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PROBLEMS WITH 'INTERNET ADDICTION' DIAGNOSIS AND CLASSIFICATION

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SUMMARY

Owing to the fact that the Internet is spreading rapidly and influencing all aspects of everyday life, a task is assigned to the academic and clinical circles to establish a diagnosis and provide treatment for disorders brought about by its dysfunctional use. This paper presents a review of the most frequent problems and difficulties in dealing with individuals complaining of the symptoms of Internet use disorder, as well as some suggestions for overcoming and alleviating these problems.

For the diagnostic criteria problem, a solution can be provided in the form of behavioural addictions *category in order to solve the problem of the classification of not only this disorder but also other forms, such as pathological gambling, compulsive shopping etc. However, since there are obvious similarities with the compulsive behaviour, we suggest the term* Internet Use Disorder*, which appears most acceptable in terms of avoiding beforehand the indecisiveness of this disorder nature. Certainly, in the practical work with each client, by means of a precise and complex clinical interview, it would be further determined which subtype is under question and whether the mechanism of its realisation is more that of a compulsive or addictive nature.*

We also suggest an approach of defining a set of minimal key symptoms and manifestations of this problem, rather than singling out the personality profiles of individuals who constitute the population at risk. By prevention, the attentiveness of the public would be in that way directed towards the critical aspects of behaviour, and not towards a vague picture which causes panic and doubt, rather than reasonable ways of the problem solution.

Key words: *addiction - compulsive behaviour - diagnostic criteria and classification - Internet use disorder*

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INTRODUCTION

Nowadays, due to the position of cyberpsychology as an empirical scientific discipline, there is a need for conceptual and content complements to the goals and tasks which were set at the very moment of establishing cyberpsychology as a scientific study. Problematic Internet use has been for a long period of time a little-studied phenomenon, and it still is. As the Internet is expanding further into many aspects of everyday life, a task is assigned to the academic and clinical circles to establish a diagnosis and provide treatment for disorders brought about by its excessive, compulsive and dysfunctional use.

Is it a pathological behaviour or addiction, an independent disorder or a symptom of some other psychiatric conditions? Are adolescents, the socially anxious, or gamers perhaps, the population most at risk? Is there a valid screening instrument, a structured clinical diagnostic interview? These are some of the problems and difficulties that psychodiagnostician*s,* therapists, but also scientific circles, daily face with when dealing with individuals complaining of the symptoms of Internet use disorder. This paper presents a review of those most frequent problems, as well as some suggestions for overcoming and alleviating these problems. Some of the expressed problems and solutions have been solved through the work of experts from all over the world, and part of the stated problems will be presented through the results and conclusions of the original Internet use studies, which have been the subject of the author's work for the last few years. Part of these questions have been already addressed in some earlier papers (Mihajlović et al. 2008; Hinić et al. 2008), but with the spread of the Internet, the manifestations and the importance of these problems vary, in the way that the methods for their solution need to be adapted and re-adjusted to the new forms of the problems.

Three scientific standpoints

Diagnostic Manuals such as DSM-IV or ICD-10, official guidelines on which clinical diagnoses and scientific criteria are based, does not define addictions as an original, specific disorder category. Problems which are usually label under the category of addiction are dispersed throughout some other categories, such as substance dependence or habit and impulse control disorders. If we take a starting point to be substance dependence, it can be observed that there is a certain number of essential criteria for the definition of the term addiction (American Psychiatric Association 2000): tolerance - a need for markedly increased amounts of the substance to achieve desired effect, persistent desire or unsuccessful efforts to cut down or control the addictive behaviour, the withdrawal syndrome, obsession or preoccupation with the object of addiction, problems with important social, occupational, or recreational activities, and finally the persistence of addictive behaviour, despite the knowledge of having a recurrent physical or psychological problems caused by the same

behaviour. How can these points be theoretically and practically applied to the Internet and its increased use?

