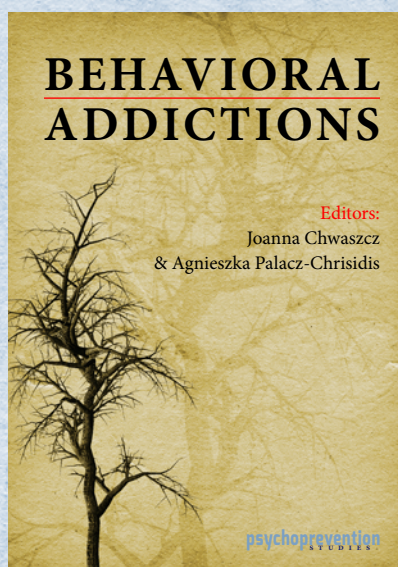


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Behavioral Addictions Publications – Brief Review

*Weronika Augustynowicz,
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The Presentation of the SOGS-RA as a Screening Tool for the Identification of Problem Gambling among Schoolchildren

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ABSTRACT

The article shows the results of the studies carried out among schoolchildren on the adaptation of the Canadian tool for screening pathological gambling in young people – the South Oaks Gambling Screen Revised Adolescent, or the SOGS-RA.

Keywords: gambling, addiction, schoolchildren, SOGS-RA

Virtually non-present in Poland until only recently, the problem of gambling has started to escalate both among adult and young Poles. The latest research has shown that in adult Poles as many as 3.9% are problem gamblers or people addicted to various types of gambling (Centrum Badania Opinii Społecznej [CBOS], 2011; CBOS, 2012; Malczewski, 2012). This proportion is even higher for young people and they commonly take part in games of chance, with this phenomenon being much more widespread among young people than the general population as a whole. The results of ESPAD from 2011 show that ca. 2% of young people in our country can be at risk of problem gambling (Sierosławski, 2011). Meta-analyses of a number of North-American studies on the frequency of different gaming-related phenomena have shown that the frequency of gambling among young people varies be-

tween 4% and 8% (Shaffer, Hall, & Vander Bilt, 1999; Steinberg, 1988; as cited in Griffiths, 2003).

What is disturbing is that teenagers are likely to develop gambling-related problems twice as often as adults (Fisher, 1993; Lesieur & Klein, 1987; as cited in Griffiths, 2003). Research carried out in the USA, Canada and the UK has shown that the proportion of pathological gamers aged below 18 is 5–6% and is twice as high as in the adult population (Griffiths, 1995; Schaffer, LaBrie, Scanlon, & Cummings, 1993; as cited in Griffiths, 2003). Moreover, when analysing trends in terms of young people's participation in gambling-related gaming, researchers have noted that while as far as few years back this type of gaming had largely been the domain of boys, girls have been catching up recently (Fisher, 1993; Lesieur, 1998; Stinchfield & Winters, 1998; Vitaro, Arseneault, & Tremblay, 1997; Winters, Stinchfield, & Fulkerson, 1993).

Despite some legal restrictions, easy access to on-line gambling, mobile telephones, arcade games, sports betting, tombola and lotteries advertised on TV and on the radio, etc. constitutes an important risk factor. Especially e-gambling (on-line gambling) poses a considerable hazard. In our country e-gambling has developed in an unrestricted manner (even though there is a ban on on-line games such as roulette, cards and arcade games, it is possible to enter into the so-called mutual wagering or pari-mutuel betting, e.g. in respect of horse racing). In Poland there is no law which would bar licensed sports-betting websites operating within the EU, i.e. those which provide services outside the territory of Poland but are available for Polish residents (Woronowicz, 2011).

What is of note is that the problematic participation of young people in gambling-related games strongly corresponds with other risky behaviours and especially the use of psychoactive substances (Hardoon & Derevensky, 2002; Ladouceur, Boudreault, Jacques, & Vitaro 1999), violence, crime (Stinchfield, 2000; Winters et al., 1993), learning difficulties, dropping out of school (Ladouceur et al., 1999; Lesieur & Klein, 1987), etc. Studies on problem gambling among young people have suggested that teenagers who experience problems with gambling come across some serious problems at school, both in educational (behaviour issues) and cognitive terms (poor learning performance). Adolescent gamblers perceive themselves as students who are slower to master the school curriculum, and diagnostic tests have confirmed that they suffer some learning disorders (Hardoon & Derevensky, 2002; Ladouceur et al., 1999). The involvement of teenagers in gambling results in serious emotional and social damage, while also being connected with mental-health problems (especially depression) and going hand in hand with a tendency to demonstrate high-risk behaviour (Derevensky, Gupta, Dickson, Hardoon, & Deguire, 2003; Griffiths, 2003; Lelonek-Kuleta, 2011).

In Poland, however, problems related to youth gambling have continued to be overlooked and often even neglected. Parents, carers, educators and teachers often remain unaware of the specific nature of gambling and the risks it carries. They are unable to recognize risky and subsequently problematic gaming among young people, and are ignorant of the nature and various consequences of this disorder. They lack screening tools which would allow a fast and easy identification of young people who found themselves involved in risky gambling or who experience some serious problems while taking part in such activities (problem and pathological gamers).

This article shows the results of own studies carried out among schoolchildren on the adaptation of the Canadian tool for screening pathological gambling in young people, namely

the South Oaks Gambling Screen Revised Adolescent, or the SOGS-RA, as devised by Winters, Stinchfield, and Fulkerson (1993), and its validation (the assessment of its criterion and construct reliability and validity).

Study Characteristics

The aim of this study was to adapt the Canadian tool for screening pathological gambling in young people, i.e. the South Oaks Gambling Screen Revised Adolescent, or the SOGS-RA, as devised by Winters, Stinchfield, and Fulkerson (1993), and its validation (the assessment of its reliability and validity in criterion- and construct-related terms). The study included:

- adapting the SOGS-RA scale to problem- and pathological-gambling screening among schoolchildren/lower-secondary and upper-secondary schools);
- conducting pilot and proper studies to account for cultural differences and assess the tool against its psychometric properties; and
- validating the adapted tool/screening test.

The ultimate outcome of this study is the Polish adaptation of the SOGS-RA Canadian screening tool with proven psychometric applicability (validated in two stages: pilot and proper tests) and the preliminary assessment of the popularity of gambling among schoolchildren in regional terms (the city of Bydgoszcz and the Bydgoszcz District where the anonymous surveys were carried out).

This research was conducted with the financial support from the Gambling Problem Solving Fund (FRPH). The study investigated the scope of the problematic and pathological gambling risk to young people. Its results have helped to bridge the knowledge gap in respect of gambling behaviours of teenagers. As regards its application, it delivered a ready screening tool for practitioners.

Research Method and Sample

The study proper, conducted in late February–early March on a sample comprising 2,617 students, was preceded by pilot studies carried out in December 2012 on a sample comprising 591 subjects. The number of surveys qualified for the statistical analyses as part of the second stage (study proper) was 2,579. As many as 38 surveys were deemed unreliable due to considerable gaps in data, incoherent answers, facetious answers or other data suggesting a flippant attitude to the survey. The surveyed population comprised young people aged 13–20, who in the school year of 2012/2013 attended lower- and upper-secondary state schools located in Bydgoszcz and in the Bydgoszcz District. The selection of subjects was random and multi-stage. Firstly, towns and villages within the Bydgoszcz District were sampled, then lower- and upper-secondary state schools, and finally class-based groups. A sample unit consisted of a school class. The study covered the first-, second- and third-grade students of lower-secondary schools and students at upper-secondary schools of all types, including secondary-schools of general education (*liceum*), technical secondary schools (*technikum*) and basic vocational schools (*zasadnicza szkoła zawodowa*), including all grades, i.e. the first, second, third, and (in the case of technical secondary schools) fourth.

The selected sample comprised 14 lower-secondary schools, eight secondary schools of general education, five technical secondary schools and four vocational schools. The highest proportion of subjects in the surveyed sample was represented by lower-secondary school students (46%; $N = 1,188$), with vocational-school students at the other end of the spectrum (5%; $N = 128$). Subjects attending secondary schools of general education accounted for 27% ($N = 688$), while those from technical secondary schools 22% ($N = 575$).

The study applied the diagnostic poll as its research method, and survey as its research technique. The survey was anonymous and was carried out on the basis of an auditorium questionnaire. It was completed at school during lessons. Students completed it individually. They had been informed that gambling was an action with an element of risk, which involved betting money or goods that could either be won or lost. And that such winning or losing was a matter of chance. They had been familiarised with individual gambling games so that they were aware that gambling was not limited to the stereotypical casino gaming. They had also been informed that their participation in the study was voluntary. The pollsters included a member of the Kazimierz Wielki University's staff and trained students of the second year of Care Pedagogy full-time graduate studies at the Pedagogy and Psychology Department of the Kazimierz Wielki University in Bydgoszcz, who had not been connected in any way with the surveyed schools. One pollster was present in the classroom throughout the entire survey. He/she answered participants' questions and ensured the appropriate atmosphere during the survey. Teachers were asked to leave the classroom. Respondents were asked not to put their names on the survey to remain anonymous. The average survey completion time was 15 minutes.

The analysis and processing of the resultant statistical data used the following statistical methods:

- to assess the reliability of the SOGS-RA scale, the study used the internal study-consistency method (Cronbach's alpha coefficient);
- to assess the validity of the SOGS-RA scale, the study used two measurement methods: criterion-based validity (the Spearman coefficient and the point-biserial correlation coefficient [r_{pb}]) and the theoretical validity (the univariate structure of the scale, as established by the SOGS-RA authors; Winters et al., 1993). For this purpose, the study used the Confirmatory Factor Analysis (CFA). The statistical analysis of the research findings used the STATISTICA software package version 10.

The South Oaks Gambling Screen – Revised Adolescent (SOGS-RA)

The South Oaks Gambling Screen – Revised Adolescent (SOGS-RA; Winters et al., 1993) is an updated version of *The South Oaks Gambling Screen* (SOGS; Lesieur & Blume, 1987) perceived as the most popular screening tool used to identify problem gambling in adult populations. The SOGS (Lesieur & Blume, 1987) is a 20-item scale, designed for the identification of pathological gamblers in clinical trials, with a proven and successful track record of reliability and dependability. Points on the scale were determined on the basis of the diagnostic criteria for pathological gaming, as defined in DSM-III. One half of the questions concerned gamblers' behaviour in personal life and their interpersonal relations, while the other half covered funds borrowed for gaming and the repayment of debts incurred as a result of gaming. The questions on the scale refer i.a. to the types of activities in which

a given person is involved, the amount of money spent on gaming, the history of gaming within their family, etc. The maximum number of points is 20. Results such as 5 points or more indicate addicted gamers (pathological gambling); 3–4 points denote gamers at risk of becoming addicts; and finally 0, 1 or 2 points represent occasional gamers (Volberg, 1996). The reliability of the scale measured as Cronbach's alpha is 0.97 (as cited in Dane, McPhee, Root, & Derevensky, 2004).

In 1993, Winters, Stinchfield, and Fulkerson revised the SOGS by applying it to their studies on young people in Minnesota. They named the new version SOGS-RA (SOGS – Revised Adult). The SOGS-RA was devised as a screening tool to provide a more accurate assessment of problem-gambling prevalence in young people. It is a 16-item scale (four items/questions are not scored), which evaluates gambling behaviour over the last year and the resultant problems. It facilitates the identification of regular and occasional gamers. Some premises taken from the original SOGS were revised to adjust them to the age of the surveyed young people, their habits and reading skills. The original scoring system was also modified. The change in scoring involved items corresponding to the sources of borrowing money for gambling. Teenagers were given a single point for each such source, while the original version of the SOGS had provided for as many as 9 points (1 point per each source). This screening test focusses more on the frequency of gambling behaviour and such behavioural traits which are often associated with problem gambling than on the incurred financial losses (which is greatly emphasised in the SOGS tool; Derevensky & Gupta, 2004).

The SOGS-RA is used to carry out a more comprehensive assessment of problem gaming among young people. It allows respondents to be divided into specific categories. The SOGS-RA score of 0 denotes abstainers or persons who have not played any games of chance over the last year (non-gamer); score of 1 means non-problem gamers (people who have played games of chance in the said period but their involvement in this activity was mainly for fun and they have not experienced any negative consequences of gaming); scores of 2 or 3 indicate “at-risk gamblers” (they already experienced some initial serious and negative consequences of gaming, which they start to notice); and scores of 4 or more denote “problem gamers” (those who perceive gaming as a must and notice a number of serious gaming consequences about themselves). This tool is currently considered as one of the most popular, reliable and dependable measurement methods or screening tools for identifying problem gambling in young people (Shaffer & Hall, 1996; Stinchfield, 2011; Wiebe et al., 2001; Winters et al., 1993). The reliability and validity ratios for this tool were calculated for the group of 460 boys aged 15–18. The reliability of the scale was Cronbach's $\alpha = 0.80$ (Derevensky & Gupta, 2004; Stinchfield, 2011). In order to measure the internal validity of the tool, the SOGS-RA was correlated with the gambling activity ($r = 0.39$), gambling frequency ($r = 0.54$) and the amount of money allocated for gambling over the past year ($r = 0.42$; Winters et al., 1993). The SOGS-RA tool was employed by multiple studies, including in Ontario (Govoni, Rucpich, & Frisch, 1996), Louisiana (Westphal, Rush, Stevens, & Johnson, 2000), Manitoba (Wiebe, 1999; Wiebe, Cox, & Mehmel, 2000), the Atlantic coast of Canada (Poulin, 2000) and Oregon (Carlson & Moore, 1998; as cited in Stinchfield et al., 2004). Winters et al. (1993) confirmed the psychometric value of the tool, reporting its validity and discriminatory power (capacity for screening regular and irregular gamers).

It is also noteworthy to acknowledge its disadvantages, as reported by some researchers. The analysis of scientific findings reveals some accounts of its unreliability in respect of diagnosing adolescent girls. Ferris et al. (1999) claimed that the tool had not been properly

tested on the sampled girls, which caused the general sample to record a low prevalence of problem gamblers among teenage girls. However, as argued by Derevensky and Gupta (2004) these types of problems are identified in the majority of tools addressed to young people. The unreliability of this tool was also reported by other researchers, who had analysed the findings of numerous studies carried out over the last two decades in high schools in the USA and Canada. This includes studies conducted in Alberta, Connecticut, Louisiana, New Jersey, New York and Quebec (Ladouceur & Mireault, 1988; Lesieur & Klein, 1987; Steinberg, 1997; Volberg, 1998; Westphal, Rush, & Stevens, 1997; Wynne, Jacobs, & Smith, 1996; as cited in Derevensky & Gupta, 2004). Ladouceur, Bouchard, Rhéaume, Jacques, Ferland, LeBlond, and Walker (2000) challenged the validity of the SOGS-RA, arguing that the high popularity ratio of problem gambling among young people, as produced by some studies, was the result of the individual misunderstanding the intention of positions on the scale (as cited in Derevensky & Gupta, 2004), which at the same time brought into question the reliability of such measurement.

Work on Adapting the SOGS Scale and its Application to Youth Studies

The development of the scale has started with the establishment of a large pool of problem-gambling-related items/questions, comprising (a) the original South Oaks Gambling Scale (SOGS; Lesieur & Blume, 1987); (b) a small set of revised SOGS items, which were amended to adjust the tool to the level of experience the ability to understand its questions, as represented by young people; (c) items based on DSM-III-R (APA, 1987); and (d) items based on the criteria defined for compulsive gambling by Gamblers Anonymous (see Lesieur, 1986). In addition, parallel items were used for the whole life and the last year. The initial pool of items/questions was revised by a team of researchers. Since it transpired that the items under the SOGS, DSM-III-R and Gamblers Anonymous' scales largely overlapped in conceptual terms, it was decided to limit the selected scale items to elements taken from the SOGS scale only (both original and revised). The SOGS items/questions were considered preferable as they had been studied much more extensively than the other sets. This reduced pool of scale items was presented to a group of surveyed young people, who were then asked to consider each item and comment on the way it was formulated, as well as its understandability and adequacy to their experiences. At the same time, the same pool of scale items was revised again by the research team. Based on the convergence of opinions on the part of researchers and the target group of young people, it was decided as follows. The majority of the original SOGS elements which were normally scored (items 5 to 16) had their wording adjusted, and one (item 16) had its scoring principle modified considerably. The scored SOGS elements, which in the revised version SOGS-RA were not significantly altered, include items/questions Nos. 4, 10 and 14. The scored SOGS items, which in the revised version SOGS-RA were corrected, include questions Nos. 5, 6, 7, 8, 9, 11, 12, 13, 15 and 16. All the scored SOGS items were further modified by limiting the analysed period to the last 12 months. The question regarding gambling throughout life was retained to provide a historical background to the experiences of gambling young people. Three non-scored SOGS elements were also considered by the research team and the target group. The gambling activity element (No. 1) underwent the following adjustments: (a) two types of activity were omitted (stock-exchange trading and casino playing); (b) three types of

activity were added (coin toss, dice throw and scratch cards); and (c) both the involvement throughout one's entire life (*yes/no*), and the frequency throughout the last 12 months (*never/less than once a month/once a month/once a week/once a day*) were measured. The study's objectives dictated that both the last gambling activity and lifelong gambling be assessed to calculate the proportion of abstention. Finally, two remaining non-scored SOGS items were subjected to some minor adjustments. Question No. 2 (the highest amount of money won in a gambling game) remained essentially the same, except for new possible answers to reflect the lowest amount won. Question No. 3, regarding parent gambling, was divided into two separate questions, one to determine whether parent(s) gambled (*yes/no*), and the other to establish whether parent(s) had any gambling-related trouble (*yes/no*).

The Interpretation of Findings – the Broad and Narrow Assessment Criteria

The SOGS-RA employs two procedures of finding examination. These two systems are known as the broad and narrow SOGS-RA criteria (Winters, Stinchfield, & Fulkerson, 1990, 1993b; Winters, Stinchfield, & Kim, 1995). The former is a combination of the frequency of gambling and the SOGS-RA score. In order to be considered a gambler, who experiences gaming-related problems, a person needs to play at least once a week and obtain a score of 2 or more. The at-risk group is considered to comprise people playing at least once a week and having scores of 1, or playing less than once a week but having scores of 2. The group of non-problem players is characterised as those not involved in any gambling gaming or those gambling less than every day, while obtaining SOGS-RA scores of 0 (Winters et al., 1993b; Winters et al., 1995).

Under the narrow criteria, a score of 4 or more means a problem player, scores between 2 and 3 denote at-risk players, and scores from 0 to 1 are interpreted as the lack of any gaming-related problems (Winters et al., 1995; Wiebe & Mehmel, 2000). This study adopts the narrow criteria for the assessment of findings.

Since both these sets of the SOGS-RA criteria have been seen to have caused some misunderstandings, it is important to address some issues connected with the wide criteria, which are found to be somehow problematic. Firstly, Winters and Stinchfield moved from the broad criteria, as described in 1993, to the narrow criteria, as defined in 1995, due to their dissatisfaction with the first set of criteria. They also re-analysed the Minnesota data collected in 1990 on the basis of the narrow criteria. Secondly, the broad criteria fail to accurately capture the extent of some problems associated with gambling. This is due to the fact that not all patterns were present in the data collected at the time (Winters et al., 1990, 1993b), and also because the answer to the question concerning the frequency of gambling was limited to the following: every day, once a week, once a month, less than once a month, and never. This set failed to provide for answers such as “more than once a week” and “less than every day,” which would correspond to gambling 2–6 days a week. Moreover, the majority of studies conducted after 1995 used the narrow criteria which enjoyed greater popularity. The broad criteria seem to be “too broad.” They define gambling problems as a daily habit, which is questionable for gambling addiction and is not substantiated within the SOGS and DSM-IV tools. For instance, does buying a single lottery ticket a day indicate any problem or habitual gambling? The wide criteria define scores of 2 or higher as signs of problems,

which seems a little too low considering that it is relatively easy to meet the requirements specified in the SOGS-RA, especially in respect of elements based on subjective assessment. In the narrow criteria the same diagnosis corresponds to a score of 4, which is in line with the SOGS and DSM-IV, where the score is 5. Another issue is that the SOGS was initially to comprise criteria designed to diagnose habitual gambling and it is in this spirit that the most of its users interpret SOGS results. The broad SOGS-RA criteria do not even come close to this level of detail. Even though some information on the accuracy of the broad criteria has been initially included in this study, it has not contained any data on the accuracy of the classification. Last but not least, the category of “the lack of any gaming-related problems” wrongly suggests that everyone classified into this category is a gamer, while in reality it denotes the group of non-gamblers. Therefore, the identification of gambling problems in young people should primarily employ the narrow criteria (Winters et al., 1993).

The Polish Adaptation of the SOGS-RA Scale by Jarczyńska (2013)

The questionnaire for the survey was adapted by Jarczyńska. All of its questions comprise the Polish adaptation of the Canadian SOGS-RA scale by Winters, Stinchfield, and Fulkerson (1993). The adequacy of questions to our cultural background and their understanding by schoolchildren were verified in the process of adapting the tool. For this purpose, a pilot study was carried out to confirm the adequacy of the questionnaire. The study was conducted on a sample of 591 students. The SOGS-RA scale was translated into Polish, and then back into English. Two translators compared the translation with the original version to ensure that the translated questions were semantically very similar to their English counterparts.

