



Excessive Internet use – addiction disorder or not?

Preterana upotreba Interneta – bolest zavisnosti ili ne?

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Introduction

Every aspect of addiction can be considered as a highly complex process during which the function of nervous processes which are responsible for controlling behaviour associated with the object of addiction is changed by means of using/consuming the object of addiction. There is an uncontrolled need directed to appropriate behaviour, but also a tendency to amount to the least extent all types of behaviour not related to seeking, using or recovering from using the object of satisfaction¹. Is the excessive Internet use a real form of addiction or not? There is a certain number of acceptable ways for definition of the term "addiction": obsession or preoccupation with the object (substance or activity) of addiction; need or desire for increasing use of an object of addiction – tolerance; decreased or lost ability to control the use; problems in all aspects of the user's life owing to the increased use of the object of addiction; feeling of crisis in the situations when that use is not enabled – abstinence/crisis.

The only difference which is imposed in terms of the Internet addiction relates to lack of the intake of a harmful substance into the organism. Due to that reason, certain authors do not accept the inclusion of the pathological Internet use phenomenon in addiction disorders and they suggest another category which can be exploited for the interpretation of the given phenomenon – habit and impulse control disorders. Therefore the diagnostic criteria for the pathological gambling phenomenon could be applied to the occurrence of pathological Internet use. Suggestions of this kind have caused different postures and divided researchers of this phenomenon. Owing to this, central premises and attempts at defining the term of pathological Internet use are presented in this work together with the basic arguments for its defining as an authentic, specific and particular aspect of addiction.

The Internet and human needs

Phenomenologically speaking, the World Wide Web, or the Internet, basically is an enormous database, a huge number of web pages and information. However, no matter how much in its basis it presents a simple phenomenological concept, the Internet development, apart from physiological, provides opportunities for satisfying almost all human needs: the need for being in contact with other people, being accepted, acknowledged, self-actualised, together with the need for love, success, belonging, curiosity, etc.². The Internet, first of all, offers a wide spectrum of information from many different resources. Therefore, the amount and heterogeneity of stimuli can comply with numerous demands of different people, which proves them to be manifold answer to many questions and desires.

If we partially try to disregard technical features of the virtual space itself, together with its contents, and attempt to realise what the major psychological factors which urge the users to use the Net are, we come to the final agreement of most conducted studies so far. Primarily, active attitude and freedom of action imply that the Internet provides the users with possibilities to actively and independently, beyond other people and influences, look for and choose information which will be processed and used³. Lack of sensory stimulation, provides freedom of expression and anonymity of the users who have an opportunity to present themselves in a completely different light in relation to their real identity, often hiding their real traits and emphasising those which are socially and personally desired. In the real world, that kind of expressing attitudes is not often possible either due to the fear of criticism, social condemnation or rejection. Social support and interaction are the following significant factors with foundation in basic human needs, such as the motive of sociability, altruism,

social acceptability and the motive of belonging⁴. Communication applications, such as instant messaging, Skype, My Space, have been some of the most used programmes on the Internet since the beginning of this century. More recent results suggest that introverted persons, together with those with neurotic features, spot the opportunity to express their “true self” exclusively in Internet communities, whereas extroverted persons, relate that opportunity exclusively with the traditional kind of social communication⁵. Finally, a person on the Internet can create a virtual role in which they will appear in the direction of imagined or desired identity⁶.

Everything you are, your appearance, your name, feelings, attitudes, motives, knowledge, skills, interests, needs, desires, dreams, origin, social class, gender, all that find its reflection in a ‘parallel world’. That reflection, though, as every other, can never be identical to the original⁷.

All these four advantages are broadly overlapped to form a system of possibilities and advantages, which is the main characteristic of being and acting in cyberspace.

Excessive Internet use – Pathological phenomenon?