One scientific standpoint maintains that Internet addiction is a reality, and that it can completely be counterbalanced with other forms of addiction, except that there is no intake of a harmful substance into the organism (Young 1996, Tao et al. 2010). Owing to the fact that the subject is the misuse of particular activities, the solution can be found in introducing the category of behavioural addiction (Marks 1990, Griffiths 1996, Thomas et al. 1999), in order to solve the problem of the diagnostic classification of not only Internet use disorder but also other forms of addiction to activities, such as pathological gambling, compulsive shopping or some forms of sexual behaviour.

However, certain authors do not accept the inclusion of the excessive Internet use phenomenon in addiction disorders, and, in particular, they do not acknowledge the similarities with substance dependence. The Internet is an 'environment', database, system of activities, and as such, it provides only opportunities, i.e. it is only an instrument for the realisation of the existent addictive tendencies, other forms of psychological difficulties (loneliness, depression, anxiety, low self-esteem), or work or family difficulties, physical problems, disabilities, etc (Ni et al. 2009, Widyanto & Griffiths 2006). Through the Internet, individuals with already existing practical or psychological problems find functional or dysfunctional ways to compensate the problems or solve them, therefore the Internet should be counterbalanced with other modes which we reach for when we want to escape from our problems. Moreover, since a certain number of users have no previous medical history of the disorder, but simply use compulsively all the possibilities that the Internet offers (Lyoo et al. 2000), some other diagnostic category could be potentially employed for the interpretation of the whole phenomenon, and that is habit and impulse control disorders, due to the fact that in all these cases the technology is not at the core of the problem, but the behaviour that is compulsive.

The third scientific standpoint is directed towards the other end of the continuum, and claims that the Internet use cannot be related to addictions, even in the broadest possible sense, because Internet activity is a part of modern life, a way of spending free time or occupational behaviour. The Internet should be conceived as a product and consequence of the global evolution of human society and natural aspiration of the world for acceleration, which is inevitable. Nowadays, the term addiction is frequently related to various human activities (Grohol 2003). If addiction is defined on the basis of the time spent in these activities, it could be said that a modern human being, is addicted to a great variety of different objects, things and technologies, such as the telephone, microwave, freezer, and so on. Although people could in principal survive without these things, the majority of these objects, appliances, or instruments make our life easier and people are accustomed to use them so as to fulfil their daily needs in a practical and efficient way. In terms of the activities for the fulfilment of our spare time, the situation is quite similar. If a person plays football, rides a bicycle, or reads books 'during the whole day', this is not classified as a form of addiction but rather as a way of fulfilling free time in an acceptable and healthy way. In contrast to these activities, despite the speed of their acceptance, modern technologies have all gone through the phase of aggreviated or at least reserved acceptance by the public, before they became part of the everyday life, probably due to fears and unknown things and possible negative effects (Putnam 2000). However, these negative effects mainly failed to take place, except for some individual cases when they are more dependent on individual personality profiles or particular life circumstances in which the technologies did not play a role of the essential and sufficient predictor (Davis 2001). It seems that we need to accept the fact that in the process of socialization, people are more and more relying on technology (telephones, computers) these days, and less and less on direct contact 'in person'. All that, however, is neither a criterion for nor an indicator of addiction.

DISCUSION

Methodological problems

The supporters of the idea that Internet use disorder cannot be taken as a legitimate disorder and diagnostic category, among other things, adduce as a reason for their standpoint the criticisms aimed at the credibility and scientific quality of the studies having dealt with this issue so far (Yellowlees & Marks 2007). The original research of this phenomenon included mainly phenomenological and explorative surveys with no serious correlation and explanatory studies and analyses. They often did not pose the question of the history of pre-existing or existing mental disorders or difficulties, health problems or disabilities, nor the problems of establishing or maintaing social relations of the subjects (Grohol 2003). It was determined afterwards that in a great number of cases some of the stated problems can be found as a basis for the given behaviour, in the users who had developed compulsive Internet use or Internet addiction (Yen et al. 2008; Davis 2001). Moreover, it's not always possible to single out one specific mental problem of the Internet user, since different types of mental disorders are frequently intertwined in one system of dysfunctional behaviour (Hinić et al. 2010). Apart from this problem, the criticism of the small sample and sampling method (e.g. self-selected participants) was also more than justified when these initial studies are concerned, but also some later ones (Widyanto & Griffiths 2006). The importance of the variable Internet use experience, was also neglected in certain studies. Namely, they did not inspect closely whether the participants were 'novices'

