

The relationship between internet addiction and psychopathological variables among students of Albania's Universities

Elona Hasmujaj*, University of Shkoder, Shkoder, Albania

Suggested Citation:

Hasmujaj, E. (2021). The relationship between internet addiction and psychopathological variables among students of Albania's Universities. *Global Journal of Guidance and Counseling in Schools: Current Perspectives*, 11(1), 45-52. <https://doi.org/10.18844/gjgc.v11i1.5474>

Received from December 07, 2020; revised from February 17, 2021; accepted April from 05, 2021.

Selection and peer review under responsibility of Prof. Dr. Kobus Maree, University of Pretoria South Africa.

©2021 Birlesik Dunya Yenilik Arastırma ve Yayıncılık Merkezi. All rights reserved.

Abstract

The purpose of the present study is to investigate the relationship between Internet addiction with loneliness, depression, anxiety and stress among students of Albania's universities. The prevalence of Internet addiction and the gender differences are other important purposes of this study. The sample consists of 1,024 university students from different Faculties of Albania's Universities. The results showed that there is a positive and significant relationship between internet addiction and loneliness, anxiety, stress and depression as a whole and all its components. Data were collected using the Internet addiction scale, UCLA Loneliness Scale, Depression, Anxiety and Stress Scale (DASS 21). The regression results also indicated that in general, Internet addiction can predict loneliness, depression, anxiety and stress variable. *T*-test analysis indicated that male students are more prone to be addicted to the Internet than female ones and the prevalence rate of heavy internet addiction is about 0.7%. The data were analysed using correlation, regression, descriptive analysis and *t*-test.

Keywords: Internet addiction, loneliness, depression, anxiety, stress.

1. Introduction

The Internet is a widely recognized channel for information exchange, academic research, entertainment, communication and commerce (Widyanto, Griffiths & Brunnsden, 2011). This technology is changing the way people are socializing, studying, working, shopping, searching for jobs and spending their leisure time (DiNicola, 2004).

The internet has become an integral part of our society. About 40% of the world population today comprises regular internet users. Statistical data from 2013 shows that about 62.7% of Albania's population are Internet users, 35.4% use Facebook and 75.8% enjoy various internet programs (Europe Internet Stats, 2013). Today, these figures should certainly be much higher.

This is the first study about Internet addiction with university students conducted in Albania. From my several years of experience as a lecturer, I found that the increasingly use of the Internet in the classroom and university environments is becoming a problem that requires attention.

The main reason that I choose the target group of university students is because compared to all demographic groups of Internet users, the population of university students is considered one of the most vulnerable groups in the development of problems related to excessive use of the Internet (Nalwa & Anand, 2003; Yang & Tung, 2007).

Most of these students, represent the first generation to grow up with this new technology, and they are characterized by their familiarity and confidence with ICT (Gallardo Echenique, 2014). They have grown up in an age when computers, mobile phones, and the Internet are part of mainstream culture and society. Also, they are free from parental control, and most of them move away from family and located close to the respective universities.

Problematic Internet use (PIU) and Internet addiction disorder, are the two most commonly used terminology and are characterized by a lack of control over the concern, encouragement, or problems related to anxiety as a result of excessive internet use.

Because of the increased level of Internet use during the past 15 years, Internet addiction has attracted the attention of researchers and clinicians in the field, where the first who defined the concept and conducted further researches were Young (1999) and Griffiths (2000). Internet addiction was originally proposed in 2013, for inclusion in DSM-5 (Block, 2008) but not yet recognized as a disorder by itself, because Block observed that diagnosis was complicated because 86% of study subjects showing symptoms also exhibited other diagnosable mental health disorders. Gambling disorder is the only behavioural (non-substance-related) addiction included in DSM-5. However, Internet gaming disorder is listed in Section III, Conditions for Further Study, as a disorder requiring further study.

Over the last decade, research studies on Internet addiction (IA) have increased. Most of them reported the connection between excessive internet use with some social and psychological variables such as social isolation, depression and loneliness (Kraut et al., 2002), low self-esteem and complacency. Also, Ko et al. (2008) reported that Internet addiction was linked to a variety of psychological variables such as shame, loneliness, anxiety, depression, and problems in interpersonal relationships.

Alavi et al. (2010) in a study examined the relationship between psychiatric symptoms of Internet addiction in Isfahan University students; they showed that there is a significant positive correlation between psychiatric disorders, such as depression, anxiety, stress, hypochondriasis, compulsion, interpersonal sensitivity, aggression, paranoia, phobias, psychosis and Internet addiction. Jafari and Fathizade (2012) in a study showed that there is a significant positive relationship between Internet addiction and each of the clinical variables of depression, anxiety, stress and social phobia.