The SOGS-RA comprises 16 items/questions (four items/questions are not scored, these include items/questions Nos. 1, 2, 3 and 4). The other 12 questions are scored on a scale of 0 to 1. The total score within the scale ranges from 0 to 12. The higher the score, the more serious the problem gaming in the surveyed population. A score between 0 and 1 means that the respondent is not at risk of problem gaming. Values between 2 and 3 denote players at risk of problem gaming, while 4 or more points indicate problem gaming. The test provides the assessment of gaming-related behaviour and problems arising from gaming over the last 12 months before the survey.

Questions Nos. 1 and 2 measure the prevalence of gambling among young people. Question No. 1 addresses both the number of activities connected with gambling at least once a year and over the last 12 months before the survey. The original version of the tool listed 11 activities (the scale ranged from 0 to 11 points). In my own study I have extended this list to cover two additional activities (participation in lotteries and phone-in and SMS quizzes as well as playing for money on the Internet and in on-line casinos). As a result of this modification, the scale now ranges from 0 to 13 points. The analysis of activities connected with gambling over the last 12 months before the survey provided an opportunity to determine the general frequency of gambling over this period. For this purpose, the study summed up the individual frequencies of gambling for the 13 activities. The prevalence of each activity was measured on a scale ranging from 1 to 5 points. The scores were as follows: *never* = 1 point, *less than once a month* = 2 points, *once a month or more* = 3 points, *once a week or more* = 4 points, and *once a day/every day* = 5 points.

Question No. 2 concerned the highest amount of money a given respondent had risked in/bet on a game over the last 12 months. This was a multiple-choice question with the following options: never (0 points), less than 5 zloty (1 point), from 5 to 10 zloty (2 points), more than 10 zloty to 50 zloty (3 points), 50 to 100 zloty (4 points), 100 to 200 zloty (5 points), 200–500 zloty (6 points), more than 500 zloty (7 points).

The Results of the Validation Study

The validation study covered the assessment of the SOGS-RA scale reliability using the internal-consistency method and the evaluation of its validity in terms of criteria and construct. Due to the J-shaped distribution of the study, no standardisation of the obtained results was performed. The interpretation of findings adopted the scoring based on the narrow criteria, as proposed by the authors of the tool (Winters et al., 1993). This method of examining findings facilitates easy comparison of own results with those of other researchers. It also provides the evaluation of the prevalence of problem gambling among young people on the basis of the same criteria.

SOGS-RA Scale Reliability/Internal Consistency

Scale reliability defined as its internal consistency is a measure based on the correlations between different items on the same test. The higher the Cronbach's α coefficient, as the measure of the internal consistency of the scale, the greater the test reliability. As a rule of thumb, a reliability of 0.70 or higher is commonly considered acceptable (Blackler & Endicott, 2002).

The calculations made and verified twice (after the pilot and proper studies) confirmed the reliability of the SOGS-RA scale measurement. The SOGS-RA scale has an acceptable internal consistency (for the sample as a whole: in the pilot study Cronbach's $\alpha = 0.79$ and in the study proper Cronbach's $\alpha = 0.78$; for the group of lower-secondary school students: in the pilot study Cronbach's $\alpha = 0.77$, and in the study proper Cronbach's $\alpha = 0.75$; while for the group of upper-secondary school students of all types [secondary schools of general education, technical secondary schools and basic vocational schools] in both the pilot study and the study proper Cronbach's $\alpha = 0.80$). The scale's discriminatory power ranged from 0.36 to 0.52 and the average intercorrelation equalled 0.26.

The comparison of the calculated Cronbach's alpha with results obtained by other researchers reveals that this study achieved an acceptable coefficient value which was at the same time very similar to those obtained by other researchers. As mentioned before, the SOGS-RA tool was employed by multiple studies, including in Ontario (Govoni et al., 1996), Louisiana (Westphal et al., 2000), Manitoba (Wiebe, 1999; Wiebe et al., 2000), the Atlantic coast of Canada (Poulin, 2000), Oregon (Carlson & Moore, 1998), and in Lithuania (Jarczyńska, 2013); as cited in Skokauskas et al., 2009; Stinchfield et al., 2004). It is considered as one of the most popular, reliable and dependable measurement methods for identifying problem gambling in young people. All authors agree on the acceptable internal consistency of this scale. Various publications argue that the scale's reliability, as determined by Cronbach's α ranges from 0.70 to 0.80. The creators of this instrument (Winters, Stinch-

field, & Fulkerson, 1993) recorded an acceptable reliability of the tool (0.80), which was calculated for a group of 460 boys aged 15–18 only (as cited in Stinchfield, 2011; Derevensky & Gupta, 2004). The extensive research conducted in 1998 on the Atlantic coast of Canada on a sample of 13,549 adolescents (aged on average 15.2, with 50% of male respondents) attending state lower-secondary and secondary schools located within four Atlantic provinces of Canada, also showed an acceptable internal consistency of the SOGS-RA scale. This was confirmed separately for girls (0.76) and boys (0.81) (Poulin, 2002). The SOGS-RA scale was also used in research conducted in Lithuania. It was employed to examine a group of 835 adolescents aged 10 to 18 (the average age was 14.5 ± 2.2), thus confirming its reliability equal to Cronbach's α of 0.75 (Skokauskas et al., 2009).

The Validity of SOGS-RA

The criterion validity of this tool was assessed by correlating several scales and questions with each other. Firstly, the study investigated the relationship between the SOGS-RA scale and the frequency scale for gambling throughout one's life (FSGL), and the frequency scale for gambling over the last year before the survey (FSGY), and the increased frequency scale for gambling over the last year (IFGY). The assessment involved the internal consistency of each scale (for the FSGL Cronbach's $\alpha = 0.76$, for the FSGY Cronbach's $\alpha = 0.85$, for the IFGY Cronbach's $\alpha = 0.76$, and for the SOGS-RA Cronbach's $\alpha = 0.78$). Due to the considerable imbalance in the distribution of the SOGS-RA results, Spearman's correlation coefficient was applied. The SOGS-RA scale shows moderate and statistically-relevant correlation with the frequency scale for gambling over the last year before the survey (FSGY; 0.49; $p < 0.001$), the increased frequency scale for gambling over the last year (IFGY; 0.46; $p < 0.001$) and the frequency scale for gambling throughout one's life (FSGL; 0.43; $p < 0.001$).

Furthermore, the criterion validity of the scale was tested by calculating the correlations between the SOGS-RA scale and three additional questions included in the survey. These were the question concerning the amount of money usually spent by respondents on gambling over a month, the one asking whether after winning the subject felt the need to return to gaming to win even more money, and the one regarding the loss of control over the money spent on gaming, in which respondents could answer that they often played games of chance until they completely run out of money. The analyses carried out hereunder show that the SOGS-RA exhibits the strongest correlation with the question on the amounts of money usually spent by respondents on gambling over a month (0.51; $p < 0.001$).

When estimating the criterion validity of the SOGS-RA, the study also examined the relationship between the SOGS-RA and two questions included in the survey. Since these were dichotomous in nature, the point-biserial correlation coefficient was used (rpb). The first of them was to establish whether after winning respondents felt the need to return to gaming to win even more money ($rpb = 0.46$; $p < 0.001$). And the second pertained to the loss of control over the money spent on gaming. The respondents were asked whether they often played until they run out of money ($rpb = 0.45$, $p < 0.001$). The findings suggest that the SOGS-RA scale is strongly correlated both with the first and the second question.

The creators of this tool (Winters, Stinchfield, & Fulkerson) examined its validity by correlating the SOGS-RA (using the Pearson's correlation coefficient) with the types of gambling games played throughout one's entire life ($r = 0.39$) and over the last 12 months (0.39),

excessive frequency of gambling over the last year ($r = 0.54$), and the amount of funds allocated for gambling over the last year ($r = 0.42$). These correlations were statistically relevant ($p < 0.01$; Winters et al., 1993a). Clearly, they obtained similar correlation coefficients to those presented above.

The assessment of construct validity of the SOGS-RA scale also examined the univariate structure of the scale, as established by the SOGS-RA authors (Winters et al., 1993). For this purpose, the study used the Confirmatory Factor Analysis (CFA). The assumed univariate model found confirmation in empirical data. The goodness of fit proved satisfactory, as χ^2 equalled 934.681, $p < 0.01$. Due to the considerable size of the sample ($N = 2579$), it must be assumed that this is not a decisive factor, which, however, does not imply the need to discard the univariate model. The satisfactory fit between the univariate model and the empirical data is supported by the fit measures: RMSEA = 0.08 and GFI = 0.94.

The Prevalence of Gambling among Young People – the Presentation of Findings

The vast majority of respondents (90%; $N = 2314$) had played games of chance/gambled at least once in their lifetime. In the group of those who had never played such games (10%; $N = 256$) a slight majority (54%) were girls ($N = 138$).

On the SOGS-RA scale, 2.6% of respondents ($N = 67$) achieved scores corresponding to problem gaming over the last year before the survey, 4.1% ($N = 105$) proved to be at-risk players, 17.3% ($N = 445$) played socially in a manner showing no risk of problem gaming, and the substantial majority of as many as 76% ($N = 1,945$) had played no games of chance over the last year. Among the non-players there were more girls than boys (56%, $N = 1,094$, as compared to 43%, $N = 851$, respectively). The results obtained by problem gamers ranged from 4 to 12 points, with a mean of 5.7 ± 0.88 and a median of 5. The standard deviation was 1.977. The results obtained by at-risk gamers ranged from 2 to 3 points, with a mean of 3.3 ± 0.4 and a median of 3. It is of note that among those who had never played (10%, $N = 256$), the majority, i.e. as many as 54%, were girls ($N = 138$).

The Frequency of Gambling among the Respondents throughout their Lives and over the Last 12 Months before the Survey

The highest proportion of the surveyed young people (76%) had played games of chance such as scratch cards at least once in their lives, and a considerable percentage of the respondents (63%) also played games such as lotto or other numerical lotteries or money betting. A rather significant percentage of the surveyed population had played cards for money (38%) and had taken part in lotteries and phone-in and SMS quizzes (37%). The data show that the majority of the surveyed young people had never had anything in common with e.g. horse racing betting (95%), playing bingo for money (96%) or Internet gaming or on-line casinos (92%).

Over the last 12 months before the survey, similarly to the rest of their lives, the respondents had generally played games of chance such as scratch cards and lotto or other numeri-

cal lotteries and money betting. Other popular games in that period included phone-in and SMS lotteries and quizzes as well as arcade/machine gaming.

The final descriptive SOGS-RA analysis included the comparison of the results and group classification on the basis of gambling frequency over the last year. The groups were defined as follows: never (0 points), less than once a month (1 point), once a month (2 points), once a week (3 points) and every day (4 points). The classification within the groups was based on the periods of the most frequent gambling over the last 12 months in relation to the 13 gambling activities. The respondents who had not played any of the games listed over the last year represented 26.6% ($N = 653$), including 55.13% girls ($N = 360$) and 44.87% boys ($N = 293$). Overall, various games of chance/gambling were slightly more popular with girls over the last year (50.84%, $N = 1,248$) than with boys (49.16%, $N = 1,207$). However, compared to boys, a considerably lower proportion of girls played such games in a problem manner, i.e. every day. The prevalence of gambling within the surveyed group of young people, broken down by gender, is as follows. Gambling less than once a month was reported by 14.4% of students ($N = 354$), including 55.08% of girls ($N = 195$) and 44.92% of boys ($N = 159$). Playing games of chance once a month or more was reported by 16.7% of the respondents ($N = 409$). This included 57.46% ($N = 235$) of girls and 42.54% ($N = 174$) of boys. Gambling once a week over the last year was reported by 13% of the surveyed students ($N = 318$). Among these, girls accounted for a higher percentage than boys (61.64%, $N = 196$ and 38.36%, $N = 122$, respectively). Taking part in these activities once a day was reported by 29.4% of students ($N = 722$). However, everyday gambling was more popular with boys (63.66%, $N = 459$) than with girls (36.34%, $N = 262$). These results show that problem gaming is the domain of boys rather than girls. This is further confirmed by the results of the Student's t -test ($t = 9.807$), as carried out for the groups of boys and girls. The results show that the gender of the respondents is statistically relevant ($p < 0.0001$) for differentiating them by the prevalence of gambling. The analysis of differences in terms of arithmetic values obtained for the groups of girls (1.06) and boys (1.18) indicates that the higher prevalence of problem gaming is to be found in boys rather than in girls.

As part of the study young people were also asked what was the highest amount of money they had ever allocated for gambling over the last 12 months. The highest proportion of them (41.6%) had not risked any money on gambling over the last 12 months before the survey. Gaming respondents had bet only low amounts of money on such games. Usually these ranged from 5 zloty (24.8%) to between 5 and 10 zloty (15.9%). High-stake betting was rare in this group.

The Type of School and SOGS-RA Scores Obtained by Young People

The analysis of the prevalence of gambling among young people attending various types of schools (as measured by the SOGS-RA scale) employed the univariate analysis of variance (ANOVA). This statistical method was used to compare the differences between the individual types of schools in respect of problem-gambling prevalence among the surveyed young people. However, the types of schools studied did not reveal any statistically significant differences in terms of problem gambling. The result of the Fisher's test ($F = 2.527$) is not statistically relevant ($p > 0.05$). The average arithmetic values, as obtained by the students of individual schools on the SOGS-RA scale, are similar, and the slight differenc-

es found between them prove to be statistically irrelevant (lower-secondary schools: 0.56, basic vocational schools: 0.77, secondary schools of general education: 0.48, and technical secondary schools: 0.46).

Conclusions and Summary

The state of the art in problem gambling has continued to advance. As a result of numerous studies we are able to determine its characteristics and symptoms to facilitate early identification with growing accuracy. The problem of gambling among schoolchildren is, however, difficult to recognise. The hidden nature of this addiction makes it tricky to reach an early and accurate diagnosis, thus delaying the possibility of undertaking any action or providing early assistance. For many young people their involvement in gambling is the source of a considerable pleasure and a proven way to relax. Gambling allows them to escape their problems, while also bringing temporary oblivion, releasing emotions and giving them confidence in making an easy and quick financial gain. However, over time it becomes a necessity, an obsession, and, in some cases, even a must, which is difficult to overcome. The borderline between a good fun and entertainment and enslavement is very fine and difficult to notice by a young person. In view of the above, it is of crucial importance to pay attention to the very first signs of teenage gaming and to take appropriate measures to protect teenagers from developing an addiction. The first step we can take is to carry out screening tests. The Polish adaptation of the SOGS-RA scale designed for screening problem gambling among young people serves exactly this purpose. This tool has proven psychometric value and it facilitates a quick identification of for-fun, at-risk and problem gamers. It further allows an easy and fast preliminary identification of risk groups (people threatened with risky and problem gaming), to establish the amount and the type of problems, as well as the extent of damage suffered by young people in connection with their participation in various gambling activities/games of chance, and also to evaluate the frequency of gambling over their lifetime and over the last year before the survey. Screening tests employing this tool can constitute starting points for further, more detailed diagnostic studies and clinical trials. The early identification of risky gaming and the risk of problem gambling provides an opportunity to undertake rapid action and to provide assistance in respect of people who found themselves at risk of problem gaming and who have already experienced some initial negative consequences of their own actions (whether social, psychical, health-related, economic, or otherwise).

This study helped to estimate the prevalence of gambling among young people at the regional level (the city of Bydgoszcz and the Bydgoszcz District). It transpired that as many as 2.6% of study participants were problem gamers, 4.1% were at risk of problem gaming, and 17.3% played for fun only and did not put themselves at risk of problem gaming.

The SOGS-RA scale could be used more extensively to cover a Poland-wide sample of schoolchildren and produce a preliminary diagnosis of the same. These types of projects are noteworthy as it is estimated that the participation of young people in games of chance is to intensify. Indeed, over the last years, the access to arcade machines, and the popularity of the Internet itself, have been growing. Considerable publicity has also been given to games of chance offered by Totalizator Sportowy (a lottery company) and SMS-based lotteries and quizzes, as organised by digital mobile operators, TV and radio stations, and sports-betting

businesses. Low initial costs make such machines available to people with modest financial resources, such as teenagers. An important task for teachers and educators is to provide education and raise awareness on the dangers connected with gambling, not only among children and teenagers, but also among parents and other adults, whose behaviour and attitudes might affect the development of adolescents. Indeed, many adults seem not to realize that betting by children “only two zloty” on games or playing arcade games “for a zloty” can have some serious negative consequences for their future. It is vital to organise educational social campaigns to raise awareness on the problem of gambling, its determinants and consequences, and to implement short preventive interventions among groups of schoolchildren and teenagers.

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Sociodemographic Characteristic of Gamblers in Kuyavia-Pomerania Province

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ABSTRACT

The paper presents a general sociodemographic profile of a person addicted to gambling in Kuyavia-Pomerania province. The analysis was conducted among patients ($N = 192$) who entered therapy in the Regional Therapy for Addiction and Codependency Clinic in Toruń in 2008–2012. The studies were analyzing: gender, age, education, marital status, status of residence, preferred type of gambling and co-existence of chemical addictions (or other mental health disorders).

Keywords: gambling, addiction, chemical addictions co-existence

The problems associated with non-chemical addictions are relatively new phenomenon in our country, that is why the history of research e.g. on pathological gambling is short in comparison to the history of research in other countries. Still little is known about risk factors, the factors comorbid with pathological gambling. Despite the fact that knowledge consistently expands—we already have a lot knowledge on the diagnosis of pathological gambling and its treatment and players psychological portrait, it seems that when it comes to the ways to counteract this condition, especially among young people, we know still very little. It is also worth considering, what is the profile of the Polish gambler. Thank to established in 2009 the Gambling Problems Fund, more and more institutions expanded their offers of therapeutic programs for the treatment of pathological gambling, which allows to look at the specifics of Polish gambler.

This article presents a general sociodemographic profile of a person addicted to gambling in Kuyavia-Pomerania province. The analysis was conducted among patients ($N = 192$) who entered therapy in the Regional Therapy for Addiction and Codependency Clinic in Toruń in 2008–2012. During the studies were analyzed: gender, age, education, marital status, status of residence, preferred type of gambling and co-existence of chemical addictions (or other mental health disorders).

Gender of Pathological Gambler

Among the clinic patients who entered a treatment for pathological gambling, women accounted for only 4.2%. Within five years, treatment was taken by eight women. Literature indicates a process of feminisation of gambling, which is not observed in our facilities. For example, the results of the Australian studies (Niewiadomska, Brzezińska, & Lelonek, 2005) reported a significant addiction problem among female, where the amount of women in the general population of compulsive gambling has increased from 14% in 1991 to 41% in 1999.

Niewiadomska et al. (2005) indicate that women are generally less likely to gamble than men, while indicators on the severity of compulsive gaming are quite similar in both genders. In western countries, as well as in the USA and Canada, there is known the phenomenon of pathological gambling practicing by older women in retirement. In Poland, we do not notice this phenomenon. Due to the experienced tremendous shame and guilt women have particular difficulty in functioning in the treatment group with the men. During the diagnostic process and directing the woman patients to the group for gamblers, there always raises the question of whether there is another woman in the group. Undoubtedly, it would be good if at least two woman patients implement group therapeutic program at the same time. All women who are healed at the clinic were treating gambling as a form of recovery in personal injury—gambling was a cure for the difficulties of life. It is not known exactly what percentage of women constitute the general population of pathological players in Poland, while it is known that the clinic report a very rare and women are a small proportion of patients, although Zanki (2011) explicitly notes a growing trend of woman patients participation—up to 15%. Polish gambler profile presented in the *Handbook for Families* (Banaszkiewicz, 2011) shows that women constitute 24% of the total population of players, while the unknown is the proportion of women addicts among pathological gamblers in Poland.

Age of Patients

The youngest patient in the clinic was 17 years old, and the oldest 71, the average age is 35 years. Most patients treated with the diagnosis of pathological gambling are between 21–25 years and 31–35 years (Figure 1). More than half of the patients are between 21 and 35 years of age. Certainly, age differentiates the number of pathological gamblers admitted to the clinic—younger (under 20 years of age) rarely take the therapy, what is associated with less appreciable losses in different areas of life. Research conducted by Sobierajski and Szczepkowski (2011) shows that in Toruń, 22 % of young people gamble, while 5% of junior high school and secondary school students reveal problem gambling and addiction (questions were related to slot machines in the last 30 days before the survey), but the youth

do not assume therapy. Research in Ontario (Niewiadomska et al., 2005), shows that the percentage of problem gamblers among young people is 33%, and 7.7 % among adults. In contrast, addicted players in adolescents is 4% and 0.9 % of adults. These data indicates that frequency of gambling decreases with age, the rate of the problem playing is much higher among adolescents than among adults. It is known that a number of compulsive gambling player starts during adolescence, while getting to the clinic at a later age. According to Niewiadomska et al. (2005), the number of people seeking help is increasing with age—the largest number is in the age group 35–44 years. This study did not confirm this association, the largest percentage of patients were persons aged 21–35 years, while the age of 35–45 the number of patients was significantly lower.