or users who had had experience with the Internet for some time and who were familiar with the majority of its possibilities. What can easily happen is that the actual Internet use disorder may be mistaken for the initial fascination with the Internet, which we come across in many people who are getting familiar with a wide and appealing range of 'offers' that the Internet can provide. Case studies which are especially used in dealing with clinical cases, have also been the cause for reaching some speculative conclusions and unjustifiable generalizations about the entire population of Internet users. Case studies can be of great help when it is necessary to point out some potential problems and risks, together with the mechanisms of some disorders development, but they cannot be used for arriving at conclusions directly applicable to the behaviour of several millions of Internet users (Grohol 2005).

Nowadays, a great number of researchers are familiar with these criticisms and requirements which are set before the methodological study outlines, hence we can talk more ande more about professionally conducted studies and objectively founded findings.

Types and purpose of Internet activities

The issue around the purpose of Internet activities is one of the questions which is being taken more and more seriously. In contrast to the initial studies in this area, the time criterion is not being taken as a sufficient diagnostic criterion for Internet use disorder for awhile, although with the participants who spend over 40 hour per week online in non-professional use, it is certainly the signal of the existing problem (Hinić 2008, Bernardi & Pallanti 2009). Nevertheless, the persons who are professionally directed towards using this information tool can spend as much as eight hours per day on the Internet nowadays, without their behaviour being defined as dysfunctional. Such behaviour is quite the same as the behaviour of the persons who spend eight working hours beside a grindstone, excavator, cooker, or at the desk or counter. Opposite to that, a person does not need to spend so many hours to show some of the symptoms of Internet use disorders, as some of our studies have shown that the participants with 'only' twenty hours per week spent online complained of the presence of some negative physical symptoms (Hinić 2009).

As far as online activities are concerned, it is extremely significant with whom an individual interacts and what kind of online interaction it is (Jackson et al. 2004). Whether the Internet has negative or positive impact on the individual's social life depends on the way in which the Internet influences the balance between the weak and strong social ties of that individual. In the essence, it is fundamentally different if the purpose of such interaction is the maintenance of strong and close ties with close persons or it is the matter of weak and loose ties with casual acquaintances or temporary like-minded individuals in cyberspace. Although both types of interaction provide an individual with certain level of social support, the differences are obvious. There is a great difference between a university student who has gone to study in a different town, far away from their friends and family, and a secondary school student in their hometown, or an extremely shy and introverted adolescent who has no social skills developed to make a contact with their peers. Naturally, the issue of the addiction differently reflects in that light. Whether the purpose of Internet activities is the maintenance of social relations with close but physically distant friends, and a few hours per day is insufficient to classify a person as an Internet addict (Griffiths 2000).

Symptoms and diagnostic category

Although more and more authors agree on the idea that Internet behaviour disorder, is fulfilling almost all of the diagnostic criteria for addictive behaviour, and that it is reasonable to include it in the category of behaviour addictions (if and when such a diagnostic category is to be developed), a number of practical problems arise, even if we decided in favour of that proposition.

What is evident is that excessive Internet use can gradually lead to neglect of professional and social relations and duties, with apparent occurrence of somatic problems as well. All the participants from the clinical groups, who were recruited for our studies (Hinić 2008, Hinić 2009, Hinić et al. 2010), complained of some of those symptoms, which was the reason why they had sought professional help in the first place. The similar situation was noted in some studies carried outside Serbia (Lu et al. 2010, Chou 2001). What are the symptoms then?

