Symptoms and Behavior Disorder for Internet Addiction: A Netnography Research

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ABSTRACT : *Excessive use of the Internet has been found by various studies to disrupt individuals' time use and have a series of health consequences. However, the existence of Internet addiction as a mental disorder is not yet well recognized. The purpose of this study is to explore in depth the special context and unique life experience of the internet addiction online and to provide insights regarding an interpretation of symptoms and behavior disorder model. This study uses netnography analysis and online interviews, and the physical travel path in the field is observed. The theoretical contribution of this study is to establish a conceptual framework of netnography and six related propositions. The study revealed the mystery of Internet addiction disorder experiences.*

KEYWORDS *-Symptoms; Behavior disorder; Internet addiction; Netnography*

I.   INTRODUCTION

Internet addition disorder, also commonly referred to as Compulsive Internet Use (CIU) [1], Problematic Internet Use (PIU) [7], or iDisorder. Originally debated as a "real thing," it was satirically theorized as a disorder in 1995 by Dr. Ivan Goldberg, MD who compared its original model to pathological gambling [8]. Since this hoax of sorts, the disorder has rapidly gained ground and has been given serious attention from many researchers, mental health counselors, and doctors as a truly debilitating disorder [9]. Due to the explosion of the digital age, Internet Addiction Disorder has taken the reigns as the top culprit is technology addiction as of late [12]. The troubling thing about this disorder is that if you are suffering from it, you are endlessly surrounded by technology. In the digital age, the Internet has taken over. Most of what we do, as a general population, can be done on the Internet [11].

Though not officially recognized as a disorder in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), its prevalence in American and European cultures is staggering – affecting up to 8.2% of the general population [6]. However, some reports suggest it affects up to 38% of the general population. The widely variable difference in prevalence rates might be contributed to the fact that no true and standardized criteria has been selected for Internet Addiction Disorder. It is researched differently among scientists and mental health professionals. And, it is researched differently across ethnic cultures [10].

Excessive use of the Internet has been found by various studies to disrupt individuals' time use and have a series of health consequences. However, the existence of Internet addiction as a mental disorder is not yet well recognized. The purpose of this study is to explore in depth the special context and unique life experience of the internet addiction online and to provide insights regarding an interpretation of symptoms and behavior disorder model.

II.   LITERATURE REVIEW

Internet addiction disorder (IAD), also known as problematic Internet use or pathological Internet use, is excessive Internet use that interferes with daily life [13]. Addiction, defined by Webster Dictionary as a "compulsive need for and use of a habit-forming substance characterized by tolerance and by well-defined physiological symptoms upon withdrawal", was traditionally used to depict a person's dependence on a substance [1]. More recently, the concept has been applied to behavioral dependence [7]including internet use [9]. The problem of Internet addiction evolves together with the development and spread of the Internet. As adolescents (12–17 years) and emerging adults (18–29 years) access the Internet more than any other age groups

and undertake a higher risk of overuse of the Internet, the problem of Internet addiction disorder is most relevant to young people [8, 12].

IAD, in addition to other dependency disorders, seem to affect the pleasure center of the brain. The addictive behavior triggers a release of dopamine to promote the pleasurable experience activating the release of this chemical [13]. Over time, more and more of the activity is needed to induce the same pleasurable response, creating a dependency [11]. That is, if you find online gaming or online shopping a pleasurable activity and you suffer from an addiction to the Internet, you will need to engage in more and more of the behavior to institute the same pleasurable feeling prior to your dependency [6].

The variable reinforcement effects of Internet addiction is another cause of this behavior. According to the Variable Ratio Reinforcement Schedule (VRRS) theory, the reason why you might be so addicted to Internet activity (e.g., gaming, gambling, shopping, pornography, etc.), is because it provides multiple layers of rewards. That is, your constant surfing of the Internet leads to multiple rewards that are unpredictable. Perhaps your addiction to Facebook provides a multiple and unpredictable layer of rewards in the sense that every time you sign on to read your updates, you get repeated and unexpected good news [10]. Maybe you found out one of your great friends just got engaged. The next time you sign on, you learn another friend just had a baby! Or, perhaps the man you are really interested in just posted an update that he and his longtime girlfriend just broke up. Each sign on gives you unpredictable results that keep you entertained and coming back for more. Certain games, such as MMROPGs (massively multiplayer online roleplaying games) – including World of Warcraft and Everquest may lead to Internet addiction because, in effect, they never end [7, 8].