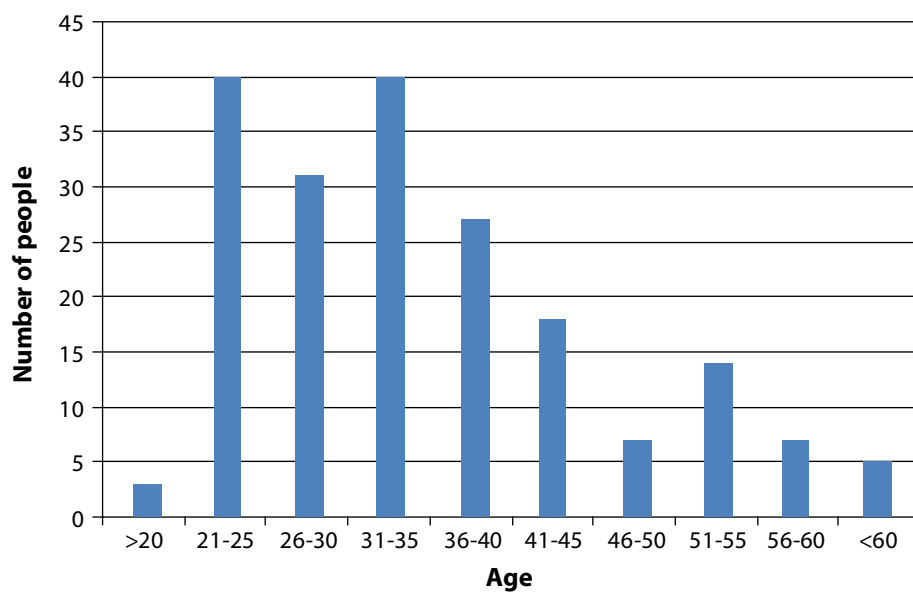


Figure 1.
Patients number in different age categories.

Education

Among persons addicted to gambling outweigh those with secondary education (57%). Another large group are those who have completed vocational school (26%). People with higher education constitute only 11%. Least of patients have primary or lower secondary education (6%). Analysis of Polish gamblers education showed that the chance games are mostly played by people with higher education (Malczewski, 2012), but the patients who are registered to the clinic mainly have secondary education. Ginowicz (2004) states that among gamblers receiving treatment in stationary facilities outweigh those with vocational or higher.

By far the majority of patients have a job—mostly they are freelancers. Approximately 5% of patients are unemployed, and about 5% are inactive patients—on a pension or retirement. It does not coincide with the description of the pathological gambler in Canada or Western Europe, because the typical western gambler is a man with a low level of education and unemployed (Ogińska-Bulik, 2010).

Marital Status

Pathological player, according to this study, is a person in a formal relationship (as many as 52% of patients). In turn, bachelors are 38.5%. The smallest group is the widowed 0.7% and 0.7% separated. Divorced is 8% of respondents. Similar results were presented by Malczewski (2012)—according to the research of Information Centre for Drugs and Drug Addiction (CINN), persons who are in relationships constitute the main group of gamblers. Malczewski's research (2012) shows however, that the general population of players in Poland includes persons who are married or cohabiting—52.9%—and it is not known exactly what percentage are those who are in formal relationships, and what percentage of people in informal relationships. In Toruń the percentage of patients who are in a marriage is 52%, while a group of people living in informal relationship has been qualified to the group of bachelors.

According to research conducted by Lelonek-Kuleta (2012), of men playing the slot machine, the majority (65.7%) are persons after divorce and separation, which could suggest that loneliness is a factor associated with taking gambling activity. But among patients in Toruń prevail however, those who are married or in a partnership.

Status of Residence

Clinics patients are mostly urban dwellers 81% (Toruń, Lipno, Brodnica, Golub Dobrzyń, Bydgoszcz, Włocławek and others). Players from the village are only 19%.

Preferred Type of Gambling

Among the respondents, the largest percent of people reported a problem with the slot machine games with low prizes—more than 78% (Figure 2). The second largest group is consisted of players addicted to sports betting (12% of patients). Least patients are cultivating players gambling in casinos (casino and online casino) and the stock market. Only two patients were playing the stock market with the symptoms of addiction.

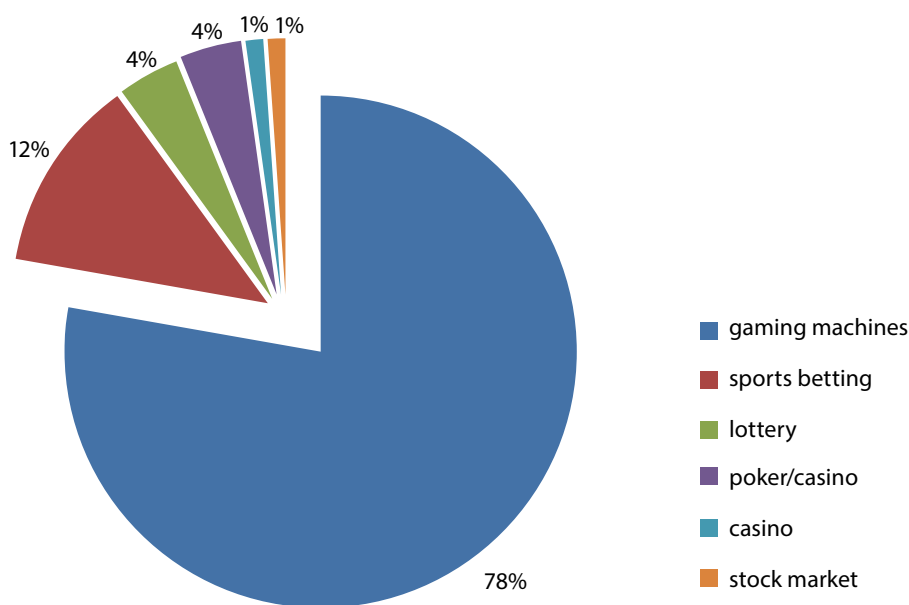


Figure 2.
Preferred type of gambling among clinic patients.

Co-existing Disorders

Among pathological gamblers, the overall rate of dependence of chemical substances is 22.9%, with drug addicts is 4.1%, and addicted to alcohol—18.8%. No woman, among the respondents, had co-occurring addiction to drugs or alcohol. By far the majority of gamblers who were earlier diagnosed in chemical dependency was at abstinence at the time of behavioral addiction therapy. The problem of pathological gambling appeared in these individuals as addictive behavior in process of recovery from chemical substances addiction. Only seven gamblers started the treatment with comorbid active addiction to alcohol or drugs. According to Denihon (as cited in Romaniuk, 2010), most people addicted to gambling, suffer from problems of addictions and mental health disorders. Patients from Toruń clinic seem to be rather more than 70% "pure" gamblers, excluding two patients with depressive symptoms, two with bipolar disorder and three with psychiatric diagnosis—schizophrenia.

Summary

According to the sociodemographic analysis of Toruń clinic patient, the gambling addict is primarily male, aged 21–35 years, living in the city, having a high school education, living in a formal relationship, which prefers to play on the slot machines. It is also economically active person.

It seems that the profile of Polish gambler is a little different from the pathological characteristics of the player in other countries (USA, Canada, Western Europe), where it is an unemployed men with low education, aged 18 to 34 years.

It is possible that the profile of a patient addicted to gambling in Kuyavia-Pomerania province compared to patients nationwide may be slightly different. Determinant of this difference may be lack of large casinos in region (one casino in Bydgoszcz and smaller—in Toruń) and lack of horse betting. No national data, however, prevent a comparative analysis.

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Sexting – a New Danger and Threat among Adolescents

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ABSTRACT

Article provides the definitions of sexting used in current research and the prevalence rates of sexting among adolescents and young adults, as derived from latest findings. Furthermore, the article provides the information about sexting in Poland, dangers related to sexting, its possible sources and ways to prevent and counteract the phenomenon of sexting.

Keywords: sexting, addiction, adolescents

Mobile phones, the Internet and new communication technologies have become more widespread recently. New technologies play an increasingly significant role in peoples' lives, and especially in adolescents' lives. These technologies are of great importance for more and more spheres of human functioning. When on September 13, 1996, the first GSM network in Poland was launched, a small number of people were aware of its subsequent influence on human functioning. Today, almost 90% of Poles possess their own mobile phone. This is a serious issue, especially because approximately 10 or 15 years ago possessing a mobile phone was uncommon. To date, the number of active SIM cards has become greater than

45 millions, thus exceeding the population of Poland, because many people have more than one SIM card. Adolescents and young adults are especially likely to be cell-phone users. The number of mobile-phone users in this age group has increased dramatically in recent years. Nowadays, 89% of adolescents and young adults (aged 15–24) possess their own mobile phone, compared with 48% of people aged 59 or more (On Board Public Relations Ecco Networks, 2012).

The number of Internet users has also grown very quickly in the past decade. In 2002 only 17% of Poles were Internet users, in 2010 – 51%, and in 2013 it was over 60% of Poles. According to the latest data, over 93% of adolescents and young adults (aged 18–24) are Internet users, which is the largest percentage, in comparison to other age groups (for example for people aged 25–34 it was 88%, for those aged 35–44 it was 76%, for those aged 45–54 – 59%, for those aged 55–64 – 40% and in the group of 65 or more it was only 11%). The total number of Internet users in Poland is expected to increase to 66% in 2014 (Centrum Badania Opinii Społecznej, 2013).

Currently, it is hard to imagine living without mobile phones, the Internet, and other new technologies. But is such ubiquitous access to these conveniences beneficial or harmful? Some of the recent studies have indicated a lot of dangers posed by the new technologies, including cyberbullying, hacking, pornography, easy access to sexually explicit media and sexually related sites, and many others (Strassberg, McKinnon, Sustaita, & Rullo, 2013).

Latest reports from different studies have revealed a new threat to adolescents associated with dangers mentioned above, namely *sexting*. In spite of the plethora of definitions of this phenomenon, it basically means exchanging sexual contents via mobile phones or the Internet. It is particularly dangerous for young people, their development and their acquisition of the knowledge about the world and other people, as well as about social functioning. They are in the prime time of their lives (also in sexual terms), so engaging in sexting may distort their beliefs and opinions in this sphere.

Although sexting is a relatively new issue, it has already become a global social phenomenon, as it was labelled by Agustina and Gomez-Duran (2012) in their article. The most important findings about sexting rates, its prevalence, differences between men and women come from studies carried out in the USA and Spain. To the best of our knowledge, there is no research on sexting in Poland. We recognize the need to carry out such research in Poland, to check its prevalence, the differences between men and women, especially between adolescents: boys and girls in Poland, and to provide a clear, detailed definition of sexting, which could be used by all researchers. That would be helpful for further research and would facilitate subsequent comparisons of the results of next studies.

The aim of this article is to provide the definitions of sexting used in current research and the prevalence rates of sexting among adolescents and young adults, as derived from latest findings. Furthermore, the article provides the information about sexting in Poland, dangers related to sexting, its possible sources and ways to prevent and counteract the phenomenon of sexting.

The Plethora of Definitions of Sexting

The popularity of sexting, as a widespread social phenomenon, has increased recently.¹ There are a lot of studies conducted by many researchers, in which some definitional problems occur. Almost in every study, sexting is defined in a different manner. There are both less and more detailed definitions of sexting. Such unclear, blurred definitional terms and different descriptions may lead to inconsistent results in most studies. This might entail misunderstanding and subsequent disregard for sexting (Agustina & Gomez-Duran, 2012).

Agustina and Gomez-Duran (2012) in their review of main research findings highlighted the diversity of definitions of sexting and presented the most important results. Prevalence rates varied widely, which might have been caused by the lack of a common definition of sexting that would be used by every researcher conducting research on sexting. Results differed significantly probably also because the samples consisted of different number of people. Some researchers studied teenagers, others – from adults onwards, so the sampled age ranged from 10 to 29 and more. The place and method of testing (filling in online questionnaires, talking on the phone or answering questions in a direct conversation) could also lead to such inconsistent results.

Below, we show our suggested/proposed division of definitions of sexting according to the ways of communication between the sender and the recipient of sexual content. We distinguish five groups of definitions, with each of them emphasizing a different way of communication or a specific combination of certain ways.

The first group of definitions highlights the sending of sexual contents electronically. According to Phippen (2009, p. 1), sexting is “the sharing of explicit images electronically.” Perez, Fuente, Garcia, Guijarro, and Blas (2010) carried out a survey referring to the safety and privacy of the use of mobile services by Spanish minors. The phenomenon studied by these researchers was explained as receiving photos or videos of their peers in provocative or inappropriate poses, or pictures or videos that have been taken of them in provocative or inappropriate poses. Next study, conducted by Ferguson (2011, p. 240), concentrated on sexting behaviours among young Hispanic women and their co-occurrence with additional, high-risk sexual behaviours. According to this author, sexting can be described as “sending erotic or nude photographs of oneself to another person or receiving erotic or nude photographs from another person.” Wolak, Finkelhor, and Mitchell (2012, p. 5) in their study tried to estimate how often teens are arrested for sexting. Their sample consisted of 2,712 law enforcement agencies. During their interviews with investigators regarding sexting cases investigated by the police, they defined it as “sexual images created by minors (age 17 or younger), that were or could have been child pornography under the statutes of your jurisdiction.” Agustina and Gomez-Duran (2012, p. 1327) characterize sexting as “sending, posting, receiving or sharing sexually suggestive messages, or those involving self-nude or semi-nude pictures/videos, using electronic media.” Fleschler Peskin et al. (2013, p. 454) in their research defined sexting as “sending and/or receiving nude or semi-nude pictures/videos or sexual text-only messages.” These authors gave a shorter name to this kind of messages, namely “a sext.”

¹ According to a personal statement by dr Bogusław Habrat from Institute of Psychiatry and Neurology in Warsaw, sexting has already existed a few decades ago. In the 1980s he watched a TV cable channel in a hotel in New York in which he observed sexual organs of people who wanted to present them. It was a private channel and there were advertisements proposing such behaviours.

The most important ways of communication in the second group of definitions are mobile phones. Lenhart (2009, p. 4) considers sexting as “sending or receiving sexually suggestive nude or nearly nude photos or videos of yourself or someone you know on your cell phone.” In the survey conducted by Strassberg et al. (2013, p. 17), this phenomenon was described as “sending and receiving sexually explicit cell phone pictures, defined as pictures depicting genitals or buttocks, in the case of both sexes, and/or breasts, in the case of females.” Benotsch, Snipes, Martin, and Bull (2013, p. 308) defined sexting as “sending or receiving sexually explicit or suggestive photos via text messages.”

The third group of definitions of sexting emphasizes both mobile phones and the Internet as the means of communication between senders and receivers of erotic contents. A survey on digital abuse, carried out by Associated Press-MTV (2009), included also the issue of sexting. In this study, the term was explained as sending or forwarding nude, sexually suggestive or explicit pictures via cell phones or the Internet. In a study conducted by the National Campaign to Prevent Teen and Unplanned Pregnancy and CosmoGirl.com (2008) the researchers aimed to better comprehend the relationship between sex, technology and cyberspace. In this study, they wanted to establish the number of adolescents and young adults engaged in sexting, which they defined as sending or posting online nude or semi-nude pictures or videos of oneself, or sending/posting sexually suggestive messages (via e-mail, texting, and messages sent via Instant Messengers – IM).

The fourth group of definitions of this global social phenomenon comprises descriptions highlighting the significance of e-mails and mobile phones. Thomas (2009, p. 34) in his survey tried to assess the prevalence of sexting, defined as “sending, receiving or forwarding sexually suggestive emails or text messages with nude or nearly-nude photos.”

The last group consists of definitions accentuating the importance of e-mails, mobile phones, and websites as ways of interaction between the senders and receivers of sexual contents. Mitchell, Wolak, and Finkelhor (2007, p. 118) in their study tried to evaluate the ubiquity of sexual solicitations, harassment and unwanted exposure to pornography on the Internet. They studied the phenomenon of sexting, which they defined as “unwanted exposure to pornography: being exposed to pictures of naked people or people having sex without seeking or expecting such pictures, when doing online searches, surfing the web, opening e-mails or instant messages or links in messages.” In the next study, Mitchell, Finkelhor, Jones, and Wolak (2012, p. 13) defined the prevalence and characteristics of youth sexting in the USA. They defined it as follows: “the transmission of sexual images via cell phones, the Internet, and other electronic media.” Their study recognised three dimensions of incidents reported by young people. The first dimension concerned the appearance in and the creation of images versus their reception. The second dimension involved adolescents that have appeared in or created images with sexual contents, and pertained to information on creating images of oneself by respondents, creating images of respondents by someone else or creating images of someone else by respondents. The last dimension provided information on sexually explicit image contents sent or received by young people, which could either be considered as child pornography or not.

Our aim is to present one, common, and detailed definition of sexting, to organize, and integrate the current knowledge about this social phenomenon. This definition consists of fundamental components included in the definitions mentioned above. Therefore, sexting (sex + texting) is a phenomenon of exchanging sexually explicit content, i.e. nude or semi-nude photographs or videos via telephone or the Internet or by the use of other new tech-

nologies. These photographs or videos depict breasts, in the case of females, or genitals or buttocks, in the case of both women and men. Sexting also applies to sexually suggestive text messages and unwanted exposure to pornography by way of receiving, sending, sharing or forwarding e-mails or links in messages with web addresses of erotic websites.

Studies on Sexting

Because it is a new phenomenon, there are only a few studies which deal with this topic. The first survey, commissioned by The National Campaign to Prevent Teen and Unplanned Pregnancy and CosmoGirl.com (2008), revealed that 20% of teenagers (aged 13–19) reported having sent or posted online nude or semi-nude photographs or videos of themselves to someone else and 31% of teenage participants admitted having received such photographs or videos from someone else. In the same study, 33% of young adults (aged 20–26) reported having sent or posted online such contents, and 46% of young adults have received such contents from someone else.

The Associated Press-MTV (2009) digital abuse survey conducted by Knowledge Networks is another study to some extent concerning sexting. It revealed that among youth (aged 14–24) 13% of females and 9% of males admitted to have sent a nude photograph or video of themselves to someone else. As many as 9% of females and 14% of males reported having received such explicit contents from someone else.

In a nationally representative survey of adolescents (aged 12–17; $N = 800$) conducted on landline and cell phones, the Pew Research Center's Internet and American Life Project has found that 4% of cell-owning teens reported ever having texted a sexually suggestive image or video of themselves to another person, and 15% of teenagers admitted to having received a sexually suggestive image or video of someone they knew. Furthermore, older participants were more likely to engage in sexting: 8% of 17-year-old participants have sent such images and 30% have received such messages (Lenhart, 2009).

In the next study, Lenhart (2010) revealed that 13% of adolescents and young adults (aged 18–29; $N = 2252$) have sent a sexually suggestive nude or semi-nude photograph to someone else via text message, and 31% have received sexts. There were no differences between genders in terms of sending sexual contents by adults, but this survey revealed that males were more likely to have received sexts than women. As many as 21% of male respondents received it, compared to 11% of females.

Ferguson (2011) in his survey conducted among 207 Hispanic women revealed that 20.5% of them admitted to having sent sexually provocative photographs or videos, and 34.5% of them have received such contents. In this study, the author did not find any significant correlations between sexting and selected sexual risk behaviours (for example: the number of sexual partners or unprotected sex with a new partner), with the exception of having sex without the use of birth control methods when not wanting to get pregnant. Furthermore, sexting behaviours were minimally more common in women with histrionic personality traits. Results also indicated that behaviours defined as sexting did significantly correlate with pleasure in sex and with positive attitudes toward the phenomenon being analyzed.

In another study, conducted by Mitchell et al. (2012), 2.5% of participants admitted to having appeared in or created sexually provocative photographs or videos and sending it

to other people, and 7.1% of participants reported ever having received such contents from others.

Benotsch et al. (2013) in their study emphasized the public health implications of sexting by analyzing relationships between this phenomenon, substance use and sexual-risk behaviours among adolescents. As many as 44% of the overall number of 763 participants (aged 18–25) reported ever having engaged in sexting. Interestingly, 62% of them had both sent and received at least one explicit photograph, 32% had only received such contents, and 6% of participants engaged in sexting had only sent sexual photographs. Compared with young people who have never engaged in sexting, they were more likely to admit substance using (several recreational drugs, such as alcohol, marijuana, ecstasy, and cocaine) and getting involved in health-damaging behaviours and high-risk sexual behaviours, such as unprotected sex and having multiple sexual partners. Moreover, almost 32% of participants engaged in sexting had sex with a new partner after exchanging explicit or provocative photographs or videos with him or her via mobile phone.

Another study, conducted by Gordon-Messer, Bauermeister, Grodziński, and Zimmerman (2013), concerning the association between sexting, sexual behavior and psychological well-being, yielded different results than findings provided by Benotsch et al., mentioned above. Their results showed that sexting was not connected with sexual-risk behaviour or psychological well-being (depression, anxiety, and low self-esteem). The authors created four categories of sexting: non-sexters, receivers, senders and two-way sexters. The authors called it the lifetime sexting behaviour status variable. Non-sexters have neither sent nor received any sexual messages, senders have sent but never received a sext, receivers have received but never sent a sext, and two-way sexters have both sent and received sexual messages. Among participants from the United States (aged 18–24; $N = 3447$), 57% were non-sexters, 28.2% were two-way sexters, 12.6% were receivers, and 2% were senders. Furthermore, it was more likely for males than for females to receive a sext without sending one. There were significant differences between sexually active and sexually inactive participants. The first group included more two-way sexters. Based on these findings, sexting might constitute an usual element of adolescents' and young adults' sexual relationships, due to its lack of correlation with riskier or safer behaviour.

Other researchers (Strassberg et al., 2013) carried out a survey concerning sexting among high school students in the United States (aged 14–18; $N = 606$). Almost 20% of participants reported they had sent a sexually explicit photograph of themselves via cell phone. Nearly 40% reported ever having received such contents. According to the results of this study, it was more likely for the students to admit that they had received than that they had sent such contents. More male (49.7%) than female (30.9%) respondents reported having received such photographs, and approximately 25% of receivers had forwarded them to other people. Interestingly, 50.4% of female respondents and 33.9% of male respondents declared that it was always wrong to send or forward such pictures, while 5.1% of females and 12.2% of males declared that sending, receiving, or forwarding such pictures was okay. Over 30% of students who reported ever having sent sexually explicit images, did so even though they were aware of serious legal consequences of sexting behaviours. Moreover, this study showed that students engaged in sending and/or receiving sexually explicit photographs or videos reported sending and receiving significantly more regular text messages.