The studies focusing on the physiological basis of this disorder have shown a stronger blood volume pulse and respiratory response and weaker peripheral temperature reactions of the high-risk Internet users, which further on indicates that the sympathetic nervous system is heavily activated in these individuals (Lu et al. 2010).

Our studies have shown the existence of four symptom dimensions: obsessive-compulsiveness, depression, anxiety and emotional sensitivity, and hostility (Hinić 2009). Within the first dimension, obsessive thoughts and fantasies about contents and activities online can lead to a sleeping and dietary problems, which apart from a 'deeper' disorders in the form of insomnia and weight problems, can further bring about a sequence of other secondary symptoms, such as exhaustion, anxiety, listlessness, attention disorder, etc. Within the second, physical correlates of depression somatisation, sense of failure, apathy, cognitive obscurity, frustrations, lies, denials, occur. The third is comprised of increased emotional sensitivity and vulnerability, before all anxiety, fear and social vulnerability. Finally, the fourth dimension includes symptoms such as irritation, anxiety, hipermanic reactions, hostility and finally aggression.

Based on our experience we may conclude that these symptom dimensions of Internet use disorder correspond with symptoms/disorders which bring about the disorder itself. Normally, individuals with already defined problems become addicted to the Internet, with an increase of initial problems, on the one hand, which interfere to some extent with newly developed symptoms caused by excessive Internet use, by means of which they create a new complex that simply cannot be equated with the initial mental problems.

The results undoubtedly support the fact that it is the matter of a specific kind of psychological dysfunction, although there is a debate about the adequacy of the term. The qualitative analysis of the physical symptoms and responses of the users who use the Internet excessively, suggests a phenomenological similarity with the symptoms of other forms of addiction. Pleasure, or even euphoria, during the procedure itself, or nervousness or irritability during an aggravating procedure, correspond with the 'two sides of the same coin' of any form of addiction which have been so far singled out. Although obsessive compulsive disorder also shows a high level of correlation with the phenomenon of excessive Internet use (Shapira, et al. 2000, Hinić 2009), we maintain that in this case it is the question of a more complex phenomenon that is accompanied by a strong feeling of euphoria and pleasure during the stay in cyberspace, which is certainly not a characteristic of compulsive behaviour. In addition, when it comes to addiction, a person persistently returns to the addictive behaviour despite the fact that they are aware of the great harm that the behaviour causes.

It is for this reason that, regarding the dilemmas about the classification of this behavioural disorder, we tend to view favourably its classification into a diagnostic category of behavioural addictions, if such a category developed in near future. The issue of the differentiation of specific online activities, which present the core of a concrete client's problem, can be solved by singling out subcategories of 'Internet addiction' such as compulsive pornography consumption, online gambling and betting, etc (Pratarelli et al. 1999), which is not uncommon for other already existing diagnostic categories. However, since there are obvious similarities with the category of compulsive behaviour, we suggest the term Internet Use Disorder which appears most acceptable in terms of avoiding beforehand the indecisiveness of this disorder nature.

A challenge set before the experts in the field of health services is to finally determine clear boundaries of the criteria for diagnosing this disorder and potential relatedness, if not causation, with other disorders, compulsions, neuroses or mood disorders. Our results suggest some potential relatedness with compulsions of sexual behaviour, and games playing, as well as with disorders in social relations, social anxiety and tendencies towards avoidant behaviour. However, all these are just assumptions which should be tested more seriously and put more carefully into practice with triage of each individual client seeking help. Only in that way could the treatment be adequately directed towards appropriate mechanisms of emergence and maintenance of this disorder. As it is the case with dealing with every client asking for help due to the symptoms which match the symptoms of some of a more complex mental disorder, for instance depression, it is essential to determine, by means of a precise and complex clinical interview and some diagnostic instruments, whether a particular subtype of Internet use disorder is at stake and whether the mechanism of its realisation, in that matter, is more of a compulsive or addictive nature. This review has not dealt with therapeutic procedures, because only a few have been seriously studied so far, although some psychotherapeutic approaches and also medications have been recommended. We strongly hope that some more far-reaching studies in this area will be conducted in the nearest future.