In parallel with the process of development and spread of the Internet network, numerous expectations, but also some negative reactions to the mentioned process have occurred^{8, 9}. Great number of those negative remarks and “warnings” is aimed at the occurrence of an increasing need for a longer presence on the Internet¹⁰. The existence of the Internet addiction as a discrete disorder was first proposed in 1995 by Ivan Goldberg. Since then, many terms for nominating this occurrence have appeared: Internet addiction, pathological Internet use, compulsive Internet use, Internet dependence, Internetomania. The seriousness by which the excessive Internet use phenomenon has been conceived is best illustrated by a proposal that the new American classification of mental disorders (Diagnostic and Statistical Manual of Mental Disorders – DSM-V), should be included as a cybernetic disorder diagnostic category, which would comprise, apart from the Internet, all forms of misuse of modern technical achievements, such as mobile phones, computers, video games.

Diagnostic criteria

A step to further consideration of “Internet addiction” concept was a description of basic symptoms in terms of establishing any diagnosis classification. The criteria listed further in this text are used for estimating the presence of Internet addiction phenomenon and are accepted by the American Psychological Association, although no criteria have been adopted officially into the DSM or International Statistical Classification of Diseases (ICD) yet¹¹. In this work, this list has been expanded by the author.

– The occurrence of tolerance – there is an increasing amount of time spent on the Internet, in order to achieve the original feeling of pleasure and satisfy needs which required less time to be fulfilled earlier.

– Abstinence symptoms – occurrence, after the cessation and/or attempt at the decrease of the Internet use. These symptoms usually denote: anxiety, subjective sense of compulsion, obsessive thoughts and preoccupation with the Internet, psychomotor agitation, trepidation, tremor, etc; the occurrence of voluntary or involuntary finger movements, similar to typing on the keyboard or “clicking” the mouse.

– The occurrence of feeling of fatigue and nervousness – at the attempt to lessen or stop the use of the Internet; the user also becomes irritated if disturbed while online. The Internet is accessed in order to avoid these abstinence symptoms.

– The Internet is accessed much more often or longer than planned.

– There is a constant desire to lessen the time spent on the Internet.

– Offline addiction – a great deal of time when a person is not on the Internet, they spend dealing with the activities related to the Internet use.

– There is a realistic individual risk of loss of significant relations, professional and educational opportunities, originated as the consequence of the excessive Internet use.

– Important social, professional or family activities are neglected or reduced due to the Internet use.

– The Internet is used despite the comprehension of the problems caused by the excessive Internet use (sleeplessness, marital difficulties, being late for work, employment difficulties, feeling of being abandoned by others, and so on).

– The Internet is used as a getaway from problems and feelings like helplessness, guilt, anxiety and depression; the Internet takes the role of the main distressor so that, besides the time increase, there is a broadening of situations/needs which present the “trigger” for the escape into the cyberspace.

– Frustrated with the feeling of guilt due to neglected duties or problems, the user hides the truth from his family members about the time spent on the Internet.

In this context, the Internet addiction is defined as a form of the Internet use which implies occurrences of at least five mentioned criteria, at a time framework of at least one year.

Internet addiction subtypes

Two distinct types of the Internet addiction are often mentioned: specific and generalised¹². Specific pathological Internet use includes those people that are dependent on a specific function, aspect of the Internet (eg. online sexual material/services, online gambling, online shopping, etc.). It appears reasonable to assume that these dependencies would also exist in the “real world”, in the absence of the Internet¹³. Generalised pathological Internet use is rarer and involves a multidimensional overuse of the Internet, often without a clear objective. The generalised pathological use can be associated with the social interaction (chat, e-mail, forums) and general computer addiction, but it is more likely that people form addictions to the specific online content and activity, rather than to the Internet itself.

There is no clear consensus on the exact number of assumed Internet addiction subtypes and in general there are four or five subtypes in question. The author of this work in his studies speaks in favour of the concept with 6 + 1 addiction subtypes:

Cyber-Relational Addiction. Persons who due to discontent with real relations or for some other reasons compulsively and continually start to replace "real" with virtual relations, either in the form of chat rooms, forums, online communities or e-mail^{14, 15}. An important remark is that relationships with the family and friends from the "real" world are not included in this group, so the relationships which, for some reasons (going abroad, studying, etc.) cannot be realised in a physical, direct contact and therefore the Internet is the only or almost the only means of communication.

