INTRODUCTION

The Internet is a modern communication tool, which basically can change and makes easier the ways of communication between people, it eliminates geographical barriers and shortens real distances. It serves as an inexhaustible source of information and knowledge about everything that people can look for. It represents an extremely rich source of information of various kinds, forms, content, veracity, prices and quality. It can be considered as the biggest market of goods, information and services (Záčok and Žačková, 2008). The Internet is fast becoming a basic feature of global civilization. Informative, convenient, and entertaining, the Internet has changed the ways people work and spend their leisure time (Tsai et al., 2009).

There was a time when the World Wide Web was considered as something unique, being accessible only to experts. Today the World Wide Web or the Internet is playing an important part in most people’s lives, and they incorporate it into their communication with other people. The Internet is used interchangeably with phones, mobiles and computers, and all of these communication tools are also used interchangeably with face-to-face contacts (Boase et al., 2006). The most important reason why the Internet has become such a successful tool is that it is fulfilling essential societal desires at the same time as it is helping us to develop the community and society by advancing the communication forward. There is an evident trend in using the Internet in the general population (e.g., Fallows, 2004) and more specifically the Internet is exceptionally important in the daily life of college students (Gordon et al., 2007). Use of the Internet as a resource for education enjoys near-universal support from students, parents, educators, and institutions (Kubey et al., 2001).
The Internet is becoming a mainstream medium that may soon be as pervasive as television, although the speed of its diffusion seems much faster. Like any major innovation, the Internet has elicited both fear and enthusiasm. Large-scale innovations always elicit resistance to change and preference for the status quo (Schumpeter, 1983). Many people still resist and resent the establishment of the Internet as a major communication tool in society. Others have embraced the Internet and have great expectations for it. In light of these opposing sentiments, one can delineate two grand scenarios about how the Internet will affect people’s relationships. The Internet pessimists fear the creation, or the accentuation, of a Kafkaian post-modern world plagued with anomie, neuroticism, loneliness and many other evils. This world resembles the scene in Nike TV ads, in which human beings ultimately become totally disconnected from their bodies and live only in virtual reality—the root scenario for many anti-technology movies like The Matrix. Along the same lines, critics of the Internet point out its paradoxical effect whereby the global village finally destroys local communities.

On the other hand, Internet optimists depict this technology as the ultimate connecting tool, enabling people living in isolated areas to communicate with the rest of the planet. It allows everybody to stay connected with their families and friends through email, chat, web cam technology, and other yet-to-be-developed technologies that will increase the realness of virtual communication. The Internet also provides new opportunities to meet people, and increases the efficiency and speed of so many transactions that it can save time for other activities—including face-to-face interaction (Coget et al., 2002). People might also engage in disclosure more easily because of the absence of physical cues (Sproull and Kiesler 1986, 1991), and this might enhance the richness of a relationship. Finally, the Internet can make communication easier and therefore increase the amount of communication overall (Malone and Rockart, 1991).
Since its increase in popularity, the Internet has gained momentum due to the attractive nature of its accessibility, affordability, and anonymity (Cooper, 1998). For twenty-four hours a day, it can be accessed as a tool to seek pleasure and instant gratification for a relatively low cost. Moreover, the ease of meeting one’s needs in the safety of the home is a seductive notion. As the popularity of the Internet increases, excessive use has been labeled a behavioral addiction (Griffiths, 2003).

It has been alleged by some academicians that excessive Internet use can be pathological and addictive and that it comes under the more generic label of technological addiction (e.g., Griffiths, 1996a, 1998, 2003). Technological addictions are operationally defined as non-chemical (behavioral) addictions that involve human–machine interaction. They can either be passive (e.g., television) or active (e.g., computer games), and usually contain inducing and reinforcing features which may contribute to the promotion of addictive tendencies (Griffiths, 1995). Technological addictions can be viewed as a subset of behavioral addictions (Marks, 1990) and feature core components of addiction, (i.e., salience, mood modification, tolerance, withdrawal, conflict and relapse (Griffiths, 1996b).

With minimally a screen, hard drive, and phone or cable line, one may shop, gamble, communicate, search for information, read newspapers and books, and live out sexual fantasies, all from the privacy of one’s home (Young, 2004).

The communication forums of the Internet are many and varied and include applications such as instant messaging, email, and chat rooms as well as Internet sites such as blogs, social networking sites, photo and video sharing sites such as YouTube, and virtual reality environments such as Second Life. Adolescents (Gross, 2004; Boneva et al., 2006) and young adults in college (Jones, 2002; Clark et al., 2004; Gemmill and Peterson,
2006) are heavy users of the Internet relative to the general population, and use it extensively for communication with peers.

The modern Internet has been presented as a combination of all previous communication technologies (Bargh and McKenna, 2004). Capable of simultaneously broadcasting vast amounts of information to a large number of individuals (much like television), the Internet can also provide an intimate venue for interpersonal conversation (much like the telephone). With these capabilities, the Internet has the potential to create a fundamental shift in how people communicate (Ross et al., 2009).

One reason for the deeper relationships observed through online activities is that a different set of rules govern online interactions. For example, Tidwell and Walther (2002) observed that online interactions generated more self-disclosures and fostered deeper personal questions than did face-to-face conversations. Without the types of restrictions that govern typical face-to-face conversations, those engaging in online conversations were more able to ask deep personal questions (e.g., asking about a person’s sexual orientation) without offending their conversation partner (Tidwell and Walther, 2002).

**USE AND ABUSE OF THE INTERNET**

The use of the Internet has increased considerably over the last few years. With this soaring number of Internet users, the problem of Internet addiction has attracted high attention from psychiatrists, educators and the public.

We all enjoy the benefits of the Internet, and for many of us it is also an indispensable tool for work, education, and communication. While time spent on the Internet can be hugely productive, for some people compulsive Internet
use can interfere with daily life, work and relationships. When you feel more comfortable with your online friends than your real ones, or you can’t stop yourself from playing games, gambling, or compulsively surfing, even when it has negative consequences in your life, then you may be using the Internet too much (Saisan et al., 2010).

The Internet is a worldwide decentralized network of computers that today has a far-reaching influence and may affect almost all aspects of our existence. In fact, the Internet has integrated so well into people’s lives that, for many, it is very difficult to imagine how they lived without it (Amichai-Hamburger and Vinitzky, 2010). Social life on the Internet initially comprised social tools, such as chat forums and newsgroups. Today it has developed many additional components, such as blogs, fantasy environments, and social networks (Amichai-Hamburger, 2005; Amichai-Hamburger and Barak, 2009).

Internet abuse is defined as using the Internet for any purpose that leads to distress or impairment in one’s life. There is a growing consensus that certain applications, rather than the Internet as an entity, are conducive to abuse (Griffiths, 2000b; Bell, 2007; Yen et al., 2007). The Internet is abused in myriad ways with various applications (Young, 1999b; Davis, 2001). It may be helpful to determine first whether an individual abuses the Internet for non-sexual purposes (gaming, web surfing, etc.) or sexual purposes. This distinction is useful because the Internet has a plethora of applications that can be abused and often is used as an outlet for sexuality. Cooper (2004) has labeled the factors that make the Internet such an attractive outlet for sexuality the Triple A Engine: accessibility, affordability, and anonymity. Others have highlighted convenience and escapism (Young, 1999a; Morahan-Martin and Schumacher, 2000).
Researchers have pointed out physical and psychological risks associated with the use of the Internet (Brenner, 1997; Kraut et al., 1998; Greenfield, 2000; Griffiths, 2000 b). Abuse of the Internet may be correlated with psychological impairment including social withdrawal/ alienation, dysfunction in interpersonal and romantic relationships, and loss of occupational/educational productivity (Greenfield, 2000). Many people turn to the Internet in order to manage unpleasant feelings such as stress, loneliness, depression, and anxiety. When you have a bad day and are looking for a way to escape your problems or to quickly relieve stress or self-soothe, the Internet can be an easily accessible outlet. Losing yourself online can temporarily make feelings such as loneliness, stress, anxiety, depression, and boredom evaporate into thin air (Saisan et al., 2010).

