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Chapter 10

Internet addiction disorder among adolescents and young adults: the picture in Europe and prevention strategies

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INTRODUCTION

This article deals with Internet addiction, the spread of this phenomenon in European countries, its possible causes as well as ways of preventing it. Nowadays, young people in the Western world, including those living in European societies, have access to a wealth of information sources through the Internet, which they use as a key means of keeping themselves up to date, entertained and in touch with their social lives. More specifically, in Greece the Internet appears to have almost completely replaced other forms of pastime, such as interactive playing outdoors, in the neighbourhood or/and at home. Young people are becoming more and more attached to the Internet as a means of communicating, learning and seeking new challenges, while at the same time they are becoming more introverted and more suspicious of face-to-face communication with others, which they often consider too demanding and even unnecessary. In their daily activities with computers they also live a virtual life alongside their real one. As this virtual reality constitutes an integral part of their everyday life, young people often fail to recognise the differences between actual and virtual reality. At the same time, however, the Internet represents an escape from everyday life, a means of discovering many and different new “lives”, and it is exactly this that creates the danger of “addiction” in the sense of compulsive Internet usage.

The focus of the problematisation discussed here lies with the opinion that Internet addiction may be described as a new distinct diagnostic category, but should be examined in the context of addictive behaviour, its symptoms, causes and consequences. According to our basic assumption, there are significant similarities among the various types of addiction irrespective of the object of addiction, which may be a psychotropic substance, a game of chance or the Internet. Some of the common alarming symptoms and warning signs are: the preoccupation of the mind with the object of the addiction, e.g. the Internet; the attempt to conceal the extent of involvement with the object of addiction or/and the subsequent lies about the extent of involvement; withdrawing from other pleasurable activities; social isolation; defensive attitudes and angry outbursts; psychological isolation; engagement in the activity as a way to escape from reality; and the continuous involvement despite the negative consequences.

The assumption that the various types of addiction have a common or similar psychological background, namely that the addicts have a similar psychological profile, has been supported by recent research (Dowling and Brown 2010). For example, both Internet and gambling addiction are associated with a high level of stress, loneliness and low social support. These findings suggest that the various types of addiction may be separate from each other and often be occasional manifestations of the same underlying vulnerable characteristics.

This similarity of the psychological profiles affects the treatment of these problems. First of all, the clinical psychologists taking part in the treatment should recognise the various manifestations of this phenomenon. Second, it should be noted that the most effective treatments for addictive behaviour are the synthetic approaches, including both the treatment of specific symptoms (e.g. of gambling or Internet use) and treatments used in the case of addictive behaviours in general. The success of the cognitive-behavioural approach for addictions such as gambling suggests that this approach may be effective for Internet addiction too. Finally, co-morbidity with psychological problems such as depression, anxiety, stress and loneliness may affect the choice of treatment as well as its effectiveness.

It should be noted that the causal relationship between problematic addictive behaviour and psychological problems cannot be inferred by the research conducted so far. There is some evidence suggesting that the psychological problems are likely to precede the development of the addiction, but this temporal relationship needs to be further explored. In conclusion, the findings to date show that the different types of addiction (e.g. gambling or the Internet) may be separate disorders with a common underlying causality or common consequences. Finally, another aspect has to do with the support addicts should be provided with in order to improve their psychological functionality.

INTERNET ADDICTION: THE GENERAL PICTURE IN EUROPE

The European Union-funded research project “Research on Internet Addictive Behaviours among European adolescents” (Tsitsika, Tzavela and Mavromati 2012) aims to augment the knowledge base of the Internet addictive behaviour risk among adolescents in Europe. A total of 13 284 adolescents aged 14-17 (a representative sample from each country) was surveyed. Additionally, 124 qualitative in-depth

interviews were conducted. The study took place in Greece, Germany, the Netherlands, Iceland, Poland, Romania and Spain.

The basic findings of the study that describes Internet addiction among adolescents in Europe nowadays show the following (Tsitsika et al. 2012):

About Internet Addictive Behaviour (IAB): 1.2% of the total sample presents with IAB, while 12.7% are at risk of developing IAB (13.9% have Dysfunctional Internet Behaviour (DIB)). Spain, Romania, and Poland show a higher prevalence of DIB, while Germany and Iceland the lowest in the study. Boys, older adolescents and those whose parents have lower educational levels are more likely to exhibit DIB. The group with DIB has lower psychosocial well-being. Gambling, social networking and gaming are strongly associated with DIB, while watching videos/movies was not related to DIB and doing homework/research was negatively associated with DIB, indicating that the more adolescents use the Internet for homework/research the less they show signs of DIB.

