

The Risk of Eating Disorders and Its Associations with Gender, Psychological Factors and Other Forms of Risk Behaviour among Slovak University Students



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BACKGROUND: Despite the incidence of eating disorders (ED) being relatively stable in recent decades, they still represent a serious public health concern. However, little is known about ED and the related factors, such as perceived stress (PS), depressive symptoms (DS) or emotional well-being (EWB). In addition, there have been few studies examining the associations between ED and various types of risk behaviour.

AIMS: The main aim of this study is to explore whether gender and the psychological factors PS, DS and EWB are associated with a risk of ED and also to answer the question whether the risk of ED is associated with alcohol consumption (AC) and problematic internet use (PIU) among university students.

DESIGN AND MEASUREMENTS: This cross-sectional study is a part of the Student Life Cohort in Europe (SLiCE) online survey. The risk of ED was monitored with the SCOFF questionnaire, that of PS with Cohen's perceived stress scale and that of DS with a modified version of the Beck Depression Inventory, and the WHO-Five well-being index was used to measure

EWB. AC was measured by means of AUDIT and GPIUS2 was used for PIU. Participants: The sample consisted of 598 Slovak university students (74.2% females, mean age 20.05, SD=1.58).

RESULTS: It was observed that gender and DS together with AC and PIU were significantly associated with the risk of ED. Those students who were more likely to be in a risk group were females with higher levels of DS, AC and PIU. Moreover, the results showed that the association between ED indicators and DS was significantly moderated by PIU. Those who scored more highly on PIU reported more ED indicators at a lower level of DS, while students with a lower PIU reported fewer ED indicators at a lower level of DS. **CONCLUSIONS:** The results complement the puzzle on ED indicators and related factors in the population of university students and also show the associations between other forms of risk behaviour. These findings could be helpful in psychological prevention and intervention strategies.

KEY WORDS: EATING DISORDERS – PERCEIVED STRESS – DEPRESSIVE SYMPTOMS – EMOTIONAL WELL-BEING – ALCOHOL CONSUMPTION – PROBLEMATIC INTERNET USE

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● 1 INTRODUCTION

Eating disorders represent a public health concern since they are an important cause of mortality and morbidity in young individuals (Arcelus et al., 2011). For their prevention and early detection it is important to investigate the related factors, not only in those with an already diagnosed disorder but also in those without clinical manifestation. For example, Tivolacci et al. (2015) identified 22.4% of possible cases of eating disorders among a non-clinical sample of university students. First-year university students experience many novel challenges such as leaving home, relocation, separation from their family and close friends and increased independence and responsibility. According to Vohs et al. (2001), disordered eating symptoms and attitudes are established before college. On the other hand, Striegel-Moore et al. (1989) reported an increase in dieting and binge eating during the first year at university. Transitional periods such as the first year at university may pose a particular risk for the development of eating disorders.

It is important to observe the occurrence of eating disorder symptoms in post-communist countries because cultural change may be associated with increased vulnerability to them (Miller & Pumariega, 2001). In the post-communist countries of Central and Eastern Europe there may be even more disturbed eating attitudes than in Western Europe as a result of over-identification with Western values (Rathner, 2005). The average level of self-perceived health is also generally worse in post-communist countries than in Western Europe (Carlson, 1998). In particular, students, as well as the unemployed and disabled, are in the group with the highest risk of depression, according to a Slovak epidemiological study (Heretik et al., 2003). Therefore, it was decided to study these relations in a sample of first-year university students attending selected Slovak universities.

Stress has a negative influence on food intake in humans and also in animal models and can trigger abnormal eating patterns and even eating disorders in predisposed individuals (Torres & Nowson, 2007). Laboratory-induced stress increased the initial eating rate in binge eating disorder patients (Schulz & Laessle, 2012) and greater reported stress was associated with indices of an augmented drive to eat, including feelings of disinhibited eating, binge eating, hunger and more ineffective attempts to control eating (Groesz et al., 2012). The diathesis-stress model suggests that the degree of vulnerability to mental illnesses varies between individuals. The interaction between a predisposition and stress-inducing life events can trigger the development of eating disorders (Slavik & Croake, 2006). In accordance with this model, a higher level of perceived stress was associated with eating disorder symptoms (Ball & Lee, 2002). The stress generation hypothesis suggests that individuals actively contribute to stress in their lives. Bodell et

