INTERNET ADDICTION IN UNIVERSITY STUDENTS – CZECH STUDY

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ABSTRACT

The main purpose of the presented study is to explore the existing risk of Internet addiction for undergraduate students of Czech universities. The research was conducted as quantitative research; a CIAS-R questionnaire was applied. The data were collected in the years just before the Covid-19 pandemic (between October 2019 and March 2020). 3,366 respondents (2,151 females and 1,215 males) participated in our questionnaire survey. The average CIAS-R score achieved by our respondents was 44 points. It equals 6% of addicted college students (when applying the cut-off point of 63/64), and 3% of addicted students (when applying the cut-off point of 67/68). A significantly higher risk was revealed in males and in full-time students compared to females, and part-time students, respectively. The type of faculty studied was proved to be a significant intervening variable. Applying the 63/64 cut-off point, we revealed 5.6% of addicted students among the students of faculties of education, which is alarming (even if we consider the fact that applying the 67/68 cut-off point, we revealed 2.7% of addicted students.). These students represented almost 50% of our respondents, and they, as future teachers, will play an important role in the prevention of risky behavior.

KEYWORDS

CIAS-R questionnaire, Internet addiction, screening and digital criteria, university students

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Highlights

- *Males have a significantly higher risk of Internet addiction in the spheres of interpersonal problems, health problems and time management problems.*
- *Females are at higher risk of Internet addiction in the sphere of tolerance symptoms.*
- *With advancing age, there is a lower incidence of Internet addiction.*
- *The type of faculty studied is a significant intervening variable.*

INTRODUCTION

Since the 1980s, the scope of research interest in addiction has expanded and now it includes a new sphere of addictive behavior, so-called behavioral addictions, which are beyond the classical scheme of addiction to psychoactive substances. Some behavioral addictions are considered to be basically very similar to substance addictions (Grant et al., 2010).

Other terms (besides that of behavioral addiction), such as non-substance addictions, non-chemical addictions or non-drug addictions, and non-toxic addictions, also refer to this new type of addictive behavior (Potenza, 2009; Zou et al., 2017; Chóliz, 2012; Vacek and Vondráčková, 2014). The most common terms used in the sphere of addictions to new technologies are those of technological or digital addictions (Chóliz, 2010). A special type of these technological addiction is Internet addiction. (Remark: 'The literature uses interchangeable references such as "compulsive Internet use", "problematic Internet use", "pathological Internet use", and "Internet addiction"' (Zenebe et al., 2001: 1).

Young (1998) drew on the diagnostic model of pathological gambling, and she defined Internet addiction as a compulsive and impulsive disorder that does not cause intoxication.

Nowadays, experts discuss possible ways of the classification of Internet addiction. The issue whether to consider this diagnostic unit as a primary psychiatric disorder or as a consequence of other mental disorders is also discussed (Bipeta et al., 2015). Some authors define Internet addiction as the inability of individuals to control their using of the Internet, which leads to feelings of anxiety and functional disruption of daily activities (cf. (Douglas, 2008). Other authors, such as Bipeta et al. (2015), consider Internet addiction to be a consequence of the obsessive-compulsive disorder. But also these authors define

Internet addiction in a way similar to the one mentioned above – it is individuals' inability to control the extent to which they use the Internet.

Generally speaking, Internet addiction can be defined as using the Internet in such an excessive way that everyday life collapses, which can gradually lead to a complete breakdown of personal life, social relationships, working habits and sleep patterns, and to medical problems such as mood disorders, anxiety, depression and even suicidal ideation (see e.g. Hong et al., 2014; Lai et al., 2015; Goswami and Singh, 2016; Hawi and Samaha, 2016; Poli, 2017; Cheng et al., 2018; Hinojo-Lucena et al., 2019; Ioannidis et al., 2019; Chi, Hong and Chen, 2020; Shen et al., 2020; Tóth et al., 2021).

Internet addiction is perceived (based on triggers of compulsive behavior) as a broad category that includes several subtypes of addiction. A five-dimensional view of Internet addiction is very often used. This approach distinguishes the following sub-dimensions (see Young et al., 1999, Goswami and Singh, 2016, Poli, 2017, Pan, 2020):

- Cybersex addiction
- Addiction to cyber relationships
- Net-compulsions
- Information supersaturation
- Addiction to computer games

A common feature of all forms of Internet addiction is getting a nice feeling in a quick and easy way.