With regard to high-risk behaviour: the research showed that one dangerous form of behaviour is communication with strangers. Specifically, 63% of the total sample communicate with strangers online; 9.3% of those communicating with strangers online state that this experience was perceived as harmful for them (5.4% of total sample); and 45.7% of those communicating with strangers online have gone on to meet someone face-to-face that they first met on the Internet (28.4% of total sample). The risk of grooming is higher in Romania, Germany and Poland, and lowest in Greece.

Exposure to sexual images: the percentage of the total sample exposed to sexual images is 58.8% and 32.8% of these state that this experience was harmful (18.4% of total sample). More boys than girls have been exposed to sexual images.

Cyber bullying: 21.9% of the total samples have experienced bullying online; 53.5% of those bullied state that this experience was harmful (11.2% of total sample). More girls than boys experience bullying. Romania and Greece have the highest percentages, while Iceland and Spain the lowest.

It is remarkable that although a significant number of adolescents may be exposed to Internet risks, a much lower number experiences harm. This indicates the importance of education and prevention among young people: educate young people to deal with risks, so that they do not experience harm.

With regard to Internet activities: social networking comes first and is followed by gambling and gaming. Specifically, 92% of the total sample are members of at least one social networking site (SNS). Some 39.4% of adolescents spend at least two hours on SNS on a normal school day. Using SNS for more than two hours daily is associated with DIB. More girls than boys use SNS, while having more than 500 online friends is associated with DIB.

Gambling: 5.9% of the total sample gamble online, while 10.6% gamble in real life. Romania and Greece have the highest gambling percentages (online and in real life, and adolescents who gamble have three times the risk of exhibiting DIB).

Gaming: 61.8% of the total sample are gamers, and adolescents who play games have twice as high a risk of exhibiting DIB. Gaming more than 2.6 hours a day is associated with DIB. Boys are more likely to abuse or become addicted to gaming.

In the same research, the qualitative components (Dreier et al. 2012) indicated the important role of the Internet in adolescence and specifically that adolescents are especially attracted to the Internet because of their developmental characteristics and their thirst and curiosity for:

- ▶ getting answers to a wide range of questions;
- ▶ attaining fast and the most up-to-date information;
- ▶ keeping in touch with existing and new contacts;
- ▶ having fun.

The Internet eases (facilitates) everyday life in adolescence. However, some teenagers need to feel boosted (empowerment). Empowerment comes through positive online encounters (being liked, gaining excellence in games, feeling equal and filling empty time). In addition, empowerment may fill a void when it comes to adolescents with deficient offline social skills.

It is important to mention that adolescents with underdeveloped offline skills may experience a high degree of empowerment through the Internet and thus are more vulnerable to the development of Dysfunctional Internet Behaviour.

With regard to the adolescents' behaviour of being "always online", the research showed that adolescents, following their personal online journeys of exploration (digital pathways), develop various strategies in order to handle the phenomenon of being always online; for example, "adaptive strategies" (efforts to balance online and offline engagements like self-monitoring, prioritising, exploring offline alternatives), and "maladaptive strategies" (efforts to maintain increased online engagement like bypassing parental control, normalisation, legitimising use). The properties that determine the strategies are self-regulation and readiness for change (motivation in changing behaviours that cause objective difficulties).

Continuous Internet use and the development of high-risk behaviour were researched further, which resulted in the classification of four types of continuous use:

A) "Stuck Online": displays excessive Internet use, neglects main areas of daily routine (school, friends, duties), has specific online activities, has negative effects of over-use (sleep disturbance, distress if unable to go online) and has difficulty to reduce Internet use, even if acknowledging the negative impact. However, this type may have a thirst for life and offline experiences, but because of deficient social skills he/she feels disappointed, bullied or excluded and thus "trapped" online:

Well, I used to go out more, being outside, going swimming, or stuff like that. I haven't been swimming for about two years. I haven't been out with my friends in the evening for over four months now, such things you neglect.