al. (2012) found that if stress generation is present in individuals with symptoms of eating disorders, it could be attributed to symptoms of depression. It was also shown that an increase in perceived stress is a significant predictor of increased depressive symptoms among students (Rosal et al., 1997). Depressive disorder is the most common co-morbid diagnosis in people with eating disorders (Kaye et al., 2008). The positive relationship between depressive symptoms and eating disorders appears to be similar between the genders (Green et al., 2009). Eating disorder patients had significantly higher scores in the Beck depression inventory (Speranza et al., 2003), but prospective studies did not show that depression was predictive of future eating problems (Dobmeyer & Stein, 2003). The aim of the current study was to investigate this association in a non-clinical sample of first-year university students. Many studies have identified reduced quality of life in patients with eating disorders (Engel et al., 2009). Impaired emotional well-being has also been observed in patients after recovery from eating disorders, in particular from bulimia nervosa (Doll et al., 2005). After one year of treatment, emotional well-being improved but did not achieve the level found in the healthy population (Munoz et al., 2009). Reduced subjective quality of life is also observed in subjects with particular bulimic symptoms which are insufficient for the diagnosis of an eating disorder (Hay, 2003). Little attention has previously been paid to the emotional well-being of non-clinical samples with particular symptoms of eating disorders. Therefore, the aim of the current study was to explore emotional well-being in relation to the risk of ED. The genders have different eating styles and women experience more food-related conflicts than men do (Rolls et al., 1991). Gender differences in the prevalence of eating disorder symptoms are well documented (Striegel-Moore & Bulik, 2007). Thus, apart from other psychological factors, gender appears to be one of the most relevant predictors of ED.

There have been a number of studies exploring eating disorders (ED) in relation to substance use (e.g. Krahn et al., 2005; Krch et al., 2005; Gadalla & Piran, 2007), which have revealed significant associations. Dysfunctional eating strategies such as dieting and bingeing severity were associated with the frequency and intensity of alcohol use, as well as the negative consequences of alcohol use (Krahn et al., 2005). These studies are based on shared etiology hypotheses (*personality hypotheses, the role of endogenous opioids, family history, a developmental perspective*), which highlight the common predisposition of both forms of psychopathology, or on causal hypotheses (*self-medication, the role of anxiety and the reduction of tension, food deprivation*), which follow the assumption that problems in one area lead to the development of problems in another area (Wolfe & Maisto, 2000). The research of Stock et al. (2002) revealed opposite results, where adolescent food restrictors

reported lower alcohol use than sex- and grade-matched comparison population and binge eaters did not differ from this comparison adolescent population. However, these studies were carried out on female samples and thus the role of gender in the association between ED and alcohol use is not yet clear. Alcoholism and eating disorders often co-occur in the presence of other psychiatric disorders (Grilo et al., 2002) or major depressive disorder (Dansky & Brewerton, 2000). ED and depression are considered to be chronic conditions associated with comorbid psychopathology (Presnell et al., 2004). However, information supporting the effect of the interaction between alcohol use and psychological factors such as depression on ED is somewhat lacking.

On the other hand, a few studies have focused on the associations between behavioural addictions such as problematic internet use (PIU) and ED (Rodgers et al., 2013; Zhuoli Tao, 2013; Zhuoli Tao & Liu, 2009). The cognitive-behavioural model of PIU by Davis (2001) suggests that individuals with psychosocial problems are prone to developing PIU. According to Shapira et al. (2003), PIU is defined as irresistible captivation or excessive use of the internet for a longer period of time than planned. This definition could be enriched by the addition of thoughts or behaviour associated with the use of the internet leading to negative personal or professional results (Caplan, 2010). The research of Zhuoli Tao and Liu (2009) pointed out the existence of a relationship between internet addiction and eating disorders. Both men and women (students of secondary schools and universities) with symptoms of internet addiction have reported significantly higher symptomatic aspects of eating disorders. The study by Zhuoli Tao (2013) addresses how the problems in different spheres of life resulting from the excessive use of the internet are related to symptoms of eating disorders (the drive for thinness, bulimia, body dissatisfaction). A significant relationship was found between bulimic symptoms and PIU, with depression as a partial mediator of the relationship. Similarly, Rodgers et al. (2013) revealed a significant relationship between symptoms of internet addiction and eating disorders in women. It was also found that the symptoms of internet addiction are predictors of eating disorders in women. However, no significant interaction effect of internet addiction on the association between depression and bulimia appeared. In the current study, consideration has been given to whether the results regarding the risk of eating disorders (anorexia and bulimia together) rather than bulimia only would differ from previous results.