Cybersexual Addiction. Compulsive download, watching or trading with online pornographic contents, including all forms of interaction with sexual contents in its basis (chat rooms, online hot-line). A noticeable need for a frequent sexual stimulation which can but does not have to be followed by sexual problems in reality.

Information Overload. Intensive surfing in search for information, search of online database with the aim of gathering information and their later processing. As a main motive is the curiosity motive, and also many types of professional and non-professional interests (hobbies) and values.

Net Gaming. There is a rising number of online games (PC and Sony play stations games, obsessive Net gambling, various types of *fantasy* games, betting, etc.) which engulf persons' attention due to the thrill, suspense and lively contents. Although games are most frequently connected with younger population, in recent years the age limit keeps disappearing.

Compulsive online shopping. The noticeable need of the Internet user for the Internet shopping. The range of thus purchased or sold products and services is most often very wide and cannot be linked with a certain activity of the user.

Computer and information technology addiction. This subtype is most debatable, being too general and not strictly connected to the Internet use, however it includes it. It comprises all compulsive needs related to new technologies, from computers to mobile phones.

Mixed type. Owing to the interactive nature of the whole process, types and contents of the activities which users mainly perform in cyberspace, often a clear form of behaviour cannot be discussed, but a cumulative, mixed or generalised type of addiction. Users spend their time in different activities which cumulatively lead to the feeling of necessity and need to continue such a kind of the same behaviour¹⁶. This type of addiction should be differed from the previous one, to which it is most similar, but does exclusively refer to the Internet.

Internet addiction theories

There are different explanations of factors which may be responsible for the Internet addiction.

The behavioural approach mostly relies upon operant conditioning and "law of effect" stating that the form of behaviour which brings a reward reinforces and thus becomes typical behaviour of every individual. Rewards which the Internet offers are various, from different forms of fun to numerous information.

The cognitive-behavioural model of the Internet dependence suggests that the specific maladaptive cognitions are sufficient to cause the set of symptoms associated with this disorder¹⁷. Cognitive distortions about the self include self-doubt, low self-efficacy and negative self-appraisal, such as, "I am worthless offline, but online I am someone", "The Internet is the only place where I'm respected", "Nobody loves me offline".

Psychodynamic theories are based on childhood events and early deprivation; individuals become predisposed to develop an addictive behaviour, or none whatsoever.

Personality theories deal with the individual traits and their experiences. It is not the subject or the activity that is important in this case, but the individual traits under which they become addictive.

Biomedical approach presupposes that there are addictive personality types whose changes in functioning of particular hereditary and congenital factors lead to specific neurotransmitter and hormonal imbalances. These changes are most frequently actualised in situations replete with emotional turmoil, which by nature activate neurochemical system of a person. For instance, some studies have shown that playing games on the Internet leads to dopamine release in the nucleus accumbens.

Sociocultural approach emphasises social aspects of the Internet use. People primarily use the Internet because of the social interaction, need for socialisation; they look for and find people similar to themselves and communicate with them whenever they want to.

Finally, some results suggest the psychopathological background of the phenomenon. In that case, individuals with certain problems in social relations, or with already existing psychological disorders, are often trying to compensate for feelings of emptiness, dissatisfaction and dysfunctional patterns of behaviour with virtual relations and an intensive use of online contents^{18, 19}.

Clinical characteristics of Internet addiction

The two main tasks present in empirical attempts to try to define Internet addiction are: forming a dependably determined set of symptoms which build up a clinical picture of this disorder and establishing one or more external validation criteria, such as personality traits, online behaviours or tendencies in disorder development, which would additionally correlate with it. Surveys so far have been directed towards the former task and there are already a few indicator lists, one of which has been stated in this work. Studies which would deal more seriously with the determination of common features of persons characterised as the "Internet addicts", however, are still in their infancy. For that reason, in this review we will list several studies which

best describe the fulfilment of the former task, so as to focus in more details upon research on the Internet addicts profiles.

