



Problematic using of the Internet among seniors – a pilot study

Problematiczne używanie Internetu wśród seniorów – badanie pilotażowe¹

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Aleksandra Wójciak^a

^a Aleksandra Wójciak, PhD, <https://orcid.org/0000-0002-9054-0355>, Institute of Psychology, Pedagogical University of Cracow

Abstract: The use of the Internet is nowadays an important element of each person's life. Along with the advancement of technology, older adults use the Internet ever more frequently. (CBOS, 2016; CBOS, 2018). The aim of the study was to verify if seniors actually differ from people in middle adulthood in terms of the severity of problematic Internet use and its selected correlates – personality structure and coping strategies. The conducted research was a pilot study. The statistical analysis included the results of studies conducted among 44 individuals in late adulthood and 41 individuals in middle adulthood. The average age among seniors was 67 years and in the control group – 35 years. The respondents resided in the Malopolska Province. The study used the Problematic Use of the Internet Test in the Polish adaptation by Ryszard Poprawa. This tool makes it possible to identify the severity of symptoms of problematic Internet use (Poprawa, 2011). In addition, the Inventory for Measuring Coping with Stress – Mini-COPE and the IPIP-BFM-20 Questionnaire were used. The results of the analyses showed no significant differences in the severity of problematic Internet use and the personality structure between the studied group of seniors and people in middle adulthood. Significant differences were found in the aspect of coping with stress. Specifically, people in late adulthood obtained significantly lower results on the sense of humour subscale and significantly higher results on the subscale of religious coping than people in middle adulthood. It should be emphasized that the conclusions of the conducted research may not only provide a significant indication for effective preventive interventions aimed at seniors, but also confirm the need for further, in-depth analysis in this area.

Keywords: people in late adulthood, problematic Internet use, coping strategies, personality structure

Abstrakt: Używanie Internetu stanowi w obecnych czasach ważny element życia każdego człowieka. Wraz z postępem technologicznym coraz częściej z sieci korzystają osoby w okresie późnej dorosłości (CBOS, 2016; CBOS, 2018). Celem przeprowadzonych badań było sprawdzenie czy seniorzy istotnie różnią się od osób w okresie średniej dorosłości w zakresie nasilenia problematycznego używania Internetu oraz jego wybranych korelatów – struktury osobowości oraz strategii radzenia sobie ze stresem. Zrealizowane badania miały charakter pilotażowy. Analiza statystyczna uwzględniła wyniki badań przeprowadzonych wśród 44 osób w okresie późnej dorosłości oraz 41 osób w okresie średniej dorosłości. Średnia wieku w grupie seniorów wyniosła 67 lat, z kolei w grupie kontrolnej 35 lat. Respondenci byli mieszkańcami województwa małopolskiego. W badaniu wykorzystano Test Problematycznego Używania Internetu w polskiej adaptacji Ryszarda Poprawy. Narzędzie to umożliwia zidentyfikowanie stopnia nasilenia symptomów problematycznego używania sieci (Poprawa, 2011). Ponadto zastosowano Inwentarz do Pomiaru Radzenia Sobie ze Stresem – Mini-COPE oraz Kwestionariusz IPIP-BFM-20. Wyniki przeprowadzonych analiz ukazały brak istotnych różnic w zakresie nasilenia problematycznego używania Internetu oraz struktury osobowości pomiędzy badaną grupą seniorów a osobami w okresie średniej dorosłości. Istotne różnice wykazane zostały w aspekcie strategii radzenia sobie ze stresem. Doprecyzowując, osoby w okresie późnej dorosłości otrzymały istotnie niższe wyniki w podskali poczucie humoru oraz istotnie wyższe wyniki w podskali zwrot ku religii niż osoby w okresie średniej dorosłości. Należy podkreślić, że wnioski z przeprowadzonych badań mogą stanowić nie tylko istotną wskazówkę do prowadzenia skutecznych oddziaływań profilaktycznych kierowanych do seniorów, ale i potwierdzają one konieczność przeprowadzenia na tym gruncie dalszych, pogłębionych analiz.