1.1. Objectives

The main purpose of this study is to explore the phenomenon of internet addiction and its relationship with psychopathological symptoms such as loneliness, depression, anxiety and stress.

1.2. Research questions

What is the prevalence of internet addiction in university students of Albania?

What is the relationship between internet addiction with loneliness, depression, anxiety and stress?

Can internet addiction predict loneliness, depression, anxiety and stress?

Is the rate of internet addiction different for male and female students?

1.3. Hypothesis

H1: There is a positive relationship between internet addiction and loneliness, depression, anxiety and stress variable.

H2: Internet addiction can predict loneliness, depression, anxiety and stress variables.

H3: Male students are more prone to internet addiction than female ones.

2. Methods

2.1. Design

This is a descriptive and correlational cross-sectional study aimed to assess the prevalence of internet addiction and its relationship with some psychopathological variables.

2.2. The sample

The population of this study includes 74,277 students from Bachelor studies including the public Universities of Albania. Using the method of cluster sampling it was created a probabilistic sample of 1,065 subjects, but after the process of data cleaning the sample size was reduced to $N = 1,024$. Respondents ranged in age from 18 to 25 years, with a mean age of (± 20.8). The confidence coefficient was 95% with an error 5%. The sample was selected using Yamane's formula (1967):

$$n = N$$

$$1 + N e^2$$

where n = sample size

N = the size of the population

e = the error of 5%

$$Deff = 2.55$$

2.3. Assessment tools

2.3.1. Internet addiction test (IAT)

IAT is created by Dr. Kimberly Young. This 20-item questionnaire measures internet addiction in mild, moderate and severe levels. Each answer is scored based on a Likert scale from 1 to 5. The total score between 20 and 49 represented mild, 50–79 showed moderate and 80–100 was severe addiction.

In this study, Cronbach's alpha score for this test was estimated at 0.913.

2.3.2. UCLA loneliness scale

This is the most known scale which has been somewhat adopted as a standard measure in the field of scientific researches due to its higher reliability in psychoanalysis compared to other scales. This test includes 20 questions that should be answered by respondents according to Likert's scale divided into four measures. In this study, Cronbach's alpha score for this test was estimated at 0.839.

2.3.3. Depression, anxiety and stress scale (DASS-21)

This questionnaire was prepared by Lovibond and Lovibond (1995). The scale contains 21 items that any psychological construct of 'depression', 'anxiety' and 'stress' is evaluated by seven different terms. The validity in the whole instrument is higher, $\alpha = 0.92$ and for its components too, where for Depression $\alpha = 0.811$, for Anxiety $\alpha = 0.846$ and for Stress $\alpha = 0.759$.

3. Results

3.1. Descriptive statistic of internet addiction

It was found that 474 (46.3%) of the students were normal internet users, they don't show any symptoms of internet addiction. 356 (34.8%) of the subjects show a low level of internet addiction. They may surf the web a bit too long at times, but they have control over their usage. 187 students (18.3%) show moderate level of internet addiction. They are experiencing occasional or frequent problems because of the internet and only 7 (0.7%) of students have severe addiction to internet. Their internet usage is causing significant problems in their life. These results may be observed in more detail in Table 1.

Table 1. Descriptive statistic (frequency, percentage, mean, standard deviation) of internet addiction

	Groups	Frequency	Percentage	Mean	Standard deviation	Total
Internet addiction	No symptoms	474	46.3	33.8447	16.49160	1,024
	Low level	356	34.8			
	Middle level	187	18.3			
	High level	7	0.7			

3.2. Correlation between internet addiction with loneliness, depression, anxiety and stress

Correlations were conducted in an attempt to determine the nature of the relationship between the constructs of internet addiction and loneliness, depression, anxiety and stress.

The results of these correlations suggest that there is a weaker positive correlation between internet addiction and loneliness ($r = 0.234$, $n = 1,024$, $p < 0.01$).

A mild positive correlation was found between internet addiction and depression ($r = 0.449$, $n = 1,024$, $p < 0.01$), anxiety ($r = 0.443$, $n = 1,024$, $p < 0.01$), and stress ($r = 0.465$, $n = 1,024$, $p < 0.01$).

These results may be observed in more detail in Table 2.