– Boy, 16 years

B) "Juggling it all": these people may have a thirst for life and offline experiences, and also a good level of social competence. Online activities may have a strong connection to offline activities (e.g. an adolescent with a lot of friends may use Facebook a lot):

Because I am busy and I spend a lot of time on the Internet, it's hard to manage everything. But I get everything done.

– Girl, 15 years

C) “Coming full cycle”: a person in this category has an excessive online pattern, progressive and adaptive change and self-correction, with that self-correction possibly coming through: saturation (“Got sick of it”); acknowledging negative consequences (physical problems, aches, academic downfall, parental conflicts etc.); or motivation (romantic relationship, etc.):

I started visiting social networks like Facebook, saying “ah, here there are many people, I meet new people, that’s nice”, staying [online] for more and more time, making comments, uploading stuff and creating a new life in there. Like a virtual reality. Um...I think that happened. After a while though, you come full cycle, you start saying “what am I doing now?”, you get tired of it, you shut it down, you go out and you start cutting down on the time you spend on it. Just like that; it comes full cycle.

– Girl, 17 years

D) “Killing boredom”: those in this category perceive the offline environment as “boring” and lack alternative activities of interest. Online engagement provides a comfortable time filler and Internet use is an automatic reaction to boredom:

Well, I really don’t care. I just kill time. I feel so bored.

– Boy, 17 years

As the writers emphasise, the “Model of Four” may serve as a tool for categorising users with DIB and offer an initial prognosis.

Types A and D seem to have a poorer prognosis and co-morbidity (anxiety, depression, attention disorders, etc.). In these cases, DIB may be the tip of the iceberg – the expression of an underlying psychosocial difficulty that requires intervention.

Types A and D most probably will not self-correct and may need professional help.

Types B and C seem to be functional users and loss of control is mainly connected with developmental adolescent patterns.

Types B and C most probably will self-correct and may not need any intervention at all. Type C, however, may lose quite a significant time interval during the “cycle” and some kind of help may be needed.

It is remarkable that the four types of individual that demonstrate continuous and a lower or higher level of problematic Internet use outline characteristically the so-called negative side of the use of this medium, which is associated with alienation, a lack of real personal contact and the parallel development of a fake and virtual sociability. So, on the one hand, the Internet offers indeed the opportunity both for instant and faster communication with people and for instant and faster information about current events around the world. On the other hand, it is a fact that this kind of communication prevents face-to-face communication and contact among young people nowadays. The social media represents a characteristic example, where users are linked to many people they know while at the same time belonging to various collective communities created on the Internet. However, the satisfaction of this need for sociability and socialisation in a virtual way inhibits the pursuit of establishing closer personal and social relations.

In contrast to this argument, there is the view of the Internet as an inevitable part of today's social reality, so much so that Internet users often wonder how it was possible to communicate before the invention of this communication means. It is a fact that people have the need to communicate for practical, psychological and social reasons. How this communication is achieved is a function of the resources available to each era. Taking communication as a valuable commodity, the Internet has multiplied the possibilities for communication in various ways, resulting in the potential connection of all people who have access to it. This is a huge advantage with many dimensions in our daily lives, as we can now be connected with previously inaccessible places and persons through simple moves. Bearing always in mind the Internet is an integral part of social reality, it can be pointed out that such behaviour associated with the abuse of the Internet would not be considered so problematic if it were not associated with estrangement from the most direct and therefore more powerful forms of communication that have always been available to people and which constitute key elements of socialisation and personality development. Such communication immediacy, along with the qualitative elements that enrich human communication such as touch, gaze, or gestures, are absent from communication through the Internet, and this absence is "impoverishing" people in terms of their communication.

INTERNET ADDICTION: RECENT RESEARCH FINDINGS

The findings of recent research on the prevalence of pathological Internet use (PIU) and maladaptive Internet use (MIU), conducted by Durkee et al. (2012) on a sample of about 12 000 adolescents from 11 European countries, showed that the overall prevalence of PIU was 4.4%; it was higher among males than females (5.2% versus 3.8%) and differed between countries ($\chi^2(2) = 309.98$; d.f. = 20; $P < 0.001$). PIU correlated significantly with mean hours online and male gender. The highest-ranked online activities were watching videos, frequenting chat rooms and social networking; significantly higher rates of playing single-user games were found in males and social networking in females. Living in metropolitan areas was associated with PIU. Students not living with a biological parent, low parental involvement and parental unemployment showed the highest relative risks of both MIU and PIU. One of the most important findings was the fact that there are cultural differences (which need to be researched further) and that the prevalence of pathological Internet use varies by country and gender, with adolescents lacking emotional and psychological support at highest risk.