Słowa kluczowe: osoby w okresie późnej dorosłości, problematyczne używanie Internetu, strategie radzenia sobie, struktura osobowości

Introduction

In the 20th century the Internet was commonly recognized as an innovative and revolutionary technology (Klimczak, 2012). One of the factors that makes it popular is that the Internet allows us to

satisfy essential social needs (Zając, Krejtz, 2007). In other words, the world wide web has influence on human life and various world transformations (Klimczak, 2012). It enables people to access information,

¹ Artykuł w języku polskim: <https://www.stowarzyszeniefidesetratio.pl/fer/2022-4-Wojciak.pdf>

resources, books, education, entertainment, and it makes the exchange of opinions possible (Grzegorzewska, Cierpialkowska, 2018). Furthermore, the cyberspace allows people to gain knowledge on other cultures and religions, and learn foreign languages (Klimczak, 2012). It also offers the opportunity to establish interpersonal relations (Grzegorzewska, Cierpialkowska, 2018). Notably, the Internet has become a place where new communities are forged and new cultural and social norms are created (Zajac, Krejtz, 2007). In addition, the interactive properties of the web allow its users the development of selected psychophysical functions (Augustynek, 2015).

Apart from positive aspects of the use of the Internet we should also emphasize that, alongside the benefits, it involves various types of risks (Klimczak, 2012). One of the results of problematic use of the Internet, which in the recent years has affected an ever-wider group of people, is Internet addiction. Given that it is observed among all user groups, it is worthy to characterize it briefly.

1. Internet addiction in the context of behavioural addictions

Internet addiction belongs to the group of behavioural addictions, which can be defined as “forms of disorders (addictions) not related to the use of psychoactive substances, but to the uncontrolled performance of certain activities” (Rowicka, 2015, p.6). When analysing behavioural addictions, it is worth pointing out that until now this term has not been included in any classification of diseases and disorders. Specifically, it has not been included in the International Classification of Diseases (ICD-11) or in the Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association (DSM-5). It is worth noting that the ICD-11 classification distinguishes only gaming disorders and gambling disorders, which have been included in the category of disorders due to substance abuse or addictive behaviours (Gaebel, Zielasek, Reed, 2017; Krawczyk, Świącicki, 2020). The DSM-5 classification, in turn, distinguishes only gambling disorder, which has been classified in the category of disorders non-related to psychoactive substances (Rowicka, 2015).

Importantly, during the works on the DSM-5 debates were held on whether it should include Internet use disorders (Rowicka, 2018). Those in support thereof emphasized that individuals diagnosed with Internet addiction demonstrate a behavioural pattern similar to other addictions: tolerance and withdrawal, excessive use, negative effects related to social functioning. Another argument in favour of including Internet addiction in the classification as a psychiatric disorder was that it would contribute positively to seeking help and treatment from specialists by people with its symptoms. The counterargument put forward by the opposing group of specialists was that there are no analyses that would confirm the physiological symptoms of withdrawal syndrome and the presence of tolerance. Moreover, it was emphasized that classifying Internet addiction as a disorder would lower the social trust in psychiatric diagnosis and would contribute to the escalation of current barriers and stereotypes. Noteworthy, according to the opponents of inclusion of web addiction in the classification, establishing a separate “Internet addiction” category could become an argument for proposing new addiction categories along with the technological progress (Pies, 2009). As a result of the discussions, upon the exploration of the broad scope of Internet addiction and insufficient empirical data, only one dimension of the addiction has been included: the gaming disorder, which, as it was already pointed out, is listed in DMS-5 under section 3 (Rowicka, 2015; Rowicka, 2018).

The category “Internet addiction” has not been included in the classifications that have been in use in the recent years, hence the ambiguities in its scope. First of all, the name itself is ambiguous. So far, there is no agreement among specialists in and researchers of harmful and maladaptive Internet use as to its definition (Krzyżak-Szymańska, 2018). Therefore, in relevant literature Internet addiction is sometimes referred to as Internet dependence, cyber dependency, or Internet dependency disorder (Jarczyńska, Orzechowska, 2014, p.122). Another example of imprecision is related to the diagnostic criteria of this addiction. The lack of a definite set of such criteria has yielded frequent attempts among specialists to define them precisely (Izdebski, Ko-

tyśko, 2016; Klimczak, 2012; Woronowicz, 2009). In Poland, one of the researchers who have worked on that is Bohdan Woronowicz. As he pointed out, in order to diagnose Internet addiction, the following symptoms must be present:

- a strong need or compulsion to use the Internet,
- a subjective belief of the individual that they have less control over their behaviour related to the Internet,
- obsessive thoughts experienced by the individual (after stopping Internet use or reducing the time spent on it) related to what is happening online, a visibly lower mood, dreams and fantasies related to this medium, psychomotor agitation, involuntary or deliberate movement of fingers imitating typing on a computer keyboard,
- extending the time spent online in order to achieve satisfaction that was earlier achieved in a significantly shorter time,
- a recognized, increasing in frequency negligence of forms of pleasure or interests (other than using the web),
- continued use of the Internet, even in the face of harmful mental and physical consequences related to the time spent online (Woronowicz, 2009, p.481).

It is worth noting that Woronowicz made an attempt to identify and describe the stages of Internet addiction. He stated that, in the first stage of cyber-dependency, the Internet becomes an object of fascination. The individual gets acquainted with the possibilities of the web, often experiencing a sense of lack of boundaries and feels a strong connection with the rest of the world. In the next stage, the person believes that the Internet use makes relaxation easier and contributes to a reduction of discomfort brought about by, for example, tension or loneliness. In the third stage of Internet addiction, the individual spends time in the virtual world more frequently. Being online acts as a regulator of emotional states, which can be related to the growing number of virtual relations. The final, fourth stage is related to expe-

rience of discomfort, fear, or irritation in situations when the individual cannot access virtual space. At this stage, various (financial, social or health) problems related to excessive use of the web can appear (Woronowicz, 2009).

The use of the Internet (apart from manifold advantages) entails some risks. They are mostly related to the possibility of problematic using of the Internet, which influences the life of an individual in a negative way. It is worth analysing the epidemiology of this phenomenon.

2. The epidemiology of Internet addiction

The research carried out in the recent years related to the patterns of Internet use and addiction indicates that problematic using of the Internet is becoming an ever more frequent diagnosis, both in Poland and abroad. It should be noted that this is the case for all age groups (Wójciak, 2022). We will therefore present selected relevant statistics in order to outline and specify the scope of this phenomenon.

In the modern world, the use of the Internet is a commonly undertaken activity (Jarczyńska, Orzechowska, 2014). Basing on the data from Internet World Stats as of 31st of December 2020, the number of web users worldwide exceeded 5 billion. It is worth noting that this medium was used by about 700 million of people². We should also point out that the frequency of Internet use around the world is varied. This is evidenced, for example, by the meta-analysis of 80 studies covering 31 countries from several regions of the world, carried out in 2014 by scientists from Hong Kong. The authors proved that the highest rates of Internet use are observed in Central and Eastern Asia. The lowest rates were found in the northern and western Europe (Izdebski, Kotyśko, 2016).

Just as elsewhere in the world, similar studies were recently also conducted in Poland in order to assess the prevalence of Internet use (including problematic use indicating addiction) among various

2 <https://www.internetworldstats.com/stats.htm>, (access: 20.04.2021).

age groups. First, it is worth mentioning the latest data from the survey report carried out by the Public Opinion Research Centre (CBOS) in 2018-2019. According to the report, almost $\frac{3}{4}$ (74.2%) of the respondents living in the territory of Poland aged 15 or above used the Internet at least sporadically. We should clarify that the vast majority of them (98.0%) were average users, who did not present any difficulties related to web usage in their daily functioning. Addiction from the Internet was found in about 0.03% of the surveyed population (which was 0.04% of Internet users). The percentage of respondents at the risk of addiction was 1.4%, which constituted 1.9% of people using the Internet. The report data are especially interesting in the terms of groups that are at a particular risk of becoming addicted to the Internet. These were individuals under 25 years of age. More specifically, in the group of adolescents aged 15 to 17, 8.0% of the respondents exhibited a risk of addiction or addiction to the Internet. Among people aged 18-24, such risk was found in 4.2% of respondents (CBOS, 2019, p. 194).