Young²⁰ in 1996 selected eight of the gambling criteria she felt applied most readily to the Internet use. Pathological gambling is considered the closest type of addiction to the Internet addiction since it involves failed impulse control without involving an intoxicant. The participant had to meet five or more of the criteria over a 12-month period to be classified as a "dependent" Internet user. Qualitative analyses suggest significant behavioural and functional usage differences between the group of "dependent" Internet users and the control group of nondependent Internet users, which justified further application of these criteria in the Internet addict categorisation. To more clearly delineate Internet addiction, Beard and Wolf²¹ later stated that the first five of Young's criteria must all be met and that at least one of the final three must be met as well. One of the largest survey from the early days of working on this subject was conducted in 1998 by David Greenfield²². He found that 5.7 percent of 18 000 Internet users who participated in the survey met his criteria for the compulsive Internet usage (adapted from the criteria for compulsive gambling). Those findings square with figures from smaller studies done by others, which range from 6 to 14 percent.

The assumptions so far set forth involved, as potentially high-risk groups, persons prone to fantasising, shy persons, those suffering from social anxiety and social phobia, as well as those not satisfied with their social status²³. In a case study from the early nineties, fifty participants, recruited through the Internet or the Internet Addiction Support Group, completed an "Internet Use Survey", the MMPI-2 Addiction Potential Scale, the Coopersmith Self-Esteem Inventory and the Sensation Seeking Scale²⁴. The Internet Addiction scale showed a moderate level of internal consistency reliability and construct validity, predicting a relationship with the Addiction Potential Scale. Poor self-esteem predicted greater scores on the Internet Addiction Scale, while impulsivity did not. In similar studies, the personality characteristics that have been found to influence the Internet use are extroversion and neuroticism, low self confidence and self-esteem^{5, 25}.

Furthermore, it appears that individuals who are pre-morbidly vulnerable, especially with a history of impulse control, depression, social anxiety and addictive disorders, are especially at risk of using the Internet in an excessive way because it appears that the addiction can exacerbate existing mental problems²⁶. There are several examples of studies which confirm the relation of this phenomenon with some other pathological phenomena. Ha et al,²⁷ investigated correlations between Internet addiction and depression, alcohol dependence, obsessive-compulsive symptoms and biogenetic temperament in adolescents. The Internet

addiction was significantly associated with depressive symptoms and obsessive-compulsive symptoms. Regarding biogenetic temperament and character patterns, high harm avoidance, low self-directedness, melancholia, low cooperativeness and high self-transcendence were correlated with the Internet addiction. In the multivariate analysis, among clinical symptoms, depression was most closely related to the Internet addiction, even after controlling for differences in biogenetic temperament. All patients from Maressa Orzack study also had at least one other problem, depression, social phobia, impulse control disorder, another addiction or substance abuse. Several other studies have also implicated that concrete examples of pre-existing psychopathology in the form of compulsive gambling and compulsive/pathological use of pornography are major predictors of Internet addiction²⁸⁻³⁰. Gathered studies, first of all, confirm the former assumption about the complexity of the phenomenon of the excessive Internet use. It is a sequence of behavioural forms questioning the user's normal functioning in daily activities and duties, such as family, school, work, social relations, financial situation, briefly "compulsive use despite the harm which that activity does to the user". A long presence on the Internet can also lead to a somatic discomfort (backache, chafing of eyes, impaired sight, drowsiness and fatigue).

Conclusion

The phenomenon of the excessive Internet use is a particular kind of psychological dysfunction which deserves to be singled out as a specific type of disorder, to be more specific, as a type of process addiction, although there is no term to describe this dysfunction best. It is also clear that we cannot use either former addiction or impulse control disorders tests in attempt to diagnose Internet addiction. Moreover, most of the symptoms relating to the Internet, especially the number of hours spent online (time criterion) can be only conditionally interpreted as pathological.

Persons with indicative symptoms of Internet addiction usually have some suppressed psychological problem in the background, which they are trying to solve or realise in the Internet space, and in this context the Internet is often only the means for actualising already existing forms of addiction, social anxiety, unreasonable preferences and/or compulsive behaviour.

Consequently, the requirements set upon to some future research take the direction of the search for an adequate name, closer content identification and better operational definition of the observed phenomenon, together with creating a battery of tests for its adequate diagnosis. As a result, that would surely enable clearer defining of the optimal Internet use limit and prevention with the aim of hindering its misuse.

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