Fleschler Peskin et al. (2013) examined the prevalence and patterns of sexting among ethnic-minority urban high school students (black and Hispanic students) in the United States

(aged 15–16; $N = 1034$). In this study, 21% of respondents declared ever having sent either nude or semi-nude photographs or videos, and almost 25% of students reported ever having sent sexually suggestive text-only messages. As many as 31% of students reported ever having received nude or semi-nude pictures or videos, and almost 32% of respondents admitted to ever having received sexually suggestive messages from someone. Furthermore, 10% of students admitted to sharing sexts with other people, not originally intended to be recipients of such contents, and 20% of participants were the recipients of sexts originally sent to someone else. Hispanic males were less likely to engage in sexting behaviours than black males and females, and Hispanic females were the least likely to participate in all sexting behaviours mentioned in this study.

According to the data mentioned above, the prevalence of sexting varies considerably. Its estimates are different in almost every study probably due to different populations assessed, wide range of participants' age, the accuracy of the definition and its more or less detailed elements, the time of the survey, and its methodology, i.e. the ways and methods of carrying out the study (Mitchell et al., 2012). Moreover, the data on prevalence revealed in some studies might underestimate the participants' sexting behaviours, because some of the interviews had been realized via cell phones, with their parents present in the next room (Strassberg et al., 2013). Because of ambiguous findings, it is essential to verify how sexting is related to sexual behaviours. It should become the aim of interventions to prevent many risky sexual behaviours, but on the other hand, it could be adapted as a safer, independent sex behavior, especially if it was used instead of physical contact (Gordon-Messer et al., 2013).

Sexting in Poland

Unfortunately, there is no research that has examined sexting among Polish adolescents or young adults empirically. To the authors' knowledge, sexting is a serious issue among Poles, but a reliable survey needs to be conducted.

Solid and reliable research is needed in Poland to figure out the contexts in which this phenomenon occurs and to establish the associations between sexting and sociodemographic factors, the motivations for sexting, the emotions arising from it, its relationship to risk behaviours and its rationale (for bullying, as a joke, in the relationship, etc.). It is essential to determine the impact of sexting on various other behaviours and health outcomes in relevant age groups and check its direction. This kind of survey should also ascertain the degree to which sexting behaviours are accepted or coerced and estimate the adolescents' awareness of the potential consequences of sexting (Fleschler Peskin et al., 2013; Strassberg et al., 2013).

Dangers and Threats Related to Sexting

Adolescents and young adults are the largest groups of mobile-phone and Internet users. Nowadays, they cannot imagine living without these technologies. Furthermore, adolescents are in the prime time of their sexual lives (Levine, 2013). Given the increasing prevalence of mobile phones, there is a possibility for new technologies to play a great role in the

sexuality of adolescents. Especially because of their greatest use of it. Engaging in sexting might create inappropriate standards connected with dating, sexual behaviours and various rules governing relationships. It could also popularize the belief that sex was necessary after exchanging sexual contents via mobile phones or the Internet (Fleschler Peskin et al., 2013). There are a lot of advantages of using new technologies, but doing it the wrong way might lead to many disadvantages and threats. It is possible that sexting results in many adverse outcomes for its participants, which include embarrassment, feeling upset, feeling harassed, as well as mental health problems, public dissemination of explicit photographs or videos and other serious psychological and social consequences. In addition, the lack of control after an explicit or sexually suggestive photograph or video is sent or the pressure by someone's partner to sext, might lead to psychological distress and other mental and physical health concerns. Recently, there have been many cases of suicide attempts and committed suicides due to the distribution of somebody's naked pictures or videos to unintended recipients or due to the blackmailing of the victims (Gordon-Messer et al., 2013). It has been documented, that people seeking sexual partners via the Internet are at a considerably higher risk of engaging in dangerous sexual behaviours. There are also a lot of social and legal consequences of sexting. In the United States there have been many legal cases in which adolescents were accused of child pornography distribution after sending, receiving or forwarding nude or semi-nude pictures or videos of themselves or somebody else (Benotsch et al., 2013; Ferguson, 2011).

The Possible Sources of Sexting

As mentioned in previous paragraphs, sexting constitutes a real threat to adolescents, young adults, and to the society as a whole. When wondering where it came from and what are the possible sources of this global social phenomenon, many reasons should be taken into consideration. Levine (2013, p. 257) cites Klein: "The same thing happens repeatedly whenever a new technology is introduced into Western popular culture: It becomes an instrument with which to terrify ourselves and others about sex." Nowadays, almost every adolescent possesses his or her own mobile phone and a computer with access to the Internet, which enables them to contact with others instantly. They live different lives than their parents or grandparents and learn about each other and the whole world in a different way. It is possible for them to easily reach out for sexually explicit media, including pornography (Strassberg et al., 2013). Erotic content has entered almost every sphere of human life, so adolescents, who are in the prime time of their sexual lives, may consider sharing naked photographs or videos with other people as something typical for the society as a whole. Moral standards have also changed dramatically over the past decade. Adolescents engaged in sexting may be convinced that sex with his or her partner is obligatory after sharing with each other explicit photographs or videos. It is possible that this phenomenon has arisen from widespread, inappropriate, obscene norms in terms of dating and sexual behaviours (Fleschler Peskin et al., 2013). There is also one more possible reason for engaging in sexting: the failure of parents to spend time with their children, especially on talking about current family issues. They are so absorbed in their work and problems of everyday life that they cannot spend much time with their children. The lack of parents' and teachers' control over adolescents, as well as their boredom, need for entertainment, need for new

experiences, and the desire to follow new technology trends as well as technology usage, may encourage young people to engage in sexting behaviours.

The Prevention of Sexting

When we think about sexting, we have to consider its harmful effects on children, adolescents and adults. This phenomenon does not leave our physical and mental health unaffected. We have to provide separate solutions for children and for adolescents, their parents, teachers and the whole society, because each of these groups requires focusing on slightly different thoughts, emotions, and behavior.

In the case of children and adolescents, we have to provide them with detailed information about the phenomenon of sexting. Psychologists and teachers, with special training in this field, should participate in meetings, during which they would tell young people about how dangerous and risky the behaviors described as sexting are. Such meetings should take place in every school, so that adolescents have easy access to people who are knowledgeable about how to work with victims and perpetrators of sexting. Furthermore, students should be taught and trained on how to use new technologies, for example mobile phones and the Internet, safely. They also should be taught that the Internet is a specific kind of virtual world, in which every information, every photograph, and video is stored indefinitely.

When talking about parents, it needs to be emphasized that in most cases, they do not know what exactly is their child doing in his or her room, while surfing on the Internet or talking or sending messages with the help of their mobile phones. Specially trained psychologists would be the best sources of information about the essence of this phenomenon, its potential impact, dangers connected with it and ways to react properly if your daughter or son becomes a victim or perpetrator of sexting. It should be noted that parents' reactions will differ between the two cases mentioned above. Boys and girls will experience different emotions and thoughts, and will behave in different ways, which will depend on whether they are being subject to ridicule or being the creators of erotic photos or videos. When parents receive professional information about sexting, it is essential for them to share their knowledge with their children. It is also very important to talk to children about sexual norms and about human sexuality in general. If such conversations take place within the family, children will probably be more careful in respect of using the Internet and mobile phones. Besides, one of the most important things a parent can do to protect his or her daughter or son against dangers connected with sexting, is to monitor websites visited by their children. This is an excellent opportunity to block pornographic websites, which may prevent children from sending and receiving erotic photos and videos. Every parent should be provided with information about legal consequences of sending and receiving such materials, which may be considered as child pornography. In order to protect children against sexting it is crucial to provide them with such information as the legal aspects of this issue and the consequences of their involvement in sexting.

Moreover, it is essential to provide teachers with information about sexting. Children and adolescents spend most of their time at school. Recently, the school environment has changed dramatically. Students have their own mobile phones and other electronic devices, such as laptops and tablets, which are used by them even in the classroom. Teachers should be taught about new means of communication and many risks arising from using them in

inappropriate ways. Detailed training cycles should be organized for teachers, focusing on developing skills in working with the victims and perpetrators of sexting. Raising awareness among teachers and students of the phenomenon of sexting and many dangers arising from it, would be a great way to improve the relationship between teachers and students. If students knew that there was a person who is always ready to talk and help them in case of any kind of problems, they would feel more secure and shared their problems with their teachers or educators.

Undoubtedly, there is a huge need to publicize this relatively new phenomenon. The whole society should be provided with information about sexting, its essence, dangers and risks connected with it. People of all ages should learn about the most appropriate ways to react and help in the case of meeting a victim or perpetrator of sexting. All the information listed above should be included in appropriate, detailed TV and radio programmes, printed in magazines dedicated to young people, as well as to their parents and teachers. Each age group should be able to find information on sexting in their favourite magazines or TV programmes. It would be a great idea to organize a social campaign to protect children and adolescents against the harmful/adverse effects of engaging in sexting, both as a sender and receiver of sexts, which are sexually suggestive nude or nearly nude photographs or videos of oneself or any other people. An obligatory part of such a campaign should be a set of information aimed at promoting appropriate sexual standards for adolescents, which differ significantly from current obscene sexual standards developed and popularized by TV programmes and movies, and the whole porn industry. It is also vital to emphasize the individual's law to refuse the requests of other people, pertaining to unwanted, indecent behaviours.

Conclusions

New technologies (e.g. mobile phones and the Internet) have become more widespread recently. They play an increasingly significant role in peoples' lives, especially in respect of adolescents, who are currently the largest group of mobile-phone and Internet users. Sexting is a new danger and threat posed by our digitalized world. There are many different definitions of this relatively new phenomenon, but they fundamentally mean the same, i.e. exchanging sexual contents (naked or semi-naked photographs and/or videos) via mobile phones or the Internet. Its prevalence rates among adolescents and young adults vary significantly, depending on various factors. Unfortunately, there is no research on sexting among adolescents in Poland, so there is no information about its prevalence among Poles. To conclude, there is a huge need for such solid, reliable research in Poland and for the regular supervision over trends in new technologies and sexual behaviours among adolescents. This kind of knowledge might help us prepare detailed preventive programs and protect young people against considerable harm to their health and lives.

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The Behaviour of Young People in Cyberspace and Their Perception of Family Relations

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Both authors share equal credit for this article. This applies both to the development of research framework, methodology and records.

ABSTRACT

Today's world has evolved and developed mainly towards technological advancement. The role currently played by media in the lives of individuals and of the society is crucial and continues to grow. Undeniably, children and young people are the groups which have the aptitude to quickly adapt to new technologies. This is why the Internet has become part of their everyday lives they use it for entertainment, social and scientific purposes, and even lead "second lives." These premises have inspired this study to investigate the relationships between teenage behaviour on the Internet and their perception of their relations with parents.

The study covered a group of lower- and upper-secondary school students (aged 15 and 17, respectively). Family relations were determined with the use of The Family Profile Inventory by Gaś and teenage behaviour on the Internet was assessed on the basis of questions included in authors' own survey.

The conclusions of this study suggest that using the Internet for many hours at a time has significantly reduced the involvement of young people in their family lives and has caused their family bonds to weaken. Moreover, young people spend a lot of time on the Internet unaware of its passing, and attempts by adults to admonish them cause the par-

ent-child relationship to deteriorate and the family to be described by teenagers in more negative terms.

The results of this study also show that the frequent use of social-networking sites by young people reduces the number of their social relations outside the Internet and results in less involvement in social life on their part.

Keywords: cyberspace, the Internet, family relations, teenage behaviour

Introduction

The development of technology has fostered the emergence of an information society. Currently, the Internet has become the medium which plays a major role in human life. Its versatility, simplicity and accessibility have made it gain an extraordinary popularity with children, teenagers, adults and even the elderly. The World Wide Web has become a place where people look for information and entertainment, do shopping and meet new people.

A substantial amount of Internet users are children and young people. In the 21st century, in this age of information, the family and school have ceased to be the lead and sole educators of children, who, from their earliest years, are quick to choose and use the wealth of possibilities offered by the Internet. But this medium has a special impact on the minds of children and young people, whose personalities are not yet fully developed and who have yet to master such skills as full self-control or the ability to assess and predict the consequences of their actions. This often renders them vulnerable and exposed to various threats in this vast world of cyberspace.

The Essence of the Internet

Cyberspace is generally defined as the space of open communication via computer networks and digital storage systems operating worldwide. It is also described as a new type of social space, where Internet users meet, and in the humanist discourse it has become a synonym of the Internet.

The most important characteristics of this medium include:

- its remarkable wealth of data (e.g. the World Wide Web holds more information than TV could possibly broadcast over decades);
- interactivity (bidirectional communication);
- general availability (cyberspace is common and its users communicate with each other to create real communities of interest and action) (Siudem, 2012).

Today, the Internet is no longer something magical but a symbol of the state-of-the-art technology. It comprises an enormous network extended over the whole world, which continues to evolve and transform. It is an unlimited source of data which can be accessed at

any time and place. Above all, it serves the exchange of any type of data and information, but also has a number of other functions, such as the didactics and education of young people (Danowski & Krupińska, 2007).

What is interesting here is that no one has any control over the Web any more. On the contrary, it undergoes constant change and has grown to such an extent that it is virtually impossible to explore it thoroughly. Moreover, this medium is more and more often viewed as harmful, and the knowledge on risks arising from uncontrolled and immoderate Internet and computer use is still incomplete and insufficient (Maczydłowska, 1999).

Both the computer and the Internet have entered practically every sphere of human life, bringing with them a wealth of opportunities. Indeed, in many situations they are outright irreplaceable, and the society has continued to become addicted to this digital world. For instance, many companies exist in cyberspace only, and people visiting chat rooms create virtual identities which are not uncommonly completely different from their real "selves."

This world of cyberspace has not only brought with it new opportunities and new forms of entertainment, but also new ways of creating oneself. This is extremely appealing, especially for young people, who have just begun their lives. For children and young people, who are generally driven by curiosity and desire to meet new people and discover new worlds, while also experimenting with themselves, this cybernetic world creates tremendous opportunities. It facilitates self discovery and allows learning one's reactions without facing any of the consequences which would definitely ensue in the real world. Furthermore, the digital world is a ready and convenient source of entertainment and relieving boredom with barely any effort required (Braun-Gałkowska, 2003).

A number of studies have shown that the virtual world is most often used by children and teenagers, since the computer and the Internet provide them with plenty of opportunities, particularly in terms of education. It helps them acquire and organise the learning material, while also making it more attractive.

To conclude, the computer and the Internet have become an inseparable part of human life. It is fairly certain that in a couple of years people with no network literacy will be unable to find a good job. Therefore, it is vital to teach the subsequent generations how to successfully harness the benefits of cyberspace.

The Family as a Psycho-social System

In modern socio-economic conditions the family is subject to some far-reaching transformations, affecting its economic and social foundations, internal structure and functions, and the very essence of family life. Researchers studying family (i.e. Plopa, 2007; Ryś, 2004; Satir, 2000; Gaś, 1995; de Barbaro, 1999; Braun-Gałkowska, 1992; Radochoński, 1987; and Olson, 1986) have considered the family as a system, i.e. not as a simple group of individuals but as an autonomous entity with its own structure, processes, roles, etc. Therefore, the family forms a certain system, in which its individual members (parents, children, grandparents and relatives) remain in mutual relations and affect one another on the basis of feedback.

What is distinctive about the family in systemic terms, is the presence of direct and indirect correlations between all members of the family. This means that relations between two members, e.g. a wife and a husband, not only influence themselves but also their children who are part of their family. Consequently, what we are dealing with here is a complex

and systemic nature of family relations. Family members interact with each other on the basis of specific arrangements, determined by various transactions. These arrangements, although not explicit and apparent, form the complete structure of the family. As a result, the family is a structure which cannot be reduced to the sum of its individual parts, i.e. family members, but rather constitutes a dynamic system determined by its framework of mutual interactions. This perception of the family provides a better understanding of its social and emotional organisation, while also providing an opportunity for deeper insight into the relationships and interactions between these phenomena which apparently do not have much in common in the traditional approach (Siudem, 2010).

Systemic concepts of the family provide the basis for explaining a number of processes taking place within marriage and family. Such constructs (models) include the so-called circumplex model, as developed by Olson, Russell and Sprenkle (as cited in: Plopa, 2006; Sitarczyk, 2002; Gaś, 1995), which is commonly referred to in literature as the Olson's model. This model distinguishes three central dimensions in which family systems generally operate. These dimensions are cohesion, flexibility and communication.

Family cohesion is defined as the quality of emotional bonding within the family and the degree to which its individual members are either connected with or separated from it. It comprises such variables as emotional bonding, independence, boundaries, coalitions, time and space, friends, decision-making and interests of individual members.

The second dimension is *the flexibility of the family*, or the ability to change its leadership structure, role relationships and relationship rules in response to developmental or situational stress. This dimension is about the capacity of marital and family systems for responding in the form of introducing appropriate changes in response to new requirements (whether external or internal) which might appear in the family life.

The third dimension of family functioning is *communication*. Effective communication requires family members to be able to convey comprehensible and internally-coherent messages, facilitate the exchange of information, show empathy, etc. It is commonly agreed that traits such as attentive-listening skills, clear-speaking skills, honest self-disclosure, appropriate continuity tracking and due respect and regard, allow the family to operate more efficiently in the areas covered by the other two dimensions. Effective communication is characteristic for those families which represent a mature level of cohesion and flexibility (Plopa, 2006).

To sum up the above considerations on the family as a psycho-social system, it should be noted that the family is a dynamic system of social relations. It has a complex structure composed of interdependent groups of people with common history and knowledge passed from one generation to another, as well as common behaviour and reaction patterns used to achieve their objectives. They share a certain emotional bond and jointly implement interaction strategies needed by both individual members and the group as a whole. In addition, such a system provides development opportunities for each family member, while also satisfying their emotional needs and ensuring the right balance between human dependency and autonomy.

Research Method

The purpose of this exploration was to investigate the behaviour of young people on the Internet and determine the relationship between the activity of the young people on the Internet and interpersonal relations in their families. From the literature it is known that young people with problems in the family, often use the escape techniques such as spending much time in cyberspace, which is not always a positive effect on their development.

From the point of view of research, it was also important to try to find answers to the question: What role does the Internet take in the lives of young people today and how it is related to their family relationships? This knowledge can help to better understand young people and paying attention, both their own and their parents on some aspects and problems, that solved will make them better, more preferably run in families.

This exploration is to investigate teenage behaviour on the Internet and to determine the relationship between their activity on the Internet and their interpersonal relations within the family.

The undertaken study was an attempt to find an answer to the question of what was the relationship between using the Internet and perceiving family relations among lower- and upper-secondary school students, if any. For this purpose, the following research problems were established:

- What is the relationship between the amount of time spent by young people on the Internet and the amount of time devoted by them to family matters, if any?
- Is there any link between using social-networking sites and maintaining relationships in the real world?
- Is there any connection between the general condition of the family and the subjective assessment of family bonds?

In view of the above problems, the following hypotheses were formulated:

- There is a relationship between the amount of time spent by young people on the Internet and the amount of time devoted by them to family matters. The amount of time spent by young people on the Internet is negatively connected with the amount of time spent by them with the family.
- There is a link between the use of social-networking sites by teenagers and their maintaining of relationships in the real world.
- There is a connection between the general condition of the family and the subjective assessment of family bonds by young people.

Family relations were determined with the use of The Family Profile Inventory by Gaś, due to its having its roots in the Olson's theory (Gaś, 2004). This method facilitates the analysis of family-system operation. It comprises 86 statements making up six scales, three of which refer to the positive dimensions of the family-system operation (including family cohesion, flexibility, and mutual understanding) and three describing difficulties that the family might experience (including family roles, development difficulties, and family disintegration). Furthermore, it makes it possible to calculate the sense of functionality ratio, which describes the individual perception of family functionality.

Characteristics of particular scales are as follows:

- Scale "S"—family cohesion—examines whether family members are experiencing a sense of family togetherness, emotional closeness; whether the family has a coherent system of values and beliefs.

- Scale “A”—adaptability—defines constructive in dealing with problems, cooperation in difficult situations, ability to negotiate, to complement each other and exchanging roles and responsibilities, having common interests and pastimes, the ability to analyze past experiences and constructive use of them in organizing future.
- Scale “GM”—mutual understanding—is close to the dimension of communication. It comprises elements that indicate the existence of empathy, mutual understanding of the motives and conduct of individual members of the family, openness to other people’s messages, and mutual perceptions of family members.
- Scale “RR”—family roles—examine the negative aspects of performing roles in the family, which is the major pathogenic roles.
- Scale “TR”—development difficulties— is used to measure the sense of development difficulties: stereotyping activities, stagnation, helplessness crisis.
- Scale “DR”—the disintegration of the family— measures the level of difficulty of the family, an integrated counter the crisis. Research and crises do not unify families, intensifying the sense of threat and level of dysfunctional.

In addition, it is possible to calculate the rate of functional sense of family— “PF” [$PF = (S + A + WZ)/(RP + TR + DR)$], which indicates an individual sense of family functionality.

The second method used for determining teenage behaviour on the Internet was authors’ own tool, namely a survey comprising 21 multiple-choice questions. The second method, based on the specified teenage behaviour on the Internet, authors’ own tool, namely a survey comprising 21 multiple-choice questions. This method allowed the respondents in the free and how to determine their behaviour and opinions concerning the use of the Internet. The respondents were assured anonymity. The questions were adapted to the environment and the age of the respondents.