One aspect of problematic Internet use is online gaming. Online gaming addicts range from adolescents to mature adults. Research on a representative sample of 580 adolescents aged 14-18 in Germany investigated the possibility that playing digital games is associated with forms of addictive behaviour. The findings show that 3.7% (95% CI: 3.1, 4.3) of the respondents could be considered problematic users. The percentage of problematic gamers among adolescents is above average (7.6%, 95% CI: 5.6, 10.1). A high score in the measure used to assess online gaming addiction is associated with aggression, low sociability and self-efficacy, and a lower satisfaction with life. Additionally, these scores correspond with intensive use and preferences for certain gaming genres across all age groups. The conclusions underline that gaming

addiction is not currently a widespread phenomenon among adolescents and adults in Germany. The high scores in the scale for the assessment of gaming addiction are associated with intensive use, as well as certain problematic aspects of individuals' personalities and social lives (Festl, Scharkow and Quandt 2013).

The concept and nature of what is called "Internet addiction" are discussed in the article of Starcevic (2013) that examines some of the most important issues surrounding Internet addiction and proposes an alternative conceptualisation for it. The Internet is used by hundreds of millions of people worldwide, with its numerous benefits only leading to an increase in the number of users. But there is a dark side to the Internet, and one of the negative consequences of the vast potential of the Internet has been its excessive and uncontrollable use, often referred to as Internet addiction. As a concept, Internet addiction faces two types of challenge. The first one is about it being an addiction. The second one refers to the Internet as a medium to which a person is presumably addicted. Addiction does not appear as a diagnosis in the diagnostic and classification systems such as the Diagnostic and Statistical Manual Disorders (DSM) – IV. The diagnostic concept most closely related to addiction has been dependence, which has been linked with psychotropic substance use. It was pathological gambling as a behavioural addiction that served as the model for the concept of Internet addiction. However, this was inappropriate because of the differences between the two that were either neglected or overlooked. Furthermore, behavioural addiction itself is a problematic construct, as it implies that any behaviour that is rewarding can be addictive (Starcevic 2013).

Pathological Internet use is a behavioural addiction whose prevalence seems to increase. Several authors have reported a significant co-morbidity of PIU and mental and psychosomatic disorders. In recent years, psychotherapists were increasingly confronted with PIU among inpatients on psychotherapeutic wards. There is still a lack of clarity about the psychodynamic function of PIU and online gaming which causes users to engage excessively in gaming and to neglect their everyday relationships and work duties.

As a contribution to a better understanding of the psychodynamics of online gaming, the paper of Langenbach and Schutte (2012) presents two cases of adult inpatients that were treated on a psychotherapeutic ward for severe depressive episodes. In the course of treatment, a distinctive online addiction became apparent as a relevant area of problems. Traumatic experiences in both patients' childhoods had an important weight both in the genesis of the acute mental disorder and the online addiction. The authors propose to consider the relevance of traumatic experiences and of patients' coping behaviour with such experiences in a significant group of patients with online addiction (Langenbach and Schutte 2012).

There are some quite interesting studies and findings that investigate the potential relation of the involvement with the Internet to people who belong to the broader spectrum of autism. One of these studies (Finkenauer, Pollmann, Begeer and Kerkhof 2012) investigates the possibility that individuals with autism spectrum disorders or autistic traits benefit from the Internet and computer-mediated interactions, but there is concern about their Internet use becoming compulsive. This study investigated the link between autistic traits and Internet use in a two-wave longitudinal

study with a non-clinical community sample (n = 390). Compared to people with less autistic traits, people with more autistic traits did not report a higher frequency of Internet use, but they were more prone to compulsive Internet use. For women, more autistic traits predicted an increase in compulsive Internet use over time. These results suggest that, despite its appeal for people with autistic traits, the Internet carries the risk of compulsive use. (Finkenauer, Pollmann, Begeer and Kerkhof 2012)