The anonymous status on the internet (Skinner et al., 2003; Umefjord et al., 2003) the diversity and the importance of accessible data (Cline and Haynes, 2001) seem to partially explain this success. Despite that such interactions are purely text-based conversations, the exchange of words empower a deep psychological meaning as intimate bonds are quickly formed among on-line users. In Cyberspace, social convention of rules of politeness are gone, allowing personal questions about a person's marital status, age, or weight to be asked upon an initial virtual meeting. The immediacy of such open and personal information about oneself fosters intimacy among others in the community. Upon a first meeting, an on-line user can tell a complete stranger about his personal life - leaving him feeling dose. Through this immediate exchange of personal information, one can easily become involved in the life of others who they have never met - almost like watching a soap opera and thinking of the characters as real people. As they become more involved in the virtual group, Dependents were able to take more emotional risks by voicing controversial opinions about religion, abortion, or other value laden issues. In real life, Dependents were unable to express these opinions
to their closest confidants or even their spouses. However, in Cyberspace, they felt free to express such opinions without fear of rejection, confrontation, or judgment since the presence of others was less readily available and their own identities were well masked (Young, 1997c).

Creating a persona through a fictitious handle allows one to transform himself mentally into a new person on-line. Most times, an on-line persona is a paradox of one's real life. Beyond amusement, reinventing oneself is also a way to fulfill an unmet need. The loss of a social identity on-line allows one to reconstruct an "ideal self" in place of a poor self-concept. This "ideal self" becomes a secret life carried out in the confidential surroundings of Cyberspace. Those who suffer from low self-esteem, feelings of inadequacy or frequent disapproval from others are at the highest risk for developing a secret on-line identity. Such negative self-concepts lead to clinical problems of depression and anxiety, which also may be intertwined with excessive net use and manipulated self-presentations. When asked about the main attractions of using these direct dialogue features, 86% of Dependents reported anonymity, 63% accessibility, 58% security, and 37% ease of use (Young 1997a).

The potential for misuse and inappropriate and excessive use of certain computer applications has led to the expression of concerns related to the psychological and behavioral impact of the Internet on individuals. We find reference in media reports referring to complaints from commercial enterprises of email and Internet use leading to inefficiencies and reduced productivity, termination of employment or prosecutions resulting from the access to illegal/inappropriate websites, parental complaints related to children and adolescents becoming socially withdrawn and secluded through excessive time spent on computers, and educators and health professional
concerned about the impact of computer usage on education and the physical health and obesity levels (Blaszczynski, 2006).

The concept of human – machine technological addiction, it is argued, is a natural extension of behavioral or non-chemical group of addictions containing the core elements defining addiction including neuro-adaptation, salience, mood modification, tolerance and withdrawal, conflict and relapse (Griffiths, 1996; Holden, 2001). There is a further presumption that negative consequences associated with excessive computer and Internet activity such as social withdrawal and isolation occurs as a manifestation of impaired control over Internet use.

In 2005, America Online's survey of more than 4000 people found that 25% could not go without email for more than three days, 41% checked email first thing in the morning, 60% checked email on vacation, 47% checked personal email at work, and 77% had more than one account. They referred to “an obsessive-compulsive need to check it morning, noon and night”. Civin (2000) claimed that the Internet is a communication technology that has changed how people relate to one another.

As the Internet increasingly becomes part of our lives, Internet addiction disorder has received much attention. Internet addicts may withdraw from social and interpersonal interactions other than those on the Internet. Their family relationships and academic or occupational functioning may deteriorate. Several withdrawal symptoms have been identified, including nervousness, agitation, and aggression, as well as an addiction syndrome that includes the presence of withdrawal symptoms, increasing tolerance, and loss of control (Mitchell, 2000). A high rate of co-morbid mental disorders has also been reported, especially depressive symptoms and social impairment (Kraut et al., 1998; Shapira et al., 2000).
The amount of time kids spend online is a source of frustration for many parents. Initially, parents welcomed the Internet into their homes, believing they were opening up an exciting new world of educational opportunities for their children. However, many parents soon realized that, instead of using the Internet for homework or research, their kids were spending hours instant messaging with friends, playing online games or talking to strangers in chat rooms. Children and young people can easily become "hooked" on online activities such as multi-user games, instant messaging, pornography and chat rooms. The most vulnerable children, according to the Computer-Addiction Services at Harvard Medical School, are those who are "lonely and bored or from families where nobody is at home to relate to after school." Children who are unpopular or shy with peers are often attracted to the opportunities for creating new identities in online communities. Boys, in particular, are frequent users of online role-playing games, where they assume new identities and interact with other players. Although playing these games with thousands of other users may appear to be a social activity, for the introverted child or teen, excessive playing can further isolate them from friends and peers (Gaon, 2007).

NEGATIVE EFFECTS OF EXCESSIVE INTERNET USAGE

Excessive Internet usage may cause individuals to have difficulty in their social networks. Internet addicts must work hard to maintain an illusion of normalcy to the outside world. Addicts will hide their usage from others, changing their behaviors in order to get the time that they need on the Internet. An addict can spend up to 80 hours per week on the Internet. In order to facilitate these prolonged hours, the user may forego sleep or begin taking caffeine pills in order to stay awake. Loss of sleep can leave users susceptible to fatigue and illness as well as impair their ability to be effective
in their daily life. Other health risks may include a sedentary lifestyle and increased risk for carpal tunnel syndrome (Young, 2004).

Eventually the addiction will become noticeable to those who are close to the addict, no matter how the user attempts to hide their usage. The individual will become increasingly asocial, and when social encounters do occur, the user may manifest tension and fatigue. These symptoms may occur due to the user’s intense need to fulfill the craving to be on the Internet. The need to be on the Internet becomes less about being on the computer and more about using it as a tool to find a means of escape or to cope with life stress (Young, 2004).

Using the Internet as a means of escape and coping is currently not as stigmatized as other addictive behaviors. For example, there are ongoing campaigns and public service announcements to educate the public about excessive drug and alcohol abuse but no warnings about excessive Internet usage. Connectedness to the outside world via the Internet is the norm, considering the public is inundated with new and better technology such as cell phones and personal digital assistants that allow people to get onto the Internet virtually anywhere. Because the Internet has not been thought of as a high threat, research around Posttraumatic Stress Disorder clients using the Internet is not well researched.

Internet addiction is a behavioral addiction and not a substance addiction and is not necessarily regarded with the same amount of seriousness. Because of the previously held belief that only a foreign substance could create chemical changes and dependencies in the brain, substance addiction has been considered far more harmful than behavioral addictions (Martin and Petry, 2005). However, both substance and behavioral addictions have the power to create behavioral, neurobiological
and psychological changes in the individual, making all types of addictions detrimental (Bradley, 1990; Holden, 2001; Martin and Petry, 2005).

The hallmark consequence of substance dependence is the medical implication involved, such as cirrhosis of the liver due to alcoholism, or increased risk of stroke due to cocaine use. However, the physical risk factors involved with an addiction to the Internet are comparatively minimal yet notable. While time is not a direct function in defining Internet addiction, generally addicted users are likely to use the Internet anywhere from forty to eighty hours per week, with single sessions that could last up to twenty hours. To accommodate such excessive use, sleep patterns are typically disrupted due to late night log-ins. The patient typically stays up past normal bedtime hours and may report staying on-line until two, three, or four in the morning with the reality of having to wake for work or school at six a.m. In extreme cases, caffeine pills are used to facilitate longer Internet sessions. Such sleep deprivation causes excessive fatigue often making academic or occupational functioning impaired and may decrease one’s immune system, leaving the patient vulnerable to disease. Additionally, the sedentary act of prolonged computer use may result in a lack of proper exercise and lead to an increased risk for carpal tunnel syndrome, back strain, or eyestrain. While the physical side-effects of utilizing the Internet are mild compared to chemical dependency, addictive use of the Internet will result in similar familial, academic, and occupational impairment.

1. Familial Problems

Young (1996) found that serious relationship problems were reported by fifty-three percent of Internet addicts surveyed. Marriages, dating relationships, parent-child relationships, and close friendships have been noted to be seriously disrupted by "net binges." Patients will gradually spend less time with people in their lives in exchange for solitary time in front of a
Loved ones first rationalize the obsessed Internet user’s behavior as "a phase" in hopes that the attraction will soon dissipate. However, when addictive behavior continues, arguments about the increased volume of time and energy spent on-line soon ensue, but such complaints are often deflected as part of the denial exhibited by the patients. Similar to alcoholics who will try to hide their addiction, Internet addicts engage in the same lying about how long their Internet sessions really last or they hide bills related to fees for Internet service. These same characteristics create distrust and over time will hurt the quality of once stable relationships.