Table 2. Pearson's correlation coefficient for the research variables

	Pearson's correlation coefficient				
	Internet addiction	Loneliness	Depression	Anxiety	Stress
Internet addiction	1	0.234**	0.449**	0.443**	0.465**
Loneliness		1	0.413**	0.376**	0.325**
Depression			1	0.780**	0.747**
Anxiety				1	0.746**
Stress					1

3.3. Multiple linear regression

Multiple linear regression analysis is computed with internet addiction as predictor variable and Loneliness, Depression, Anxiety, Stress as outcome variables.

The regression results also indicated that in general, Internet addiction can predict about 5.4% of loneliness ($r^2 = 0.054$, $F(1,1023) = 59.143$, $p < 0.001$); 20.1% of depression ($r^2 = 0.201$, $F(1,1023) = 258.352$, $p < 0.001$); 19.5% of anxiety ($r^2 = 0.195$, $F(1,1023) = 249.214$, $p < 0.001$); and 21.6% of stress variable ($r^2 = 0.216$, $F(1,1023) = 282.523$, $p < 0.001$).

According to the findings, stress is more explained by internet addiction than the others variables of the study. All the findings are significant.

Table 3. Multiple linear regression analysis showing the effect of internet addiction on loneliness, depression, anxiety and stress

Model	Unstandardized coefficients		Standardized coefficients				Collinearity statistics		Durbin-Watson
	B	Std. Error	Beta	t	r ²	p	Tolerance	VIF	
Loneliness	0.189	0.025	0.234	7.7	0.055	,000	1.000	1.000	1.639
Depression	0.120	0.007	0.449	16.7	0.202	0.000	1.000	1.000	1.860
Anxiety	0.115	0.007	0.443	15.8	0.196	0.000	1.000	1.000	1.858
Stress	0.113	0.007	0.465	16.8	0.217	0.000	1.000	1.000	1.834

^aPredictors: (Constant): Internet addiction.

^bDependent variable: loneliness, depression, anxiety, stress.

3.4. Gender differences on internet addiction

Table 4. Mean scores, standard deviation, and t-values of female and male students in relation to internet addiction

	Gender	Mean	Standard deviation	t	Degrees of freedom	F	p
Internet addiction	Male	38.06	17.68	6.59	1,022	13.68	0.000
	Female	31.26	15.12				

The mean value of internet addiction in the male students ($M = 38.06$, $p = 0.000$) is greater than female students ($M = 31.26$, $p = 0.000$). As can be observed the results are statistically significant [$t(1,022) = 6.59$, $p = 0.000$] and the mean difference between two gender are high.

So, male students are most at risk to be affected by internet addiction than female ones.

4. Discussion

This is the first cross-sectional study with university students conducted in Albania, that evaluates the prevalence of Internet addiction. Diagnostic tool used in this case is the Internet Addiction Test (Internet Addiction Test – IAT, Young, 1998). The reliability of this test is consistent with similar studies (Johansson & Gotestam, 2004; Siomos et al., 2008).

The most important finding in this study is that the percentage of heavy Internet addiction is very low, about 0.7% only. In the literature, we find too many studies conducted in different societies, which reported a low number of individuals with severe Internet addiction (Chae & Black, 2008). Therefore, in university students of Italy it is estimated a prevalence of 0.8% (Poli & Agrimi, 2012) and 0.9% in Jordan (Al-Qudah, 2001). The highest prevalence of Internet addiction is reported by British students, with about 18% (Niemz, Griffiths & Banyard, 2005).

The results of this study suggest that male students tend to exhibit higher levels of addiction to the internet compared to their female counterparts. These results are in line with early and recent scientific studies (Akman & Mishra, 2010; Morahan-Martin & Schumacker, 2000; Sipal & Bayhan, 2010; Soh et al., 2013; Soh, Teh, Hong, Ong & Charlton, 2007). Men are more likely than women to be pathological Internet users and to explore the sites of sophisticated technologically (Widyanto & Griffiths, 2004).

Reasons for these results may be different. First, these differences may be due to traditional gender roles and stereotypes, which claimed that women are less technologically oriented than men (Papastergiou & Solomonidou, 2005).

Second, these results can be explained by the less developed skills of verbal and non-verbal communication in males than in female students. So they can use the Internet as a tool that facilitates interpersonal communication with other users.

In contrast with the results of this study, Young (1998) has shown that the number of women that exhibit PIU is higher than men.

Other studies report that there is no association between gender and PIU (Fallahi, 2011; Hall & Parsons, 2001). In this case, both men and women are equally likely to display symptoms of Internet addiction.