● 1 / 2 Aims

The aim of the study is to explore (1) whether gender and the psychological factors PS, DS and EWB are significantly associated with the risk of ED, (2) if the risk of ED is related to other forms of risk behaviour such as AC and PIU among

university students and also (3) to identify possible interaction effects.

● 2 METHODS

● 2 / 1 Sample and procedure

The sample consisted of 598 first-year university students (74.2% females, mean age 20.05, SD=1.58) from three universities in Košice, Slovakia. Participation in the study was voluntary and anonymous. All the participants signed an informed consent and were informed that they could terminate their participation at any time during the study.

The results presented in this study are based on data from the SLiCE study (Student Life Cohort in Europe), which is a cross-national longitudinal study assessing health and health behaviours among university students from several European countries. Students were invited to participate by e-mail and in additional ways such as information on notice boards, flyers, etc. All the students registered on www.slice-study.eu and completed questionnaires online. Permission to conduct the study was granted by the ethics commissions of the participating institutions.

● 2 / 2 Measures

Eating disorder indicators

The SCOFF questionnaire, which is a screening instrument for detecting eating disorders (Morgan, 2000) was used. It consists of five items with dichotomized “yes” or “no” answers. The questions are based on core features of anorexia nervosa and bulimia nervosa, such as “Do you make yourself sick because you feel uncomfortably full?” The number of positive answers was summed. A score of two or more positive answers indicated a likely diagnosis of an eating disorder (Morgan, 2000), in which case they were marked as being at risk of an eating disorder and in the opposite case without risk of an eating disorder. The Cronbach’s alpha coefficient was 0.42, which is acceptable because of the low number of items.

Perceived stress

This concept was measured with the four-item version of Cohen’s perceived stress scale (Cohen et al., 1983). It assesses the degree to which life events are perceived as stressful in one’s life over the past month. The questions are designed to assess the degree to which respondents have found their lives unpredictable, uncontrollable and overloading, e.g. “How often have you felt that you were unable to control the important things in your life?” The answers are on a five-point scale ranging from “never” to “very often”. The score was obtained by reversing the score of items 2 and 3 and then totalled for all four items. A higher score

indicated more perceived stress. The Cronbach's alpha coefficient reached an acceptable value of 0.73.

Depressive symptoms

Depressive symptoms were measured using a modified version of the Beck Depression Inventory (Schmitt & Maes, 2000). It is a twenty-item scale measuring depressive symptoms experienced in the last few days. The intensity or severity of the symptoms is measured using a five-point frequency rating scale. The total score was obtained by summing the answers to all the questions. The Cronbach's alpha coefficient was 0.91, which shows excellent internal consistency.

Emotional well-being

Current emotional well-being was measured with the WHO-Five well-being index (Bech, 2004). It consists of five items related to positive mood, vitality and interests, e.g. "I have felt cheerful and in good spirits." The respondents were asked to consider the time during the last two weeks. The answers were presented on a six-point scale ("all of the time", "most of the time", "more than half of the time", "less than half of the time", "some of the time" and "at no time"). The total score ranges from 0 to 25, with 0 indicating the worst possible quality of life and 25 the best possible quality of life. The Cronbach's alpha coefficient was 0.86, which shows very good internal consistency.