2. Academic Problems

The Internet has been touted as a premiere educational tool driving schools to integrate Internet services among their classroom environments. However, one survey revealed that eighty-six percent of responding teachers, librarians, and computer coordinators believe that Internet usage by children does not improve performance (Barber, 1997). Respondents argued that information on the Internet is too disorganized and unrelated to school curriculum and textbooks to help students achieve better results on standardized tests. To further question its educational value, Young (1996) found that fifty-eight percent of students reported a decline in study habits, a significant drop in grades, missed classes, or being placed on probation due to excessive Internet use.

Although the merits of the Internet make it an ideal research tool, students surf irrelevant web sites, engage in chat room gossip, converse with Internet pen pals, and play interactive games at the cost of productive activity.
3. Occupational Problems

Internet misuse among employees is a serious concern among managers. One survey from the nation's top 1,000 companies revealed that fifty-five percent of executives believed that time spent surfing the Internet for non-business purposes is undermining their employees' effectiveness on the job (Robert Half International, 1996).

Dangers of the Internet addiction are also described by Bobrowicz (2003). The author offers names and characteristics:

1. One of the most commonly mentioned addictions is *being on the net*. The user spends more and more time in the virtual world and their social interaction within traditional social interactions becomes non-existent. Children and adolescents are particularly vulnerable to the addiction; they can neglect their learning and even their physiological needs (sleeping, eating) in the most extreme cases. People who suffer from problems with social interaction are most frequently affected.

2. Another danger described by the author is **free access to all types of anti-social contents**, which have a demoralizing effect on the youngest Internet users in particular. Most commonly these are pornography (especially child pornography), contents propagating destructive religious sects, fascism, etc.

3. A considerable number of young Internet users form a special **Internet subculture** called cyberpunk, which has their own language and a special code of values. Their most distinguishing feature is a peculiar anarchism – striving for unconditional freedom on the Internet – attempts to abolish all censorship on the Internet, facilitation of the free flow of information, often with disregard to the problem of intellectual
property. This subculture is often a breeding ground for the so-called hackers, computer networks experts who perceive hacking into computer network security systems (often purely to satisfy their ambition) and stealing information as their greatest challenge.

4. An important aspect of using the cyberspace is the **creation of a special language**, full of abbreviations and simplifications. On the other hand, as online communication lacks direct contact, emotions expressed otherwise with facial expressions or gestures are replaced with special signs created on the basis of the keyboard characters set. These are the so-called emoticons, also known as smileys.

Internet Addiction is related to neglect of other life areas, and is known to result in decreased work productivity and family time, strained relationships, decreased communication within the family, decreased sleeping time, reduced quality of meals, a narrowing range of interests, and the development or exacerbation of mental health problems (Young, 1998 a; Shapira et al., 2000; Nalwa and Anand, 2003; Beard, 2005). When students’ grades drop because of an excessive amount of time spent surfing the web or when students avoid early morning classes because they have not gotten enough sleep, IA can lead to failure in academic areas (Chou et al., 2005).

Related physical impairments are mostly mild to moderate, including dry eyes, blurred vision, sleep deprivation, fatigue, and musculoskeletal discomfort or pain (Chou, 2001). A “marathon” online-gaming session was implicated in the death of a 28-year-old man (BBC News, 2005). After a series of 10 cardiopulmonary-related deaths in Internet cafes (Choi, 2007) and a game-related murder (Koh, 2007), South Korea considers Internet Addiction, one of its most serious public health issues.
Harmful Effects of Online Communication

1. Interacting with strangers: Despite educational efforts that target even the very young not to do so, numerous people engage in talk with other persons whom they do not even know (Berger and Calabrese, 1975). In this process they tend to reveal personal information and ask questions, manipulate the environment, and even tap into targets’ social networks in order to acquire personal information about one another (Berger et al., 1976; Cline and Musolf, 1985).

2. Questionable identity presentation: There are cases in which people make up entirely fictitious identities face-to-face. More chronic, however, are the partial and strategic self-presentations by which people conceal aspects of themselves while enacting other, situationally-demanded affectations. According to Hogan et al. (1985), success at intimidating or seducing others through communicative actions is linked to personal and species survival. Almost a decade of research in social psychology focused on Snyder’s (1974) construct of “self-monitoring,” including its sub dimension, “acting ability.” Clearly most people are not presenting themselves in their most unguarded, unmanipulated, and nonstrategic fashion, when they talk to one another face to face.

3. Deception: While a common fear about the Internet is that it makes it easy to lie to people online, apparently people find little difficulty prevaricating without the Internet. In a study—predating Internet—Turner et al. (1975) asked participants to log their conversations, then code them regarding honesty; approximately two-thirds of their conversations were admittedly less-than-honest. According to a review by Burgoon et al. (1996), motivations to deceive “have to do with basic needs, affiliation, cognitive consistency, and entertainment.” As long as
these basic, healthy needs are addressed through face-to-face communication, we should fear that this medium will be used for deception as it appears to have historically been.

4. Sexual deception and coercion: It is widely reported that individuals use speech to deceive prospective sexual partners about their intents or their marital status in order to foster sexual activity. Indeed, there are cases in which partners who are in committed relationships nevertheless use talk to deny such a commitment, or to fool and make false promises to sexual conquests using talk. More recently, scholars are examining the dynamics of sexual coercion (Spitzberg, 1998) and patterns of communication typifying obsessional intrusion and stalking, much of which takes place through telephones but much of which emanates from face-to-face relationships (Cupach and Spitzberg, 1998).

5. Flaming: An alarming degree of verbal abuse has been noted in talk. While insulting, name-calling, and swearing, tend to be over-reported activities as relate to computer-mediated communication (Walther et al., 1994) there is evidence that its face-to-face analogue, verbal abuse, is rampant in face-to-face interaction. Particularly troubling is its presence in intimate relationships (Yelsma, 1995). Clearly, verbosity and the purposes to which talk is put are undermining some of the most important social institutions in many individuals' lives.

As the popularity of the internet, particularly adult web sites, increases, clinicians are faced with clients entering therapy for problems associated with the use of the internet. Whereas this media can be facilitative in many aspects (Newman, 1997; Cooper et al., 1999; Grohol, 1999), some individuals are unable to control the time and content of internet usage (Shaw, 1997; Collins, 1999; Cooper et al., 1999). In turn, this may interfere with their
social, occupational, and personal lives, and consequently, in some cases, bring them to therapy. Some attention is given in the literature to these aspects, especially as researchers and clinicians encounter more individuals who identify internet usage as a problem in their lives (Cooper et al., 2000). Almost all of this attention is from the perspective of the individual and focuses on how misuse of the internet affects an individual’s interpersonal skills (including intimacy), interference in occupational settings, and negative effects on relationships (Cooper et al., 2000; Young et al., 2000).

With the anonymity provided by the internet, people may be more inclined to share intimate ideas, feelings, and secrets that are normally reserved for a primary, long-term relationship. Such sharing may also be done at an accelerated pace compared to non-internet relationships. In terms of convenience, an individual is able to find someone else with similar interests at any given time on the internet. Internet sites operate nearly continuously making it easy to pursue sexual interests at any time. Finally, the internet provides an alternate reality that individuals create. For example, someone who is normally reserved can enter a world where they are outgoing and desired by many people.

**REASONS FOR THE POPULARITY OF INTERNET**

In the past, people reported to have an Internet addiction disorder were stereotyped as young, introverted, socially awkward, computer-oriented males. While this stereotype may have been true in the past, the availability of computers and the increased ease of access to the Internet are quickly challenging this notion. As a result, problematic Internet use can be found in any age group, social class, racial or ethnic group, level of education and income, and gender.
Does the nature of the Internet make itself addictive? Greenfield (1999a) states that the unique qualities of the Internet contribute to the potential for Internet addiction specifically its speed, accessibility, intensity of information accessed online, and the potency (stimulation) of its content. In Chou’s study (2001), 83 heavy Internet users were interviewed and reported that the Internet features they most appreciated included interactivity, ease of use, availability, and breadth of information accessed online. Interactivity has two aspects: human–computer and interpersonal.

Most Internet applications such as the WWW are simple to use, and thus enhance human–computer interactions; furthermore, some applications, such as chat rooms and email, are especially good at facilitating interpersonal interactions. Availability means easy, low-cost access for users. Abundant and rapidly updated information is another major feature that attracts users to participate online. The diversity of ideas, subjects, attitudes, and opinions presented on the Internet continuously changes users’ perspectives.

Indeed, the popularity of the Internet is increasing. In addition to ease of access and low cost, the Internet’s continuously expanding bandwidth continues to deliver multimedia resources in greater amounts and higher quality. The development of friendlier interfaces allows even those with low network literacy to use the Internet more easily and comfortably.