TREATING INTERNET ADDICTION: THE GREEK EXPERIENCE

The belief of the first therapeutic programme in Greece for the treatment of Internet addiction, which is section of the broader agency for addiction treatment “18 Ano” (Over 18) (2013), is that, since the beginning of the progressive increase of the accessibility of the Internet, which becomes possible at an even younger age, the data concerning the younger generations of adults in the country are going to change dramatically. This fact inevitably renders the current generation of adults more vulnerable to Internet addiction compared to the past generations of adults and, correspondingly, the future generations of adults compared to the present adult generation. The increase of vulnerability to Internet overuse, in combination with an ageing population, demands the application of specialised structures for dealing with the phenomenon, the ever-growing dimensions of which have not been described for Greek adults yet. It should be underlined that Internet overuse is not a “childhood or adolescent disease” although it certainly appears as such, most likely due to the higher level of familiarisation not of the young, but of the younger generations with the Internet.

In conjunction with the above-mentioned, it should be underlined that the character of the Internet is likely to change soon, multiplying its potentials as well as the risk of development of addictive behaviour. More specifically, the Internet will develop into a network, since both television and telephone will be included within the framework of the Internet’s functions. The transformation has already begun with the commercialisation of mobile phones that allow permanent connection to Internet applications.

It should be noted that quite a large number of the people who are addicted to Internet use also meet the requirements of addiction disorders related to psychotropic substances use and other impulse control disorders, such as pathological gambling. It is argued indeed that those users with a profile that includes the above-mentioned disorders have already made the first step towards Internet overuse. As a result, Internet addicts are admitted to a unit for psychotherapeutic evaluation and treatment.

The recognition that both drug addiction and problematic Internet use belong to the therapeutic section of addictive behaviour, and the assessment of clinical experience gained thus far-led to the organisation of a specialised admission centre in Athens, which focuses on the treatment of such cases.

More specifically, its services address adults who are both addicted and not addicted to substances and who have (or had) in their record any type of disorder associated with Internet use. The services provided are: individual and group psychotherapy, art and body expression groups, and alternative psycho-educational groups.

PREVENTION OF INTERNET ADDICTION: WHAT DO WE KNOW ABOUT IT?

A meta-analysis of recent research about the prevention of Internet addiction showed that the characteristics of the family are primarily associated with the development of Internet addiction among adolescents (Yen et al. 2007; Wieland 2005; Hurr 2006). This is why some mental health professionals suggest that family should be the focus of prevention strategies. Many researchers suggest a family-centred approach to prevention, similar to the one used in interventions for the prevention of drug addiction (Yen et al. 2007). This kind of approach entails parental education and its aim is to help parents improve their communication skills with their children, promote healthy interaction within the family, help parents acquire skills on how to deal effectively with certain situations and help the family reduce maladaptive family behaviours (Yen et al. 2007).

Oravec (2000) suggests that mental health counsellors help family members to decide the extent to which they want the Internet and the computer to be part of their family life before the purchase and installation of these technological media.

Another prevention method has to do with the encouragement of adolescents to participate in real life and not in cyberspace activities (Hurr 2006). The planning of these strategies has utilised research on the personality types of Internet addicts. The first studies showed that Internet addicts tend to be individuals with high exploration irritability (and low reward dependence) (Ko et al. 2007; Ko et al. 2006). This is why adolescents with this profile should take part in offline activities, creative, exploratory and healthy activities so that they match the needs of their personality (Ko et al. 2007). The researchers suggest also that teenagers should be allowed to use the Internet only during specific hours of the week so that the development of Internet addiction is prevented (Ko et al. 2007).

Although many suggestions for prevention have been made, which result from research on Internet addiction, none of these prevention strategies has been sufficiently controlled on an experimental level. In conclusion, a more general comment has to do with the lack of literature and studies about the prevention of Internet addiction. Whereas in recent years a great deal of research has been conducted on this phenomenon, suggestions for its prevention, which may be associated with an overall dealing with this problem, are few.

PREVENTION OF INTERNET ADDICTION: OUR SUGGESTIONS

Theoretical framework

Prevention programmes in schools focus on the social and scholarly skills of the children, such as the improvement of the relationship with their peers, self-control and dealing with difficult situations. The ideal application framework is the integration of these programmes into the curriculum, because factors such as school failure are often associated with the development of substance-related addictive behaviour. These programmes reinforce the bonds of the students to school and decrease the

possibility of dropping out of school. The last generation of programmes contains interventions that affect the school environment as a whole.