Alcohol consumption

Alcohol consumption was measured by the Alcohol Use Disorders Identification Test (AUDIT) by Babor et al. (2001). It is a 10-item alcohol screening test. AUDIT consists of three questions on hazardous alcohol use, three questions on dependence symptoms and four questions on harmful alcohol use. Items 1–8 use a five-point scale, while items 9–10 use a three-point scale. A total score (ranging from 0 to 40) was used in the data analyses, with higher scores representing

a higher level of hazardous or harmful alcohol use. A total score of 8 or more is an indicator of risky alcohol use. The Cronbach's alpha was .71 for hazardous alcohol use, .64 for dependence symptoms, .62 for harmful alcohol use and .81 for the complete scale, which were all acceptable.

Problematic internet use

Problematic internet use was measured with the Generalized Problematic Internet Use Scale (GPIUS 2) developed by Caplan (2010). This scale consists of 15 items divided into five subscales (preference for online interaction, mood regulation, cognitive preoccupation, compulsive internet use, negative outcomes) with an eight-point Likert scale (1 – definitely disagree; 8 – definitely agree). The total score ranges from 15 to 120 and a higher score indicates more PIU. Participants who showed signs of problematic internet use were identified through the Visual Binning function, using the method of cut-off points (standard deviation) in SPSS. This divided the sample into four groups according to an SD of +/-1 from the mean; (those who scored an SD over 1 above the mean were considered to show significant signs of problematic internet use: total score ≥ 56). The Cronbach's alpha coefficient was 0.91, which shows excellent internal consistency.

● 2 / 3 Statistical analysis

Descriptive statistics and binary logistic regression in IBM SPSS Statistics (version 21) were performed. A significance level of $p < .05$ was adopted for the analyses. Binary logistic regression was performed to assess the associations between the risk of ED and gender and psychological factors (EWB, DS, PS) at step 1, between the risk of ED and other forms of risk behaviour (AC, PIU) at step 2 and a significant interaction effect (DS*PIU) on the risk of ED at step 3. Other interactions following the theoretical background were also studied (AC*gender, DS*AC), but since they were not statistically significant, they are not mentioned in the presentation of the results.

Table 1 / Tabuľka 1

Proportion of students at increased risk of eating disorders, risky alcohol consumption and problematic internet use
Podiel študentov so zvýšeným rizikom porúch stravovania, rizikovej konzumácie alkoholu a problematického užívania internetu

	risk	Risk of ED		Risky AC		Signs of PIU	
		cases	percent	cases	percent	cases	percent
males	yes	10	7.4%	57	46.3%	36	25%
	no	125	92.6%	66	53.7%	108	75%
females	yes	67	16.4%	81	22.4%	77	18.9%
	no	341	83.6%	280	77.6%	330	81.1%
total	yes	77	14.1%	138	28.4%	113	20.4%
	no	466	85.9%	348	71.6%	440	79.6%

Note: ED – eating disorders; AC – alcohol consumption; PIU – problematic internet use

Poznámka: ED – poruchy stravovania; AC – konzumácia alkoholu; PIU – problematické užívanie internetu

● 3 RESULTS

The ratios of the students for three types of risk behaviour are shown in *Table 1*. The proportion at increased risk of an eating disorder was 14.1% (7.4% of the men and 16.4% of the women), while risky alcohol consumption was indicated among 28.4% of the students (46.3% of the men and only 22.4% of the women). 20.4% of the students (25% of the men

and 18.9% of the women) showed signs of problematic internet use. According to this, it seems that more males than females engaged in risky behaviour, except for eating behaviour. Furthermore, risky alcohol consumption seems to be the most frequent risk behaviour among the students.

Table 2 shows the descriptive statistics of the variables used in the logistic regression analysis and interaction graph.

Table 2 / Tabuľka 2

Descriptive statistics of psychological factors and risk behaviours

Deskriptívna štatistika psychologických faktorov a rizikového správania

	Range	Minimum	Maximum	Mean	Std. Deviation
EWB	25	0	25	11.930	5.273
PS	16	4	20	10.430	3.058
DS	76	20	96	46.992	13.575
ED indicators	5	0	5	.584	.869
AC	27	1	28	6.080	5.100
PIU	105	15	120	40.508	19.741

Note: AC – alcohol consumption, PIU – problematic internet use, EWB – emotional well-being, PS – perceived stress, DS – depressive symptoms, ED – eating disorders
Poznámka: AC – konzumácia alkoholu; PIU – problematické užívanie internetu; EWB – emocionálny well-being, PS – percipovaný stres; DS – depresívne symptómy; ED – poruchy stravovania