The study covered a group of 105 people, including lower-secondary school students aged 15 (45%) and upper-secondary school students aged 17 (55%), with female students (68%) predominating over male ones (42%). The study was carried out in the Lubelskie Province—in Lublin (big city) and Puławy (medium city). The study was conducted in May 2012, was anonymous and voluntary, carried out in peaceful atmosphere.

The Analysis of Findings

The first issue subject to assessment was the frequency of Internet use by the subjects. This is presented in Table 1.

Table 1
The frequency of Internet use by lower- and upper-secondary school students

	<i>How often do you use the Internet?</i>			
	<i>Every day</i>	<i>A few times a week</i>	<i>Once a week</i>	<i>A few times a month</i>
Total	98	5	1	1
Proportion (%)	93.3	4.8	0.9	0.9

The analysis of the above-mentioned data shows that nearly all respondents used the Internet every day (93%), with hardly any other answers selected. The statistical data shows no relevant differences between the genders (relevance level was $p = 0.471$) and no differences between lower- and upper-secondary school students ($p = 0.881$) in terms of Internet use. The majority of teenagers surfed the Internet for 5 to 8 hours (44%) or 2 to 4 hours a day (38%). As many as 4% spent over 8 hours a day on the Internet.

Lower-secondary school students proved to spend on the Internet significantly more time a day than upper-secondary school students ($p = 0.002$), and male students were found to spend on the Internet considerably more hours a day than female students ($p = 0.027$).

When it comes to places where they used the Internet, the majority of respondents used it at home (92%), while the rest surfed the Web either in other places (5%) or at school (3%). The statistical data shows no relevant differences between the genders ($p = 0.418$) and no differences between lower- and upper-secondary school students ($p = 0.399$) in terms of Internet use.

When surfing the Internet, the subjects usually browsed web pages (26% of answers) and social-networking sites (26%), or chatted (23%), with searching for scientific material as the least popular option (1%). The activities performed on the Internet by male and female students varied considerably ($p = 0.004$). For instance, female students usually watched on-line TV series and browsed social-networking sites, while male students generally played on-line games. The latter did not search for scientific material at all. This is presented in the figure below. However, there were no significant differences in this respect between lower- and upper-secondary school students ($p = 0.429$).

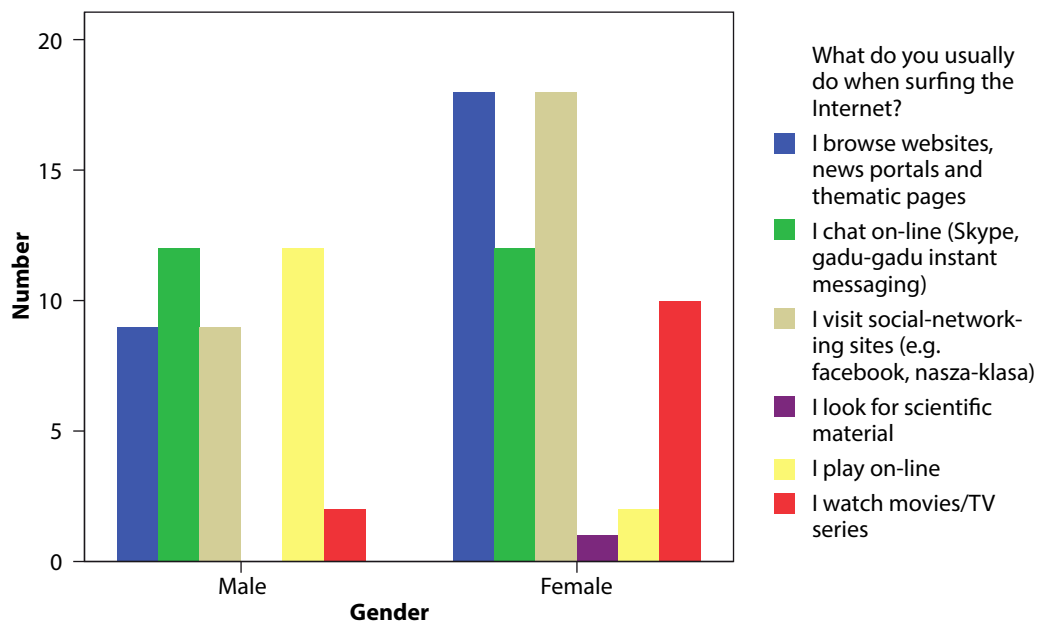


Figure 1.
Activities performed by young people on the Internet and gender.

Another issue was that of the assessment by teenagers of time spent in cyberspace. This is presented in Figure 2.

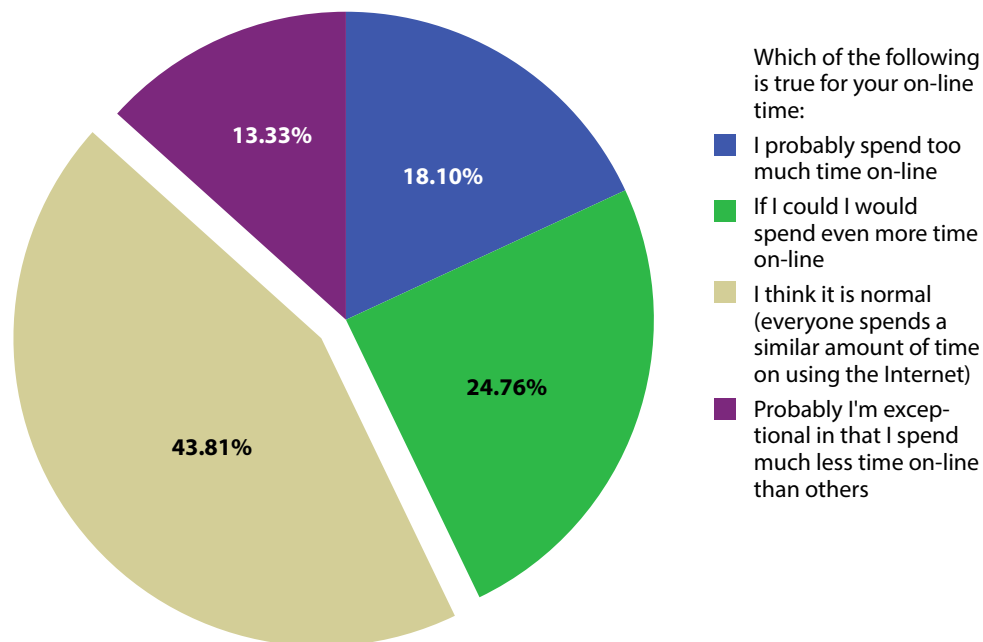


Figure 2.
The assessment of time spent on the Web by the subjects.

The majority of respondents (44%) concluded that the amount of time they spent on the Internet "was the norm." As many as 25% of them declared that if they could they would spend even more time on the Internet. And 18% of the subjects, i.e. nearly every one in five, believed that they spent too much time on the Web. The lowest percentage (13%) considered themselves exceptional in that they spent much less time on the Internet than their peers.

The statistical data showed no significant differences between the genders in this respect ($p = 0.112$). However, female students were more likely to report that they were "exceptional" in spending too little time on the Web. In addition, there were no significant differences between lower- and upper- secondary school students ($p = 0.695$).

The next investigated issue related to the use of social-networking sites by the subjects. The analysis of the collected empirical data showed that as many as 93% of respondents used social-networking sites. Usually, the teenagers visited them everyday (83%) and in the majority of cases spent up to 3 hours a day doing so (46%). No major differences were observed between the genders, with both men and women devoting similar amounts of time to visiting social-networking sites ($p = 0.479$). However, lower-secondary school students, allocated significantly more time than their upper-secondary school counterparts ($p = 0.045$).

Moreover, almost three out of four respondents (64%) declared that social-networking sites helped them maintain relationships with friends, although this proved more true for lower- rather than upper-secondary school students ($p = 0.032$). All in all, as many as 37% of respondents met their friends outside the Internet "frequently," i.e. a few times a week.

On the other hand, 42% of the subjects admitted to rarely meeting their friends outside school. It is important to note, however, that 1% of students did not meet their friends outside school at all. Male students met their friends less often than female ones, but the difference was not significant ($p = 0.188$). In turn, upper-secondary school students met their friends more often than their lower-secondary school peers, with the difference again being statistically irrelevant ($p = 0.336$).

Another analysed issue included the choice of activities preferred by young people in their free time. The top choice was using the Internet (36%), followed by active recreation, such as playing sports (28%). One in five respondents would play computer games. The least popular option was learning (4%), and only 5% of respondents would choose to spend some time with their parents. When it comes to gender differences, the distribution of answers is presented in the figure below.

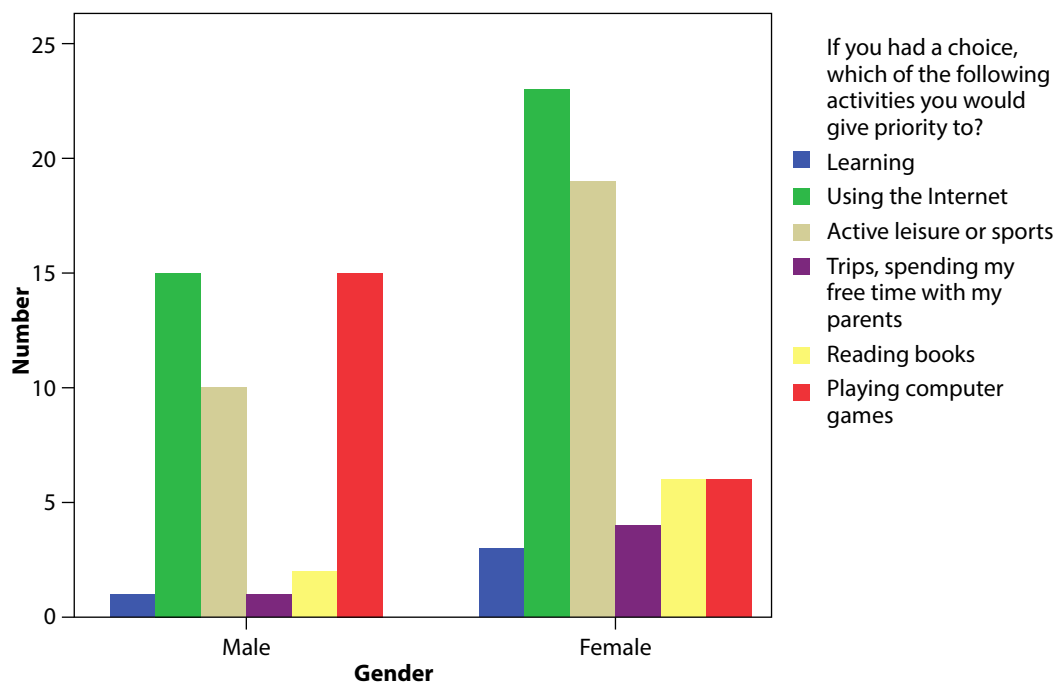


Figure 3.
Preferred free-time activities and gender.

The analysis of the above-mentioned data reveals some differences between the male and female populations in respect of activities undertaken in free time, yet these are not statistically relevant ($p = 0.059$). It is noteworthy, however, that female students were more likely to choose sports and reading books than their male peers, who, apart from the Internet, also preferred computer gaming.

Some statistically-relevant differences ($p = 0.025$) were found, however, in terms of school type. Namely, lower-secondary school students chose the Internet and computer gaming, while upper-secondary school students preferred active recreation, sports and reading (see Figure 4).

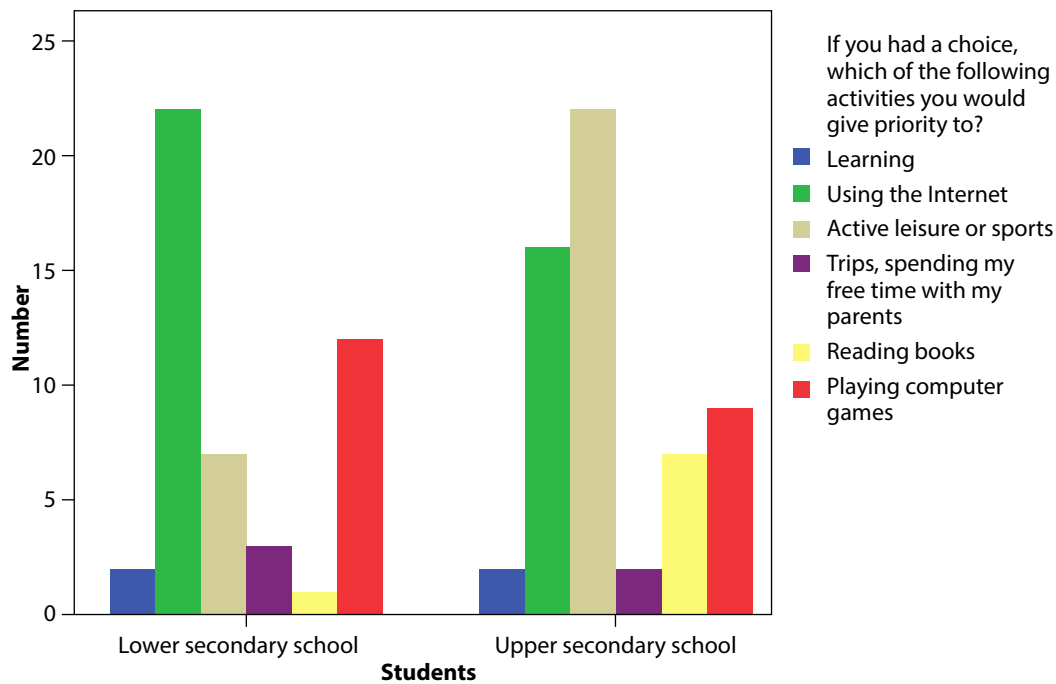


Figure 4.
Preferred free-time activities and the type of school.

The next problem concerned Internet communication, as shown in the tables below.

Table 2
Internet communication and direct human contact

<i>Can on-line communication replace direct contact with another person?</i>	<i>N</i>	<i>%</i>
Absolutely yes	1	1
Rather yes	28	26.7
Rather no	51	48.6
Absolutely not	25	23.8

The analysis of the above data shows that respondents usually (48.6%) believed that social-networking sites rather could not replace direct, close relationships with other people, while almost every one in four students (23.8%) considered it absolutely not possible. Nevertheless, what is of considerable importance here, is that as many as 26.7% of respondents viewed it as rather possible.

Moreover, it was observed that upper-secondary school students were much more likely to believe that social-networking sites would not replace direct human contact ($p = 0.005$).

Table 3
Taking pleasure in on-line communication as viewed by the subjects

<i>Does on-line communication give you more pleasure than real-world contacts?</i>	<i>N</i>	<i>%</i>
Yes	14	13.3
No	64	61
Hard to say	27	25.7

The above data show that respondents generally denied (61%) that they enjoyed on-line communication more than real-world contacts. However, as many as one in four students (25.7%) hesitated about this issue. There were no significant differences between the genders in this respect ($p = 0.517$). In addition, lower-secondary school students were more likely to state that the Internet had taken the place of reality than their upper-secondary school peers, but the difference was negligible ($p = 0.066$).

Nearly 70% of respondents had never tried to reduce the amount of time they spent on the Internet. Every one in three students had attempted to reduce their Internet time, but in the majority of cases these efforts failed. Male students were more likely than female ones to reduce their Internet usage, but the difference was not statistically-relevant ($p = 0.78$). Furthermore, lower-secondary school students more often tried to limit their on-line time, however to no avail, but the difference proved irrelevant ($p = 0.12$).

When assessing the time spent on the Internet, the evaluation covered issues related to neglecting school work and domestic chores, as presented in Figure 5.

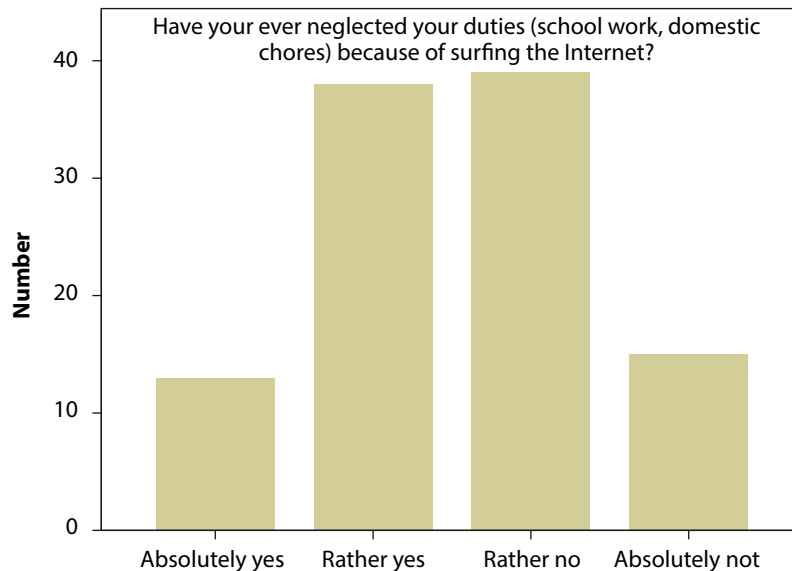


Figure 5.

Neglecting school work and domestic chores in the opinion of respondents.

Data evaluation shows that a considerable group of students (36% of *rather yes* answers and 14% of *absolutely yes* answers) neglected their school work and domestic chores to surf

the Internet. Male students proved more likely to do so than female ones, although the difference was not statistically relevant ($p = 0.08$).

Other of examined issues included the relationships between the surveyed lower- and upper-secondary school students and their parents. The results are presented below in the form of figures and tables.

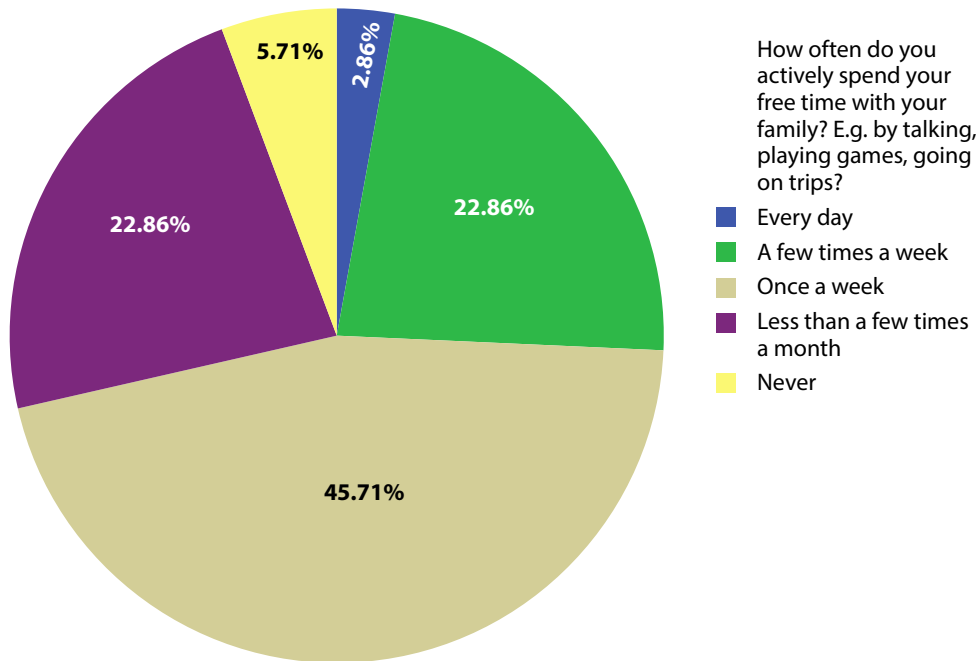


Figure 6.
Free time spent with family as perceived by the subjects.

As shown on the above figure, most of the respondents (45.7%) actively spent their time with their families once a week, after 10 pm, 9% of the surveyed population did so "less than several times a month" or "a few times a week." At the other end of the spectrum, with less than 3%, were those spending time with their families every day, while 6% did not spend any time with their parents. Female students were found to spend some time with their parents more often than male students.

When it comes to the assessment of child–parent relationships, the majority of respondents (48%) evaluated them as average. Both good and poor child–parent relationships were reported by equal proportions of respondents (23% each), and very poor relationships were declared by the lowest number of students (2%).

Female students reported better contacts with their parents than male students, yet the difference was not statistically relevant ($p = 0.168$). Upper-secondary school students also reported better contacts with their parents than lower-secondary students, with the difference not being statistically relevant ($p = 0.161$).