Due to the scope of the research described in this article, it is worth looking at the statistics on the use of the Internet by individuals in late adulthood. This group is becoming increasingly active as Internet users. It is evidenced for example by the data from survey report of the Public Opinion Research Centre No. 163: *Forms of spending time by seniors*. The report shows that nearly one third of respondents (30%) have used the web (CBOS, 2016). Further research carried out in 2018, available in CBOS Report No. 62: *The Use of the Internet*, indicates that nearly the half of respondents at the age of 55-65 have actively used the Internet. Among the people above the age of 65, twenty-five percent declared using the Internet (CBOS, 2018).

When presenting the analyses related to seniors' online activity, we should consider if these individuals show symptoms of problematic using of the Internet. Unfortunately, literature on the subject lacks sufficient analyses in this scope (Wójciak, 2022). This was confirmed, among others, by the publications of Khaled M'hiri, Alessandra Costanza, Yasser Khazaal, Riaz Khan, Daniel Zullino and Sophia Achab (2015).

These researchers found that, until today, no comprehensive analyses have been performed showing the scope of the Internet addiction in the aforementioned age group. The possible risk of addiction is estimated based on analyses where seniors constituted just a certain proportion of all respondents. The results of analyses carried out in Sweden could serve as an example here: the researchers found out that nearly the half of respondents (the median age was 45 years) met at least one criterion of problematic Internet use (M'hiri et al. 2015). Considering that there are no detailed analyses regarding problematic Internet use among seniors, it seems legitimate to devote attention to this aspect of their functioning.

3. Research methods

3.1. The aim of the research

The analysis of the available reports prepared by CBOS shows that seniors are becoming increasingly active as virtual space users. Not only is the Internet a source of knowledge for them, but it also enables communication and entertainment. Furthermore, using the Internet allows people in late adulthood to access cultural assets (CBOS, 2018).

The present research aimed to identify and verify the difference between people in late adulthood and middle adulthood in terms of intensity of problematic Internet use. It should be noted that the problematic use of the Internet is referred to as "excessive involvement in the use of certain Internet applications (mainly related to interactivity), giving rise to problems in individuals' psychological, social and health problems, and having clear features of addictive behaviour" (Poprawa, 2011a, p. 217). Moreover, the research made an attempt to check the differences between the studied groups in terms of the selected correlates of web addiction. These correlates were: personality structure and strategies of coping with stress (Wójciak, 2022).

The conducted pilot study is both a response to the insufficient number of publications on this subject and an inspiration to conduct further, in-depth analyses.

3.2. Research problem

The research problem of this study was to answer the question: How do individuals in late adulthood differ from persons in middle adulthood in terms of intensity of problematic Internet use and its selected correlates? Hence, the following hypotheses were verified during the analyses:

- H1: The group of seniors exhibits a lower intensity of problematic Internet use than the group of individuals in middle adulthood.
- H2: The group of seniors differs from the group of individuals in middle adulthood in terms of personality structure.
- H3: The group of seniors differs from the group of individuals in middle adulthood in terms of strategies of coping with stress.

3.3. Variables and their operationalization

To clarify the research problem, a dependant variable and independent variables were distinguished. The variables were operationalized into indicators, which were subjected to empirical research.

3.4. Research methods and tools

The conducted study was comparative and diagnostic in nature. The method used was diagnostic survey. In accordance with the adopted theoretical background and methodological assumptions, the study used: Test of Problematic Using of the Internet (TPUI) by Kimberly Young, in the Polish adaptation by Ryszard Poprawa (Poprawa, 2011b), IPIP-BFM-20 Questionnaire (Topolewska, Skimina, Strus, Ciecuch, Rowiński, 2014), Inventory for the Measurement of Coping with Stress–Mini-COPE (Ogińska-Bulik, 2014) and a socio-demographic questionnaire.

The Test of Problematic Using of the Internet (TPUI) is a tool prepared on the basis of Kimberly Young’s Internet Addiction Test (IAT). TPUI in the Polish adaptation by Poprawa consists of 22 questions that the respondents answer on a six-point scale: 0 - never, 1 - sporadically, 2 - rarely, 3 - sometimes, 4 - often, 5 - very often (Poprawa, 2011b). The test allows to diagnose the level of intensity of problematic using of the Internet (Makaruk, Wójcik, 2012). The test result is the sum of the respondent’s answers to all questions, which can range from 0 to 110. The higher the achieved score, the more symptoms of problematic Internet use are confirmed and the stronger the addictive use of

