

BRIAN E. WALLACE¹, JOLANTA MASIAK², MATTHEW R. PABIS³

Kluczowe problemy badań uzależnienia od internetu i depresji u młodzieży i studentów

Streszczenie

Internet jest popularnym i użytecznym narzędziem, które stało się integralną częścią stylu życia w różnych kulturach, niestety może on też być przyczyną psychospołecznych problemów, jak szkodliwe używanie internetu (PIU) czy uzależnienie od internetu (IAD). IAD staje się przedmiotem międzynarodowych analiz – dotyczy osób które stopniowo tracą kontrolę nad czasem, który poświęcają internetowi mimo negatywnego wpływu na ich społeczne i psychologiczne funkcjonowanie. Nadużywanie internetu ma często negatywny wpływ na pracę zawodową, funkcjonowanie akademickie, relacje społeczne i finanse. Wśród objawów IAD wymienia się m.in.: przymus używania internetu, zaabsorbowanie nim, utratę kontroli, niepokój, napięcie psychiczne, wyobcowanie, depresję.

Następstwa IAD były szeroko badane od lat 90-tych, szczególnie społeczne, edukacyjne i somatyczne. Mniej uwagi poświęcono jego relacjom ze zmiennymi odnoszącymi się do życia psychicznego takimi jak: depresja, lęk czy stres. W znacznym stopniu badania te koncentrowały się na określeniu relacji między szkodliwym używaniem internetu a depresją.

W niniejszej publikacji dokonano przeglądu piśmiennictwa dotyczącego związków między IAD a depresją u adolescentów i studentów, szczególnie w odniesieniu do badań ujmujących depresję jako następstwo, współchorobowość lub istotny element, który może także pogłębiać objawy IAD. Przedstawiono także nowe podejście badawcze w odniesieniu do populacji młodzieży i studentów, znaczenie pełnej oceny diagnostycznej i leczenia depresji wiążącej się z IAD a także potrzeby badań regionalnych nad IAD szczególnie w środkowej i wschodniej Europie.

Key insights and new approaches that are advancing the understanding of Internet Addiction Disorder and Depression in adolescents and university students

Abstract

The Internet is a popular and useful tool that has become an integral part of the lifestyle in many cultures but it can also be the focus and cause of psychosocial problems leading to Pathological Internet Use (PIU) or Internet Addiction Disorder (IAD). IAD is a growing international concern which involves a small but significant number of the Internet users who gradually lose control of the time allotted to their online activity and continue “surfing” the Internet despite its damaging effects regarding their social and psychological welfare. Overuse of the Internet often has negative impacts with regard to an affected individual’s occupation or academic performance as well as their relationships and finances.

IAD commonly incorporates a myriad of symptoms, which may include craving, preoccupation, loss of control, psychomotor agitation, anxiety, hostility, withdrawal, and depression. Although the associations of IAD with social, educational, and physical variables have often been investigated since the disorder was first recognized in the late 1990s, less attention has been paid to documenting its correlations with mental variables such as depression, anxiety, and stress. However, an increasing proportion of psychological research is beginning to focus on the relationship between problematic Internet usage and depression.

This review article examines the current scientific literature discussing the associations between IAD and depression in adolescents and university students. Specifically, this article will examine several studies dealing with depression as a symptom, comorbidity, an essential component of an emerging cycle that may enhance symptoms of IAD, and as a multidimensional symptom measure in IAD. The article will also discuss new research approaches for dealing with the adolescent and university student populations, the importance of recognizing and treating underlying depression in IAD, and the need to increase regional IAD research, especially in central and eastern Europe.

Słowa kluczowe: uzależnienie od internetu, studenci, młodzież, depresja.

Keywords: Internet addiction, students, adolescents, depression.

¹ Medical University of Lublin, Poland

² Department of Psychiatry of Medical University of Lublin, Poland

³ St. Marks Place Institute For Mental Health, New York, USA

INTRODUCTION

The Internet has become a significant tool and means for entertainment in the lives of many individuals [1-3]. While most people regulate their Internet use, some individuals experience a progressive inability to control the time and frequency devoted to their online activities [1-3]. The excessive time spent on the Internet and consequential behavioral alteration can result in negative psychosocial outcomes. The term given to this is "Pathological Internet Use" (PIU) or "Internet Addiction Disorder" (IAD).