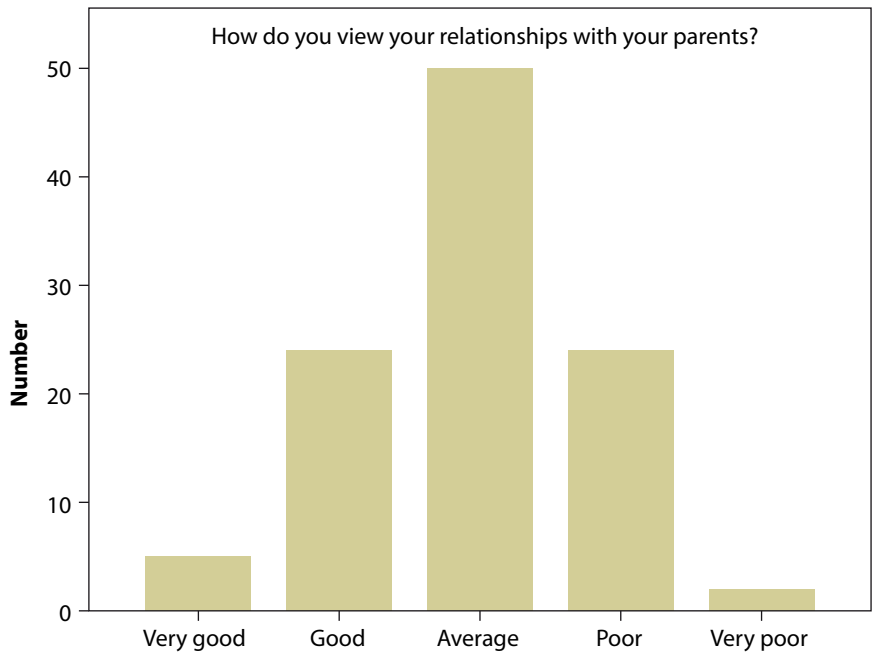


Figure 7.
Child-parent contacts as viewed by the subjects.

The next problem concerned changes in child-parent relationships due to the Internet use, as shown in the figure below.

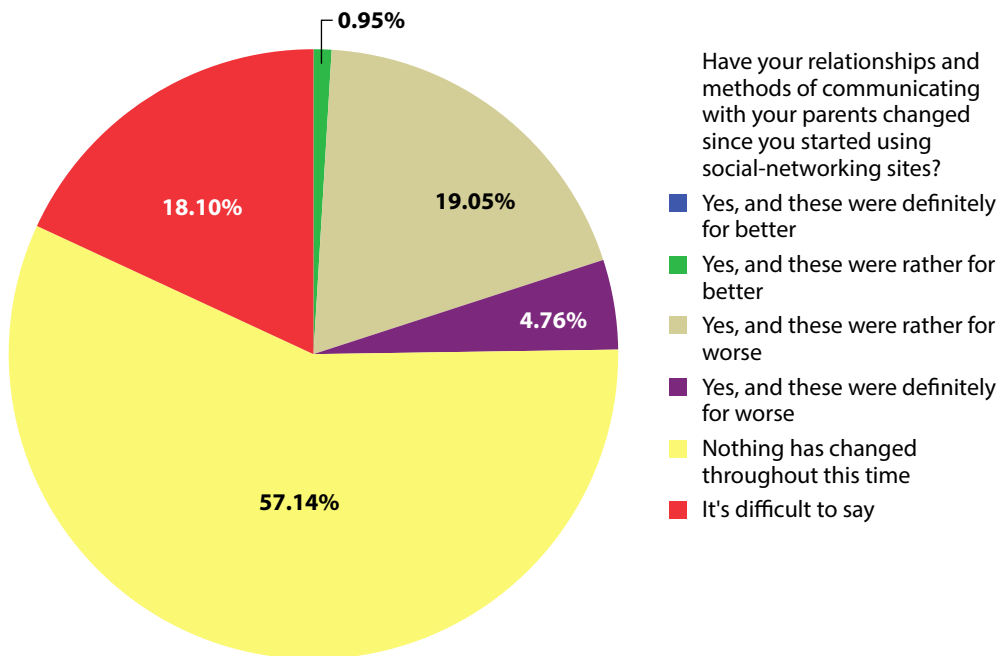


Figure 8.
Changes in child-parent relationships due to the Internet use.

More than half of the respondents (57.14%) reported that nothing had changed in contacts with their parents since they had had started using the Internet. Nearly every one in five respondents (19.05%) claimed that their contacts had rather deteriorated and every one in twenty (4.76%) declared that these were definitively changes for worse. Almost every fifth person (18.1%) found it difficult to assess this. No relevant differences were observed in this respect between the genders ($p = 0.167$) and between lower- and upper-secondary school students ($p = 0.185$).

Further issues concerned complaints by other people regarding on-line surfing by the surveyed students (see Figure 9).

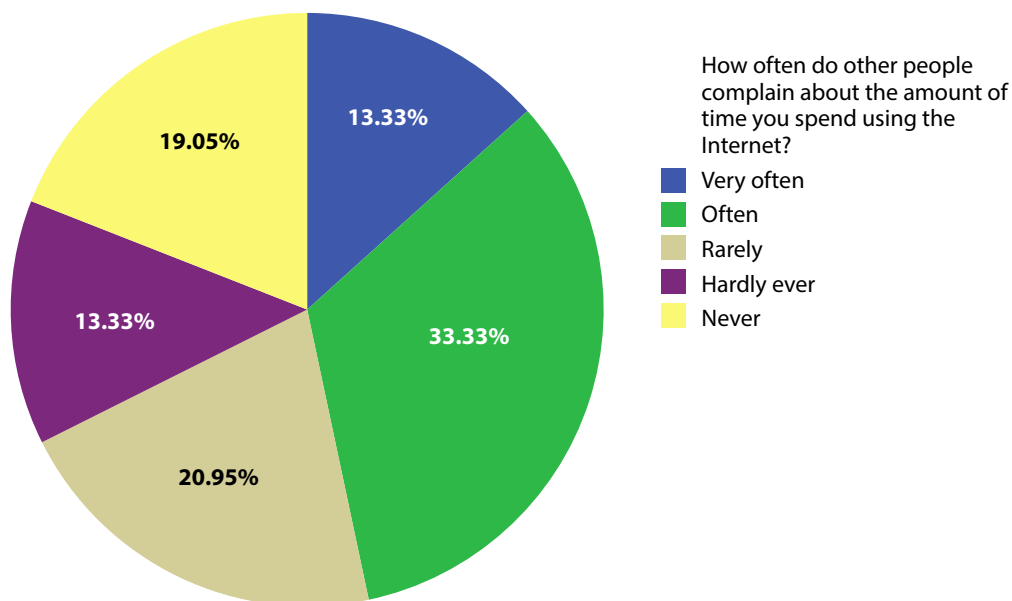


Figure 9.
Complaints regarding the amount of time spent by the subjects on the Internet.

Generally, the surveyed population (33.33%) reported that others frequently complained about the amount of time they spent on using the Internet. Every fifth respondent (20.95%) declared that they rarely received such complaints and a similar proportion of respondents (19.5%) did not have any such experiences whatsoever. In addition, it was observed that the parents of male students were much more likely to complain about the amount of time their sons spent using the Internet ($p = 0.019$) than the parents of female ones. Similar differences were found in respect of type of school where the parents of lower-secondary school students were much more likely to complain about the amount of time their children spent using the Internet ($p = 0.014$) than the parents of their upper-secondary school peers.

The next investigated issue was related to the negative consequences of spending time on-line, as presented in the figure below.

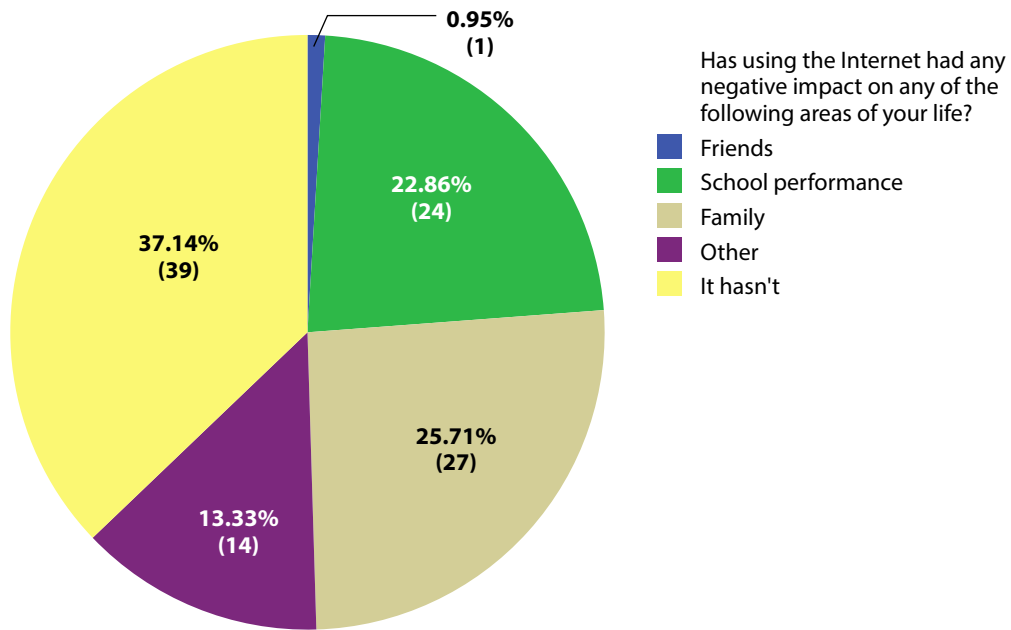


Figure 10.

The negative impact of the Internet on the lives of the subjects.

The surveyed population generally believed that using the Internet did not have any impact on their lives (37.14%), but every one in four students (25.71%) reported that using the Internet had a negative effect on their family relations. Likewise, a considerable number of learners (22.86%) declared a negative impact of using the Internet on their school performance.

Moreover, using the Internet had a more negative effect on school performance and family relations in the case of male students than female ones (a large, yet irrelevant difference, $p = 0.080$). The distribution of these results is illustrated in the figure below.

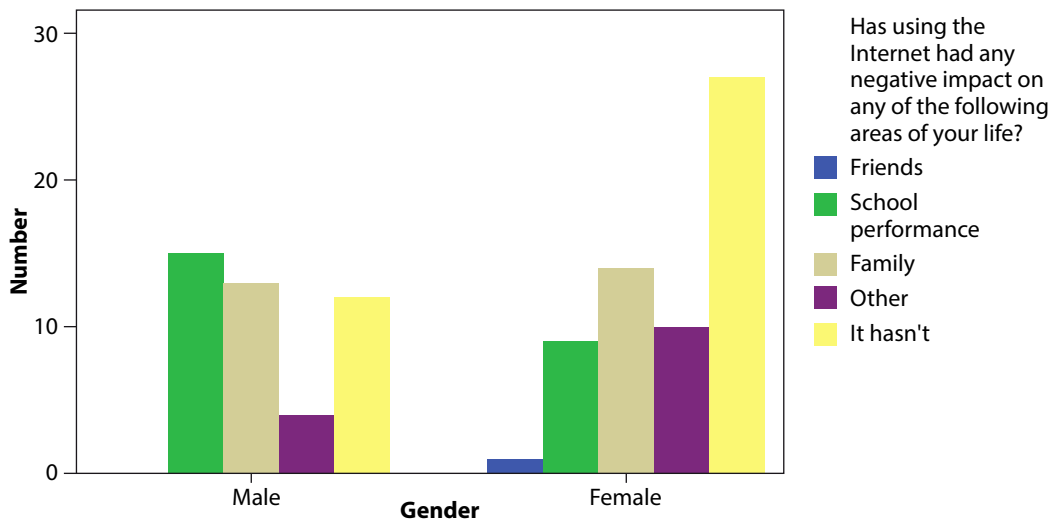


Figure 11.

The negative impact of the Internet on selected areas of respondents' lives and their gender.

Similarly, using the Internet proved to have a greater impact on the lower-secondary school students than on the upper-secondary school ones. For the former, it was more about the family, while for the latter—school performance. Even though this difference was rather profound, it was not relevant ($p = 0.067$), as shown in Figure 12.

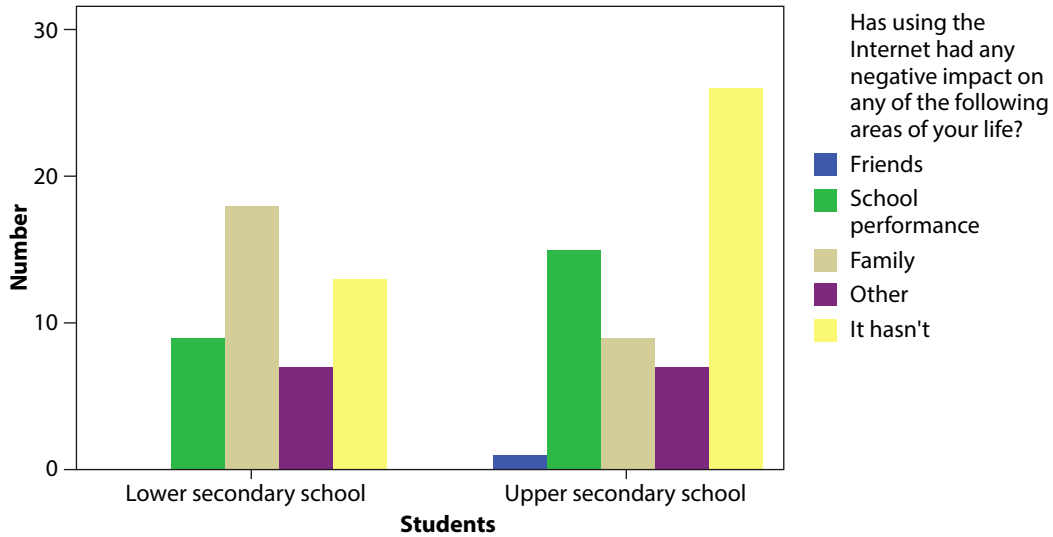


Figure 12.

The negative impact of the Internet on selected areas of respondents' lives and the type of school.

Moreover, the respondents generally (60%) declared that using the Internet helped them forget their problems, with lower-secondary school students admitting to it more frequently than upper-secondary school students. It was also observed that on-line surfing makes as many as 37.14% of students happy, and nearly 30% feel relaxed, while 14% bored (for the distribution of these results, see Figure 13).

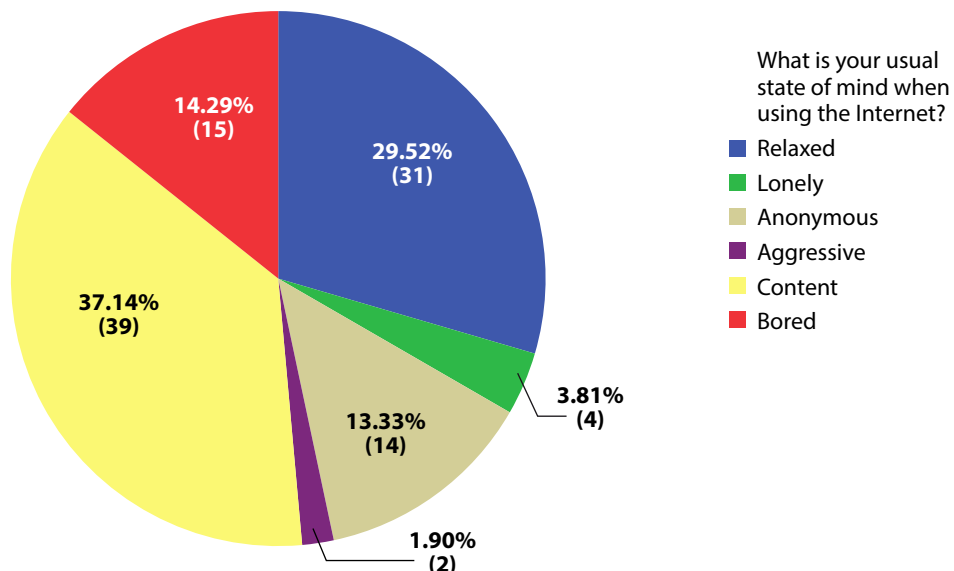


Figure 13.

Emotional states of the subjects while using the Internet.

In addition, upper-secondary school students declared that they relaxed on the Web and it was their remedy for loneliness, while their lower-secondary school peers reported to be more aggressive and bored (these differences are not statistically relevant, $p = 0.052$).

The analysis of the other results concerning the activity of the surveyed students on the Web shows that the majority of respondents (40%) could not imagine their lives without the Internet, while for 39% it would be very difficult and every one in five (21%) could easily do without the Internet. Furthermore, female students found it easier to quit using the Internet than their male peers (the difference is statistically relevant, $p = .01$). Likewise, refraining from the use of the Internet would not constitute a problem for upper-secondary school students, but it would be very difficult for lower-secondary school students (the difference is statistically relevant, $p = 0.045$).

Other of the addressed issues pertained to the assessment of the family by the subjects as a psychosocial system. The distribution of results within The Family Profile Inventory by Gaś is presented in the table below.

Table 4
The distribution of results within The Family Profile Inventory scales

Scale name	N	Minimum	Maximum	Mean	Standard deviation	Sten
Family Cohesion (C)	105	1.00	37.00	16.71	10.14	5
Flexibility (F)	105	0.00	34.00	17.33	9.95	4/5
Mutual Understanding (MU)	105	1.00	27.00	16.47	6.63	4
Family Roles (FR)	105	2.00	44.00	13.94	9.67	5
Development Difficulties (DD)	105	1.00	18.00	7.19	4.06	5
Family Disintegration (FD)	105	0.00	20.00	6.06	5.15	6
Sense of Functionality (SF)	105	0.06	19.40	3.63	4.03	7

The analysis of data presented in the table above shows that respondents reported the lowest values for *mutual understanding* (MU value = 16.47 points corresponds to sten 4). This means that the surveyed population assessed their families' capacity for communication as functioning slightly worse than in an average family. On this basis, it can be inferred that these families exhibit some difficulties in understanding why their individual members behave the way they do.

The surveyed lower-secondary school students ranked the *sense of functionality* on top (SF = 3.63 pts is sten 7), which means that young people individually evaluate the functionality of their families in positive terms. Therefore, it can be concluded that communication problems do not result in a complete deterioration of family bonds.

The other results in the Gaś's Inventory were around the average. Consequently, the respondents assessed their emotional relationships within the family *cohesion* (C = 16.71 pts –sten 5), as moderate, with the external boundaries of the family system remaining partially open and those internal being fully open.

The resultant score on the *flexibility* scale (F = 17.33 pts), ranged from sten 4 to 5, and, more specifically, around the upper limit below the average. This means that the surveyed

students believed that the abilities of their families for changing the structure of power, modifying family principles or exchanging family roles, were often difficult to achieve and considered them to be slightly below their typical level. Therefore, the surveyed population believed that in their families it was sometimes difficult to introduce any changes or constructively address problems, and family decisions were generally made in an authoritative and categorical manner.

On the *family roles* scale the respondents scored RR = 13.94 pts (sten 5). This means that detrimental attitudes appearing within the family are considered in respect of their intensity as similar to those present in other families.

As regards the perception of *development difficulties* within the family (DD = 7.19 pts – sten 5), the surveyed students recognise the attempts their families make to confront these difficulties, but sometimes they are faced with helplessness and routine approaches.

In respondents' opinion their families try to unite when faced with a crisis and make efforts to reinforce their strengths (*family disintegration* FD = 6.06 pts – sten 6) which proves either more or less successful.

Moreover, the analysis of results shows that there are some major differences between the genders. These are to be found in respect of the following scales: *mutual understanding* ($p = 0.04$) and *flexibility* ($p = 0.05$), to the benefit of girls. Therefore, it can be inferred that boys receive considerably less understanding from their parents and that they show lower family flexibility. There are also some differences between lower- and upper-secondary school students in relation to the *flexibility* scale. The former evaluated this aspect of family functioning lower than the latter. However, the difference is not statistically relevant ($p = 0.09$).

Another of the analysed problems involved the relationship between using the Internet and the perception of the family by the surveyed students.

Table 5
Relationships between survey answers and scales from The Family Profile Inventory by Gaš (only relevant correlations included)

Question No.	Family Profile scale	Correlation coefficient (Spearman's rho)	Relevance level (p)
Question 1. How often do you use the Internet?	MU	0.289	0.003
Question 3 How many hours a day do you surf the Internet?	C	-0.441	0.000
	F	-0.505	0.000
	MU	-0.569	0.000
	FR	0.231	0.018
	DD	0.348	0.000
	FD	0.365	0.000
	SF	-0.430	0.000

<i>Question No.</i>	<i>Family Profile scale</i>	<i>Correlation coefficient (Spearman's rho)</i>	<i>Relevance level (p)</i>
Question 6. Which of the following is true for your on-line time?	C	0.228	0.019
	F	0.276	0.004
	MU	0.334	0.001
	SF	0.218	0.025
Question 7. Does using social-networking sites help you keep in touch with your friends?	MU	0.207	0.034
	FR	-0.280	0.004
	FD	-0.204	0.037
Question 8. How often do you spend your free time with your friends outside the Internet?	C	-0.487	0.000
	F	-0.482	0.000
	MU	-0.412	0.000
	FD	0.261	0.007
	SF	-0.312	0.001
Question 10. Can on-line communication replace direct contact with another person?	C	0.333	0.001
	F	0.352	0.000
	MU	0.356	0.000
	FD	-0.223	0.022
	SF	0.254	0.009
Question 13. Have you ever neglected your duties (school work, domestic chores) because of surfing the Internet?	C	0.455	0.000
	F	0.382	0.000
	MU	0.486	0.000
	FR	-0.284	0.003
	DD	-0.264	0.006
	FD	-0.384	0.000
	SF	0.381	0.000
Question 14. How often do you actively spend your free time with your family? E.g. by talking, playing games, going on trips?	C	-0.490	0.000
	F	-0.445	0.000
	MU	-0.567	0.000
	FR	0.383	0.000
	DD	0.470	0.000
	FD	0.489	0.000
	SF	-0.540	0.000

<i>Question No.</i>	<i>Family Profile scale</i>	<i>Correlation coefficient (Spearman's rho)</i>	<i>Relevance level (p)</i>
Question 15. How do you view your relationships with your parents?	C	-0.699	0.000
	F	-0.709	0.000
	MU	-0.730	0.000
	FR	0.416	0.000
	DD	0.613	0.000
	FD	0.583	0.000
	SF	-0.672	0.000
Question 16. Have your relationships and methods of communicating with your parents changed since you started using social-networking sites?	C	0.230	0.018
	F	0.209	0.033
	FR	-0.298	0.002
	DD	-0.320	0.001
	FD	-0.341	0.000
	SF	0.285	0.003
Question 17. How often do other people complain about the amount of time you spend using the Internet?	C	0.544	0.000
	F	0.535	0.000
	MU	0.613	0.000
	FR	-0.391	0.000
	DD	-0.426	0.000
	FD	-0.536	0.000
	SF	0.567	0.000
Question 19. Have you ever used the Internet to forget about your problems or about having a bad day?	C	0.367	0.000
	F	0.336	0.000
	MU	0.390	0.000
	FR	-0.205	0.036
	FD	-0.297	0.002
	SF	0.307	0.001

The assessment of the data presented in the table above shows that the answers to most questions correlate (to a higher or lower degree) with almost all scales in The Family Profile questionnaire by Gaś. This indicates that positive dimensions of the family system functioning, i.e. cohesion (C), flexibility (F), and mutual understanding (MU), dominate in the families in which:

- children spend little time in front of the computer;
- children use the computer chiefly for scientific purposes;
- children are able to differentiate between the real and virtual worlds and to quit using the Internet at any time.