If we understand the Internet as a kind of mass medium, then the possibility surfaces that the Internet is in the process of replacing or substituting for a part of traditional media (e.g., television, radio, newspapers, magazines, books, and so on) (Chou, 2001). Grohol (1999) suggests that societal acceptance and promotion of the Internet must also be considered. If most of the information we need in our daily lives (e.g., from mass media) can be easily and cheaply obtained from the Internet, and if activities (e.g., writing letters, making phone calls) can also be carried out from the Internet, then it is
no leap to predict that more and more people will spend more and more time online.

Young (1998a) stated that the Internet itself is not addictive, but specific applications embedded within interactive features play a significant role in the development of pathological Internet use. Morahan-Martin (1999) asserts the ability to change identity online is a liberating experience because you can change the way you are perceived by trying out different ways of presenting yourself and interacting with others.

Some researchers have found that the anonymity offered by the Internet can provide a beneficial effect for some individuals. The lack of face-to-face interaction can produce a beneficial “disinhibition effect” that decreases social anxiety and shyness. The Internet can therefore be used to dispel loneliness, gain emotional support, promote intimacy, make friends, and build self-confidence and social skills (Morahan-Martin and Schumacher, 2003).

Young et al. (2000) pointed out that specifically, anonymity was associated with four general areas of dysfunction:

1. Encouraged deviant, deceptive, and even criminal acts such as viewing and downloading obscene images (e.g., pedophilia, urination, or bondage fantasies) or illegal images (e.g., child pornography) widely available on adult web sites. It should be noted that the evidence indicates that clients who entertained deviant sexual fantasies involving children and adolescents did not attempt to contact children or adolescents beyond the Internet. Researchers suggested that the existence of deviant fantasies did not necessarily equate with or reliably predict that the sexual molestation of children will occur or has occurred. The behavior began out of curiosity and soon became an
obsession. In cases of Cyber-sexual addiction, sex offender psychotherapy was offered to reduce potential risk.

2. Provided a virtual context that allowed overly shy or self-conscious individuals to interact in a socially safe and secure environment. Over-reliance upon on-line relationships resulted in significant problems with real life interpersonal and occupational functioning. In such cases, cognitive-behavioral and interpersonal psychotherapy techniques were applied in to reduce avoidant behavior and to enhance social skills.

3. Interactive components of the Internet facilitated cyber-affairs or extramarital relationships formed on-line that negatively impacted marital or family stability, primarily leading to separation and divorce. Individual and marital therapy and family therapy were used when couples worked towards reconciliation after the online infidelity.

4. The ability to develop alternative online personas, dependent upon a user’s mood or desires, that provided a subjective escape from emotional difficulties (e.g., stress, depression, anxiety) or problematic situations or personal hardships (e.g., job burnout, academic troubles, sudden unemployment, marital discord). The immediate psychological escape found within the "fantasy" on-line environment served as a primary reinforcement for the compulsive behavior. Underlying mood disorders and psychosocial issues were treated with psychotherapy and pharmacological interventions as appropriate.

Suler (2004) studied how the online disinhibition effect encourages individuals to reveal personal details or "act out" in ways that they might be reluctant to in daily life. The effects were divided into “benign” and “toxic” disinhibition. He described how “disassociative anonymity” permits individuals to segregate their daily lives from their online activities, while “invisibility”
gives people the “courage to go places and do things that they otherwise wouldn’t” (Suler, 2004). The minimization of status and authority means “what mostly determines the influence on others is one’s skill in communicating (including writing skills), persistence, the quality of one’s ideas, and technical know-how.”

Another issue that has risen to the surface is that online anonymity can foil criminal investigations. There is a growing perception that the Internet is “the perfect communication tool for terrorists” (Rowland, 2003). In addition, anonymity is used by online predators to establish contact with and gain the confidence of children.

Because cyberspace does not offer a means to monitor others non-verbal responses to one’s communications, several unconscious, firmly held expectations about communications protocols are challenged (Huang and Alessi, 1996). A critical factor in understanding how text based interpersonal relationships can lead some people to experience pathological consequences is the disinhibiting effect inherent in on-line interactivity. The improbability of any local, real life repercussions for on-line social activity produces a new and poorly understood psychological phenomena; people feel free to express themselves in an unrestrained manner. "If all computer-mediated communication systems can be said to have one single unifying effect upon human behavior it is that usage tends to cause the user to become less inhibited." (Reid, 1994). Judgments of others in this virtual social setting, made without the normal sensual clues, can consist of distorted, emotionally laden projections (King, 1995), and can be communicated without the normal constraints imposed by the need to maintain social order. This is a naturally exciting, stimulating and reinforcing aspect of Internet communications, one that contributes to the occurrence of Internet Addiction Disorder.
Internet communication increases the range of possible social networks that a person can connect to, and adds elements of diversity that are very appealing to some (Wellman, 1996).

Another component of the model, feedback, suggests that these heightened self-presentations and idealized perceptions magnify each other to a super ordinal level, as users reciprocate each other's partial and selective presentations (Walther, 1996).

The attributes of Internet communications that stand out as offering the potential for rewarding, stimulating emotional involvement's include; it's ease of access and 24 hour availability, the wide range of diverse personal connections possible, the hyper-personal nature of interpersonal relationships, the ability to witness others interacting (with no risk) and the uninhibited nature of no risk relating. It is reasonable to assume that many people will find one or more of these factors reinforcing enough to become passionate about their Internet activities, at least for the initial period of time when they are still discovering the capabilities of new Internet social connections. These factors are necessary, but not sufficient, to explain true pathologic computer use. Some additional qualities inherent in the user must be present that differentiate those for whom Internet communications are a passionate past-time from those for whom this activity becomes a compulsion resulting in loss. The passion possible is understandable, as virtual community involvements dissolve geographic boundaries and expand the ability of people with common interests to share ideas important to them. However, the nature of addiction is to continue to pursue the initial excitement one received, at the risk of other social involvements and responsibilities.
THE NATURE OF INTERNET USERS

In addition to examining the Internet itself and its contents, it is also important to examine what user’s needs are, and how the Internet meets those needs. Suler (1999) argues that understanding such needs can illuminate how and why some people become pathologically involved with the Internet. The six needs he identifies include the need for (1) sex, (2) an altered state of consciousness, (3) achievement and mastery, (4) belonging, (5) relationships, and (6) self-actualization and the transcendence of self.

1. Sex is always a popular topic in mass media; sex on the Internet—“cybersex” or “net sex”—is no exception. Suler (1999) claims that people become preoccupied with online sexual activities for the same two basic reasons people exhibit obsessive behavior regarding sex in any context: satisfaction of biological needs, and satisfaction of a variety of purely psychological and social needs. Morahan-Martin and Schumacher (2000) report that pathological users are more likely than others to use the Internet’s adults-only resources. Young (1997a) also suggests that sexual fulfillment is one of the potential explanations for pathological Internet use.

2. The Internet also seems to have the ability to fulfill users’ needs for achievement and mastery. Suler (1999) claims that for many users who enjoy mastering the various technical features of software applications, computers and networks offer a motivating and rewarding cycle of challenge, experimentation, mastery, and success. Kandell (1998) also works with the concept of users’ desire to exercise control over the computer and the Internet.

3. Suler’s (1999) notion of the need for an altered state of consciousness is akin to Young’s (1997b) concepts of unlocked
personalities and creating online persona. Suler argues that people have an inherent need to alter their consciousness, to experience reality from different perspectives, and that cyberspace may be a new and important arena in which to satisfy that need. For example, one’s sense of time, space, and personal identity can be changed on the Internet. Moreover, online personas, according to Young, offer individuals an outlet for experimenting with accessing different parts of their personality, and allowing individuals to expand the range of emotions experienced and expressed toward others. Morahan-Martin (1999) also believes that the ability to change oneself online—an ability enhanced by the Internet—can be liberating.

4. Chou and Hsiao’s study (2000) found that the addicted group’s pleasure experience scores were higher than those of the non-addicted group. Morahan-Martin and Schumacher (2000) report similar findings: the Internet provides a place to relax, escape pressures, and seek excitement.