The idea that the way both teachers and students perceive and experience the school community has gained ground over the last years. The application of programmes over the past 15 years, such as “Caring School Communities” in many primary schools in the USA, is a characteristic example. The findings show that the sense of the school community may improve for both teachers and students, that it is associated with a wide range of positive results and that the possible benefits from the re-establishment of the school community are much bigger for schools with a low socio-economical level. More generally, the concept of school as a community seems to provide a strong framework for revising school practice and applying pedagogical changes.

The education of pedagogues as prevention agents is associated with the social development of students within the school community. Beyond the improvement of educational practice, a basic goal is to render the school itself an environment that meets every aspect of the needs of the teachers and the students.

More specifically, with regard to the target group of the prevention programmes, namely the “tweenagers” and the teenagers, some indicative characteristics are mentioned: they have shaped behaviour in relation to the Internet and the age group 15-19 represents the age category with the biggest tendency towards Internet use (40% mild use, 7% severe overuse) (Sunwoo and Rando 2002). What is more, this group is more likely to neglect other activities because of problematic Internet use. The age is the only factor typically associated with Internet addiction (Widyanto and McMurrin 2004). The development of addiction at a young age may suggest an increased possibility for successful therapy, since the younger the person is the easier he/she adapts to a new behaviour or he/she has an increased possibility of remaining addicted in adulthood (Block 2008).

Example: pilot programme in Greece

Introduction: Internet addiction appeared during the last decade in Greek society as a new type of addictive behaviour among children, adolescents and adults. Problematic Internet use tends to begin at an even younger age, since it is widely observed among students of primary education level (Siomos, Mouzas and Angelopoulos 2008). Secondary education students seem to have already shaped their behaviour so that the problem can be described as an observable phenomenon with specific characteristics. Therefore, in this age group, prevention is on the one hand mostly informative and aims at a more appropriate Internet use and on the other hand it is an attempt to promote the individual and collective processes that contribute to the prevention of the development of any type of addictive behaviour. This new addiction type may, in our opinion, be investigated in the context of the common causal traits with the other more widespread addiction types, such as psychotropic substance-related addiction.

Aim: the aim of the research is to study the relationship between children at secondary education level and the Internet in terms of family, education and general social aspects, as well as the cases of bullying that appear not only in the school environment but on

the Internet too (cyberbullying). The sample consists of first and second-grade secondary education students. The selection of the sample is determined by randomised stratified sampling. The students respond to questionnaires about their relationship with the Internet based on the IAT scale developed by Young (1998), which was adapted for school-age children. The students respond to another questionnaire too (developed by Psalti et al.), about their school life and focusing especially on bullying.

Results: the research is still in progress. However, the statistical analysis of the pilot data shows that increased Internet use by students is associated with aggression and the lack of socialisation.

Conclusions: the results of the study will be primarily discussed in view of the reliable information of the students, the teachers and the parents so as to assess the existing relationship with the Internet, to prevent and to promptly tackle the behaviour problems that might come up due to inappropriate Internet use, within the context of the programme of Schools of Collaborative Learning and Prevention, a pilot programme of Aristotle University of Thessaloniki, under the scientific responsibility of Mika Haritos Fatouros.

CONCLUSIVE COMMENTS

The Internet represents a technological breakthrough, a new way of communication and a new era with different characteristics regarding the transfer and speed of information. The advantages of Internet use are numerous, both on a professional and social level. The fact that, after 25 years of existence of this medium, mental health scientists have today reached a point where they can observe pathological behaviour associated with its maladaptive use may suggest that this medium has certain “addictive” attributes (e.g. immediacy, easiness of information accessibility, range of stimuli). It may suggest that its use fulfils certain needs of modern people such as communication, information and entertainment but above all that it allows the development of addictive behaviour similar to that observed years before the invention of the Internet. This article deals with problematic Internet use not in order to demonise the medium and its use, but to highlight the spread of a phenomenon with a negative impact on human psychological behaviour in today’s Europe.

