A review on the definitions of internet overuse behavior

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Abstract
Internet has become an essential part of life globally. Though devised primarily to facilitate research, information seeking, interpersonal communication, and business transactions, Internet has become the central focus of people's lives and a temptation that is hard to resist. Despite its various benefits, it also causes serious negative effects due to overuse of Internet. Although research on this excessive internet use has been existing for the past two decades, the concept of Internet overuse is still ill-defined. It goes by different names such as, internet addiction, problematic internet use, pathological internet use, compulsive internet use, excessive internet use, heavy internet use. Some researchers view it as a form of addiction that is more clinical or pathological, while some view it as a mere behavior excess causing distress. This paper attempts to provide a conceptual definition that may be applied universally.

Keywords: internet addiction, excessive internet use, problematic internet use, internet dependence

1. Introduction

Internet usage has boomed worldwide and is being used at unimaginably excessive amount by everyone almost every minute. Many researchers have explored at its usage pattern and found some of the factors that significantly correlate with the trend in usage of Internet. Rapid expansion and proliferation of the internet has provided better opportunities for communication, information and social interaction (Kutty & Sreeramareddy, 2014) [26]. Internet user population world-wide has crossed 4 billion in 2017 and in Asia, the largest continent of Internet users, it has doubled from 1 billion in 2011 to 2 billion in 2018 in Asia, which accounts to 48.7 per cent of its population. Internet usage in India is also on the rise. According to the latest world statistics, over 4.6 million Indians are accessing the net which accounts for 34 per cent of Indian population. India stands the second most Internet users in the world, next to China with 7.7 million Internet users (Internet World Stats, 2017).

Internet has attained an indescribable power to influence, connect, and mobilize people around the world (Cabral, 2011) [8]. It has been primarily looked upon as a potent tool to spread awareness among the masses, bringing about radical changes in the way people perceive communication (Chowdhury, 2014) [2]. Today, Internet helps people to shop from virtual stores, meet new people and establish new friendships through social networking sites, easily reach for necessary information and sources regarding a particular topic, and obtain information and news on events taking place at any location across the world (Cicekoglu, Durualp & Durualp, 2013). For many, it is also an integral tool for navigating daily life and a way to stay connected with friends and family (APS Healthcare, 2011) [4]. Such ease of use and accessibility has made life without the internet almost unthinkable for most people.

Internet positively affects the wellbeing for self-concealing individuals when online interaction is positive, builds relationships, or fosters a sense of community. Yet, a number of consequences are being reported in reviews worldwide. Despite its enormous benefits, there is now growing literature on the negative effects of excessive internet use (Chou & Hsiao, 2000) [11]. The case of young people getting addicted to pornography, drugs, terror-induced activities are all well reported often leading to disastrous outcomes (Yuvaraj & Suresh, 2017) [48]. Empirical studies have linked Internet overuse to negative outcomes including sleep disorders, personal injury, depression, and poor social and academic adjustment (Ko *et al.*, 2006) [24]. Internet used at excess has been reported to have caused academic problems (Akhter, 2013) [1], markedly serious problems in relationship (Young, 1996) [41]. Psychologically, studies have proved that people who overuse internet are found to be suffering with low psychological wellbeing and even among those with psychiatric disorders (Yuvaraj & Suresh, 2017) [48]. People tend to alleviate their psychological distress through being unusually dependent towards Internet.

2. Conceptual Interpretations

The concept of **Internet Addiction** was first reported as a *social issue* at the 104th annual meeting of APA in 1996, by Dr Kimberley S. Young, Assistant Professor of Psychology at University of Pittsburgh (Young, 1996) [41]. She defined Internet addiction at that time as *an impulse-control disorder which does not involve an intoxicant*. Young (1998) [43] continued to claim that the term addiction can be applied to excessive internet usage because the symptoms of internet addiction have the same characteristics as those of tobacco and alcohol addiction. She reported Internet addiction as *a 'behavioral addiction' similar to gambling addiction and*

unlike alcoholism (Young, 2004) [45]. In her view, internet overuse is addictive, which is caused without any physical ingestion and impulsive that it even ruins the lives of the users.

Kandell (1998) [22] later symbolized Internet addiction to *any type of activity once logged on to the internet,* [entailing] *psychological dependence on the Internet and characterized by (i) an increasing investment of resources on Internet-related activities, (ii) unpleasant feelings when offline, (iii) an increasing tolerance to the effects of being online, and (iv) denial of the problematic behaviors.*