One of the main findings of this study is that there is a positive correlation between Internet addiction and loneliness, depression, anxiety and stress among university students of Albania. These findings are consistent with those of recent studies, which also reported a significant and positive relationship between internet addiction with stress, depression, anxiety and loneliness (Hwang et al., 2014; Jafari & Fathizade, 2012; Weinstein et al. 2015).

Some researchers believe that the correlation between Internet addiction and psychological symptoms can't be easily determined.

First, there are some studies, which are contrary to these findings. Two studies with representative samples of the US population found no difference among Internet users, on the prosocial and communication attitudes with family, friends or colleagues (Robinson & Kestnbaum, 1999; Neustadt & Alvarez, 2000; Center of UCLA Policy and Communications, 2000). Moreover, there are also studies that report that internet use enhances the existing social relationship and affects the expansion of an individual social network (Katz & Aspden, 1997).

Another finding of the study shows that Internet addiction can predict loneliness, depression, anxiety and stress variables. Also, Maarten et al. (2009) show that Internet use is a relatively strong predictor of depression and social anxiety in adolescents and young adults. In the same line, the Turel and Serenko (2010) results suggest that internet addiction can lead to a range of negative consequences, including depression, loneliness, social isolation and stress. This finding is consistent with the general literature on addiction. But there are also studies that report continuous access to the Internet help individuals finding a sense of calm and control in their personal lives (Karlson, Meyers, Jacobs, Johns & Kane, 2009).

However, several limitations of the study should be noted to provide direction for future research. First, the sample of the study consisted of university students and may not be representative of the general adult population in terms of the frequency of internet addiction or the prevalence of loneliness, depression, anxiety and stress, because generalization of the results is somewhat limited. Second, as correlational statistics were utilized, no definitive statements can be made about causality.

Future studies could use different methodologies (e.g., structured interviews), different samples or subgroups of populations.

5. Conclusions

In the whole sample, most of the subjects appear to be normal Internet users.

The level of intense internet addiction among university students of Albania is 0.7% only.

There is a weaker positive correlation between internet addiction and loneliness.

There is a mild positive correlation between internet addiction and depression, anxiety and stress, confirming the first hypothesis of the study.

Internet addiction can predict about 5.4% of loneliness, 20.1% of depression, 19.5% of anxiety and 21.6% of stress variables, confirming the second hypothesis of the study.

Male students are more likely to develop Internet addiction than female ones, confirming the third hypothesis of the study.

6. Recommendations

Orientation, workshop and seminar should be organized by the universities for the students on the proper use of the Internet.

University counsellors can provide small group or individual counselling for students who are Internet addicted.

Time management should be incorporated into the curriculum of the universities in order to assist them on how to manage their time on campus.

Replacing Internet usage with healthy activities like practising yoga, exercising, meditation joining some team sports.

References

- Akman I. & Mishra A. (2010), Predictive effect of gender and sector for employees' Internet usage. *Engineering Economics*, 21(3), 295–305.
- Alavi, S. S., Alaghemandan, H., Maracy, M. R., Jannatifard, F., Eslami, M. & Ferdosi, M. (2010). Impact of addiction to Internet on a number of psychiatric symptoms in students of Isfahan universities, Iran, *International Journal of Preventive Medicine*, 3(2), 122–127.
- Al-Qudah, K. (2001). Internet addiction among students at Jordanian universities. *Journal of Arabic and Human Sciences*, 4(2), 71–88.
- DiNicola, M. D. (2004). *Pathological Internet use among college students: the prevalence of pathological internet use and its correlates*.
- Fallahi, F. (2011). *Procedia Social and Behavioral Sciences*, 15, 394–398.
- Gallardo Echenique, E. (2014). An integrative review of literature on learners in the digital era. *Studia Paedagogica*, 19(4). Retrieved from www.studiapaedagogica.cz, doi:10.5817/SP2014-4-8
- Griffiths, M. (2000). Internet addiction—time to be taken seriously? *Addiction Research*, 8, 413–418.
- Hall, A. S. & Parsons, J. (2001). Internet addiction: college student case study using best practices in cognitive behavior therapy. *Journal of Mental Health Counseling*, 23, 312–327. Retrieved from <http://firstmonday.org/ojs/index.php/fm/article/view/4334/3745>
- Hwang, J. H., Choi, J. -S., Gwak, A. R., Jung, D., Choi, S.-W., Jaewon, L., ... Kim, D. J. (2014). Shared psychological characteristics that are linked to aggression between patients with Internet addiction and those with alcohol dependence. *Ann Gen Psychiatry*, 13, 6–6. doi:10.1186/1744-859X-13-6.