Signs and symptoms of IAD may present themselves in both physical and emotional manifestations. Some of the emotional symptoms of IAD may include [9], depression, dishonesty, feelings of guilt, anxiety, feelings of euphoria when using the computer, inability to prioritize or keep schedules, isolation, no sense of time, defensiveness, avoidance of work, agitation, mood swings, fear, loneliness, boredom with routine tasks, procrastination [6]. Physical Symptoms of Internet Addiction Disorder may include (Robertson, Yan and Rapoza, 2018), backache, carpal tunnel syndrome, headaches, insomnia, poor nutrition (failing to eat or eating in excessively to avoid being away from the computer), poor personal hygiene (e.g., not bathing to stay online), neck pain, dry eyes and other vision problems, weight gain or loss [13].

III. METHODOLOGY

Netnography is a specific approach to conducting ethnography on the internet. It is a qualitative, interpretive research methodology that adapts traditional ethnographic techniques to the study of social media [4, 16]netnography refers to a set of practices that encompass the particular use of search engines to locate particular sorts of interactional and social data in order to answer queries about sites, topics, or people [14]. Therefore a netnography does not necessarily need to be focused on a particular site or location, and also need not correspond to a particular location, group of persons, or even topic that exists discretely in the physical world [2, 15].

Related to this idea is the notion that netnography must reclaim the individual from various, and sometimes anonymized or pseudonymized, subject positions. In fact, photos, images such as avatars, text, and videos are clues that point the researcher in particular interpretive directions [5, 14]. These clues do more than reveal simple information about identity such as the age, gender, and height of the social media participant. They can be used to delve deeply into the relationship of people, in their various roles – as family members, as citizens, as consumers, as producers – and how they relate to identity projects and other life projects [14]. The netnographer's task, then, transcends simply understanding and translating the images and words that are exchanged. Another interesting and challenging part of the task consists of contextualizing the meaning of particular interactions or expressions in terms of its various contributions to social significance [15]. The location, the symbolism, the language, the people who are included, the people who are excluded, the people who respond, those who do not respond: all of this is important analytic data to consider. In contemporary society, human beings are constantly constructing and reconstructing themselves [16]. They do this through collective acts that display different aspects of themselves – or their selves – in different social contexts. Thus researching online personas is facilitated by the fact that alteration of identity is a natural consequence of our social life in every context. It is not simply an idiosyncratic tendency that manifests itself only in the online

environment. The netnographer must use an analytic frame that is open to and aware of this important social reality [15, 16].

IV.   TEXT ANALYSIS

Software solutions such as the QSR NVivo qualitative analysis packages (computer assisted qualitative data analysis software) can expedite coding, content analysis, data linking, data display, and theory-building functions [14]. As data analysis commences (often concomitant with data collection), the researcher must contextualize the field data, which often proves to be more challenging in the social-cues-impoverished context. Then, the use of an alternating induction and deduction cycle was applied until all of the collected original data were reduced, transformed, and abstracted into concepts in the formation of a framework [3]. The title frames were taken to construct correlations between different concepts [14]. Then, based on the literature review, the findings of this study were summarized [2, 15].

V.   FINDINGS

This study emphasized the theory that emerged from the meaning of the text. Theories also came from a meaning sharing system based on symbolic interaction [5, 16]. The theories were systematically applied according to the rules of netnography and conducted based on context induction [15]. The findings of the study can be classified into a three-stage situational context approach, which is presented in the form of propositions. Finally, the insight of the situational context model was developed, as shown in Figure 1.

Figure 1 here.

A conceptual framework built in this study is composed of six inter-textucl thesis concepts. It follows the meanings of the theoretic reference model from netnography. And this structure is also the "hermeneutics meaning" obtained from this study.

VI.   Development theoretical propotions

There's been more and more scientific research devoted to understanding what IUD is, how it works neurologically, and how we can treat it [1]. Research has shown that people with internet addiction have demonstrable changes in their brains, both in the connections between cells and in the brain areas that control attention, executive control, and emotion processing. Most intriguing is the fact that some of these changes are what you see happening in the brains of people addicted to cocaine, heroin, special K, and other substances [8]. And other research has found that people who are hooked on the internet have changes in how the brain's dopamine system operates. The respondent said:

Dopamine is generally credited for allowing us to experience pleasure and reward. (Coding, A5)

This studies have found that people with internet addiction have fewer dopamine receptors in certain areas of the brain, and others have suggested additional ways in which dopamine function might be impaired [8]. And very recent study suggested how certain genetic variations might be involved in internet addiction [11]. Therefore, based on the above literature and field data, this study presents the following proposition:

Proposition 1: People with Internet addiction have fewer dopamine receptors in certain areas of the brain.