Modern digital technologies are becoming a common part of the daily routine of university life. The professional public very often perceives university students as one of the most at-risk groups. 'The high prevalence is usually attributed to students' easy access to the internet, flexible daily program, and to the fact that after enrolling in university, most of them are in a new environment without their previous social ties and start to build new relationships and social status, which is largely facilitated by the Internet.' (Chraska, 2019: 559)

Some studies (e.g. Hsieh et al., 2018; Zhang et al., 2018) suggest that the incidence of Internet addiction is independent of the gender of students. The others revealed a higher prevalence of Internet addiction in men than in women (e.g. Poli, 2017; Li et al., 2018; Milkova and Ambrozova, 2018; Hinojo-Lucena et al., 2019; Grover et al., 2019; Hayat, Kojuri and Amini, 2020). Similarly, no significant differences are revealed in studies (e.g. Li et al., 2018) concerning the types and orientation of study fields, whereas other findings confirm significant differences among faculties (e.g. Zhang et al., 2018). Age has proven to be a factor that positively correlates with the sphere of the risk of Internet addiction (cf. Hsieh et al., 2018; Grover et al., 2019; Chiu, 2019).

Being familiar with the above-mentioned findings, in our research, we focused on students of Czech universities. The purpose of the presented research is to detect the prevalence of Internet addiction among university students in the Czech Republic and its risk factors, including gender, age, the form of studies (full-time vs. part-time), the type of university studied and study specializations.

The Materials and Method section presents the questionnaire used in our research, and then it presents the research process. In the Research Results section, the quantitative data analysis is presented. The Discussion section compares our research findings with the findings made in previous research cases. The Conclusion and Future Work section briefly summarizes the most important results, and presents our further research planned in the field of Internet addiction.

MATERIALS AND METHODS

The presented study focuses on university students. Its main purpose is to explore the existing risk of Internet addiction for undergraduate students of Czech universities. The data were collected between October 2019 and March 2020.

From a wide range of more than 21 research and diagnostic tools focusing solely on Internet addiction (see Kuss and Lopez-Fernandez, 2016), we chose the Revised Chinese Internet Addiction Scale (CIAS-R), i.e. the questionnaire which is referred to (based on its author) as the "Revised Chen Internet Addiction Scale" (Chen et al., 2003; Ko et al., 2005).

CSIAS-R

CIAS-R is a worldwide used self-report questionnaire designed to measure participants' addiction to the Internet. The questionnaire includes 26 items, each of them is scored on a 4-point scale: 1 (never = does not match my experience at all), 2 (hardly ever), 3 (often), 4 (nearly always = definitely matches my experience). That means, the minimum possible score to be achieved is 26, the maximum possible score to be achieved is 104. Higher scores indicate a more severe level of Internet addiction.

CIAS-R was originally designed for adolescents, the screening cut-off point of 57/58 and the diagnostic cut-off point of 63/64 are considered. According to Ko et al. (2009), the cut-off points of 63/64 and 67/68 of the CIAS-R are considered to be the best screening and diagnostic cut-off points, respectively, when college students are focused.

The individual CIAS-R scales refer to 5 following factors of various problems related to Internet addiction:

- compulsive symptoms (five items) - symptoms associated with the compulsive need to connect to the Internet,
- withdrawal symptoms (five items) - symptoms associated with discomfort resulting from the situation in which the Internet is disconnected or unavailable,
- tolerance symptoms (four items) – symptoms manifested by a longer time spent on using the Internet,
- interpersonal & health problems (seven items) – problems associated with negative impacts of the Internet use on the bio-psycho-social health of users,
- time management problems (five items) – problems associated with impaired control over the user's own behavior.

The biggest advantages of the tool are its easy administration and the fact that it is not time-demanding (the time spent on completing it should not exceed 10 minutes). The tool has good validity and reliability (Ko et al., 2005; Alizamar et al., 2018). According to (Mak et al., 2014: 1238), 'CIAS-R reported strong internal consistency, and satisfactory convergent validity as evidenced by its significant correlations with Young's (1998) Diagnostic Questionnaire (YDQ) and Morahan-Martin and Schumacher's (2000) Pathologic Use Scale (PUS).'