Table 1. Variables, measurement methods and indicators of own research

Independent variable		Dependent variables	
Variable	Indicator	Variable	Indicator
		Problematic Using of the Internet	The indicator is the intensity of symptoms of problematic Internet Use – the results were obtained by asking respondents to fill in the Test of Problematic Using of the Internet (TPUI).
Age of the respondents	The indicator is belonging to the group of seniors or to the group of individuals in middle adulthood.	Personality features	The indicator is the results showing the personality structure, obtained by completing the IPIP-BFM-20 Questionnaire.
		Coping with stress	The indicator is the results showing the dominant strategies of coping with stress in a difficult situation obtained by completing the Inventory for Measuring Coping with Stress–Mini-COPE.

Source: Own elaboration.

Table 2. Frequency of converted scores for the Test of Problematic Using of the Internet, divided into the group of seniors and individuals in middle adulthood

		Frequency	Percent	Valid percent	Cumulative percent
Seniors	Low	18	40.9	40.9	40.9
	Average	25	56.8	56.8	97.3
	High	1	2.3	2.3	100
Individuals in middle adulthood	Low	13	31.7	31.7	31.7
	Average	24	58.5	58.5	90.2
	High	3	7.3	7.3	97.6
	Very high	1	2.4	2.4	100

Source: Own elaboration.

the virtual space by the respondent (Poprawa, 2011b). TPUI is often used both in clinical practice and in scientific research (Grzegorzewska, Cierpialkowska, 2018). The Test of Problematic Using of the Internet reveals good psychometric properties. The results of factor analysis confirmed the single-factor structure of the tool. The internal consistency of Cronbach’s α test was 0.935, and the discriminatory power of particular items ranged from 0.40 to 0.70 (Cudo, Kopiś, Stróżak, 2016). It is noteworthy that the calculated split-half reliability was 0.95, with the split-half correlation of 0.91 (Grzegorzewska, Cierpialkowska, 2018).

The IPIP-BFM-20 Questionnaire is a short version of the Goldberg Questionnaire. It consists of 20 items which enable the measurement of five personality dimensions: intellect, extraversion, conscientiousness, agreeableness, and emotional stability. The respondents give their answers on a 5-point scale. The questionnaire is used, among others, in scientific research. The tool has satisfactory validity and reliability (Topolewska et al. 2014).

Mini-COPE (Inventory for the Measurement of Coping with Stress) is a short form of the Multidimensional Coping Inventory – COPE. It contains 28 items which correspond to 14 strategies of coping with stress (Ogińska-Bulik, 2014). The tool can be applied in the diagnosis of typical reactions to and feelings of respondents in situations when they experience strong stress. Noteworthy, Mini-COPE is

used for research purposes and in practice (mainly in prophylaxis)³. The Inventory for Measurement of Coping with Stress has satisfactory psychometric properties (Ogińska-Bulik, 2014).

Socio-demographic information was obtained in a survey form. Respondents had to provide necessary socio-demographic information: their sex, age, and place of residence.

3.5. Research sample characteristics

The respondents of the conducted research were seniors and middle-aged adults living in Małopolska province. The respondents voluntarily consented to participate in the anonymous survey. The group of people in late adulthood consisted of 33 women and 11 men. The age of these seniors ranged from 60 to 77 years. The average age was 67 years. The control group included 41 people in middle adulthood – 28 women and 13 men. The average age in this group was 35 years.

4. Results

The conducted analyses presented in this article aimed at a statistical verification of the research hypotheses. The hypotheses were subjected to verification in the order given in 3.2.

3 <https://www.practest.com.pl/mini-cope-inwentarz-do-pomiaru-radzenia-sobie-ze-stresem>, (access: 10.06.2021).

4.1. Differentiation in the intensity of problematic using of the Internet in the groups of seniors and individuals in middle adulthood

In order to verify hypothesis 1 of the study, the frequency of the scores converted for TPUI and the differences in the level of problematic Internet use were analysed.

4.1.1. Frequency analysis of the scores converted for the Test of Problematic Using of the Internet

The frequency analysis of the converted scores for the Test of Problematic Using of the Internet (TPUI) showed that the majority of respondents (56.8% among seniors and 58.5% in the group of individuals in middle adulthood) obtained average scores. It is worth pointing out that 9.7% of respondents in the sample group of individuals in middle adulthood obtained high and very high scores. Such scores among seniors were obtained by 2.3% of respondents. A detailed frequency analysis of converted scores can be found in Table 2.