Table 3 / Tabuľka 3

Binary Logistic Regression model of risk of eating disorders

Model binárnej logistickej regresie vysvetľujúci riziko porúch stravovania

		B	df	Sig.	OR	95% C.I. for EXP(B)	
						Lower	Upper
Step 1	gender ^a	0.980	1	0.033	2.665	1.081	6.572
	EWB	-0.003	1	0.924	0.997	0.932	1.066
	PS	-0.026	1	0.696	0.975	0.856	1.109
	DS	0.057	1	<0.001	1.059	1.027	1.091
Step 2	gender ^a	1.511	1	0.003	4.529	1.674	12.256
	EWB	-0.012	1	0.746	0.988	0.922	1.600
	PS	-0.046	1	0.504	0.955	0.835	1.093
	DS	0.056	1	0.001	1.057	1.024	1.091
	ALC	0.102	1	0.002	1.107	1.039	1.1800
	PIU	0.019	1	0.021	1.019	1.003	1.036
Step 3	gender ^a	1.546	1	0.003	4.694	1.719	12.815
	EWB	-0.022	1	0.548	0.978	0.911	1.051
	PS	-0.046	1	0.504	0.955	0.835	1.093
	DS	0.117	1	<0.001	1.124	1.054	1.198
	ALC	0.099	1	0.003	1.104	1.035	1.177
	PIU	0.089	1	0.006	1.093	1.026	1.163
	DS x PIU	-0.001	1	0.025	0.999	0.997	1.000

Note: ^amales as a reference group, Step 1: $\chi^2(4,318)=29.12$; $p<.001$, explaining between 7.4 and 13.4% of variance in the risk of ED; Step 2: $\chi^2(6,318)=44.57$, explaining between 11 and 20.1% of variance in the risk of ED; Step 3: $\chi^2(7,318)=49.87$, explaining between 12.3 and 22.3% of variance in the risk of ED
Poznámka: ^amuži ako referenčná skupina, Krok 1: $\chi^2(4, 318)=29,12$; $p<0,001$, vysvetľujúci medzi 7,4 a 13,4% variancie rizika porúch stravovania; Krok 2: $\chi^2(6, 318)=44,57$, vysvetľujúci medzi 11 a 20,1% variancie rizika porúch stravovania; Krok 3: $\chi^2(7, 318)=49,87$, vysvetľujúci medzi 12,3 a 22,3% of variancie rizika porúch stravovania

The full model consisted of six independent variables: gender, EWB, PS, DS, AC and PIU, with a significant interaction between DS and PIU being statistically significant (Table 3) and correctly classified in 86.1% of cases. As reported in Table 3, gender made a statistically significant contribution to the model. The odds ratio for gender indicated that women are almost 4.7 times more likely to report the risk of an ED. DS, AC and PIU also contributed significantly to the model (see Table 3). Higher DS, AC and PIU scores increased the likelihood that respondents would be at risk of an ED. The odds ratio for DS, AC and PIU indicated that with the increasing level of the score in these factors the respondents were 1.12, 1.10 and 1.09 times respectively more likely to report the risk of an ED (see Table 3). On the other hand, neither PS nor EWB appeared to be significant in the model. The interaction between DS and PIU was significant in the model. No other interaction effects appeared to be significant.