The rise in psychosocial problems associated with the Internet and personal computer use has been noted since the late 1990s [1,4]. Since then IAD has commonly been defined as a lack of ability to control one's use of the Internet, which may result in marked distress and impairment in a person's lifestyle and daily function. In fact, excessive Internet use may eventually lead to total neglect and abandonment of professional duties and social relations [5]. The disorder occurs throughout the world, but most commonly in the countries where computer access and technology are prevalent [6]. Clinical samples generally report a male predominance where the onset of problematic Internet use occurs towards the end of the individual's second decade of life or the early part of their third decade [6,7]. In this population, the progression from an affected individual's introductory computer experience to their problematic computer usage is approximately 10 years [6].

Although, there appears to be a high proportion of problematic Internet users in their late 20s and early 30s, adolescents and young adults require specific consideration with regards to IAD, as they have been observed to be at high risk for various behavioral addictions [8,9]. As a group, university students may be exceptionally vulnerable to IAD, as they have predominantly unrestricted and unsupervised access to the Internet as well as autonomous control of their time [8].

If IAD develops, it is frequently linked with indicators of social withdrawal and isolation as well as dimensionally measured depression. In addition, psychiatric co-morbidity is often reported in association with IAD where approximately 86% of affected individuals present with at least one other DSM-IV diagnosis [10]. These comorbidities commonly include impulse control, anxiety, mood, and substance use disorders [6]. IAD is also reported to have a long list of potential underlying variables and associations that include loneliness, depression, decreased self-esteem and life satisfaction, low family function, attention deficits, obsessive-compulsive symptoms, and psychotic symptoms [4,11-13]. While it is not apparent if IAD is the cause or consequence of mental disorders it is clear that many disorders are sustained or intensified by problematic Internet use [2,4].

The etiology of IAD is not known, but is likely to entail neurobiological, psychological, and cultural factors [6]. There are currently no evidence-based treatments for IAD and no recognized psychotropic medication regimes. Cognitive behavioral approaches may prove to be beneficial as well as family and marital therapy in some instances. In other extreme examples, a self-imposed ban on computer use and Internet access may be required.

Prevalence estimates vary considerably as a universally recognized diagnostic indicator of IAD has not yet been es-

tablished [8,14]. In fact, there are more than a dozen distinct diagnostic measures in circulation used to determine IAD [14]. Several of these such as the Internet-Related Addictive Behavior Inventory and the Internet Addiction Disorder Diagnostic Criteria were modified using the DSM-IV substance abuse and dependency criteria. Alternative measures such as the Chen Internet Addiction Scale, Problematic Internet Usage Questionnaire, Young Diagnostic Questionnaire and Young Internet Addiction Test all incorporate the DSM-IV criteria for pathological gambling. Further assessment tests such as the Compulsive Internet Use Scale or the Griffiths Addiction Components Criteria use the PIU behavioral addiction model. Finally, other instruments like the Online Cognition Scale and the Generalized Problematic Internet Use Scale focus on the Davis cognitive-behavioral model of PIU.

Because each scale differs, prevalence estimates of IAD are inconsistent throughout the world and, therefore, published data must be evaluated with caution [8]. For example, in Europe the reported adolescent IAD prevalence rate has ranged from 1% to 9%, which contrasts significantly to that of Asia, which is between 2% to 18%, and from 1% to 12% in the Middle East. Additionally, Problematic Internet usage among college students has been reported from 1% to 26% in the US and from 6% and 19% worldwide. Additional concerns regarding these estimates are noted as some of the instruments used to collect and measure data have not yet been clinically validated [8].

Furthermore, obtaining accurate estimations of IAD has also been hindered by deficiencies in methodology, with the most notable being sampling bias. Many initial studies involving IAD in adults were based strictly on voluntary Internet surveys that lacked measurable denominators, as well as chat room sampling, or convenience samples of Internet users [8,15,16]. Also, investigations targeting US college students have been restricted in that they often rely on a single classroom or class year for obtaining a sample population [8,17]. Regardless of the lack of universal diagnostic criteria, physicians throughout the world are increasingly reporting cases of patients suffering from issues directly related to problematic Internet use [18,19].

Current Literature Review

One of the more advanced countries with regard to Internet usage is South Korea where approximately 70% of its population subscribes to online providers and 98% of South Korean adolescents use the Internet [4]. Online activities are, therefore, an integral part of the lifestyle, especially with respect to the South Korean adolescent culture. Ha et al. suggest that adolescents are more susceptible to IAD because they generally have a decreased ability compared to older individuals to control their enthusiasm for activities that excite their interest such as internet use or online game play [4]. Therefore, Ha et al. evaluated IAD in South Korean adolescents and examined the correlations between pathological Internet use, depression, obsessive-compulsive symptoms, and alcohol dependence.