5. The need to belong and the need for relationships. Everyone needs interpersonal contacts, social recognition, and a sense of belonging to live healthy and balanced lives. Young (1997a) also provides an explanation of online “social support” for Internet addiction. She claims that social support is formed by groups of people who engage in regular computer-mediated communication with one another over extended periods of time. With routine or frequent visits to a particular newsgroup, chat room, or Bulletin Board System, familiarity and a sense of belonging can be established. As Morahan-Martin (1999) observed, the more time users spend online, the more likely they are to use the Internet for emotional support, meeting new people, and interacting with others.
6. “Anonymity” and the “interactivity” of online interpersonal communications. Young et al. (1999) suggest that anonymity is associated with four general areas of dysfunction. Among them, two are interpersonal, the first being that the Internet provides a virtual context in which overly shy or self-conscious individuals are allowed to interact in a socially safe and secure environment. However, overdependence on online relationships may result in significant problems with real-life interpersonal and occupational functioning. The second dysfunction involving the anonymity of the Internet is cyber-affairs or extramarital relationships formed online that negatively impact marital or family stability.

Another leading factor underlying pathological Internet use is “interactivity,” which has two aspects of particular importance: human–computer interactions and human–human interactions.

DEFINING INTERNET ADDICTION

A passion adds value to one’s life, an addiction takes away value. When the line between these two is crossed, the addict is often the last to know, due to their denial. A family and social history will reveal that the subject is being evaluated by close friends as actually suffering a great loss from their activity (King, 1995).

Historically, addiction has been defined as physical and psychological dependence on psychoactive substances (for example alcohol, tobacco, heroin, caffeine and other drugs) which cross the blood-brain barrier once ingested, temporarily altering the chemical milieu of the brain. Addictive behaviors often act as a lubricant to cope with missing or unfulfilled needs which arise from unpleasant events or situations in one’s life. That is, the behavior itself momentarily allows the person to "forget" problems. In the short
term, this may be a useful way to cope with the stress of a hard situation, however, addictive behaviors used to escape or run away from unpleasant situations in the long run only end up making the problem worse. For example, an alcoholic who continues to drink instead of dealing with the problems in marriage only makes the emotional distance wider by not communicating with one’s spouse (Young, 1999).

Bratter and Forest (1985) define addiction as "a behavior pattern of compulsive drug use characterized by overwhelming involvement...with the use of a drug and the securing of the supply, as well as the tendency to relapse after completion of withdrawal." Like all other addictions, Internet addiction is a psycho-physiological disorder involving tolerance (the same amount of usage elicits less response; increased amounts become necessary to evoke the same amount of pleasure), withdrawal symptoms (especially, tremors, anxiety, and moodiness), affective disturbances (depression, irritability), and interruption of social relationships (a decline or loss, either in quality or quantity).

While many believe the term addiction should only be applied to cases involving the ingestion of a drug (Walker, 1989; Rachlin, 1990), similar criteria have been applied to a number of problem behaviors such as eating disorders (Lacey, 1993; Lesieur and Blume, 1993), pathological gambling (Griffiths, 1990, 1991; Mobilia, 1993), computer addiction (Shotton, 1991) and video game addiction (Keepers, 1990). Today, among a small but growing body of research, the term addiction has extended into the psychiatric lexicon that identifies problematic Internet use associated with significant social, psychological, and occupational impairment (Brenner, 1996; Egger, 1996; Thompson, 1996; Young, 1996; Griffiths, 1997; Morahan-Martin, 1997; Scherer, 1997). Currently, there is no standardized definition of Internet abuse. In fact, a discussion has arisen regarding whether
Internet “addiction” exists and, if it does, how it should be viewed in relation to other disorders (Shaffer, 2002). Various nomenclatures include: Internet Addiction (Young, 1999b), Internet Addiction Disorder (Goldberg, 1996), Internet Dependency (Wang, 2001), Problematic Internet Use (Caplan, 2002), Pathological Internet Use (Davis, 2001), and Internet Abuse (Fortson et al., 2007). Yet, critics posit that Internet addiction is a creation of the psychological and psychiatric professions (Eppright et al., 1999).

In some respects, addictive use of the Internet resembles other so-called "process" addictions, in which a person is addicted to an activity or behavior (including gambling, shopping, or certain sexual behaviors) rather than a substance (mood-altering drugs, tobacco, food, etc.). People who develop problems with their Internet use may start off using the Internet on a casual basis and then progress to using the technology in dysfunctional ways. Many people believe that spending large amounts of time on the Internet is a core feature of the disorder. The amount of time by itself, however, is not as important a factor as the ways in which the person's Internet use is interfering with their daily functioning. Use of the Internet may interfere with the person's social life, school work, or job-related tasks at work. In addition, cases have been reported of persons entering Internet chat rooms for people with serious illnesses or disorders, and pretending to be a patient with that disorder in order to get attention or sympathy. Treatment options often mirror those for other addictions. Although only a limited amount of research has been done on this disorder, the treatments that have been used appear to be effective.

Internet addiction disorder made its first significant appearance in the U.S. press in 1995, when an article entitled “The Lure and Addiction of Life On Line” was published in the New York Times. O’Neill, the article writer, quoted addictions specialists and computer industry professionals and likened excessive Internet use to compulsive shopping, exercise, and gambling
Addictive Internet use is defined as "an impulse control disorder that does not involve an intoxicant" and akin to pathological gambling (Young, 1998a). Internet addicts exhibit signs like preoccupation with the Internet (i.e., thoughts about previous online activities or anticipation of the next online session); use of the Internet in an increasing amount of time in order to achieve satisfaction; repeated, unsuccessful efforts to control, cut back or stop Internet use; feelings of restlessness, moodiness, depression or irritability when attempting to cut down use of the Internet; staying online longer than originally intended; jeopardizing or risking loss of significant relationships, job, educational or career opportunities because of Internet use; lying to family members, therapists or others to conceal the extent of involvement with the Internet; and using the Internet as a way of escape from problems or to relieve a dysphoric mood, e.g. feeling of restlessness, moodiness, depression or irritability when attempting to cut down use of the Internet; staying online longer than originally intended; jeopardizing or risking loss of significant relationships, job, educational or career opportunities because of Internet use; lying to family members, therapists or others to conceal the extent of involvement with the Internet; and using the Internet as a way of escape from problems or to relieve a dysphoric mood, e.g. feeling of hopelessness, guilt, anxiety, and depression (Young, 1999a).

Hall and Parsons (2001) believe that Internet Behavior Dependence is a correctable, benign condition, and "compensate(s) for a lack of satisfaction in other areas of life." Worldwide incidence of the disorder has been estimated
at 6% to 14% of online users, with no specific age group or gender predominantly affected (DeAngelis, 2000). Problematic use has been conceptualized by different researchers and clinicians as an impulse control disorder (ICD), an impulse control disorder not otherwise specified (ICD-NOS), an addiction akin to a substance abuse disorder, a type of behavioral addiction, and simply problematic use rather than a form of dependency (Mitchell, 2000; Griffiths, 2000b; LaRose et al., 2003; Shapira et al., 2003; Young, 2004).

Internet addiction disorder is not listed in the mental health professionals' handbook, the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition, text revision (2000), which is also called the *DSM*. Internet addiction has, however, been formally recognized as a disorder by the American Psychological Association. As early as in 1976, the year after the Internet came into being, the American Psychological Association (APA) had anticipated that the Internet would potentially lead to addictive behavior among users. The psychology community was asked to develop policy guidelines for counseling persons who may become addicted to the Internet (APA, 1976). Compared to other known forms of addictions such as gambling and alcohol, public awareness about Internet addiction is still in its stage of infancy. However, a number of specialists have studied the Internet addiction problem and have offered a number of definitions and reasons for the behavior.

Young (2011) defines Internet addiction is as any online-related, compulsive behavior which interferes with normal living and causes severe stress on family, friends, loved ones, and one's work environment. Internet addiction has been called Internet dependency and Internet compulsivity. By any name, it is a compulsive behavior that completely dominates the addict's life. Internet addicts make the Internet a priority more important than family,
friends, and work. The Internet becomes the organizing principle of addicts' lives. They are willing to sacrifice what they cherish most in order to preserve and continue their unhealthy behavior.

**DIAGNOSING INTERNET ADDICTION**

To be diagnosed as having Internet Addiction Disorder, a person must meet certain criteria as prescribed by the **American Psychiatric Association**. Three or more of these criteria must be present at any time during a twelve month period:

1. **Tolerance:** This refers to the need for increasing amounts of time on the Internet to achieve satisfaction and/or significantly diminished effect with continued use of the same amount of time on the Internet.