Irrespective of the terminology used to describe the phenomenon – Internet Addiction, Internet Addiction Disorder, Pathological Internet Use, Internet Overuse, Compulsive Internet Use – all the terms describe more or less the same concept, namely that an individual may be so engaged in Internet use that he/she neglects other important aspects of his/her life. Whether it exists as a distinct diagnostic category or not, Internet addiction may, in our opinion, be studied more effectively in the context of addictive behaviour in general and that of the need that urges individuals to develop addictive behaviour with negative consequences on both an individual and social level. Griffiths (2000) has argued that many of these excessive users are not “Internet addicts” but just use the Internet excessively as a medium to fuel other prior addictions. In this sense the causal factor of Internet addiction is complex and ranges from prior mental disorders to a dominant lifestyle model and the establishment of relations mediated through the technological medium. This change in the way interpersonal relations are created and sustained signals a

readjustment of everyday life's needs and values where prevail alienation and on the surface communication. Despite its positive traits, such a strong technological medium cannot substitute the deeper need for interpersonal contact, a need that becomes gradually less and less recognisable as it is concealed by the new and unfamiliar artificial needs of human nature.

The investigation into the causes of Internet addiction could be facilitated by emphasising the question of why a young individual chooses virtual over face-to-face communication. It is important to understand the way this need is created during early school years and ends up becoming established as a basic communication model even during adult life. The assumption of a prior basic psychopathology that might predispose an individual to problematic Internet use does not seem to be so strong in such a widespread phenomenon with such dimensions. The answer should rather be sought in the modern social circumstances and lifestyle that dictates, for example, the ease and speed of establishing relations. Even worse, the new way of day-to-day survival imposes an excessive individuality and a preoccupation with individual activities (e.g. computer games, online series), where the presence of the other person exists only on an imaginary level, if it exists at all.

In this context, prevention has a broader character and does not aim only at preventing the symptoms of Internet addiction or at improving the corresponding skills but at promoting, in our case, the values of collectivity, equivalence, solidarity and responsibility within the school community, as well as at boosting the positive characteristics of the students.

In order for prevention to be effective, one needs to take into consideration both the previous experience in prevention strategies and the cultural differences between various countries. Thus, the above-mentioned suggestion for boosting collectivity and responsibility takes into consideration the fact that the prevention strategies aiming at informing young people or helping them acquire social skills have not yet borne fruit. This means that one should maybe turn to more experiential strategies, to strategies primarily associated with the reasons why such problems come up. So, for example, if alienation caused by the modern lifestyle is one of the causes of addiction, the focus must be on fostering those values that prevent the development of alienation, namely collective consciousness, participation in collective processes, etc.

Research on problematic Internet use among young people and mostly adolescents in Europe may give a clearer picture of the current situation, of the effective and non-effective measures and suggested interventions. For example, a great deal of research shows that the intensity of the demonstration of Internet addictive behaviour depends on individual psychological (individual peculiarities of adolescent age) and micro-social (psychological difficulties and complications generated by the close social environment) factors, which do not appear separately from each other, but are interconnected and interdependent. The main types of teenage behaviour on the Internet are: compulsive, compensatory, emotion-dependent, communicative and cyber-sexual (Zaytsev and Vakulich 2008). When it is known that certain behaviour is associated with the development of problematic Internet use, certain prevention strategies could be developed, aiming at, among other things, preventing the development of these psychological traits.

And alongside all this, one should not ignore the need to provide counselling support to children and adolescent users or prospective users of the Internet. A comprehensive approach to the level of prevention would consider ways of improving the use of the Internet in favour of a more conscious and less mechanistic form. In this way, counselling would not only be intended as a way to provide information but also as a way to explore the needs and shortcomings of the young, as well as to their consequent psychological empowerment, so that the use of the Internet would facilitate and enrich the development of a healthy personality instead of covering its gaps.

The need for a more functional use of the Internet is imperative if one believes that the result of a compulsive connection with the Internet is often disconnection from other forms of support, information, orientation and entertainment, all of which constitute a rather healthier way of communicating with others in general. Central to the development of addiction to the Internet is the illusion of communicating and connecting with others, while, in essence, people can become disconnected from real human relationships, as is indeed shown by the high correlation of compulsive Internet use with symptoms of depression and anxiety.

Finally, it has been observed that there are differences in the development and prevalence of the phenomenon among different European countries. The fact, for example, that Spain, Romania and Greece have higher percentages of negative characteristics may be attributed to the cultural context and the degree of tolerance of certain behaviour. It may, however, also mean that the prevention policy in these countries is either insufficient or ineffective and should therefore be more carefully planned and applied. On the other hand, experience from other countries, such as the USA with the programme Caring School Communities, may prove useful when taking into consideration the special cultural characteristics of each country.

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