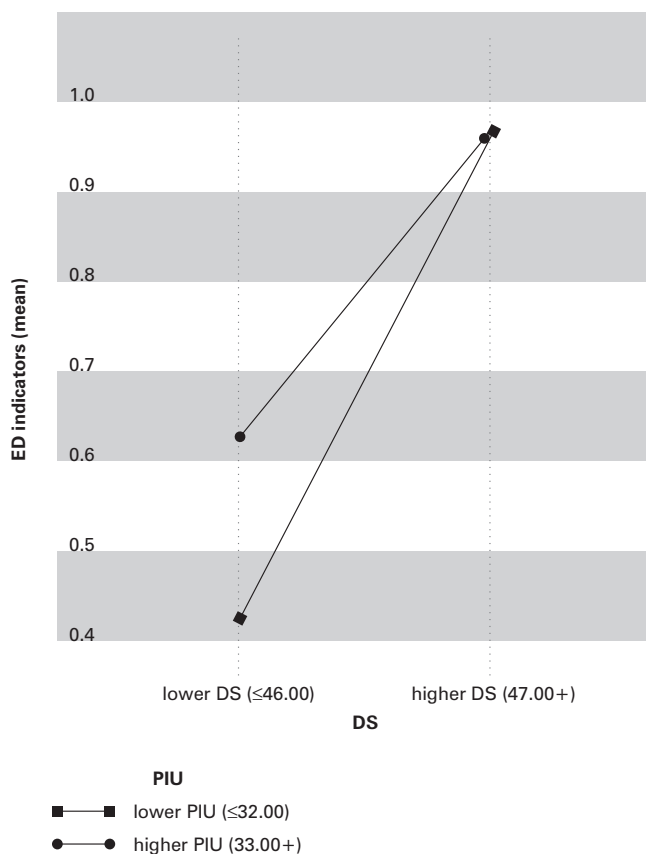


Figure 1 / Obrázok 1
Interaction between depressive symptoms and problematic internet use
Interakcia medzi depresívnymi symptómami a problematickým užívaním internetu

A significant interaction between DS and PIU is demonstrated in the interaction graph (Figure 1) after the transformation of the dichotomized variable “Risk of ED” into the continuous variable “ED indicators” (total score of

indicators reported) and dichotomization of the variables DS and PIU. As depicted below, PIU seems to moderate the relationship between the extent of the ED indicators reported and DS. A higher PIU at a lower level of DS indicates more ED indicators reported, while a lower PIU at a lower level of DS indicates fewer ED indicators reported.

● 4 DISCUSSION AND CONCLUSIONS

In this study it was found that students with more depressive symptoms, more risky alcohol consumption and more problematic internet use were more likely to be at risk of eating disorders. Additionally, females were more likely to report the risk of an ED. Students are unlikely to be a representative sample of the community, but they are a good sample for studying eating disorders since the highest prevalence of eating disorders is between the ages of 16 and 44 years (Wells et al., 2006). Another strength of the recent study was the inclusion of both males and females in the study sample. The majority of the research in this area includes only females. Anorexia nervosa and bulimia nervosa are more common among females than males (Striegel-Moore & Bulik, 2007), although gender differences are far less pronounced in binge eating disorders (Hudson et al., 2007). The SCOFF questionnaire that was used is based on the core features of anorexia nervosa and bulimia nervosa (Morgan, 2000) and the result of a higher occurrence of eating disorder indicators among females is therefore not surprising. On the other hand, the overall proportion of the risk of disordered eating was quite high (14.1%). This could also be a result of the online data collection, in which the level of participation might be higher among those who are interested or somehow involved in this topic. However, it is lower in comparison with the proportion of possible cases of eating disorders identified by Tivolacci et al. (2015) in a non-clinical sample of French students (22.4%).

Higher perceived stress has been associated with anorexia nervosa (Tozzi et al., 2003) and bulimia nervosa (Bekker & Boselie, 2002). However, this study has not confirmed this association in a non-clinical sample of university students. On the other hand, the results support the previous findings that anorexic and bulimic patients report more depressive symptoms (Speranza et al., 2003) and that binge eating disorders are strongly associated with depressive symptomatology in young adults (Smith et al., 1998). The present data extends these findings to a non-clinical sample of university students who show only particular indicators of eating disorders without their clinical manifestations. Regarding emotional well-being, the current results contrast with those of previous studies (e.g. Vallance et al., 2011; Munoz et al., 2009), which showed impairment in well-being associated with eating disorders. These present results might have shown a different pattern in a population of students.