Problems with diagnostic instruments

In line with the abovestated, there is a need for a more recent standardisation of some of the existing scales of Internet addiction, so as to employ all preventive measures for its detection and suppression. The existing clinical instruments, usually used for measuring these disorders, are most frequently those based on diagnostic criteria defined by DSM-IV or ICD-10, which are in most cases adapted criteria for diagnosing pathological gambling or substance dependence. The mere copying of the criteria for pathological gambling and their implementation with slight adaptations is not sustainable without thorough investigations. The Internet is a pro-social medium, with a possibility of interaction, and that mere fact is sufficient to raise the question of the validity of equalising that phenomenon with such an individual and specific activity, such as gambling and betting.

Among most frequently used instruments in practice, particularly in research work, the following should be mentioned: Internet Addiction Test or IAT scale (Young 1999), and Chen Internet Addiction Scale or CIAS (Chen et al. 2003). It is becoming a common opinion that the IAT is not completely reliable and valid psychometric instrument nowadays (Grohol 2005). Although some attempts have been made at its validation (Widyanto & McMurran 2004; Ferraro et al. 2007; Khazaal et al. 2008), it is evident that certain criteria included in the items of this scale must be adapted to the current Internet use and the place it takes in human lives. One of most frequently criticised items is 'How often do you check your email before something else that you need to do?'. Moreover, some items, such as 'How often do you find yourself anticipating when you will go online again?', are somewhat vague, which is at the same time, like the

previous ones, a questionable measure for some 'irrational behaviour' nowadays. Furthermore, there is a problem with the number of factors covered by the test, ranging from one-factor model (Khazaal et al. 2008), to six-factor model (Widyanto & McMurran 2004), which is also not the characteristic of good psychometric scales. As far as CIAS scale is concerned, there are satisfactory results which have been reported so far in relation to its psychometric characteristics. However, what we need is more time and more studies, especially outside the Asian population, so that this scale could ensure its dominance in use. The majority of studies related to national samples, use these scales as a basis for constructing similar instruments applicable to national populations. It is also extremely important not to stop at the employment of such an instrument no matter its potential good psychometric properties and standards when dealing with persons who may be rightly suspected to show several symptoms of Internet use disorder in practice, but also to employ some form of a semi-structured clinical interview which would encompass all the dilemmas and overlaps of the categories noted in this paper. One of the better suggestions, which shows acceptable reliability, is the one to investigate the following criteria in clinical interviews: the symptom criterion (seven clinical symptoms of addiction disorder), clinically significant functional and psychosocial impairments, course criterion (duration of addiction lasting at least 3 months, with at least 6 hours of non-essential internet usage per day) and exclusion of dependency attributed to psychotic disorders (Tao et al. 2010). According to these authors, a diagnostic cut-off criterion should include preoccupation and withdrawal symptoms and at least one of the five other symptoms (tolerance, lack of control, continued excessive use despite knowledge of negative effects/affects, loss of interests excluding internet, and use of the internet to escape or relieve a dysphoric mood).

The problem of defining the risk population

The research results suggest that the population of 'pathological Internet users' differ from the general Internet population (Hinić 2008). Although certain regularities in the distribution of particular categories in the clinical population have been established, Internet use disorder, similar to many other forms of addictive disorders, takes its place in most diverse demographic structures, thus, in this view, we cannot firmly rely on demographic predictors of this behavioural disorder.

Although some personality characteristics have been found to influence Internet use, such as: extroversion and neuroticism (Hamburger & Ben-Artzi 2000; Tsai et al. 2009), self confidence and self-esteem (Yang & Tung 2007), poor social skills (Whang et al. 2003; Yang et al. 2005), tendency towards avoidant and compulsive behaviour, social anxiety (Hinić 2011), depression symptoms, hyperactivity disorder, social phobia, and hostility (Ko et al. 2009), we cannot provide with certainty a reliable profile of an average 'Internet addict'.

