS-K scores and internet usage were much lower after eight weeks of treatment, and the authors tentatively recommend that methylphenidate might be considered as a viable treatment for IAD. In another study, bupropion (a non tricyclic antidepressant) was used by Han and colleagues (2010) found that after six weeks of treatment, there was a decrease in the desire to play online video games, the total time spent gaming, and in cue-induced brain activity in the dorsolateral prefrontal cortex.

A research by Shapira et al. (2000) suggested that mood stabilizers may also lessen Internet Addiction Disorder symptoms. In addition to these studies, there are several case reports of patients treated with escitalopram (Sattar & Ramaswamy, 2004) citalopram (SSRI), quetiapine (an antipsychotic) combination (Atmaca, 2007), and naltrexone (an opioid receptor antagonist), (Bostwick & Bucci, 2008).

#### Conclusion

Internet addiction is a complex phenomenon encompassing a range of behavioral problems and impulse control issues. Any form of addiction affects individuals physically, mentally, emotionally, and psychologically. The concept of internet addiction originates from behavioral addiction.

Overall, this paper emphasizes the importance of understanding the nature and symptoms of Internet Addiction, particularly how personality traits may predict internet usage. It also highlights significant correlates of internet addiction, including self-esteem, loneliness, cognition, stress, anxiety, and depression. Neuroimaging studies of behavioral addiction have



shown an association between changes in brain structure and function related to reward, emotion, executive function, attention, decision making, and cognitive control, similar to drug addiction.

Frustration among adolescents is increasingly putting pressure on parents. The desire to alleviate this frustration, combined with the burden of social responsibility, often leads young individuals to withdraw from the real world and engage in unhealthy and excessive internet use. However, in addition to discussing the various correlates and negative impacts of internet addiction, we have also highlighted various treatment strategies. These strategies can help individuals develop adaptive coping mechanisms, thereby preventing future negative psychosocial consequences.

#### **Future Directions**

In today's time Internet-related entertainment is becoming more and more popular among teenagers and youths. More researches however are needed, in the area of Internet addiction which may provide guidance for policy makers to formulate and design programs in the area of healthy regulations, prevention, and intervention. Consequently, it is also important to for the researchers to understand many of the psychological factors that lead to engage in excessive Internet Usage behavior among adolescents and adults, which may further assist clinicians in designing behavioural interventions and in determining robust prevention programs to handle Internet Addiction.

To address the problem, there is a need to develop effective educational programs to teach youths how to use the internet responsibly. Various family programs should also be initiated, as the home is often the primary location for internet usage among addicts. Additionally, to promote healthy internet usage among young individuals, our country could benefit from more hospitals and clinics dedicated to treating internet addiction, similar to the SHUT Clinic at NIMHANS in Bangalore, which provides counseling and treatment for this issue.

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