The researchers used the Internet Addiction Test (IAT) to assess 452 individuals for IAD severity with consideration of their behavioral characteristics and primary reason for using the Internet. Psychopathology was evaluated using

the Korean version of the Center for Epidemiologic Study for Depression (CES-D), the Maudsley Obsessive Compulsive Inventory (MOCI), and the “Cutting down, Annoyance by criticism, Guilty feeling and Eye – openers” (CAGE) assessment for substance-related problems. In addition, the Temperament and Character Inventory was used to assess the relationship between IAD and biogenetic temperament and character patterns [4]. The results revealed that IAD was notably associated with depressive symptoms and obsessive-compulsive symptoms. Moreover, Ha et al. demonstrate that IAD in adolescents is more likely related to depressive symptoms compared to symptoms involving obsessive-compulsive behavior or substance dependence.

Additionally, biogenetic temperament and character patterns associated with IAD included high harm avoidance, low self-direction, low cooperativeness, and high self-transcendence. These temperament profiles substantiate the association between IAD and depression and cause Ha et al. to conclude that it is necessary to evaluate the potential underlying depression in IAD adolescents. Detection and treatment of an underlying condition such as depression can prevent complications such as impairment of behavioral and interpersonal function [4]. However, further prospective research incorporating structured diagnostic interviews are required to confirm IAD as an additional symptom profile of adolescent depression.

In Europe, a separate adolescent study was recently performed by Fischer et al. to investigate the correlation between “at risk Internet usage” and IAD with depression, deliberate self-harm, and suicidal behavior [20]. A sample of 1,435 German adolescents (48% boys, 52% girls) was analyzed based on their responses to several questionnaires, which included the Young Diagnostic Questionnaire for the assessment of risky and pathological Internet use, the Beck Depression Inventory, the Deliberate Self Harm Inventory, and the Paykel Suicide Scale.

While 80.7% of the adolescents reported normal Internet usage, 14.5% were categorized as exhibiting risky Internet use, and 4.8% were classified as pathological Internet users [20]. The at-risk and IAD groups exhibited notably higher rates of depression, deliberate self-harm and suicidal behavior compared to the individuals classified with regular Internet usage. Interestingly, there was not a remarkable difference regarding the levels of depression and suicidal behavior when comparing risky and pathological users.

These data demonstrate that not only IAD is associated with symptoms of depression, self-harm and suicidal behavior but also risky Internet use is associated with such symptoms. Fischer and colleagues conclude that clinicians should consider this data when assessing adolescents classified with both IAD and risky Internet usage in order to recognize and treat symptoms of depression, self-harm and suicidal ideation and tendencies.

In 2011 Christakis et al. examined IAD among US college students in the first of a series of studies designed to determine ultimately a legitimate IAD prevalence estimate [8]. Over 300 participants from different universities were administered both the Internet Addiction Test (IAT) to determine problematic Internet usage and the Patient Health Questionnaire to assess depression. The investigators examined the link between IAD and moderate to severe depression

as well as the individual items assessed by the IAT as they relate to depression.

In Christakis’ study, 4% of the students scored within the occasionally problematic or addicted parameters on the IAT, and 12% were assessed with moderate to severe depression. The investigators noted an important association between problematic Internet usage overall and moderate to severe depression [8]. The prevalence reported by Christakis and his colleagues is lower than the IAD prevalence rates that have been observed in other studies. However, the at-risk population is significantly high and therefore, preventative measures are also recommended for this susceptible population.

In his discussion, Christakas states that many college students express concerns about their Internet usage and that 70% of the students questioned in the initial study reported that they often remain online longer than they initially intended. This infers that the wide availability and ease of access to the Internet has a definite prospective downside [8]. For example, the current view of addictions suggests that certain individuals are at an increased risk compared to others due to genetic predisposition. Whether these predisposed individuals actually become addicted entails a multitude of factors, but continual subjection to the substrate is required as illustrated in gambling or alcohol addiction. Christakas suggests that if there is, likewise, an intrinsic susceptibility to IAD, then those particular college students are at great risk considering the current exposure that they have to the Internet and the increased concerns that students express with regard to their dependence on the Internet during many everyday situations.