It is for this reason that we suggest an approach of defining a set of minimal key symptoms and manifestations of this problem, with which a wider population of people would be acquainted through a process of training, rather than singling out personality profiles of individuals who constitute the population at risk. The attentiveness of the public would be in that way directed towards the critical aspects of behaviour, and not towards a vague picture, which causes panic and doubt, rather than reasonable ways of the problem solution.

Table 1. Arguments against/ for a new diagnostic category

Arguments against a new diagnostic category	Arguments for a new diagnostic category
Uncertainties about the name of the diagnostic category due to the overlap of addictive symptoms and other mental disorders, primarily habit and impulse control disorders.	Although the registered symptoms correspond to addictive symptoms most (excessive use, tolerance, abstinence, inability to control), the solution may be achieved by a neutral name *Internet use disorder*
There is a set of different unrelated behaviours and disorders which are only realised by the Internet and are already existent in reality (sex addiction, gambling, video games playing, compulsive shopping, etc)	The common attribute is the realisation of activities through the Internet. It is necessary, though, to single out the subcategories of Internet use disorder, such as online gaming, gambling, shopping, pornography addiction, etc)
This classification might also include the behavioural patterns which have the function of the evolutionary development of human behaviour in the era of new technologies, and therefore may create more resistance to treatments and prevention work	With *official* diagnostic category, the individuals with these problems would be motivated to seek help, and in that way it would decrease the mortality, hospitalisation, prejudice and other consequences
First, it is necessary to increase the number of studies and their quality (standardisation of instruments, controlled experiments etc) in order to obtain more reliable results and more objective facts	More attention would be drawn to the groups at risk, and preventive, educational work aimed at the prevention of this phenomenon. In this way, the number and quality of research papers would be stimulated

CONCLUSION

As there have been changes in dietary habits, in the completion of professional duties, the transport and shopping, so will it inevitably come to some adaptive changes in communication and interaction processes. The majority of the symptoms assigned to Internet use, particularly the number of hours spent online, can only be taken into consideration conditionally and in a combination with other numerous criteria upon diagnostification of the Internet use disorder. If, on the other hand, Internet use should cross that, at first sight, unclear line, which is still clearly reflected in negative effects on the user's life (certain physical symptoms, compulsive symptoms, anxiety, apathy, the problems in educational, professional and social functioning), we hope this review has provided certain pieces of advice and suggestions. Regarding the dilemmas about the classification of this disorder, we suggest the term Internet Use Disorder, which appears most acceptable in terms of avoiding beforehand the indecisiveness of this disorder nature. The issue of the differentiation of specific online activities, which present the core of a concrete client's problem, can be solved by singling out subcategories of Internet Use Disorder, such as compulsive pornography consumption, online gambling and betting, compulsive shopping, etc.

Table 2. Suggestions for improving the approach to Internet Use Disorder

Suggestion list of steps to be taken
To form the diagnostic category Behavioural addictions, and within it the category Internet use disorder
To name the list of clear, concrete and specific symptoms which isolate this disorder from other disorders, similar categories, such as compulsive disorder and other forms of behavioural addictions
To identify the subcategories of this disorder and describe them clearly. We suggest the following: generalised disorder, disorder of online social interaction, online gaming, compulsive online shopping, gambling, consumption of pornographic contents
To unify the experiences in diagnosing different forms of Internet addiction. To define the most efficient theses to be included in specialised clinical interview. To test more thoroughly and improve psychometric characteristics of the existing and construct new diagnostic scales
To unify the experiences of therapists in the therapeutic approach. According to our experience, the REBT approach has appeared most efficient in the treatment of this disorder, although there is plenty of room for improvement
To affirm journals, teams, institutions, which deal with this problem in a specialised manner. To conduct a greater number of controlled clinical trials in order to resolve some of the main doubts stated in this text

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