On the other hand, the negative dimensions of the family system operation, i.e. family roles (FR), development difficulties (DD), and family disintegration (FD), dominate in the families in which:

- children spend a lot of time in front of the computer;
- children use the Internet solely for the purposes of playing on-line games or spending time on social-networking sites;
- children are unable to balance the real and virtual worlds and to quit using the Internet.

The verification of research hypotheses

In order to verify the hypothesis concerning the relationship between the amount of time spent by young people on the Internet and the amount of time spent with their families, their answers to selected survey questions were correlated, as shown in Table 9.

Table 6
Correlation coefficients (Spearman's rho) for answers to selected questions

		How many hours a day do you spend surfing the Internet?	How often do you active- ly spend your free time with your family?
How often do you use the Internet?	Correlation coefficient	-0.392*	-0.178
	Relevance (two-tailed)	0.000	0.070
How many hours a day do you spend surfing the Internet?	Correlation coefficient		0.382*
	Relevance (two-tailed)		0.000

* statistically-relevant correlation

On the basis of the data in the table above it can be concluded that the amount of time spent daily by young people on surfing the Internet shows a positive correlation ($\rho = 0.382$, $p = 0.000$) with the amount of time actively spent with the family. This means that the more hours a day young people spend on the Internet, the less time they spend with their families and the lower their involvement in family life. A similar relationship is seen in respect of the frequency of Internet use, however this correspondence is not statistically relevant ($\rho = -0.178$, $p = 0.07$). Therefore, the hypothesis, stipulating that the free time spent on the Internet by the surveyed lower- and upper-secondary school students is negatively correlated with the time they spend with their families, can be confirmed as valid.

In order to verify the next hypothesis, arguing that there is a relationship between the use of social-networking sites by young people and maintaining relationships in real life, the respondents' answers to selected questions from the survey were correlated, as shown in Table 10.

Table 7
The correlation coefficient (Spearman's rho) for answers to selected questions

		<i>How often do you spend your free time with your friends outside the Internet?</i>
Do you use social-networking sites?	Correlation coefficient	-0.303*
	Relevance (two-tailed)	0.002

* statistically-relevant correlation

The analysis of these results shows that there is a negative correlation ($\rho = 0.303$, $p = 0.002$) between using social-networking sites and social relationships in the real world. In view of the above, it can be concluded that the frequent use of such websites by the surveyed young people reduces the number of social relationships outside the Internet and causes their lower participation in social life in their free time. Consequently, the hypothesis has been proven to be right.

The last hypothesis concerned the general relationship between the functioning of the family and the subjective assessment of family bonds by the surveyed young people. In order to verify this claim, answers to selected questions from the survey and the SF value from The Family Profile questionnaire by Gaś, were correlated, as presented in the table below.

Table 8
The correlation coefficient (Spearman's rho) for answers to selected questions and the family functioning indicator

		<i>Functionality Level</i>
How do you view your relationships with your parents?	Correlation coefficient	0.672*
	Relevance (two-tailed)	0.000

* statistically-relevant correlation

The analysis of these data shows that there is a statistically-relevant relationship ($\rho = 0.672$, $p = 0.000$) between the general level of family functioning and the subjective assessment of family bonds, which confirms the assumed hypothesis. Accordingly, the higher the subjective assessment of family bonds, the higher the sense of family functionality.

For the purpose of further analysis, the amount of complaints on the part of parents about the time spent on the Internet, and the perception of the family-functioning system by young people, was examined. The results of this analysis are presented in the table below.

Table 9
The correlation coefficient (Spearman's rho) for answers to selected questions and the Family Profile scales

Question No.	Scale	Coefficient value (Spearman's rho)	Relevance level (p)
How often do other people complain about the amount of time you spend using the Internet?	C-Cohesion	0.544	0.000
	F-Flexibility	0.535	0.000
	MU-Mutual Understanding	0.613	0.000
	FR-Family Roles	-0.391	0.000
	DD-Development Difficulties	-0.426	0.000
	FD-Family Disintegration	-0.536	0.000
	SF-Sense of Functionality	0.567	0.000

The analysis of the above-mentioned data shows that the amount of complaints on the part of parents about the time spent on the Internet by their children positively correlated with positive dimensions of the family system, i.e. *cohesion, flexibility, mutual understanding* and *sense of functionality*, and negatively with *family roles, development difficulties* and *family disintegration* ($p = 0.000$). Consequently, it can be concluded that the more often parents complain about the time their children spend on the Internet, the more the children perceive their families as helpless and problematic, thus ascribing negative characteristics to their parents. And conversely, the less complaints from parents, the more positive assessment the family system receives from children.

The Discussion on the Findings

The analysis of the collected empirical data indicates a positive verification of all the stipulated research hypotheses. Therefore, a considerable amount of time spent on the Internet by the surveyed lower- and upper-secondary school students results in their reduced involvement with family relations, while also limiting the amount of time spent together with their parents. On the other hand, parents' complaints addressed towards the students and regarding the excessive amount of time spent on the Web, make the young people's relationships with their parents deteriorate and cause the latter to see the family in negative rather than positive terms.

Moreover, the findings suggest that the positive perception of young people in respect their family relations is connected with the increased sense of the general functionality of the family, i.e. higher satisfaction with their family relations and a more positive image of the family.

The evaluation of these results also indicates that the frequent use of social-networking sites by the surveyed students reduces the number of social relationships in the real world and causes them to withdraw from their social lives and contacts with other people.

What is disturbing is the fact that some of the surveyed students spend a considerable amount of time on the Internet, without even controlling it and consequently being unaware of it going out of hand. This excessive on-line activity and considerable amount of time

might suggest the risk of Internet addiction. The majority of the surveyed students declared that they could not imagine their lives without access to the Internet.

Despite some undeniable benefits of cyberspace, such as rapid on-line communication, Internet's resourcefulness, its easy accessibility, etc., it needs to be emphasised that this medium entails a number of risks. Namely, it can cause family bonds to deteriorate and make individual members of the family isolate themselves from one another, thus reducing the amount of honest conversations between children and parents, and weakening mutual trust. This can lead young people to develop cyberspace escape mechanisms to avoid any problems in the real world such as having a bad day or foul mood. This study confirms such behaviours in young people.

The analysis of the above-mentioned data is also reflected in various studies on the impact of the Internet on social relations, as conducted by other authors. Consequently, a considerable amount of time spent in an on-line environment gives it a label of being a "time thief." Research shows that people who spend a lot of time on-line lose touch with their families and friends. Such people also report a greater sense of loneliness or even depressive disorders (Wallace, 2004). In addition, mass media (and especially computers and the Internet) consume children's time and steer them away from learning, family responsibilities and more ambitious pastimes (Kossowski, 2000).

Erding's study findings (as cited in: Andrzejewska, Bednarek, & Szarżała, 2007) indicate that some (extreme) Internet users experience a reduction in the number of interpersonal relations and in their involvement with social life. Similar conclusions have been reported by Kraut (*ibid.*). According to this author, extreme Internet use causes lower involvement in family relations.

On the other hand, findings by Katz, Rice and Aspen (as cited in Puchała, 2009) suggest rather positive aspects of using cyberspace. Indeed, these authors have reported that Internet users were more active in their local communities and public affairs than non-users; they were also found to meet more with their friends and to be more active outside their domestic environment.

Conclusions

In recent years, the educational significance of electronic media has grown, and the computer and the Internet are now one of the most vital parts in the lives of children and teenagers alike. The virtual reality has been developing and changing at an amazingly rapid pace. In the meantime, the distinction between the real world and cyberspace has continued to blur. Some people are unable to keep up with these changes and others become lost, since there are no road signs, rules or guidelines for using cyberspace. No one controls what is going on within this virtual world. Nevertheless, it is important to remember that this continuously-growing digital world is not only a great opportunity for humanity as a whole, but also a very real threat, especially for young people.

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Computer Addiction – Studies Taken in 1999–2010

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ABSTRACT

The paper is a brief presentation of research on computer addiction, conducted at the University of Science and Technology in Krakow in the years 1999–2010. The introduction presents the criteria of Internet addiction, and the main body of the paper consists of research results presentation. Conclusions are focused on such issues: the prevalence of Internet addiction in Poland, personality correlations of Internet addiction, effectiveness of the therapy of Internet addiction syndrome.

Keywords: computer addiction, Internet addiction, therapy

In the era of the formation of the information society, dominated by the Internet, new scientific sub-discipline are created, including psychology of the Internet. Over the last 14 years, this relatively still little known area of exploration research was the subject of my studies. The course and results of studies on computer addiction and relating them to the world of literature, I presented in detail in a monograph devoted to this issue, I also presented there the detailed bibliography of used sources (Augustynek, 2010). In this paper I will confine myself only to present the overall results of the study.

Conduction of these research was possible largely due to the fact that in the years 1999–2010, the staff of the Faculty of Humanities at the University of Science and Technology in

Krakow carried out a long-term research program on the evolution of Polish information society, under the direction of Professor Lesław Haber. The psychological testing was conducted in large groups of people in different configurations of analyzed characteristics of respondents.

Three criteria were applied to recognize the Internet addiction:

1. **Addiction symptoms** – the respondents answered following questions:
 - “Do you experience hours of uninterrupted sessions on the Internet?”
 - “Do you often think, what you did or what you will be doing on the Internet?”
 - “Can you control the time spent on the Internet?”
 - “Has this amount of time extended lately?”
 - “Does it happen you neglect other issues or responsibilities because of the Internet?”
 - Does the Internet serve as an escape from your problems, anxiety or depression?”
 - Does the person next to you believe that you spend too much time online?”
2. **Self-assessment** – the respondents answered the question: “Do you consider yourself as a computer addict?”
3. **The amount of time spent on the computer** regardless of the job and studying. It was assumed that:
 - up to 30 hours per week spent on the Internet is the rational use;
 - 31–49 hours per week is a threat to excessive use;
 - 50–62 hours per week is excessive use;
 - 63 or more hours a week is a destructive use.

Searching the connection between personality characteristics and Internet addiction, researchers used the Eysenck's Maudsley Personality Inventory (MPI) in authorized adaptation and with Polish standards, in authorship of Choynowski (1996, 51–95).

While doing the statistical processing of collected material, the researches resigned of using more advanced statistical tools. This is due to the fact that the figures are derived primarily from the numbers declared by the respondents, based on their subjective assessment. In addition, not representative of the population of Internet users, purposeful selection did not allow for the exploration of statistically significant differences in the results between groups. Therefore, the statistical analysis have been used only two basic tools: the arithmetic mean and the Pearson correlation coefficient (Brzeziński & Stachowski, 1984).

Additional, but very important, source of information was the analysis of information obtained from persons taking computer addiction therapy (Augustynek, 2010). For this case, the method of case study was used.

The multistage research has begun in 2000. It was assumed that the analytical basis will provide the material collected in the next stages of research exploration, which will enable to capture the dynamics of qualitative and quantitative changes that have taken place between the successive stages of research.

Phase I was completed in 2000. Respondents were students living in dormitories of the University of Science and Technology in Krakow. This was clearly purposeful selection of the research sample. Differentiating variables of respondents were sex and year of study. The study was conducted on a group of randomly selected 1,461 students from all faculties of the University, in age from 19 to 23 years. Among them were 566 women and 895 men.

In January and February 2003, Phase II of the research was completed. The study included a total of 4,803 students from all faculties of the University, in age from 19 to 27 years.

In 2005, 1,011 people were carried out in Phase III of the research. The subjects were students, graduates and academics of the University of Science and Technology, Jagiellonian University and the Academy of Economics (now the University of Economics).

Another, Phase IV of the research was carried out in 2006. The studies involved a total of 751 people diversified in terms of level of education: 31% had a primary, in which 1% are high school students, 41% medium, including 3% of them were students, 28% higher.

Phase V took place in 2010 on the basis of 314 students of the University of Science and Technology.

A separate direction of research was to analyze cases of people addicted to the Internet, attending to the therapy to the Centre, which I led. In the period from 1 January 2000 to 31 December 2008, 17 people declared to the psychotherapy of Internet addiction. 10 of these 17 patients took at least three sessions of psychotherapy and I included them in the analysis. The others, after the initial visit or in one case after another, withdrew from treatment without reporting to an appointment.

Research were focused on four issues:

1. The prevalence of Internet addiction in Poland.
2. Are the most popular features of the Internet the most addictive as well?
3. Personality correlations of Internet addiction.
4. Effectiveness of the therapy of Internet addiction syndrome.

Ad 1. Assuming the other authors, we have 5% of addicts, from about 15 million Internet users in Poland, it gives the monstrous number about 750,000 "internetoholics." It is not confirmed in clinical practice of centers for addiction therapy. Why is this happening? By entering the study, I believed that there are two possibilities: (a) the erroneous Internet addiction criteria was taken and (b) it is the result of methodological errors in conducted research.

To this question I formulated the research thesis: The number of people addicted to the Internet have been overstated in the vast amount of scientific studies on the subject (it was generally from 5% to as much as 12% of Internet users). It found experimental confirmation, as it turned out that the number of Internet addicts was assessed using three diagnostic criteria (duration of logging on to the network, the symptoms of addiction and self-esteem of being addicted), depending on the characteristics of the respondents, ranged between 0.5% and 1.2%. The results and analysis of other authors indicate, that this is the effect of the acceptance by them the logging time more than 50 hours a week, as a primary criterion of Internet addiction. The researchers do not isolate the number of hours devoted to work and education. In contrast, a high performance self-assessment of Internet addiction is the result of confusion between the concepts of Internet interests, hobbies, passions, relationships (necessary relation between person and the elements of its environment) of the concept of addiction (pathological, harmful use) and therefore the long time spent on work or the computer science treat as a symptom of addiction.

Assuming that the prevalence of Internet addiction among Polish Internet users is approximately 1%, in Poland exist 150,000 people addicted to the Internet. Having regard to the fact that the majority of Internet addicts are not seeking treatment, the scale of the occurrence of this addiction was confirmed by the data of the Ministry of Health of Poland. It is stated that at the end of 2009, at the Polish health centers were registered 22,000 inter-

netoholics. However, there is no information about the number of changes over the past few years.

Ad. 2. The group research has shown that the most popular Internet activity is an information exchange between Internet users (e-mail, chats, chat via instant messaging, groups and discussion forums, video conferencing). On the second place there is a wide process of obtaining information via the Internet. The third place is occupied by downloading various files (movies, music, software). Internet games are classified in the fourth place when observed in the last years of their decreasing popularity among students and people with higher education.

To this question I formulated the second research hypothesis: **The most popular online activities are the most addictive.** Among 10 people who have taken the treatment of Internet addiction, the half was dependent on the exchange of information with other users. Two of them were playing computer games in addictive way. The others were addicted to Internet pornography, gathering information on the network and hacking. Of course, on the basis of 10 people we can not draw far-reaching conclusions. However, in both studies, group and cases of people addicted to the Internet, the exchange of information between Internet users was by far at the first place and it should be considered as the most popular and also the most addictive web activity. Consequently, the second research hypothesis also found empirical confirmation.

Ad. 3. Personality predisposition to addiction to the Internet. The study detected a relationship of personality traits of subjects with time spent on the Internet. In the group of men, the opposite trend occurred than in women. It has been observed that introvertic women log-on to the network longer than extravertic ones, spending time mostly chatting online. In men, extroverts devote more time playing online in combination with introverts, participating in discussion groups, trading on the Internet, downloading different types of files (pornography, programs, movies, music). This compound is increased in the case of co-occurrence of elevated levels of neuroticism, both men and women. This dependence can be important in planning the treatment of people with different types of temper.

The other interesting relationship detected, was inversely proportional relationship between the level of computer skills and frequency of Internet use. The observed already in 2000 relationship between the level of computer knowledge and the frequency of logging on to the network has been confirmed by studies in 2003. Also the inversely proportional correlation of Internet users age and the time spent on the internet (regardless of the time spent on professional work or study) was detected. In other words, the younger was a surfer (regardless of gender), the more time they devoted to the Internet. The correlation coefficients were -0.32 in case of women ($n = 397$) and 0.27 of men ($n = 354$).

Ad. 4. The analysis was conducted by "case study method. This resulted from the fact that 17 internetoholics have reported to the therapy, and only 10 of them participated in at least 10 sessions. Four people out of these 10 persons reached therapeutic effect. All people who came to the treatment on their own initiative, received its good effect. This points to a significant role of motivation for the treatment. In the analysis of the effects of therapy, two other observed trends are interesting. Firstly, the person who has satisfied therapy results, did not have other addictions. Secondly, the treatment was successful only in extraverts, who

were critical of their addiction. In contrast, there was no additional effect of co-occurrence of mental disorders (e.g., neurotic anxiety or depression), the kind of addictive computer operations or work performing, on therapy results. But there was no effect of the kind of addictive computer activities, to the effect of therapy.

The analysis of the age of people responding to the treatment of Internet addiction, provided interesting insights. The average age of persons covered by the therapy was 32.8 years (range 24–47). In contrast, seven patients (all boys), who came to the therapy, but did not take part, were at mean age of 19.8 years (range 15–22), it is average 13 years less than people taking therapy. In turn, the average age of those who achieved the expected effect of therapy is 28.5 years and those who have not achieved positive results of treatment is 36.6 years. This may indicate that very young people suffer from Internet addiction too short to perceive a problem at home, while people over age 35 are so fixed on compulsive behavior that it is difficult to change them. Therefore, the best treatment effects would be expected in people at age 25 to 35 years. Conditions of favorable results of treatment in four patients can not be generalized in any way. They may be only a starting point for further exploration, possible when the number of persons covered by the therapy will increase. Because the available literature, the evaluation of the effectiveness of computer addiction therapy is not met, it is not possible to refer the results presented above to the accomplishments of other therapists.

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The Psychological Characteristics of Addictive Behaviour in Adolescents (on the Basis of Internet Addiction Disorder)

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ABSTRACT

This article presents an overview of the theoretical studies of addiction and addictive behaviour in psychology, the concept of Internet addiction disorder (IAD), its causes, types, and the characteristics of IAD in adolescents. It also includes the results of an empirical study aimed at identifying the level of susceptibility to Internet addiction in the adolescents studied, the connection between the susceptibility and such personality traits of the studied adolescents as credibility and susceptibility to various coping strategies. In particular, it is argued that the majority of the teens surveyed have quite high susceptibility to Internet addiction, while severe Internet addiction was not found in the subjects. It was also shown that the level of adolescents' susceptibility to Internet addiction was directly correlated with the tendency to use coping strategies such as escape-avoidance and distancing, inversely correlated with scores on the scales of credibility, problem-solving planning, acceptance of responsibility, finding social support, self-control and confrontational coping. It was established that the boys studied had higher levels of susceptibility to Internet addiction than girls.

Modern people face a variety of problems, stressful situations in which they have to make quick and not always very easy decisions, where it is necessary to make a choice and be prepared to bear responsibility for it. To address various issues that we face and to overcome difficult life situations, we always need some resource – that is the thing that gives us

strength, desire, and enthusiasm to solve our problems, the thing that fills us with faith in ourselves and our capabilities.

However, there are situations when there are not enough resources in order to get out of the difficult situation in which we have found ourselves. In such situations people lose heart, become depressed, experience health problems and are reluctant to do anything due to disbelief in their own abilities, etc. Unfortunately, currently, a significant percentage of people who find themselves in such situations run away from the seemingly complex, incomprehensible, hostile reality into the world of fantasies and dreams, a world where all the problems disappear and one which eliminates the need to take responsibility for own behaviour. This is how addiction disorders develop.

Despite the fact that the concepts of addiction and addictive behaviour are relatively new in psychology, many researchers have considered the issue. Thus, the pioneer researchers in this field are T. Korolenko, A. Tymofeeva, A. Akopov. Great attention to the problems of addiction and in particular to the addictive behaviour of teenagers has been given by S. Smagin and other scholars - both foreign as well as domestic and Soviet scientists.

Talking about the age aspect of developing addictive behaviour or predisposition to it, we should mention that adolescence is particularly dangerous and risky in this context. It is at this age that we begin to become maximalists (there is also the phenomenon of “youth maximalism” at a later age). By resorting to a very destructive and harmful pattern of behaviour, often we do not see or do not want to see a variety of ways of solving complicated situations. Moreover, at this age, even small difficulties seem enormous, very difficult and hopeless. Due to this, teenagers are a group at risk of developing addictions of all types.

