# Chapter 14 The Emergin

# The Emerging Psychological Problem of the Digitalized World: Pathological Internet Use

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#### **ABSTRACT**

This chapter mainly aims to shed light on a rather overlooked phenomenon of pathological Internet use (PIU). Due to the rise of the technology, the global internet usage is almost inevitable, yet although it has many benefits, the dependency towards the internet usage (where it is specific or general) is an alarming psychological condition, especially for young adults and adolescents. The disorder and its related problems as well as treatment and intervention options that are evidence-based are reported. The results of treatment-outcome studies underlying the positive effects of CBT for PIU are presented. The necessity of more literature in the related field and the need for an official diagnosis for better understanding of etiology and treatment of PIU is underlined.

#### INTRODUCTION

Human beings adapt and learn their environment through various levels and types of stimulation. Through that, individuals activate their nervous systems and variety of synaptic communications occur that eventually led towards learning and memory formation (Carlson & Birkett, 2021). Stimulation therefore becomes necessary for healthy human development. However, it is shown that pretty much anything that can give you a stimulation, can also trigger adaptive processes when habitual stimulant turns into an obligatory stimulant for an individual (Alavi et al., 2012). Yet, that simple source of stimulation which is

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needed for healthy development, can turn into a form of impulsive, sequential behavior through repetitive stimulation, hence can form the basis of what is known as an addiction.

Addiction in its simplest form is known to be the dependence on a substance or activity (Widyanto, & McMurran, 2004). It is crucially important to acknowledge the 'activity' part of the prior description as until very recently, it was not very common to conceptualize non-chemical addiction as a form of addiction (mostly because 'non-substance behavioral addiction' was not listed in any of the diagnostic tools like DSM-IV or ICD-10) (Ibid, 2004). However, recently it has been evident that in order to develop an addiction, one does not need to rely on a substance-based source, hence, as mentioned above, any form of activity that can create a stimulation, can in turn cause addiction (i.e.: gambling) (Alavi, et al., 2012). The main issue here is to differentiate between forms of addiction because in 'non-substance related addictions' in other words, behavioral addictions, the individual is known to be either addicted to the behavior, or to the feeling/emotion that one gets after the behavior is completed (Ibid, 2012). As this Chapter is mainly concerned, the non-substance-based addictions such as Internet addiction and the related psychopathologies of it have been loosely studied within the literature (Davis, 2001). Therefore, one of the aims of the current manuscript is to show the relevance of the Internet addictions (as seen by man clinicians (Ibid, 2001)), and to give a through description of both the notion at hand and the intervention methods related to it.

#### PATHOLOGICAL INTERNET USE: ITS CAUSES AND PROBLEMS

Related to the previous indications, literature further points out that the behavioral addictions can be formed in two groups: passive (watching TV) or active (playing PlayStation) (Alavi, et al., 2012). Based on that, the main indicator of the addiction and the repetition of the behavior lies within the reinforcement. Regardless whether the behavior is passive or active, it needs to stimulate reinforcement mechanisms in an individual in order to be repeated. This further can be explained by brain-based learning mechanisms (mainly through dopamine and reward circuits of the brain) which will be focused on next, and the learning theories through reinforcement (Watson, 1913; Skinner, 1948).

Considering the importance of prior literature on addiction, the authors believe it is fundamental to also explain some basics of addiction. This is mainly because the neural mechanisms and neurocircuitry involving dopaminergic activation (as addictions are reward based) have often been studied through the lens of substance addictions. However, growing evidence suggests that behavioral addictions (like Pathological Internet Usage/Internet Addiction) are very similar to the substance addictions in terms of phenomenology, comorbidity, genetic contributions, neurobiological background and treatment modalities (incl. psychotherapy as well as psychopharmacological treatments which will further be mentioned) (Grant, Potenza, Weinstein, & Gorelick, 2010). Yet, based on a diagnostic perspective, according to DSM-5 (APA, 2013), the addiction term is associated mainly with substance use disorders (Koob, & Volkow, 2016). It is believed that, the former association was made as drug and other related substance addictions involve loss of control (impulsivity) when the intake is limited, even though the similar notion seems to be the case for the behavioral addictions (Grant, Potenza, Weinstein, & Gorelick, 2010). Moreover, behavioral addictions are further similar to substance-related addictions in terms of the anticipation of the stimulant, as well as the negative affect associated with it when the intake (or use/repetition) of the stimulant is prevented (Ibid, 2010). All in all, based on the recent review of Koob and Volkow (2016), addictions can be understood "as a three-stage, recurring cycle-binge/intoxication, withdrawal/nega16 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

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