2. **Two or more withdrawal symptoms** developing within days to one month after reduction of Internet use or cessation of Internet use (i.e., quitting cold turkey), and these must cause distress or impair social, personal or occupational functioning. These include: psychomotor agitation, i.e. trembling, tremors; anxiety; obsessive thinking about what is happening on the Internet; fantasies or dreams about the Internet; voluntary or involuntary typing movements of the fingers.

3. **Use of the Internet** is engaged in to relieve or avoid withdrawal symptoms.

4. The Internet is often accessed more often, or for longer periods of time than was intended. A significant amount of time is spent in activities related to Internet use (e.g., Internet books, trying out new World Wide Web browsers, researching Internet vendors, etc.).
5. Important social, occupational, or recreational activities are given up or reduced because of Internet use.

6. The individual risks the loss of a significant relationship, job, educational or career opportunity because of excessive use of the Internet.

In recent research, Egger and Rauterberg (1996) identified some other characteristics viz. feelings of restlessness or irritability when attempting to cut down or stop Internet use. The second is that the Internet is used as a way of escaping problems or relieving feelings of helplessness, guilt, anxiety or depression. The third characteristic is that the user lies to family members or friends to conceal the extent of involvement with the Internet. And, finally, the user returns repeatedly despite excessive fees.

Young (1996a) addressed the question of whether or not the Internet can be addictive, and the extent of problems associated with its misuse. She was the first person to link excessive Internet use to a DSM-IV diagnosis. According to her, excessive Internet use was most closely associated with behavioral impulse-control disorders as defined in the DSM-IV. Since, pathological gambling was viewed to be the closest in nature to pathological Internet use, the DSM-IV criteria for pathological gambling was modified to develop an eight-item questionnaire for diagnosing internet addiction. Participants who answered yes to five or more of the eight criteria were classified as addicted to the Internet (i.e., dependents).

Further, Young (1996a) pointed out that dependents spent more time online (38.5 h per week) compared to non-dependents (4.9 h per week), and mostly utilized the more interactive functions of the Internet, such as
chat rooms and forums. Dependents also reported that their Internet use caused moderate to severe problems in their family, social and professional lives. Young concluded that (a) the more interactive the Internet function, the more addictive it is, and (b) while normal users reported little negative effects of Internet use, dependents reported significant impairment in many areas of their lives, including health, occupational, social and financial.

Young’s (1996a) Diagnostic Criteria for Internet Addiction

1. **Preoccupation**: One thinks constantly about previous online activity or keeps looking forward to the next online session. Some people crave time on the Internet the way a smoker craves a cigarette.

2. **Increased use**: One needs to spend increasing amounts of time online to achieve satisfaction.

3. **Inability to stop**: One can't cut back on your Internet use, even after several attempts. Some people can't stop visiting chat rooms while at the office, even though they know their bosses are monitoring the sites they visit.

4. **Withdrawal symptoms**: One feels restless, moody, depressed, or irritable when you attempt to stop or cut down Internet use.

5. **Lost sense of time**: Everyone lets time slip by occasionally while on the Internet. Consider it a problem if it happens to you consistently when you’re online and you’re also experiencing some of the other symptoms on this list.

6. **Risky behaviors**: One jeopardizes a significant relationship, job, or educational or career opportunity because of Internet use.
7. **Lies**: This includes lying to family members, a therapist, or others to conceal the extent of your involvement with the Internet. Someone who's seeing a therapist for depression might not tell the therapist about her Internet use.

8. **Escape to the Internet**: You use the Internet as a way to avoid thinking about problems, or to allay depression or feelings of helplessness.

Recently, Tao et al., (2010) proposed very detailed criteria and reported an inter-rater reliability of 98%. They propose symptom criterion (presence of seven clinical symptoms from their list of eight - preoccupation, withdrawal, tolerance, lack of control, continued excessive use despite knowledge of negative effects/affects, loss of interests excluding internet, use of the internet to escape or relieve a dysphoric mood, and hiding from friends and relatives), clinically significant impairment criterion (functional and psychosocial impairments), course criterion (duration of addiction lasting at least three months, with at least six hours of non-essential internet usage per day) and exclusion criterion (exclusion of dependency attributed to psychotic disorders).

**SYMPTOMS OF INTERNET ADDICTION**

The symptoms of Internet Addiction can be broadly classified under two broad categories:

(A) **Psychological symptoms**

- Using the online services everyday without skipping.
- Loosing track of time after making a connection.
- Going out less and less.
• Spending less and less time on meals at home or at work, and eating in front of the monitor.

• Denying spending too much time on the Net.

• Others complaining of your too much time in front of the monitor.

• Checking the mailbox too many times a day.

• Thinking that one has got the greatest website in the world and dying to give people one’s URL.

• Logging onto the Net while already busy at work.

• Sneaking online when spouse or family members not at home, with a sense of relief.

(B) Physical symptoms

• Carpel Tunnel Syndrome (pain, numbness, and burning in hands that can radiate up the wrist, elbows and shoulders)

• Dry eyes

• Backaches

• Severe headaches

• Eating irregularities such as, skipping meals

• Failure to attend to personal hygiene

• Sleep disturbances
THEORETICAL PERSPECTIVES OF INTERNET ADDICTION

The rationale why people become addicted to the Internet is vast. Some theories to explain addiction disorders are rooted with behavioral explanations, psychodynamic and personality explanations, socio-cultural explanations, and biomedical explanations (Ferris, 2003).

1. Neuro-chemical / Biological Theory

This theory concerns the mood-altering potential of behaviors related to process addictions. Just as a person addicted to shopping may feel a "rush" or pleasurable change in mood from the series of actions related to a spending spree – checking one's credit cards, driving to the mall, going into one's favorite store, etc. — the person with an Internet addiction may feel a similar "rush" from booting up their computer and going to their favorite web sites. In other words, some researchers think that there are chemical changes that occur in the body when someone is engaging in an addictive behavior. Furthermore, from a biological standpoint, there may be a combination of genes that make a person more susceptible to addictive behaviors, just as researchers have located genes that affect a person's susceptibility to alcohol.

These explanations focus on hereditary and congenital factors, chemical imbalances in the brain and neurotransmitters (Ferris, 2003). There could be chromosomes, hormones, and surplus or lack of certain necessary chemicals and neurotransmitters that regulate activity in the brain and the rest of the nervous system. According to this perspective, this would cause someone to be susceptible to addiction (Sue et al., 1994). There is definitive research that shows that some drugs act to fill in the synaptic gaps of the neurons in the brain, fooling the brain into sending out faulty information. This, it is thought, is one reason for the "high" one gets from engaging in activities such as running, drug use, and gambling. This might apply to Internet addiction, since
many opportunities on the Internet are fun and exciting. This suggestion resembles the use of prescribed drugs by patients who need the chemical balance in the brain, or those who get a high from running, or gambling. The Internet provides a temporary high. Mitchell (2000) pointed out that activities on the Internet may lead to dopamine release in the nucleus accumbens, which is thought to be an important neuro chemical event in the development of addiction.

2. **Psychodynamics and Personality**

Psychodynamic and personality views account for addiction through early childhood traumas, correlations with other certain personality traits or other disorders, and inherited psychological dispositions (Sue et al., 1994). Depending on the childhood events that affect the individuals as children and the personality traits they developed, they become predisposed to develop an addictive behavior or none whatsoever (Ferris, 2003). It is not the subject or the activity that is important in this case, but the individual, and the foundation under which they become addictive. A foreign exchange student can be liable to go on the Internet looking for familiarity and in the process is susceptible to a desire to be mentally there all the time.

A dispositional model or diathesis-stress model of addiction might help in understanding Internet Addiction Disorder. Certain people, due to a variety of factors, may be predisposed (diathesis) to developing an addiction to something, be it alcohol, heroin, gambling, sex, shopping, or on-line computer services. They could go through their entire lives never developing any kind of addiction. On the other hand, if the right stressor, or combination of stressors, affects the person at a critical time, the person may be more inclined to develop an addiction. If the person begins drinking alcohol even occasionally, but continues to increase consumption, he may develop a dependency on alcohol. The same premise holds for Internet addiction. If it
is the right combination of time, person, and event, then addiction may take place. The idea is that it is not the activity or subject that is important. It is the person that is most crucial to the equation.