4.1.2. Differences in intensity of symptoms of problematic using of the Internet

At the next stage of the analysis, the differences in the intensity of symptoms of the problematic using of the Internet among seniors and middle-aged adults were verified. For this aim, using the Mann-Whitney U test, both groups were compared in terms of scores obtained by respondents in the

Test of Problematic Using of the Internet. It should be noted that the chosen test is used when “the dependant variable is measured on an ordinal scale or when the dependent variable has a quantitative level of measurement, but the analysed data do not meet the assumptions provided for parametric tests” (Cypryńska, Bedyńska, 2013, p. 185). The detailed data are present in Table 3.

The analysis indicated a lack of significant differences between the group of seniors and middle-aged individuals in terms of problematic using of the Internet. The results allow us to reject hypothesis 1 which assumed, based on statistics related to the use of the Internet, that the intensity of problematic using of the Internet in the group of seniors is lower than in the group of people in middle adulthood.

4.2. Differentiation of the personality structure in the group of seniors and people in the middle adulthood

In order to verify hypothesis 2, we used student t-test for independent samples. This particular test was used due to the distribution of scores for the individual scales in IPIP-BFM-20 questionnaire. To be more precise, the result of Kolmogorov-Smirnov Test was statistically significant, which means that the distribution deviated from normal significantly. However, skewness of the distribution in particular factors of personality structure did not exceed the conventional absolute value of 1. This meant that the asymmetry of the distribution was insignificant and it was possible to use a parametric test (with the other assumptions met). Detailed data is presented in Table 4.

Table 3. A comparison of the intensity of symptoms of the problematic using of the Internet among seniors and individuals in middle adulthood

	Seniors			Individuals in middle adulthood			Z	p
	Mean rank	Mdn	IQR	Mean rank	Mdn	IQR		
Problematic using of the Internet	38.22	9	13	48.13	15	24	-1.854	0.064

Source: own elaboration

Table 4. A comparison of intensity personality structure factors among seniors and people in middle adulthood

	Seniors		Individuals in middle adulthood		t	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Extraversion	11.43	2.74	12.37	3.15	1.46	0.626	-0.34	2.21	0.32
Agreeableness	14.02	2.07	14.78	2.34	1.58	0.358	-0.20	1.71	0.34
Conscientiousness	13.21	2.72	12.66	2.50	-0.96	0.953	-1.67	0.58	-0.21
Emotional stability	11.75	2.76	11.95	3.23	0.31	0.554	-1.09	1.50	0.07
Intellect	14.27	2.94	14.61	2.85	0.54	0.607	-0.91	1.59	0.12

Source: own elaboration

Table 5. Comparison of the intensity of styles of coping with stress among seniors and individuals in middle adulthood

	Seniors		Individuals in middle adulthood		t	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Active coping	4.30	1.13	4.66	1.18	1.45	0.15	-0.14	0.86	0.32
Planning	4.39	1.16	4.00	1.07	-1.58	0.12	-0.87	0.10	-0.34
Positive reframing	3.07	1.53	2.95	1.63	-0.34	0.73	-0.80	0.56	-0.07
Acceptance	4.05	1.22	3.95	1.20	-0.36	0.72	-0.62	0.43	-0.08
Humour	1.09	0.98	2.07	1.46	3.67	0.00	0.45	1.52	0.80
Religious coping	3.36	2.00	2.15	2.03	-2.78	0.01	-2.09	-0.35	-0.60
Seeking emotional support	3.55	1.25	3.73	1.29	0.68	0.50	-0.36	0.73	0.15
Seeking instrumental support	3.20	1.42	2.73	1.43	-1.53	0.13	-1.09	0.14	-0.33
Distraction	3.16	1.70	2.76	1.46	-1.17	0.25	-1.09	0.28	-0.25
Denial	1.41	1.32	1.41	1.38	0.02	0.99	-0.58	0.59	0.00
Venting of emotions	2.16	1.20	2.39	1.30	0.85	0.40	-0.31	0.77	0.19
Behavioural disengagement	1.55	1.15	1.44	1.32	-0.40	0.69	-0.64	0.43	-0.09
Self-blame	2.36	1.56	2.73	1.70	1.04	0.30	-0.34	1.07	0.23