Research Study

The research was conducted as quantitative research (Kaliba, 2020).

Research objectives

The objective of the presented study is to explore the risk of Internet addiction occurring in university students in the Czech Republic.

The partial objectives of the research are to compare differences between the behavior of men and women, differences between individual age categories of students, between the forms of studies (full-time and part-time) and differences between study fields (with a special focus on students majoring in teaching).

Considering the research objective, the following four null hypotheses were proposed:

- H_{gender}: Internet addiction does not depend on the respondents´ gender.
- H_{age}: Internet addiction does not depend on the respondents´ age.
- H_{form}: Internet addiction does not depend on the form of studies.
- $H_{orientation}$: Internet addiction does not depend on the faculty orientation.

Pilot Study

In order to verify the planned research procedure and the suitability of the chosen research tool, a pilot research was carried out. It involved 251 students of the Faculty of Education, University of Hradec Kralove (Ambrozova and Kaliba, 2020). Excellent internal consistency (*Cronbach's alpha* of 0.93) of the CIAS-R scale was achieved in our pilot research. This result was similar to that one reached by Chraska (2019) in his pilot study which focused on revealing Internet addiction of Czech university students, and which applied CIAS.

Research sample

We addressed officials of variously oriented faculties and universities in the Czech Republic, and we asked them to forward our questionnaire to students. 3,397 respondents participated in the CIAS-R questionnaire survey, the questionnaire was sent electronically. The research was processed within the framework of a dissertation thesis (Kaliba, 2020) and in line with the ethical code of the University of xxx, Czech Republic. The data were logically and optically checked. Some responses were excluded for such reasons as the incompleteness of data, or the non-university student status of some respondents. The final number of respondents was 3,366 (2,151 females and 1,215 males). Concerning its extent, our research study ranks among the largest in the Czech Republic and also worldwide (compare Moreno-Guerrero et al., 2020).

Concerning the gender, see Table 1 for the composition of the sample (almost 64% of females and 36% of males), which roughly corresponds to the general gender composition of the population of Czech university students (female university students represent approximately 60% of the total number of all students). A slight surplus of women in our sample can then be attributed to the traditionally higher proportion of women studying at Czech Faculties of Education. The involvement of this type of faculties was important for our research in the context of its objectives.

The respondents were both full-time students and part-time students from various universities in the Czech Republic. We monitored the distribution of the respondents based on the faculties studied and the faculties´ orientations. For simplification, we divided the faculties studied by our respondents into 6 groups according to their dominant focus. Our main attention was paid to students of faculties of education, who are therefore most represented within the sample structure (approx. 50%), and students of faculties significantly oriented on technological fields and directly oriented on informatics (approx. 29%). Roughly 21% of all the respondents represented the remaining types of faculties (those oriented on humanities, science, health service and medicine, economics and mathematics), see Table 1.

Gender	
Female	2151 (63.9%)
Male	1215 (36.1%)
Age	
19–25	2664 (79.1%)
26–35	355 (10.5%)
36–50	367 (10.3%)
Forms of studies	
Full-time form	2609 (77.51%)
Part-time form	757 (22.49%)
Faculties oriented on	
Education	1682 (49.47%)
Technology and informatics	985 (29.26%)
Humanities	253 (7.5%)
Economics and mathematics	67 (1.99%)
Science	212 (6.3%)
Health service and medicine	167 (4.96%)

Table 1: Baseline characteristics of the study population (*N* = 3,366), 2019–2020 (source: own calculation)

Limitation

Although the research sample can be considered as being very numerous also in the context of other studies, it cannot be considered as being representative due to its construction (almost 43% of the respondents were from the "home" university, and almost 50% of the respondents were from faculties of education). That is why the conclusions reached cannot be generalized. However, they can be definitely perceived as an important insight into the online risk behavior of the target group, and as a confirmation of the conclusions reached in a number of other research cases.

Data analysis

The IBM SPSS Statistics software was used analyze the collected data. On the basis of the Kolmogorov-Smirnov test, it was revealed that all the monitored data have the normal distribution. Levene's test for equality of variances revealed that this equality existed in case of all the monitored data.

To statistically analyze the needed relationships, we used the analysis of variance (ANOVA). The analysis of covariance (ANCOVA) with the respondents´ age as the covariate was carried out.