While many researchers view Internet addiction simply as a problem of behavior excess, some of them view it as a real psychological disorder. Internet addiction has been conceptualized similar to substance dependence in Diagnostic and Statistical Manual-IV (DSM–IV) (Sherer, 1997; Hall & Parsons, 2001) [20]. In such lines, Goldberg (1996), a New York Psychiatrist, coined the term *Internet Addictive Disorder* (IAD), parallel to substance dependence. IAD, he states, is *a behavioral addiction that serves as a coping mechanism and borrows from substance dependence criteria from the DSM IV* (Garrison & Long, 1995; Goldberg 1996) [14]. Goldberg considered IAD as leading to Impulse-Control Disorders*,* which is according to the DSM IV, *an inability or failure to resist an impulse, drive, or temptation to perform an act that is harmful to the person or others.* This disorder leads to an increasing sense of tension or arousal before committing the act and then experience pleasure, gratification, or relief afterward. This condition of tension and relief is observed commonly among high users of Internet, while, not all of them report it to be pathologically disturbing. Substance dependence is one such impulse-control disorder which, Goldberg had simply replaced the term *substance* in Substance Dependence as in DSM IV, with the term Internet*.*

At the same time, Young (1996) [41] came up with the concept of *Problematic Internet Use* (PIU), as IAD seem to be more oriented to disorder or psychological illness. She connects PIU with that of pathological gambling and is characterized by eight important criteria: *preoccupation with internet; need for longer amounts of time online; withdrawal when reducing internet use; time management issues; environmental distress; repeated attempts to reduce internet use; deception around time spent online;* and *mood modification through internet use.* Thus, she compiled many of the problems relating to internet overuse and also connected with the symptoms of behavioral addictions.

Griffiths (1995) [16] initially referred internet overuse to "Technology addiction," describing *problematic patterns of using technological means, including excessive use of personal computers (PC) and the Internet.* Later, Griffiths (1998) [17] and then Young (2004) [45], referred to Internet addiction as *a subset of behavior addiction and any behavior that meets the six core components of addiction: salience (preoccupation with the behavior), mood modification (using the behavior to alter feelings), tolerance (making larger investments in the behavior), withdrawal (negative experiences when attempting to reduce behavior), conflict (problems stem from behavior) and relapse (unsuccessful attempts to reduce behavior).*

Rasmussen (2000) [31] proposed five criteria for Internet addiction: *failure to fulfill major rule obligations at work, school or home; longer use with less enjoyment; restlessness, irritability and anxiety when not using; extended use with unsuccessful attempts to cut down control or stop use; and continued use despite knowledge of physical, psychological and social problems associated with excess use.*

Chao & Hsiao (2000) [11] defined Internet addiction to *an individual's inability to control his/her use of the internet, which essentially causes psychological, social, and/or work difficulties in a person's life.* Kim & Kim (2002) [23] defined Internet addiction as *a mental and physical dependence on internet use.* More specifically, it refers to *a condition that involves withdrawal, tolerance, and preoccupation with the internet.* In addition, they tried to differentiate Internet addiction from other forms of substance dependence as there will be self-recognition of symptoms of dependence in the former while the latter will be expressed by anxiety within the user.

Weinstein & Lejoyeux (2010) [38] defined Internet addiction as *characterized by a maladaptive pattern of internet use leading to clinically significant impairment or distress.* According to Xu *et al.* (2012) [39], *Internet addiction may interfere with people's daily lives, and had short and long-term effects on their social, psychological and physical well-being.* Turel and Serenko (2012) [37] refer to Internet addiction as a *maladaptive psychological dependency on the use of the Internet which is manifested through obsessive Internet-seeking and Internet-use behaviors that infringe normal functioning.*

Scimeca *et al.* (2014) [33] referred Internet addiction as *the excessive and uncontrollable use of the Internet which leads to several maladaptive consequences such as poor academic and professional performance, relational maladjustment, missed sleep, and even psychiatric symptoms.* Stavropoulos, Gentile & Motti-Stefanidi (2015) [35] defined Internet addiction as *an excessive preoccupation with the Internet that causes impairment or distress.*

Yang *et al.* (2016) [40] referred to those with Internet addiction as *individuals who appeared to be excessive, dependent and uncontrollable on the Internet.* They also referred them having addictive online behavior.

Tian (2010) [36] defined as *web users* who are *Internet addicts if school grades, careers or interpersonal relationships in real life are affected by overuse of Internet.*

Apart from these, some other researchers who did not believe internet to be addictive, yet problematic, termed it in different other ways. Morahan-Martin and Schumacher (2009) [28] defined Internet overuse as *Heavy use of the internet* and referred it to *individuals' inability to control their internet use, and to the severe damage and consequences this engenders on their lives.*

Young herself reported Internet addiction, as *problematic internet use associated with significant social, psychological and occupational impairment.* She thus defined problematic internet use as *a new and yet unrecognized condition that adversely affects the online use and self-control abilities of internet-users, to the extent that it leads to relational, professional and social problems* (Young, 2007) [46]. Yet, Young & Rogers (1998) [43] viewed this problematic Internet Use from the addiction perspective where, such problematic use is characterized as forms of *behavioral addiction similar*

to other impulse control disorders, such as gambling. Individuals who meet these criteria are held to experience "social, psychological and occupational impairment" resulting from their Internet use, such as "poor grade performance among students, discord among couples, and reduced work performance among employees."

Davis (2001) extends this problematic internet use into two categories: *Specified Pathological Internet Use,* indicating users who are dependent on content specific functions of internet, such as online stock trading, auctions, sexual material, etc. and *Generalized Pathological Internet Use* referring to general multi-dimensional use without a clear objective, i.e., *wasting time in the internet through surfing, chatting, e-mailing,* etc.