Published studies on Internet addiction are scarce. Researchers' say that a lot of new studies are needed, as most are surveys, marred by self-selecting samples and no control groups [9]. The rest are theoretical papers that speculate on the philosophical aspects of Internet addiction but provide no data [1]. Despite the prominence of this topic, there is not enough evidence to have this officially. The respondent said:

It is a lot like regulating your dietary habits, because you cannot give up food altogether. (Coding, B13)
Just like giving up food, giving up internet also feels unnatural. (Coding, D4)

This form of psychotherapy teaches people how to replace the damaging thought and behavior patterns that plague them with healthier, more productive ones [7]. How does one treat Internet addiction? It cannot be simple because we can't completely give up internet. When people with internet addiction were taught how to apply CBT to their internet use problems, they reported improved well-being. Therefore, based on the above literature and field data, this study presents the following proposition:

Proposition 2: Cognitive behavior therapy to be an effective method for Internet addiction.

Analysis on Internet Addiction a Korean study into the disorder, pathological use of the internet results in negative life consequences such as job loss, marriage breakdown, financial debt, and academic failure [7]. 70% of internet users in Korea are reported to play online games, 18% of which are diagnosed as game addicts [8]. The respondent said:

I am facing unemployment, marital breakdown, and financial liabilities. (Coding, C15)

This study showed that the majority of those who met the requirements of Internet Addiction Disorder suffered from interpersonal difficulties and stress and that those addicted to online games specifically responded that they hoped to avoid reality [11]. Therefore, based on the above literature and field data, this study presents the following proposition:

Proposition 3: Internet Addiction Disorder suffered from interpersonal difficulties.

Men tend to seek out power, status, dominance, gravitating more toward the sources of information glut, aggressive interactive games. (Coding, A10)
Women seek out supportive friendships, romantic partners, and prefer anonymous communication in which to hide their appearance. (Coding, B5)

Based on the combination of the previous literature and the field data, the study found that it seems to be a natural conclusion that attributes of gender played out in Cyberspace parallel the stereotypes men and women have in our society [1, 7]. Therefore, based on the above literature and field data, this study presents the following proposition:

Proposition 4: Gender does seem to influence the types of applications and underlying reasons for Internet addiction.

Some online relationship activity can be useful and healthy, and many people utilize forums for advice or chats for relaxation [8], but when a person has many close online friends and no one to count on in the real world, problems can develop. The respondent said:

Some people become addicted to the Internet because of the social connections they make online. (Coding, C7)

Based on the combination of the previous literature and the field data, the study found that this is actually a dangerous practice because often the people who create these fake lives are already low on self-esteem or desperately seeking the approval of others [9]. Instead of seeking real help, say from a counselor, these individuals just re-make themselves online, while changing nothing about their real offline lives [8]. This can lead to increased symptoms of depression and feelings of inadequacy [12]. Therefore, based on the above literature and field data, this study presents the following proposition:

Proposition 5: Some who are Internet addiction relationships may even create pretend personalities or personas of themselves.

Past research points that 1.5% − 3.5% of German teens show signs of internet addiction or excessive use [1]. Among these adolescents, internet addiction is correlated with higher rates of depression, anxiety, and lower school achievement [10]. The prevalence rate of internet addiction for studies published in North America and Europe ranges from 1.5% to 8.2%. In 2005, just 9 - 15 million people in the United States used the internet

every day [8]. Every three months the rate of use was increasing by 25% [11]. Internet users in Greece have an internet addiction prevalence rate of 8.2% [12]. Most internet addicts are males who play online games and access internet cafés. 96% of teenagers in China use IM and 10% can be classified as Instant Messengers addicts [9]. 41% of self-selected online gamers play video games to escape and 7% are classified as being at risk of developing a psychological and behavioral dependence on online computer games [6]. 1% of Norwegians are addicted to the internet. An additional 5% are at risk of developing internet addiction. The highest rate of addiction is in the 16-29 year old group (4% addicted, 19% at risk) [1]. 11% of South Korean students are considered to be at risk for internet addiction. The prevalence of problematic internet use among South African technology workers is 4% (compared to 2% of a control group of non-IT workers). The respondent said:

> I really want to play online games. (Coding, B8)
> No internet, I can't do anything. (Coding, C13)

Therefore, based on the above literature and field data, this study presents the following proposition:

Proposition 6: Internet addiction are classified as being at risk of developing a escape, psychological and behavioral dependence on online computer games.

VII.   Conclusion and discussion

First, boredom proneness and Internet addiction may have common biological mechanisms. A previous functional magnetic resonance imaging study on individuals playing a first-person shooter video game found that boredom was related to the activities of insula, amygdala, and bilateral ventromedial prefrontal cortex [1]. Another functional magnetic resonance imaging study found that boredom was related to the activities of insula and caudate nucleus [8]. Moreover, functional magnetic resonance imaging studies also found that inter-hemispheric insula [11], amygdalaeinsula [7], and frontostriatal [7]functional connections were associated with Internet gaming disorder. Insula, amygdala, and bilateral ventromedial prefrontal cortex that are responsible for emotional regulation, impulse control and motivation are involving in both boredom proneness and Internet addiction. This study found that Internet use can conveniently provide users with various activities and enjoyment with rapid response, which may reduce the feeling of boredom. When compared with other Internet activities, online gaming frequently provides adolescent users with feelings that are different from the usual experiences in their daily lives; hence, adolescents with ADHD with high scores for lack of external stimulation on the BPSSF are attracted to engage in online gaming.