RESEARCH RESULTS

Within the framework of the acquired dataset, the CIAS-R scale showed a very high degree of internal consistency (*Cronbach's alpha* of 0.92).

Considering the sphere of Internet addiction, our respondents´ average score was 44.03. See Table 2 (*Means*, *SD*s, *Minimum* and *Maximum* scores).

Factor	Mean (Mean/Item)	SD	Min-Max
compulsive symptoms	8.28 (1.66)	2.81	5–20
withdrawal symptoms	8.95 (1.79)	2.99	5–20
tolerance symptoms	7.88 (1.97)	2.26	4–16
interpersonal & health problems	11.39 (1.63)	3.76	7–28
time management problems	7.51 (1.88)	2.38	5–20
CIAS-R score	44.03	11.38	26–104

Table 2: Summary of the CIAS-R data, 2019–2020 (source: own calculation)

Problems with overusing of the Internet are reflected in all diagnostic levels. The total score of the CIAS-R was significantly associated with the amount of the time spent on the Internet (see Table 2, tolerance symptoms).

The screen cut-off point of 63/64 and the diagnostic cut-off point of 67/68 for the CIAS-R were considered by Ko et al. (2009) to be the best cut-off points when evaluating IA in university students. However, in the monitored spheres we will present, referring to the cut-off points recommended by the authors of the original study (Chen et al., 2003; Ko et al., 2005) for adolescents, also the percentual representation of the respondents related to the screen cut-off point of 57/58 (for the reason of an easier comparison with other studies which have been already carried out).

Our research revealed 12% of the addicted when the 57/58 cut-off point was used, 6% of the addicted when the 63/64 cut-off point was used, and 3% of the addicted when the 67/68 cut-off point was used.

Results by gender

A significantly higher risk was revealed in males:

- 15.5% (applying the 57/58 cut-off point),
- 8.3% (applying the 63/64 cut-off point), and
- 3,9% (applying the 67/68 cut-off point)

(in case of females, the respective percentages were 10.6%, 5.4%, and 2.7%).

Using the ANOVA method, we analyzed the relationship between Internet addiction and the gender of the respondents. See Table 3 (*f-Mean* = females, *m-Mean* = males).

Factor	*F*-test	*f*-Mean	*m*-Mean
compulsive symptoms	1.88	8.23	8.35
withdrawal symptoms	3.57	8.88	9.06
tolerance symptoms	13.60*	7.98	7.72
interpersonal & health problems	40.34*	11.12	11.86
time management problems	41.28*	7.34	7.81
CIAS-R score	36.14*	43.26	45.38

Table 3: The CIAS-R data by gender (*$p < 0.05$), 2019–2020 (source: own calculation)

From Table 3 it is clear that males have a significantly higher risk of Internet addiction in the spheres of interpersonal problems, health problems and time management problems. Females are at higher risk in the sphere of tolerance symptoms.

Results by age

Referring to the age groups of the respondents, the 19–25 age group reached the average CIAS-R score of 45.3, i.e.:

- 13.7%, 6.5%, 3,5% resulting from the application of the 57/58, 63/64, 67/68 cut-off points.

The 26–35 age group reached the CIAS-R score of 42.1, i.e.:

- 11.3%, 4.5%, 2,3% resulting from the application of the 57/58, 63/64, 67/68 cut-off points.

The oldest respondents (aged 36–50) reached the CIAS-R score of 36.2, i.e.:

- 3.7%, 2.2%, 1.5% resulting from the application of the 57/58, 63/64, 67/68 cut-off points.

A correlation calculation was used to analyze the relationship between Internet addiction and the age of the respondents. See Table 4 (correlation coefficient *R*).

Factor	*R*
compulsive symptoms	-0.23**
withdrawal symptoms	-0.17*
tolerance symptoms	-0.22**
interpersonal & health problems	-0.18**
time management problems	-0.17**
CIAS-R score	-0.24**

Table 4: The CIAS-R data by the age (*$p < 0.05$, **$p < 0.01$), 2019–2020 (source: own calculation)

The data clearly confirm the statistically significant relation between Internet addiction and the age of the respondents. With advancing age, there is a lower incidence of Internet addiction.

Results by the form of studies

A significantly higher risk was revealed in full-time students:

- 13.7% resulting from the application of the 57/58 cut-off point,
- 6.6% resulting from the application of the 63/64 cut-off point, and
- 3,5% resulting from the application of the 67/68 cut-off point

(in case of part-time students, the percentages were 11.9%, 3.4%, and 2.1%).