Christakas’ findings advance the IAD research collective by refining previous study methodologies in a few distinct ways. First, the researchers’ sampling method was aimed at university students from two geographically distinct schools instead of just one location in order to provide a broader representation of the demographic [8]. Next, Christakas and colleagues further expanded the sample by assessing a cross section of each school’s entire student population compared sampling from just one class. Finally, this improved sampling method was used to confirm the link between depressive symptoms and problematic Internet usage that has been reported in previous samples throughout the world. Because depression has been linked with other behavioral addictions such as gambling, they were able to correlate depressive symptoms and problematic Internet usage together, thereby substantiating and strengthening the idea of IAD as a disorder [8]. Christakas expands upon this relationship by explaining that problematic Internet usage and depression are “associated in a mutually enhancing cycle wherein depression begets social isolation, which begets problematic Internet usage and thus increases both social isolation and depression.”

Hinic and colleagues illustrate a similar IAD/comorbidity cycle in their description of four specific symptom dimensions, which develop through the course of IAD [21]. These include obsessive-compulsive behavior, followed by depression, anxiety and emotional sensitivity, and finally, hostility. The first dimension of IAD development involves obsessive thoughts regarding online contents and activities, which may lead to dietary and sleeping problems. These can initiate

additional symptoms such as obesity, exhaustion, listlessness, angst, attention problems, etc. Hinic lists the second dimension to include depressive symptoms in the IAD individual expressed as a sense of failure, apathy, cognitive obscurity, and frustration [21]. The third dimension is expressed as increased emotional sensitivity and social vulnerability. Finally, the fourth dimension is composed of symptoms such as anxiety, irritation, hypomanic reactions, and aggression. Hinic concludes that the IAD symptom dimensions, in fact, correspond with symptoms/disorders, which initiate the disorder itself. Often, individuals with previously defined psychological problems become addicted to the Internet, and exhibit an increase in those initial problems. These problems cycle together to create a very new complex of symptoms as they combine with and complement the problems associated with IAD [21].

CONCLUSION

These studies have important implications for adolescents, university students, healthcare professionals, and academic institution administrators [8]. Since IAD is prevalent among the adolescent and university aged population and depression is a strong correlate with this disorder, practical measures should be put in place to prevent and identify the disorder before it progresses. Academic administrators should consider introducing prevention methods such as education and awareness campaigns or implementing treatment referrals in some cases. Also because it is often not clear whether depression is a cause or consequence of IAD, Physicians dealing with these age groups should incorporate the assessment of Internet usage and underlying IAD associations such as depression as a part of their preventative practice [8,16].

Since the Internet is a primary tool and means of entertainment in the lives of this generation, the concerns regarding the possibility of addiction are justified and necessitate a standardized assessment to define the extent of the problem [8]. In the United States and Europe, accurate prevalence estimates of IAD are incomplete, although measures to correct this lack of data have begun [22,23]. Further national representative studies are needed to provide a correct account of the disorder as IAD is considered for inclusion to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition [22,24]. In addition, IAD covers a broad-range of maladaptive behaviors involving online gaming, chatting, cybersex, and information gathering and therefore the current general studies alone do not suffice and further research is warranted to create a comprehensive knowledge of the disorder and its various sub-divisions [4].

Furthermore, although this is an extremely important topic, to our knowledge there is currently a limited amount of IAD research being produced in Poland. The authors, therefore, encourage fellow researchers in Poland and Central Europe to investigate and report on IAD in order to advance the research collective and obtain a proper prevalence estimate for general and specific populations. As local research data and conclusions often influence international diagnostic standards and clinical treatment regimes, the quality of such studies is essential [14]. Better understanding of IAD and its comorbidities will assist researchers and clinicians as they

use the information gathered to help assess various treatment options, educate patients, and predict psychopathological trends that may occur in the next decades as more internet ready devices are introduced to the market.

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Informacje o Autorach

BRIAN E. WALLACE – student, Uniwersytet Medyczny w Lublinie; dr n. med. JOLANTA MASIĄK – adiunkt, Katedra i Klinika Psychiatrii, Uniwersytet Medyczny w Lublinie; MATTHEW R. PABIS – Department of Family Medicine, Ellis Hospital, Schenectady, New York.

Adres do korespondencji

Jolanta Masiak
Katedra i Klinika Psychiatrii,
Uniwersytet Medyczny w Lublinie
ul. Głuska 1, 20-439 Lublin
tel. 509 367 574
E-mail: jolantamasiak@wp.pl