Second, online studying has become a trend for modern learning [6]. Although online studying involves more vivid and vigorous learning than does traditional studying in classrooms, adolescents with behavior disorder with high scores for lack of internal stimulation may still perceive an inability to generate sufficient stimulation for themselves to study.

Third, other factors such as psychopathology and personality characteristics may contribute to the significant association between boredom proneness and Internet addiction in adolescents with ADHD. For example, studies have indicated that boredom proneness is significantly associated with depression [1], anxiety [7], and hostility [11]. Moreover, depression and anxiety are significantly associated with Internet addiction in adolescents with ADHD [12]. Depression, social phobia, and hostility predict the occurrence of Internet addiction among adolescents in a 2-year follow-up [10].

VIII.   Research recommendation and future research

Regarding personality characteristics, sensation seeking is not only one of the manifestations of boredom proneness but also significantly associated with Internet addiction in adolescents with ADHD [7]. Thus, further study is warranted to examine whether psychopathologies and personality characteristics contribute to the co-occurrence of boredom proneness and Internet addiction or mediate the significant association between boredom proneness and Internet addiction.

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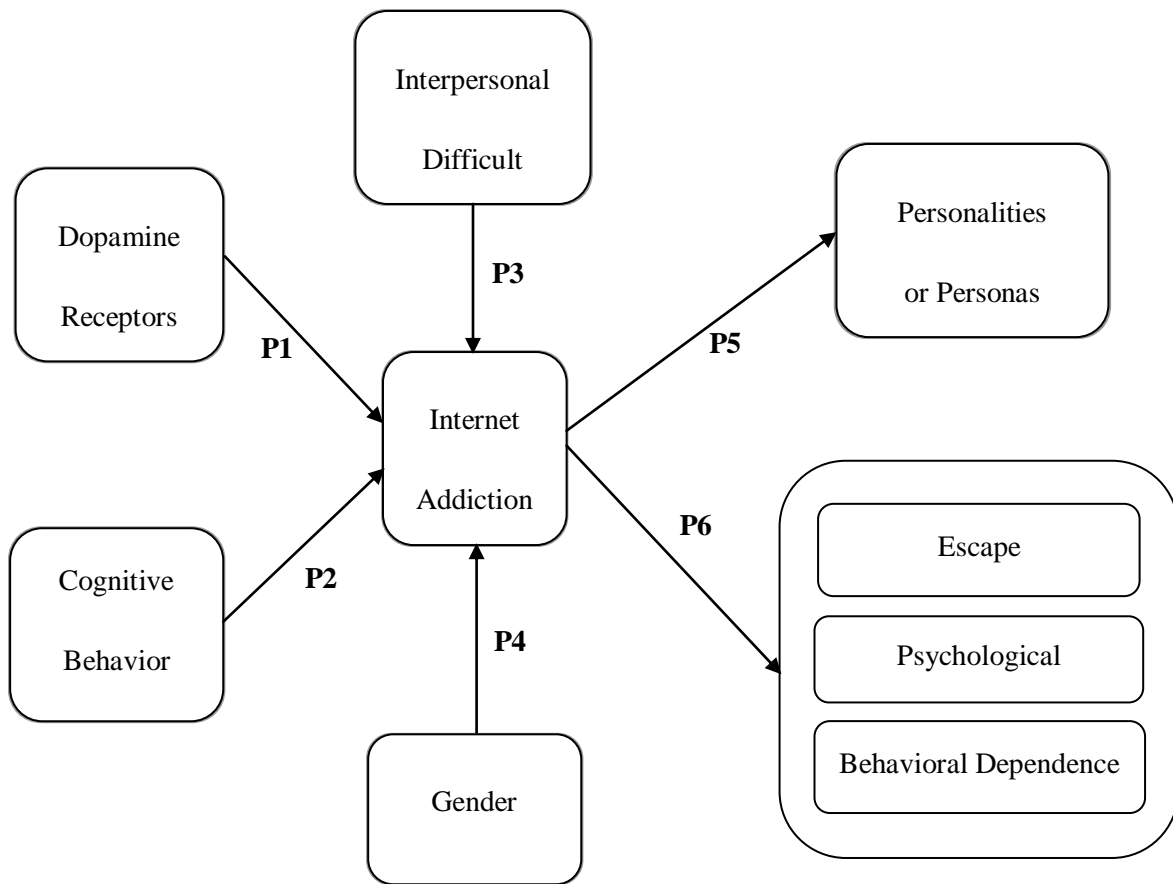
Figure 1 A conceptual framework