Similarly to these results, Gadalla and Piran (2007) came to the conclusion in their meta-analysis that there are strong positive associations between different kinds of ED and alcohol use among student populations. The results are also in line with the studies by Krahn et al. (2005) and Anderson (2006), which confirmed a positive association between alcohol use and eating disorders in non-clinical samples. On the contrary, in their study of a clinical sample Stock et al. (2002) came to the conclusion that adolescents with restrictive eating disorders and also with bingeing or purging symptoms reported lower alcohol use when compared to the general adolescent population. However, their study was limited by the small number of cases with bingeing and purging symptoms. The relationship between eating disorders and problematic internet use has been addressed in several studies (Rodgers et al., 2013; Zhuoli Tao, 2013; Zhuoli Tao & Liu, 2009). The research by Rodgers et al. (2013) revealed the association between symptoms of internet addiction and eating disorders only in women. In the study by Zhuoli Tao (2013) a significant relationship between symptoms of bulimia and PIU among college students was found. Zhuoli Tao and Liu (2009) pointed out the existence of a relationship between internet addiction and eating disorders in both men and women (students of secondary schools and universities). The results from this study are consistent with the findings from previous studies. The interaction effect between PIU and DS on the risk of an ED in this study was significant, in contrast to the results obtained by Zhuoli Tao (2013), who, however, addressed the symptoms of bulimia. The results of this study suggest that more problematic internet users, even with a lower level of depression, are more likely to suffer from eating disorders than those who reported lower problematic internet use. These results might direct attention to the problem of support websites for eating disorders. Problematic internet users may follow them more intensively, which might indicate the risk of an ED even for those with lower levels of depression. This can be explored in greater depth in future research.

There are several limitations of this study. First, the sample of first-year university students was not representative. This could be partially resolved by recruiting respondents according to the gender proportion in the population of Slovak university students. On the other hand, the research sample consisted of students who decided to participate in the online SLiCE study and they may differ from those who chose not to participate. This is an irresolvable problem in this type of research. Other inaccuracies could have been caused by the self-reporting nature of the data, which can be biased by social desirability. The other limitation is using the short, simply administered SCOFF questionnaire for assessing eating disorder indicators. This questionnaire is only a screening tool and a positive result

does not necessarily mean the presence of an eating disorder, although, according to Morgan (2000), the SCOFF questionnaire is able to correctly identify 100% of the participants with an eating disorder, both anorexia nervosa and bulimia nervosa, but it is likely to produce a relatively large number of false-positive cases (Crosby & Mitchell, 2000). Moreover, it does not distinguish between restrictive and purging/bingeing forms of eating disorders but merges them together instead.

In this study the associations between gender and relevant psychological factors (perceived stress, depressive symptoms, emotional well-being), as well as other forms of risk behaviour (risky alcohol and internet use) and the risk of eating disorders were examined. It confirmed the previous findings and generalized them to a non-clinical population of first-year university students. Moreover, the results indicate the importance of gender, depression, alcohol consumption and problematic internet use in improving the accuracy of the classification of cases with the risk of eating disorders. These findings could be helpful in preventive strategies for eating disorders focusing on improving coping strategies, reducing perceived stress and depressive symptoms and increasing emotional well-being. The findings might also assist clinicians in identifying the possible co-occurrence of disordered behaviour, so that they could prevent or arrive at an early diagnosis of possible cases.

The roles of the authors: Lucia Hricová and Eva Paulisová designed the study and proposed the study design. Lucia Hricová performed the statistical analysis and participated in the data interpretation and the writing of the manuscript. Eva Paulisová designed the initial form of the manuscript and conducted a literature review and summary of related work. Oľga Orosová supervised the statistical analysis and participated in the writing of the manuscript. All the authors contributed to the article and approved the final version of the manuscript.

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Konflikt záujmov: Bez konfliktov záujmov.

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ZPRÁVY

OSOBNÍ ZPRÁVY

S lítostí oznamujeme, že zemřel belgický kolega prof. Eric Broekaert (1951–2016).

Eric Broekaert se postaral o rozvoj „Orthopedagogiek“ (speciální vzdělávání) na Univerzitě v belgickém Gentu.

Profesor Broekaert byla velmi inspirující osobnost a nadšený učitel, který uvedl mnoho studentů a kolegů do světa integrativní,

holistické a akčně zaměřené teorie speciálního vzdělávání. Byl mezinárodně uznávaným odborníkem v oblasti terapeutických komunit a léčby drogově závislých.

Redakce