3. Behavioral Theory

These explanations are based on B.F. Skinner's studies on operant conditioning (Sue et al., 1994). The person performs a behavior and gets either rewarded positively, negatively, or be punished for his/her course of action. An example of it would be an individual who has always been too timid to meet new people and make acquaintances. For this individual the Internet would represent the means to experience love, hate, satisfaction, and fulfillment without interacting face to face with another person (Ferris, 2003). Another example might be of a child who is painfully shy and fears meeting new people. Whenever it is time for recess, he goes off on his own, and does not play with the other children. Thus, he avoids having to talk to anyone new, and consequently avoids the anxiety associated with new encounters. This avoidance of anxiety is rewarding and reinforces his behavior. This means that he is likely to engage in this behavior (escaping from the problem) the next recess, or the next time he must meet new people. This relates to addiction and specifically Internet addiction in the following way: Drugs, alcohol, sex, gambling, the Internet, and shopping offer many rewards. They offer love, excitement, physical, emotional, and material comfort, and the means to escape from reality. These can all be rewards. If an individual wants these rewards and learns that the Internet will allow him to escape, or receive love, or have a lot of fun, he will probably turn to the Internet the next time he feels these needs. This becomes reinforcing, and the cycle continues.
In addition to having features of a process addiction, Internet use might be reinforced by pleasurable thoughts and feelings that occur while the person is using the Internet. Although researchers in the field of addiction studies question the concept of an "addictive personality" as such, it is possible that someone who has one addiction may be prone to become addicted to other substances or activities, including Internet use. People with such other mental disorders or symptoms as depression, feelings of isolation, stress, or anxiety, may "self-medicate" by using the Internet in the same way that some people use alcohol or drugs of abuse to self-medicate the symptoms of their mental disorder.

4. Cognitive Behavioral Approach

Davis (2001) proposed a model of the etiology of Pathological Internet Use (PIU) using the cognitive–behavioral approach. The main assumption of the model was that PIU resulted from problematic cognitions coupled with behaviors that intensify or maintain maladaptive response. It emphasized the individual's thoughts/cognitions as the main source of abnormal behavior. Davis stipulated that the cognitive symptoms of PIU might often precede and cause the emotional and behavioral symptoms rather than vice versa. Similar to the basic assumptions of cognitive theories of depression, it focused on maladaptive cognitions associated with PIU.

Maladaptive cognitions were broken down into two subtypes—perceptions about one's self, and about the world. Thoughts about self are guided by ruminative cognitive style. Individuals who tend to ruminate would experience a higher degree in severity and duration of PIU, as studies have supported that rumination is likely to intensify or maintain problems, partly by interfering with instrumental behavior (i.e., taking action) and problem solving. Other cognitive distortions include self-doubt, low self-efficacy and negative self-
appraisal. These cognitions dictate the way in which individuals behave, and some cognitions would cause specific or generalized PIU.

Addictive thinkers, for no logical reason, will feel apprehensive, when anticipating Disaster (Twerski, 1990). While addicts are not the only people who worry and anticipate negative happenings, they tend to do this more often than other people. Young (1999a) suggested that this type of catastrophic thinking might contribute to compulsive Internet use in providing a psychological escape mechanism to avoid real or perceived problems. Subsequent studies hypothesized that other maladaptive cognitions such as over generalizing or catastrophizing, negative core beliefs, and cognitive distortions also contribute to compulsive use of the Internet (Davis, 2001; LaRose et al., 2001; Caplan, 2002). Young (1999b) hypothesized that those who suffer from negative core beliefs may be the ones who are drawn the most to the anonymous interactive capabilities of the Internet in order to overcome these perceived inadequacies. She suggested that cognitive restructuring should be used to address underlying negative core beliefs, cognitive distortions, and rationalizations such as “Just a few more minutes won’t hurt” for effective management of the patient’s primary symptoms.

Based on Davis’ model, Caplan (2003) further proposed that problematic psychosocial predispositions caused individuals to excessive and compulsive Computer-Mediated (CM) social interaction, which in turn increases their problems. The theory proposed by Caplan and then examined empirically, had three main propositions:

- Individuals with psychosocial problems (e.g., depression and loneliness) hold more negative perceptions of their social competence compared to others.
- They would prefer CM interactions rather than face-to-face ones as the latter was perceived to be less threatening and they perceived themselves to be more efficient in an online setting.
• This preference would in turn lead to excessive and compulsive use of CM interactions that would then worsen their problems and create new ones at school, work and home.

5. Social-Cognitive Theory

Human development requires identity formation (Kandell, 1998) which consists of one’s personality, knowing one’s likes and dislikes, social and subgroup identification, and a vocational path. Disruption in these areas may act as fertile ground for the pursuit of addictive agents as coping mechanisms, and as a means of escape and emotional numbing (Hirschman, 1992; Kandell, 1998) Developing meaningful relationships or intimacy, (Kandell, 1998) comprises a second area where failure to develop adequately can lead to loneliness and unfulfilled longings for partnership. The Internet, Kandell says, especially through the socially interactive modes, (chat rooms, e-mail, MUD games) provides for these unfulfilled developmental intimacy needs. He warns that such relationships may be distorted via the nature of the Internet medium, making attempts to bond in real life more frustrating. Albert Bandura’s social learning theory suggested that low self efficacy and poor coping skills elicited risk of developing addictions to cope.

6. Socio-cultural/ Interpersonal Theory

From a social or interpersonal standpoint, there may be familial factors prompting use of the Internet. For example, a person might "surf the Web" to escape family conflict. Another possibility is that social or peer dynamics might prompt excessive Internet use. Some affected persons may lack the social skills that would enable them to meet people in person rather than online. Peer behavior might also encourage Internet use if one’s friends are using it. Modeling may play a role—users can witness and experience how others engage in Internet use and then replicate that behavior. The
interactive aspects of the Internet, such as chat rooms, e-mail, and interactive games like Multi-User Dungeons and Dragons (MUDS), seem to be more likely to lead to Internet addiction than purely solitary web surfing.

Addictions vary according to sex, age, socioeconomic status, ethnicity, religion, and country. Some addictions are more common among persons of different categories. For example, alcoholism is most common in the middle socioeconomic classes, in Native and Irish Americans, and in Catholics (Ferris, 2003). Whites are more likely to use PCP and hallucinogens, but less likely than Blacks or Latinos to use heroin (Sue et al., 1994). Not enough data is available yet about those persons addicted to the Internet to determine if a particular class is most predominant. But preliminary findings in this area have revealed that specific populations might be at greater risk for developing Internet Addiction. Sun et al., (2005) found that Higher SES and Asian ethnicity were associated with higher internet use. Other researchers (NTAI, 2000; Sax et al., 2001; Kaiser Family Foundation, 2004; Joiner et. al, 2005; Junco, 2005; Oblinger, and Oblinger, 2005; Junco and Mastrodicasa, 2007; Hargittai, 2008) have pointed out that White and Asian students are more likely to use computers and the Internet than their counterparts, partially because of the disproportionate resources available to them at school and at home, and partially because of cultural and societal influences that encourage their use of technology and discourage use by students of other ethnicities.

7. **Social Network Theory**

Social network theory proposes that social behavior and communication are affected by the patterns of ties among people. Studies of social networks have surveyed the social interactions of specific individuals by lists of persons contacted and by measuring the frequency
of their interactions (Hampton and Wellman, 1999). Social network theory suggests that the more people are socially connected, the more intensely they are likely to communicate using various media available to them. Social network theory is applicable to describe human relationships across two media, like communication face-to-face or through electronic means. Like previous advances in communication technology, the Internet continues the process of connecting people participating in social networks and geographically dispersed people and organizations bound by shared interests (Haythornthwaite and Wellman, 1998; Wellman et al., 2001). Social network theory suggests that Internet social communication supplements and is an extension of traditional social behaviors. In line with the social network perspective, it has been found that the more individuals in organizations are connected, communicate face-to-face, and the more intimate their relationships, the more frequently and intimately they use email and a variety of media to communicate (Haythornthwaite and Wellman, 1998). In other words, the Internet supplements traditional social behavior, without necessarily increasing or decreasing it (Wellman et al., 2001). This is true not only for adults but for teenagers as well (Lenhart et al., 2001).

8. Uses and Gratifications Theory

If two media serve similar needs then they can act as functional alternatives (Katz et al., 1973). However, if they are designed to serve different needs then they are specialized. The motives at play, such as relaxation or the acquisition of information, can be quite different depending on the types of communications media used, such as TV or the Internet (Ferguson and Perse, 2000).

Based on uses-and-gratification theory, researchers have proposed that the expectancy value model and the gratification sought-gratification
obtained model present possible causes of media choice, which in turn leads to Internet use, by explaining individuals' needs and gratifications to be fulfilled for those needs as a result of certain media-use behaviors.