Factor	*F*-test	full-time Mean	part-time Mean
compulsive symptoms	193.91**	8.53	7.39
withdrawal symptoms	242.09**	9.25	7.90
tolerance symptoms	362.67**	8.16	6.93
interpersonal & health problems	146.91**	11.69	10.35
time management problems	167.61**	7.71	6.81
CIAS-R score	145.16**	44.94	40.90

Table 5: The CIAS-R data by the form of studies ($p < 0.01$), 2019–2020 (source: own calculation)**

Using the ANOVA method, we analyzed the relation between Internet addiction and the form of studies. See Table 5.

As it is presented in Table 5, in all the monitored factors, full-time students show significantly higher scores of Internet addiction.

It is important to mention the fact that the mean age of the full-time students involved is 21.7, and the mean age of the part-time students involved is 33.04. However, it is also important to mention the fact that 28.5% of the part-time students belong to the same age group as the full-time students do (the age under 26). To reveal whether the statistically significant difference between the forms of studies is dependent on the respondents´ age or whether it is not dependent on it, we carried out the analysis of covariance (ANCOVA) in which the age was included as covariate. The obtained result confirmed that the form of studies has an impact on the CIAS-R score also in case when covariate (age) is considered, i.e. there is also a statistically significant difference ($p < .001$) in the CIAS-R score between the groups (the full-time one and the part-time one) when adjusted for the respondents´ mean age.

Results by orientation of faculties

Table 6 illustrates the relationship between Internet addiction and the orientation of faculties. The faculties (see section Materials and Methods; Research sample) are presented in the table as follows: F1 = faculties of education, F2 = humanities-oriented faculties, F3 = faculties oriented on technology and informatics, F4 = faculties oriented on science, F5 = faculties oriented on health service and medicine, F6 = faculties oriented on economics and mathematics.

Factor	*F* test	MeanF1	MeanF2	MeanF3	MeanF4	MeanF5	MeanF6
compulsive symptoms	4.64*	8.21	8.21	8.50	8.40	7.60	8.22
withdrawal symptoms	8.79*	9.01	8.78	9.15	8.49	8.26	8.14
tolerance symptoms	11.86*	7.92	7.60	8.08	7.71	7.38	7.91
interpersonal & health problems	11.06*	11.15	11.24	11.99	11.25	10.80	11.14
time management problems	7.42*	7.42	7.86	7.24	7.20	6.97	7.21
CIAS-R score	8.08*	43.34	44.12	45.25	44.23	42.47	43.42

Table 6: The CIAS-R data by the orientation of faculties (*$p < 0.05$), 2019–2020 (source: own calculation)

The highest CIAS scores are reached by students of faculties oriented on technology and informatics. Among the respondents studying these faculties, almost 14.5% of the addicted were found when the 57/58 cut-off point was applied, 7% of the addicted were found when the 63/64 cut-off point was applied, and 4.2% of the addicted were found when the 67/68 cut-off point was applied.

On the contrary, the lowest scores in Internet addiction are reached by students of faculties oriented on health service and medicine: 10.1%, 2.4%, and 1.2%, resulting from the application of the cut-off points of 57/58, 63/64, and 67/68, respectively.

Students of faculties of education reach lower total scores in Internet addiction when being compared with students of other faculties. Their scores are immediately behind those reached by medical students, namely:

- 11.2% resulting from the application of the 57/58 cut-off point,
- 5.6% resulting from the application of the 63/64 cut-off point, and
- 2,7% resulting from the application of the 67/68 cut-off point.
- As it is presented in table 6, the CIAS-R score shows a statistically significant difference of the Internet addiction related to the sphere on which the faculties are oriented.

Summary

Referring to the research results presented above, all four null hypotheses can be rejected.

DISCUSSION

The research objectives were successfully reached. Using the CIAS-R questionnaire, we examined Internet addiction in 3,366 respondents. We identified the level of risk of Internet addiction for university students, we compared the differences between Internet addiction of males and females, we compared the differences between individual age categories of students, differences between individual study forms and differences between students of differently oriented faculties. The main focus was placed on students of faculties of education, i.e. future educators of our youth.