- Hasmujaj, E. (2021). The relationship between internet addiction and psychopathological variables among students of Albania's Universities. *Global Journal of Guidance and Counseling in Schools: Current Perspectives*, 11(1), 45-52. <https://doi.org/10.18844/gjgc.v11i1.5474>
- Jafari, N. & Fatehizade, M. (2012). The relationship between Internet addiction and depression, anxiety, stress and social phobia in students of Isfahan University. *Scientific Journal of Kurdistan University of Medical Sciences*, 17, 9–1.
- Johansson, A. & Gotestam, K. G. (2004). Internet addiction: characteristics of a question- naire and prevalence in Norwegian youth (12–18 years). *Scandinavian Journal of Psychology*, 45, 223–229.
- Karlson, A. K., Meyers, B. R., Jacobs, A., Johns, P. & Kane, S. K. (2009). Working overtime: patterns of smartphone and PC usage in the day of an information worker. Berlin, Germany: Springer Verlag.
- Katz, J. E. & Aspden, P. (1997). A nation of strangers? *Communications of the ACM*, 40(12), 81–86.
- Ko, C. H., Yen, J. Y., Yen, C. F., Chen, C. S., Weng, C. C. & Chen, C. C. (2008). The association between Internet addiction and problematic alcohol use in adolescents: the problem behavior model. *Cyberpsychology and Behavior*, 11(5), 571–576.
- Kraut, R., Kiesler, S., Boneva, B., Cummings, J., Helgeson, V. & Craeford, A. (2002). Internet paradox revisited. *Journal of Social Issues*, 58, 49–74.
- Morahan-Martin, J. & Schumacher, P. (2000). Incidence and correlates of pathological Internet use among college students. *Computers in Human Behaviour*, 16, 13–29.
- Nalwa, K. & Anand, A. P. (2003). Internet addiction in students: a cause of concern. *Cyberpsychology and Behavior*, 6(6), 653–656.
- Niemz, K., Griffiths, M. & Banyard, P. (2005). Prevalence of pathological internet use among university students and correlations with self-esteem, the General Health Questionnaire (GHQ), and disinhibition. *Cyberpsychology and Behavior*, 8(6), 562–570.
- Papastergiou, M. & Solomonidou, C. (2005). Gender issues in Internet use and favourite Internet activities among Greek high school pupils inside and outside schools. *Computers and Education*, 44(4), 377–393.
- Poli, R. & Agrimi, E. (2012). Internet addiction disorder: prevalence in an Italian student population. *Nordic Journal of Psychiatry*, 66(1), 55–59.
- Robinson, J. P. & Kestnbaum, M. (1999). The personal computer, culture and other uses of free time. *Social Science Computer Review*, Summer, 209–216.
- Siomos, K. E., Dafouli, E. D., Braimiotis, D. A., Mouzas, O. D. & Angelopoulos, N. V. (2008). Internet addiction among greek adolescent students. *CyberPsychology & Behavior*, 11, 653–657.
- Sipal, R. F. & Bayhan, P. (2010) Preferred computer activities during school age: indicators of internet addiction. *Procedia – Social and Behavioral Sciences*, 9, 1085–1089.
- Soh, P. C. H., Teh, B. H., Hong, Y. H., Ong, T. S., & Charlton, J. P. (2013, September 2). Exploring gender differences in Malaysian urban adolescent Internet usage. *First Monday*, 18(9).
- Widyanto, L. & McMurrin, M. (2004). The psychometric properties of the internet addiction test. *Cyberpsychology & Behavior*, 4, 443–450.
- Widyanto, L., Griffiths, M. D. & Brunsten, V. (2011). A psychometric comparison of the internet addiction test, the internet-related problem scale, and self-diagnosis. *Cyberpsychology Behavior and Social Networking*, 14(3), 141–149.
- Yamane, T. (1967). *Statistics, an introductory analysis* (2nd Ed.). New York, NY: Harper and Row.
- Yang, S. & Tung, C. (2007). Comparison of Internet addicts and non-addicts in Taiwanese high school. *Computers in Human Behavior*, 23(1), 79–96.
- Young, K. S. (1998). *Caught in the Net*. New York, NY: John Wiley & Sons. Retrieved from <http://netaddiction.com/Internet-addiction-test>.
- Young, K. S. (1999). Internet addiction: symptoms, evaluation, and treatment. In L. Vande-Creek & T. Jackson (Eds.), *Innovations in clinical practice: a source book* (vol. 17, pp. 19–31). Sarasota, FL: Professional Resource Press.