The uses-and-gratification theory given by Katz et al. (1974) assumed that needs and motives make people to use the media, and the obtained gratifications reinforce their media use. Many researchers suggested that the uses-and-gratifications theoretical perspective can help us understand relationships among people and different technologies. An increasing number of people use the Internet for communication. Particularly, the theoretical approach of uses-and-gratifications has identified social interaction as one of people's common reasons for media use (Katz et al., 1974). Papacharissi and Rubin (2000) found that those who were less satisfied with their lives and more anxious with face-to-face communication chose Internet use to fulfill their interpersonal motives, which is consistent with the findings of studies about Internet use for interpersonal contexts such as social contact, inclusion, or affection. Adolescence is a time of increased membership in peer groups so making connections and maintaining relationships with others are an important issue for their social development (Newman and Newman, 2008). Motives for interpersonal utility may be a significant predictor of Internet use because adolescents use the Internet as a social tool.

The theoretical approach of uses-and-gratifications of the Internet supports a relationship between social and personal characteristics and adolescents Internet use (Lee, 2009). Using the uses-and-gratification perspective in their study, Cho et al. (2003) found that adolescents with higher parental SES (Socio Economic Status) were likely to use the Internet as a means to gain learning gratifications. Gross et al. (2002) found that additional opportunities to interact with peers are motives to use the Internet for adolescents who have strong connections (to maintain
existing social networks), while lonely and socially anxious adolescents tried to communicate with strangers online (to create new ones).

**Kraut et al. (2002)** stated that socially anxious and isolated people will get more benefits from the Internet because lack of a social network offline may be compensated by its use. Social anxiety for the community, loneliness, low self-esteem, and lack of family support serve as motivators for interaction and Internet use.

**TRIGGERS OF INTERNET ADDICTION**

According to the Center for Internet Addiction Recovery, Internet addiction affects people of varying ages, cultural backgrounds, occupations, and educational levels. The following problems are likely triggers for internet addiction *(Rizk et al., 2007)*

1. **Substance Abuse**: Over half of the Internet Addicts suffer from other addictions, mainly to drugs, alcohol, smoking, and sex.

2. **Mental Illness**: Trends show that Internet Addicts suffer from emotional problems such as depression and anxiety related disorders and often use the fantasy world of the internet to psychologically escape unpleasant feelings or stressful situations.

3. **Relationship Troubles**: In almost 75% of the cases, Internet Addicts use applications such as chat rooms, instant messaging or online gaming as a safe way of establishing new relationships and more confidently relating to others.

**Saisan et al. (2010)** has identified the various **risk factors for Internet addiction**. These researchers point out that one is at a greater risk of Internet addiction if:
- **One suffers from anxiety:** One may use the Internet to distract oneself from your worries and fears. An anxiety disorder like obsessive-compulsive disorder may also contribute to excessive email checking and compulsive Internet use.

- **One is depressed:** The Internet can be an escape from feelings of depression, but too much time online can make things worse. Internet addiction further contributes to stress, isolation and loneliness.

- **Presence of any other addictions.** Many Internet addicts suffer from other addictions, such as drugs, alcohol, gambling, and sex.

- **One lacks social support.** Internet addicts often use social networking sites, instant messaging, or online gaming as a safe way of establishing new relationships and more confidently relating to others.

- **One is an unhappy teenager.** One might be wondering where one fits in and the Internet might feel more comfortable than real life friends.

- **One is less mobile or socially active than one are used to.** For example, one may be coping with a new disability that limits your ability to drive. Parenting very young children can make it hard to leave the house or connect with old friends.

- **One is stressed.** While some people use the Internet to relieve stress, it can have a counterproductive effect. The longer you spend online, the higher your stress levels will be.

**TYPES OF INTERNET ADDICTION**

Young (1999a, 1999b) claims that Internet Addiction is a broad term that covers a wide variety of Behaviors and impulse control problems. She claims that this is categorized by five specific subtypes:
1. **Cyber-sexual Addiction** – compulsive use of Internet pornography, adult chat rooms, or adult fantasy role-play sites impacting negatively on real-life intimate relationships. While online pornography and cybersex addictions are types of sexual addiction, special challenges on the Internet include its relative anonymity and ease of access. People can spend hours on the net in the privacy of their own home, and engage in fantasies impossible in real life. Compulsively spending hours on the Internet viewing pornography or engaging in other cybersex activities can adversely affect real-life relationships, career, and emotional health. Sexual addicts use sex as a means to cope, to handle boredom, anxiety and other powerful feelings or as a way to feel important, wanted or powerful.

*Bhatia (2009)* defines Sexual addiction as having a sick or pathological (out of balance) relationship with sex that is harmful to one’s self or to others. Internet sex is also defined as the consensual sexual discussion on-line for the purpose of achieving arousal or an orgasm. It is also known by the names – ‘Cybersex’, ‘Cyber porn addiction’, ‘Cybering’, ‘Virtual sex addiction’, ‘sex addiction’ and ‘Sexual addiction’. Sexual addicts form a compulsive and obsessive need to find sexual gratification. Like an addict, withdrawal symptom can occur with absence of the habit. Sex addicts are generally secret about their sexual activities and they deny their habit when confronted about it. Internet sex addiction results more frequently due to anonymity and convenience provided in the internet. People who suffer from low self-esteem, a distorted body image, untreated sexual dysfunction, or a prior sexual addiction are more at risk to develop cybersex/cyber porn addictions (*Bhatia, 2009*).
Young (2011) points out that Cybersex and Cyber porn addiction is the most common form of Internet addiction. The widespread availability of sexual content online has given rise to a new form of sexual addiction as almost 60% of the cases of online sexual compulsivity seen result exclusively from Internet use. New problems related to online affairs have also emerged as a sub-type of Internet abuse given the widespread popularity of interactive online applications such as chat rooms and instant messaging leading to surprising new trends in divorce and marital separation.

2. Cyber-Relational Addiction — addiction to social networking, chat rooms and messaging to the point where virtual, online friends become more important than real-life relationships with family and friends. When used responsibly, the Internet can be a great place to interact socially, meet new people, and even start romantic relationships. However, online relationships can often be more intense than those in real life. Our fantasies are given free reign and the idea of being with our online love can exceed all realistic expectations. Since few real-life relationships can compete with these wild, fantasy relationships, the Internet addict will prefer to spend more and more time with their online friends. Another problem is that about 50% of people online lie about their age, weight, job, marital status, or gender. When online friends meet and the real-life person fails to match the online persona, it can create profound emotional disappointment.

Young (2011) states that Internet addicts suffer from emotional problems such as depression and anxiety-related disorders and often use the fantasy world of the Internet to psychologically escape unpleasant feelings or stressful situations. Internet addicts also suffer from relationship problems in almost 75% of the cases and use
interactive online applications such as chat rooms, instant messaging, or online gaming as a safe way of establishing new relationships and more confidently relating to others through the Internet.

3. **Net Compulsions** – such as compulsive online gaming, gambling, stock trading, or compulsive use of online auction sites such as eBay, often resulting in financial and job-related problems [Young (2011)].

4. **Information Overload** – compulsive web surfing or database searching, leading to lower work productivity and less social interaction with family and friends.

5. **Computer Addiction** – obsessive playing of off-line computer games, such as Solitaire or Minesweeper, or obsessive computer programming.

Realizing the affliction and harmful consequences of Internet Addiction, the present study focused on the correlates of Internet Addiction. Internet Addiction was studied in relation to Eysenckian personality dimensions viz., Psychoticism, Neuroticism, Extraversion and Social Desirability (Lie Scale), State - Trait Anxiety, Locus of Control, Sensation Seeking (Thrill and Adventure Seeking, Boredom Susceptibility, Experience Seeking, Disinhibition and Total Sensation Seeking), Shyness, Loneliness, Mental Health and its dimensions (Being Comfortable With Self, Being Comfortable With Others, Perceived Ability To Meet Life's Demands and Total Mental Health); Stress (Daily Hassles and Uplifts, Stress Symptoms); Coping (Task Focused Coping, Emotion Focused Coping and Avoidance Focused Coping); Perceived Parental Bonding (Perceived Maternal Care, Perceived Maternal Overprotection, Perceived Paternal Care and
Perceived Paternal Overprotection); Satisfaction with Life and Perceived Social Support.

In addition, the gender differences, differences between the children of working mothers and non-working mothers and; the three types of Internet users (viz. Cyber-Sexual, Cyber-Relational and Information Overload) were also studied.