Referring to our experience, university students are one of the most at-risk groups especially for the following reasons (cf. Ceyhan, 2011; Salehi et al., 2013; Skarupova and Blinka, 2015; Chraska, 2019, Ansar et al., 2020):

- University campuses usually provide easy, free and unrestricted internet access.
- The time period of university studies is often a period of transition to an individual being´s bigger independence, and it is also the first time in a young person's life when the parental control decreases.
- The Internet plays an important role in making new contacts, friendships, and even (sexual) relationships online.
- The cyber environment and its virtual reality play a role of a kind of "temptation" which enables an escape from the pressure caused by university studies requirements (homework, exams, etc.).

The above-mentioned reasons are reinforced with the CIAS-R questionnaire results reached in our research. In all the monitored groups of the respondents (grouped according to gender, age categories, study forms and orientation of faculties), two CIAS-R items related to the need of spending an increased length of time being online occurred most frequently ("I stay online longer than I intended, even when I planned to go online only briefly"; "I have found out that I have been spending more and more time online"). The third most frequently occurring item was that one associated with feeling of discomfort when the Internet was not available. The fourth most frequently occurring item was a futile effort to spend less time on the Internet.

According to some authors (Hayat, Kojuri and Amini, 2020: 83) 'high internet dependency can have negative consequences for students, especially regarding academic careers. Such students may tend to postpone their academic tasks.' Referring to the CIAS-R questionnaire results of our research into the most frequently occurring CIAS-R items, younger students admitted that spending time on the Internet has a negative impact on their study results (whereas students aged over 36 could see their health problems as a result of a negative impact of the Internet).

Applying the cut-off point of 57/58, we revealed that over 12% of our respondents were addicted. Applying the cut-off point of 63/64, we revealed that 6% of our respondents were addicted. Our research has revealed 3% of the addicted when applying the 67/68 cut-off point.

When working with self-assessment scales, the arbitrary rule of simple averaging (median) is often applied (an individual who exceeds the median value score increased by the standard deviation is considered to be problematic or severely addicted). Applying this rule, we would identify 616 heavily addicted persons in our sample, i.e. 18.3%. However, a relatively low application of this method in the process of data evaluation in international research makes such a comparison impossible. Any kind of comparison will always be affected by the fact that individual prevalence studies face methodological problems related to different methodologies, applied tools or cut-off points. For example, the analysis of studies (Chakraborty, Basu and Vijaya Kumar, 2010) which was carried out in the period between 1970 and 2010 and which used various instruments and populations brings highly variable data oscillating between the values of 0.3% and 38% of the population addicted to the Internet. Nevertheless, we can compare our research at least with other research cases listed below:

- In the analysis published in (Chou and Hsiao, 2000), the authors report that the prevalence of Internet addiction among university students internationally ranges from 8% to 13%.
- Weinstein and Lejoyeux (2010) reviewed literature related to Internet addiction which was published between 2000–2009 in Medline and PubMed. They indicated prevalence rates varying between 1.5% and 8.2%. in the United States and Europe.
- The meta-analysis of 31 countries (Cheng and Li, 2014) revealed a global prevalence of 2.6%–10.9% of Internet addiction. This analysis used multiple search strategies in an attempt to retrieve all empirical reports from 1996 to 2012 that adopted the Young Diagnostic Questionnaire or Internet Addiction Test for assessing generalized IA.
- The recent Chinese studies (Shen et al., 2020; Shen et al., 2021) on 8,098 college students in Hunan province, China, using CIAS-R and applying the criterion with the cut-off point of 63/64, reported the prevalence of internet addiction around 8% in these Chinese college students.

Our results of the research related to gender factors correspond to studies showing a higher prevalence of Internet addiction in men than in women (Poli, 2017; Li et al., 2018; Milkova and Ambrozova, 2018; Hinojo-Lucena et al., 2019; Grover et al., 2019; Hayat, Kojuri and Amini, 2020).

Age has got proven to be a factor that positively correlates with the sphere of the risk of Internet addiction. Similarly, to other

research studies (Hsieh et al., 2018; Grover et al., 2019; Chiu, 2019), our research confirmed that younger respondents have higher risks of Internet addiction; with advancing age there is a lower incidence of Internet addiction.