Source: own elaboration

Table 6. Comparison of intensity of style of coping with stress – psychoactive substance use – among seniors and individuals in middle adulthood

	Seniors			Individuals in middle adulthood			Z	p
	Mean rank	Mdn	IQR	Mean rank	Mdn	IQR		
Psychoactive substance use	41.14	0.00	0.75	45.00	0.00	2.00	-0.90	0.367

Source: own elaboration

The analysis of the results indicated that both groups – seniors and individuals in middle adulthood – did not differ significantly as to specified personality factors. Hypothesis 2 was therefore, rejected.

4.3. Differentiation of coping strategies in the group of seniors and people in middle adulthood

With the aim to verify research hypothesis 3, we used student t-test for independent samples and Mann-Whitney U test. The use of this specific test was justified by the distribution of scores in particular scales of the Inventory for the Measurement of Coping with Stress. The Kolmogorov-Smirnov Test result was statistically significant for all scales of the Mini-COPE tool. This indicated that the distribution deviated from normal significantly. However, skewness of nearly all variables did not exceed the conventional absolute value 1. It followed that the asymmetry of the distribution was insignificant and it was possible to use a parametric test, provided that the other assumptions were met. An exception here was the style: using alcohol or other psychoactive substances, in case of which the distribution was significantly asymmetric and required the use of a non-parametric test.

The analysis showed significant differences between respondent groups in terms of two strategies of coping with stress in difficult situations: humour and religious coping. Individuals in late adulthood obtained significantly lower scores in the subscale humour and significantly higher scores in the subscale religious coping. Moreover, the effect size in case of humour was large, and in the other strategy it was medium. Thus, the assumed hypothesis 3 was partially rejected.

Discussion of the results

In the recent years, many publications have been made available, both in Poland and abroad, on the topic of addiction to new technologies (especially the Internet). Yet, most of them focused on selected groups, usually adolescents (Makaruk, Wójcik, 2012;

Warzecha, Krzyżak-Szymańska, Wójcik, Żądło, 2016; Warzecha, 2018), and seniors were excluded. Hence, the purpose of the research presented here was to identify and verify the difference between senior and middle-aged users in terms of level of intensity of problematic Internet use. Moreover, the research also aimed at verifying intergroup differences with regard to selected correlates of Internet addiction. These correlates were: personality structure and strategies of coping with stress (Wójcik, 2022).

The results of the own research showed that the sample group of seniors did not differ significantly from individuals in middle adulthood when it comes to intensity of problematic using of the Internet. This key finding indicates that the virtual space might be just as dangerous for individuals at the older ages as it is for younger people. This is particularly noteworthy when, in relation to the pandemic of SARS-CoV-2 in the last two years, seniors have been using the Internet more often and more willingly, as it has allowed them to socialize and access cultural events and entertainment. In further analyses it would, therefore, be advisable to carefully examine their activities and apply preventative measures which will be effective for this group.

Another aspect of the conducted study was to verify if the sample groups of seniors and users in middle adulthood differed significantly as to selected personality factors. As a result of the analyses, we found out that there were no significant differences. This may be due to the fact that these psychological variables are mostly biologically conditioned (Finogenow, 2013).

The last analysed area referred to the difference in the strategies of coping with stress in difficult situations between the sample groups of seniors and individuals in middle adulthood. The results of the analyses indicated that the respondent groups differed significantly in terms of two strategies: individuals in late adulthood scored significantly lower than people in middle adulthood in the subscale humour and significantly higher in the subscale religious coping. The obtained results seem to be in line with the life stage of the respondents. According to the analyses presented by P. Ulman, people in their senior years

more often turn their thoughts towards God (Ulman, 2017). Further to that, people in middle adulthood demonstrate greater reserve, distance, and humour than people in late adulthood. This may be related to the fact that seniors show increasing difficulties in understanding humorous content (Daniluk, Borkowska, 2017).

Summarizing the above findings, we would like to emphasize that the results of the presented study show the necessity of further analyses. It would be legitimate to conduct them in an appropriately larger group of seniors and individuals in middle adulthood. The group should also be suitably differentiated as to sociodemographic variables.

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