Beard & Wolf (2001) [5] define Problematic Internet Use (PIU) as *use of the Internet that creates psychological, social, school, and / or work difficulties in a person's life.* They differentiated Internet use from other non-chemical behaviors from chemically induced problems that may be entitled addiction, *due to lack of symptoms such as physical withdrawal.* Hence, it is only appropriate to describe overuse of Internet *problematic* or *maladaptive.* According to Jelehen chick *et al.,* (2014) [21], PIU is defined as *internet use that is risky, excessive or impulsive in nature leading to adverse life consequences, specifically physical, emotional, social or functional impairment.* Problematic Internet use thus, describes the behaviors and cognitions associated with Internet use that result in negative personal and professional

consequences for the user.

Still many researchers termed this online behavior into different ways and types, such as, *compulsive internet use* (Caplan, 2005) [10], *problematic computer use* (Caplan, 2005) [10], *pathological internet use* (Lei & Wu, 2007) [27], *pathological computer use* (Young, 2009) [47], *problematic internet use* (Davis, 2001; Kuss *et al.,* 2013) [25], *Internet dependency* (Kuss *et al.,* 2013) [25]. Young came up with different types of Internet addiction, such as, *cyber-sexual addiction; cyber-relationship addiction; net compulsions; information overload;* and *computer addiction.* Researchers like Servidio (2014) [34], Buckner, Castille & Sheets (2012) [7] and Floros & Siomos (2014) [13] have done exhaustive reviews on internet overuse behaviors and given the idea of excessive internet use. According to Arisoy (2009) [3], *Excessive internet use refers to a condition in which individuals are unable to curb and limit their desire to use the internet, lose their sense of time when using the internet, demonstrate excessive nervousness and aggressiveness when deprived of internet use, and experience a gradual deterioration in professional, social and family life.*

Peters and Malesky (2008) [30] considered excessive use and problematic use of Internet than looking at it as a form of 'addiction'. Caplan (2002) [9] called those engaging in excessive use of internet with different labels such as *Internet addicts*, *computer-mediated communication addicts* and *computer junkies.*
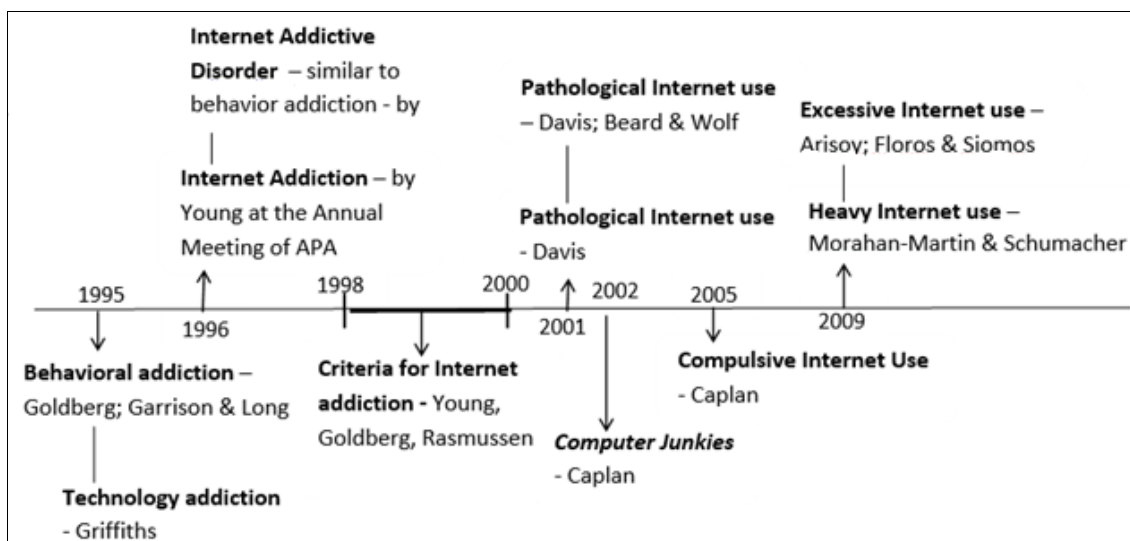

Fig 1: Timeline showing definitions of Internet Overuse Behavior

3. Authors' Definition of Internet Overuse using Integral approach

As discussed above, the excessive behavior of internet has been defined using various terminologies by several researchers in the last two decades. The analysis of the same explains the evolution of the subject and its diverse branches making the study multi-disciplinary. In this regard, the authors' have integrated these explanations and thus have defined "Internet Overuse" as *excessive use of Internet, either for specific or general; intentional or unintentional purpose leading to one's inability to control his/her use of internet*

causing significant amount of distress, thereby obstructing normal functioning of the self eventually resulting in personal, educational, professional, relational, and social problems, and if controlled, stirring unjustified anxiety, restlessness and anticipation of getting online.

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