In the Czech Republic, university teachers commonly use a virtual learning environment to make study materials available for both full-time students and part-time students, and for assigning their tasks. Discussions made by students of both the forms of studies are also similar. However, our research shows that the form of studies is a significant intervening variable. This would not be surprising if this finding got proven to be dependent on age. However, age dependence was not proven (see section Research Results). Therefore, it can be only assumed that work commitments and mostly family responsibilities of part-time students do not allow them to spend too much of their non-study time on the Internet (see section Research Results, Table 2 - "the total score of the CIAS-R was significantly associated with the amount of time spent on the Internet").

Related to the type of faculty studied, the highest levels of Internet addiction were revealed in students of faculties oriented on technology and informatics. The lowest levels of Internet addiction were revealed in students of faculties oriented on health service and medicine (cf. Zhang et al., 2018). Students of faculties of education generally reach a lower score in the overall level of Internet addiction compared to students of other faculties. 'This can be caused by specific features of teacher training.' (Chraska, 2019: 562) The number of other studies dealing with this group of students is not high, but referring to the data available (Demirer, Bozoglan and Sahin, 2013; Chraska, 2019), we can claim that the level is comparable. Personal experience that the students of faculties of education have with Internet addiction is a topic that seems very important, especially with regard to their future teaching career and their role in prevention of risky behavior, or specifically in prevention of Internet addiction.

The sphere of risky behavior of current university students in cyberspace remains an issue with high potential for further research. This issue definitely requires professional interdisciplinary discussions, which can result in outputs that can practically help the target group to face the identified problems. We fully agree with the following opinion presented in a recent paper (Zenebe et al., 2021: 9): 'As internet addiction becomes an evident public health problem, carrying out public awareness campaigns may be a fruitful strategy to decrease its prevalence and effect. Besides to this, a collaborative work among stakeholders is important to develop other trendy, adaptive, and sustainable countermeasures.' In introductory sessions of our academic courses, we draw our students´ attention to the danger of internet addiction and to problems associated with this issue. Our doctoral students and colleagues are presented with our experience and our research results within the framework of various discussions focused this issue.

Due to the worldwide COVID-19 pandemic, it is necessary to mention the fact that our presented data were collected before the first wave of the pandemic and the subsequent lockdown (the data collection was carried out between October 2019 and March 2020). It is more than likely that Internet addiction has increased due to various Covid-19 factors (limited direct social contacts above all). The data obtained from more recent research (e.g. Ansar et al., 2020; Brooks et al., 2020; Lin, 2020; Qiu et al., 2020; Ramiz et al., 2021) show that Internet addiction occurring during the lockdown could become an even more serious problem, especially in adolescents and young adults. Referring to the results achieved in the study research by Siste et al. (2020: 6), we can quote the authors, who claim that 'COVID-19 fear and prolonged quarantine period might have driven people to experience depressive and anxiety symptoms. Recreational online activities are often a mechanism to cope with anxiety and alleviate depressed mood'.

CONCLUSION AND FUTURE WORK

In our research, we focused on the level of Internet addiction in the university population. The paper presents a research case carried out within the framework of the elaboration of a dissertation (Kaliba, 2020). Referring to our research, we consider Czech university students´ Internet addiction to be very alarming. The research has revealed 6% of the addicted within our research sample in case of applying the 63/64 cut-off point, and 3% of the addicted in case of applying the 67/68 cut-off point.

The research proved a significantly higher risk in males than in females, and a significantly higher risk in full-time students than in part-time students. From the data obtained it is clear that younger respondents have higher tendency to Internet addiction than older ones, i.e. with advancing age, there is a lower incidence of Internet addiction.

Our research also shows that the type of faculty studied is a significant intervening variable. Students of faculties of education reach generally a lower score in the overall level of Internet addiction compared to students of other faculties. Namely, the average CIAS score reached by students of faculties of education is 43.34, i.e. 5.6% of Internet addicted students revealed by applying the 63/64 cut-off point, and 2.7% of Internet addicted students by applying the 67/68 cut-off point. This score is relatively lower but still alarming.

Referring to the obtained data, we assume that our future research activities which involve applying the CIAS-R questionnaire in the field of Internet addiction will focus on comparing the occurrence of Internet addiction in university students and in adolescents. We are also planning to carry out deeper research into Internet addiction of university students related to the form of their studies (i.e. the full-time form and the part-time form) and related to their profession.

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