It is clear that video-game addiction and IAD are becoming “modern” and very common among adolescents and young people. However, there are few publications dedicated to the research of computer addictions. Therefore, the issues of defining the criteria necessary to identify predisposition to addictive behaviour in adolescents in general and video games addiction in particular, developing ways for preventing various kinds of addictions in adolescents, and the study of personality traits of adolescents who are prone to addictive behaviour are all quite urgent.

The Theoretical Aspects of Addictive Behaviour in Adolescents

Addictive behaviour is a form of destructive behaviour which is expressed in the desire to escape from reality by changing one’s mental state through the use of certain substances or by permanently fixing one’s attention on specific subjects or activities. This is accompanied by the development of intense positive emotions. Moreover, such forms of addictive behaviour as alcoholism or drug addiction are considered by Korolenko (1991, pp. 8–15) and Korolenko and Donkskikh (1990, p. 192) as diseases resulting from addictive behaviours.

The attractiveness of addiction for humans lies in the fact that it is the path of least resistance. The popular belief is that by fixing on some objects or actions we do not think about our problems, we forget about anxiety and avoid difficult situations, while resorting to different types of addiction.

The forms of such behaviour vary. One can consider different types of addictions based on the addictive agent that a person uses (see detailed information in the next section). We

can also consider different forms of addictions based on the consequences for human life (biological, personal and social). It may include the occasional or regular use of any substance (alcohol, tobacco, drugs, household cleaning products, medicines, sweets), or passion for computer games, doing extreme sports, workaholism, etc.

Regardless of the form of addiction, the purpose of the addictive behaviour is to escape from loneliness, boredom, emotional or interpersonal problems, and to relieve tension, while experiencing intense positive emotions.

On the basis of individual types of addictive agents, addiction can be divided into three groups: (a) *non-chemical addiction*, (b) *chemical addiction* and (c) *an intermediate group* (Korolenko & Donksikh, 1990, p. 192).

Therefore, the group of non-chemical addictions includes gambling (addiction to gambling), Internet addiction, computer addiction, love addiction, sexual addiction, relationship addiction (co-dependency), workaholism, shopaholism, etc. The group of chemical addictions includes alcoholism, drug abuse and substance abuse. The intermediate group includes addictive overeating and addictive starvation.

The most destructive type of addiction among teenagers is suicidal behaviour. The types of addictive behaviour have specific features and signs, their consequences vary, but they share a typical mechanism of development and reinforcement.

We can distinguish five stages in the process of addiction development.

- 1. The first stage.** The beginning of the addictive process is going on at the emotional level. Starting point - experiencing acute mental-status changes such as elevated mood, feelings of joy, ecstasy, unusual euphoria, a feeling of drama, the risk due to certain actions (taking substances that alter the mental state, emotions due to the risky situation while gambling, unusual feeling of excitement when watching collections, etc.) and fixating one's mind on this connection. A person who has experienced such emotions develops an understanding that there are ways to change one's mental state fairly quickly and easily.
- 2. The second stage.** It is characterized by the development of a particular sequence for referring to the means of addiction. A set frequency of addictive behaviour is determined. It depends on many factors: personality traits, upbringing, manners, social environment, changes in the usual stereotypes, etc.
- 3. The third stage.** At this stage, addictive rhythm becomes a stereotyped, habitual type of reaction, the way of choice when meeting the demands of real life. Due to this, it is difficult or even impossible to convince people with developed addictive behaviours that this approach is wrong and dangerous. Communication with such people takes place on two levels that do not have common points: the logical and emotional one (Leonova & Btchkareva, 2004, p. 158). What is evident at the *logical* level does not affect the "thinking at will" of the person with addictive behaviour. On the formal logic level an addict agrees with you, but it does not reflect his or her true inner guidance which is addictive and produces a pattern that justifies every drink depending on the new circumstances. The method of addictive behaviour implementation gradually becomes an objective and a way, rather than the means, of life.
- 4. The fourth stage.** At this stage, there is a complete dominance of addictive behaviour. The person is totally immersed in the addictive process and is completely alienated and isolated from the society. Forms of addiction may change, making the illusion of solving more established and serious problems. It is dangerous not only for addicts themselves,

but also for those in their environment. Addiction replaces friendship, love and other activities. It consumes time, effort, energy and emotions to the point that addicts become unable to maintain any balance in life, engage in other forms of activity, or to derive pleasure from communicating with others, to develop other aspects of personality, to show sympathy, compassion, or emotional support even to their closest friends and relatives. Therefore, they lose the ability to put themselves in the shoes of their partners, to sympathize, and to imagine how they are perceived by the people around them (Leonova & Btchkareva, 2004, p. 463).

- 5. The fifth stage.** Addictive behaviour destroys the mind and biological processes. This applies, for example, to people who abuse drugs - intoxication affects their internal organs and systems in general, and causes depletion of all vital resources. Since addiction does not bring satisfaction and no longer causes any desired changes in one's mood when a person becomes used to it, the condition of addicts is in general characterized by apathy and depression. It is a period of general crisis and spiritual devastation that can greatly complicate the psychological correction or make it completely ineffective.

Adolescence is one of the critical stages in the formation of human personality. It is characterized by a number of specific features. This is the age of radical changes in perception, activities and relationships system. This stage is characterized by rapid human growth, formation of the body during puberty, which significantly affects the psychological characteristics of adolescents.

The basis for developing new psychological and personality traits is communication within a variety of activities: learning, work, creative endeavours and more. At this age, it is natural to want to exercise maturity and to develop self-esteem, take interest in one's own personality and abilities. In the absence of conditions to realize their potential positively, self-affirmation processes might be distorted and might lead to negative reactions and consequences. An important factor may be the lack of information for teenagers about what is happening to them. This information is crucial for acquiring the necessary sense of freedom and conscious choice, and for learning to take responsibility for one's decisions.

The English term *coping* defines the process of structural adjustment, due to which a person can cope with the demands which have arisen so that the difficulties are overcome and the sense of higher confidence in one's own abilities appears. This in turn leads to high self-esteem (Leonova & Btchkareva, 2004, p. 455). A teenager can choose different models to overcome emotional stress arising in this complex age period.

The active approach provides for a balanced use of age-based coping strategies to solve problems, finding social support with focus on success as a form of motivation, and readiness for active opposition to one's environment. Where a teenager chooses an *active adaptive* form of behaviour, he/she can successfully overcome the difficult life situations he/she faces, while the effort needed is minimal. The features of pseudo-active, dysfunctional behaviour may include the following: the use of both active and passive coping strategies, the prevalence of strategies that do not correspond to age, the lack of skills in terms of the active use of positive problem-solving strategies and substitution with avoidance strategies and pharmacological mechanisms for the implementation of this strategy.

If a teenager chooses the *pseudo-active, dysfunctional* model, addressing difficult situations becomes problematic, teenager uses more resources on developing the ways to escape from solving the problem, avoiding it, rather than on looking for ways to solve the problem. The features of passive behaviour patterns include the predominance of passive coping

strategies over active ones, the lack of social problem-solving skills, and the intensive use of children's coping strategies that do not correspond to this age.

The model of *passive dysfunctional behaviour* is characterized by the unwillingness to actively confront one's environment, negative attitude to the problem, treating it as a threat, defensive behaviour, and lack of focus on the stressor as a cause of psychological and emotional tension. The teenagers that use this pattern of behaviour are characterised by the low efficiency of their psychological and social resources: negative, weakly formed self-concept, poor perception of social support, empathy, internal locus of control, and relatively high sensitivity when other people turn away from them.

It can be argued that when using the last two behaviour models, the probability of addiction and of developing some type of addiction increases. Internet addiction is a mental disorder which is accompanied by a large number of behavioural problems and in general it is the inability of a person to log off the Internet in time, as well as the constant presence of an obsessive desire to log back in (Young, 1998, p. 256).

Studies show that rapid and regular Internet browsing makes the human brain lose its capacity for in-depth analytical thinking, turning regular Internet users into impulsive people, incapable of intellectual work. Continuously surfing the Internet, a person gradually loses the skill of real communication, which leads to such person being asocial. In addition to psychological and mental disorders IAD can cause physical illness. Spending a lot of time in front of the computer screen, can lead to eyesight disorders, or carpal tunnel syndrome. Internet addiction, which is accompanied by a sedentary lifestyle, leads to various diseases of the spine and joints (scoliosis, degenerative disc disease, arthritis), cardiovascular abnormalities (tachycardia, arrhythmia, hypertension, varicose veins of the lower limbs), and many other diseases.

The cause of Internet addiction in adolescents is the period of hormonal changes in the body when it is more difficult for teenagers to communicate, to make new friends, and to establish contacts with members of the opposite sex. Online communication gives teenagers the opportunity to create an image of their dreams, and to carry out the necessary and desired communicative activities, as well as those impossible in reality, using these images. This is the main reason for Internet addiction in adolescents, while the precipitating factor that stimulates the development of this addiction is anonymity and the inability to check whether the information about a person is true (Young, 2010, p. 312).

Another cause of Internet addiction is the inability to express oneself. A person who expresses their own thoughts with difficulty, who is unable to defend their own point of view, while also being afraid of public speaking and negative reactions of the real society, and who is generally insecure, can easily express what he/she wants on the Internet without the fear of disapproval and misunderstanding.

Internet addiction is developed due to a number of reasons and can be expressed in various forms. Today, psychologists and researchers of Internet addiction problems identify five main types of unrestrained craving for online surfing.

The most common type of Internet addiction is considered to be the need for continuous communication (forums, social networks, chats). Information (online surfing) Internet addiction or the irresistible need for a constant flow of information makes a person surf the Web for days on end. The next type of Internet addiction is gaming addiction. Internet addiction is linked to online gambling and is very similar to the common human passion for playing for money. Another type of Internet addiction is the so called cybersex drive - ob-

sessive craving for watching pornographic content on the Web or having cybersex (Young, 1997).

The list of the main types of Internet addiction can also include hacking, involuntary craving for shopping on online auction sites and online stores, downloading video and audio content from torrent trackers to create one's own database, etc.

The Empirical Study of Addictive Behaviour Characteristics in Adolescents (Based on Internet Addictions)

The main aim of this study was to identify the psychological characteristics of addictive behaviour in adolescents based on Internet addictions. To achieve this goal the following tasks have been implemented: the theoretical analysis of approaches to the study of addiction and addictive behaviour in psychology; the analysis of the aspects of developing video games addiction in teenagers; determining the level of susceptibility to Internet addiction among the studied teenagers; determining the issues of trust of the teenagers studied and their coping strategies; investigating the specific relationship between susceptibility to Internet addiction and personality traits such as credibility and propensity to use different coping strategies.

The study covered 65 subjects aged 12-14. These included 30 boys and 35 girls. The subjects consisted of 8th-9th grade students of secondary schools in Lviv. We used the following methods for our investigation: questionnaire "Methods of credibility study" (N. Astanina), Lazarus coping test and S. Kulakov's test for Internet addiction.

The questionnaire Methods of Credibility Study (Astanina) was developed on the basis of a semantic differential and consists of 15 questions, each of which contains statements presented in three different ways: in the form of reasoning that constitutes the content of the cognitive component of credibility, in the form of descriptions of emotional experiences, and as a description of behaviour in important situations and situations of uncertainty. This method was used to diagnose credibility.

Lazarus coping test is aimed at identifying coping mechanisms, ways to overcome difficulties in different areas of mental activity, and coping strategies. It consists of 50 statements related to human behaviour in difficult situations. Participants were asked to evaluate how often these behaviours occurred in their lives. This method allowed us to determine how often the subject used such coping strategies as confrontational coping, distancing, self-control, searching for social support, accepting responsibility, escape avoidance, planning of problem solving, and positive reappraisal in difficult life situations.

S. Kulakov's test for Internet addiction is aimed at determining the susceptibility to Internet and computer addiction. It consists of 20 statements that the subjects were asked to evaluate based on a scale from 1 (very rarely) to 5 (always). This technique made it possible to diagnose low, medium and high susceptibility to Internet addiction.

We used the correlation (linear correlation by Pearson criterion at $p < 0.01$) and comparative (based on Student's t-test at $p < 0.01$) tests implemented in the STATISTICA programme for the statistical processing of primary research data.

The results of the study revealed that 62% of the subjects had low propensity to Internet addiction and to 38% of the subjects showed medium levels of propensity (Figure 1). Girls dominated among the subjects with low and medium levels.

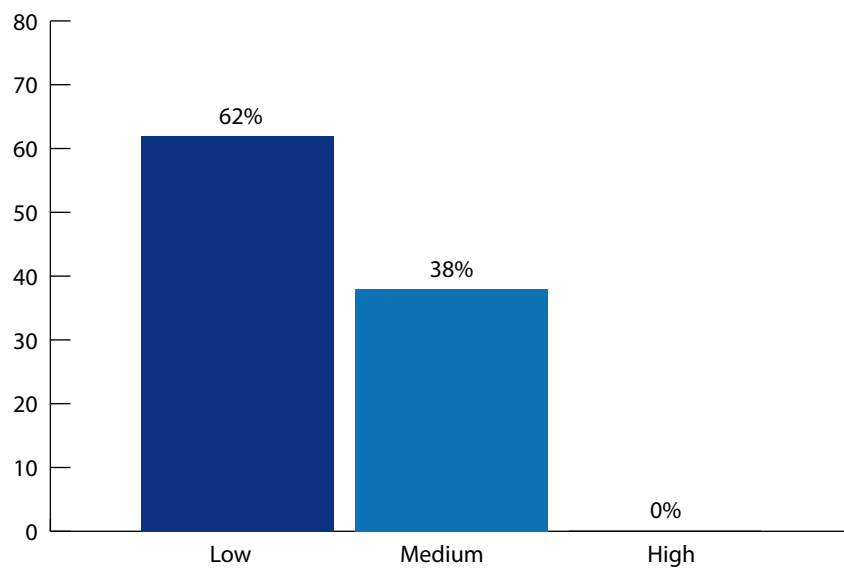


Figure 1.

Susceptibility to Internet addiction among the adolescents studied.

The results of the correlation analysis showed that the scores achieved on the scale of propensity to Internet addiction were directly correlated with scores on coping strategies such as escape/avoidance ($r = 0.71$) and distancing ($r = 0.85$) (Figure 2).

We also found that the scores on the scale of propensity to Internet addiction were inversely correlated with indicators of credibility ($r = -0.63$), coping strategies of confrontational coping ($r = -0.76$), self-control ($r = -0.8$), search for social support ($r = -0.64$), responsibility taking ($r = -0.6$), and planning to solve the problem ($r = -0.76$).

Therefore, the more the subjects were susceptible to Internet addiction, the more attempts they made to isolate themselves from the problem and to forget about it under difficult circumstances. We can, of course, talk about the relative adaptability of such a strategy, because if a person does not have the means to change the difficult situation in which he/she found himself/herself, then it will be appropriate to forget about it and isolate oneself from it. But if a person has the objective ability to overcome a problematic situation, and still escapes from it, we cannot talk about the adaptability of such behaviour.

At the same time, the higher the tendency to Internet addiction among the subjects, the more their behaviour becomes characterised by thoughts and behavioural efforts aimed at escaping from a problem situation or avoiding it. In other words, the more the subjects are prone to Internet addiction, the less determined an effort they show to change the difficult life situation in which they found themselves. In difficult situations they barely try to control their own feelings and actions. They are less likely to show hostility and anger towards the thing that has created the problem.

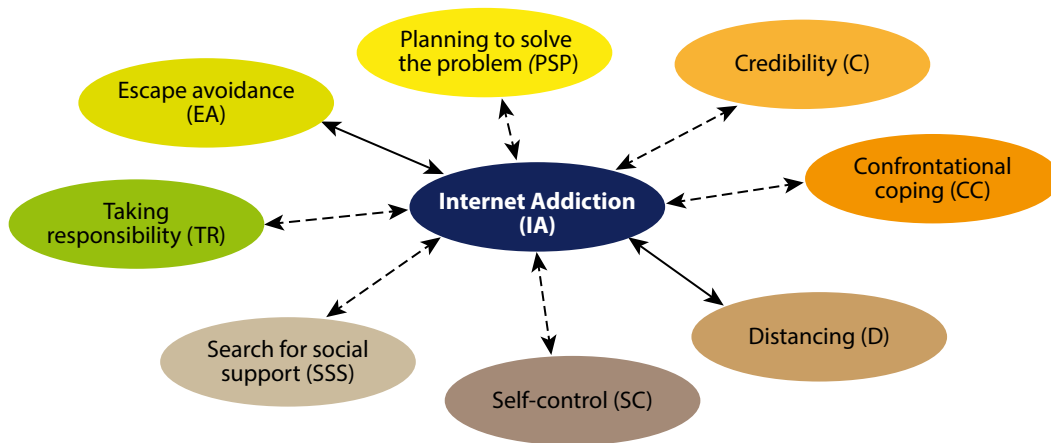


Figure 2.

Correlations between the scores on the scale of the Internet addiction and scores on other scales.

They are also less likely to try to find support and assistance of various types in their social environment, whether informational, emotional, material or other. They are less likely to produce an action plan to address the problem. Even if they make their efforts to develop such a plan, they rarely follow it.

These subjects had lower tendency to recognize their role in causing the problem and to attempt not to repeat past mistakes and so on. Therefore, this attitude was one of the reasons why when being in a difficult situation the subjects did not try to solve their problems actively.

When comparing the studied boys and girls, we found that boys had higher scores on the scales of distancing ($M = 9.75$), escape avoidance ($M = 9.05$), and Internet addiction ($M = 52.10$) than girls ($M = 6.8$ at $p = 0.005$ and $t = -2.632$, $M = 5.6$ at $p = 0.003$ and $t = -1.036$, $M = 44.52$ at $p = 0.002$ and $t = -1,221$, respectively) (Figure 3).

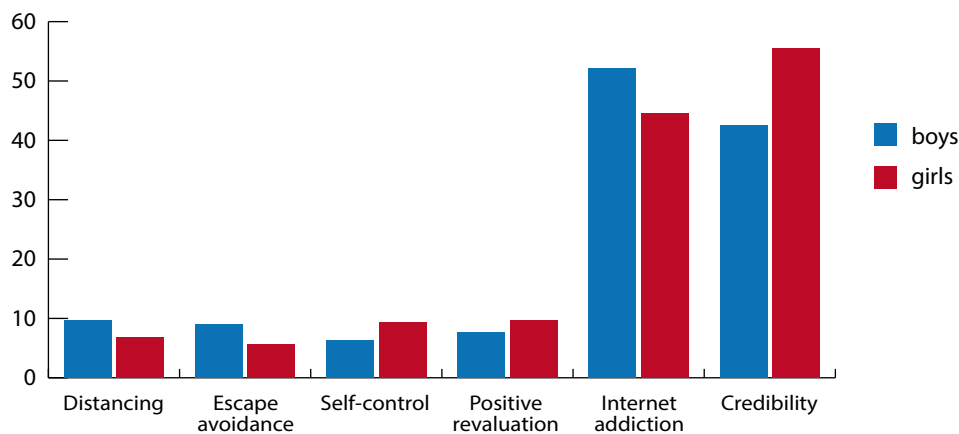


Figure 3.

Statistical differences between the studied girls and boys.

However, the studied girls were characterized by higher scores on self-control ($M = 9.3$), positive reevaluation ($M = 9.68$) and credibility scales ($M = 55.56$) than boys ($M = 6.36$ at $p = 0.001$ and $t = 2.075$, $M = 7.6$ at $p = 0.010$ and $t = 1.303$, $M = 42.55$ at $p = 0.001$ and $t = 2.005$, respectively).

The boys were largely characterized by attempts to separate themselves from the problem and to forget about it. They were more often characterised by a tendency towards thoughts or behavioural efforts to escape from a problem situation or to avoid it, or to postpone their decision, etc. We could also see that the Internet had a greater effect on the studied boys than girls, as they showed greater susceptibility to the possibility of developing an Internet addiction (they used the Internet quite often and it was difficult for them to do without the access to the Web).

Boys were more inclined to rely on "fate" and show a more easy-go-lucky kind of attitude. They believed that in their lives events occurred mostly without their control, and that their lives were shaped by the circumstances and other people rather than by themselves. They proved to be characterized by doubts about their self-importance and ability to overcome obstacles and achieve goals.

The studied girls, in turn, were under smaller influence of the Internet, they were more likely to use it for school or work, rather than for entertainment, they could tolerate the lack of access to the network relatively more easily. Also, the studied girls were more likely to treat themselves as subjects of their own lives, and as the authors and creators of their own lives, and they respected themselves more and were more sympathetic to their own personalities. Fear of failure was not typical of them, allowing them to take risks in the course of achieving goals, to go beyond their previous experiences, and to find new ways of behaviour and thus still achieve their goals. In difficult situations girls were more likely to make efforts to achieve positive outcomes to deal with the difficulty by interpreting the situation in positive terms. They tried to control their own feelings and actions.

Conclusions

Most of the studied adolescents proved to have quite high susceptibility to Internet addiction. However, severe Internet addiction was found in those surveyed. We can see that the level of adolescents' susceptibility to Internet addiction is directly correlated with their tendency to use coping strategies such as escape-avoidance and distancing, and inversely correlated with scores on the scales of credibility, problem solving planning, acceptance of responsibility, finding social support, self-control and confrontational coping. The boys studied had higher levels of susceptibility to Internet addiction than girls.

Since we discovered that the lives of a large part of those studied were influenced by the Internet, we could recommend reducing the number of hours spent on the Web to prevent the escalation of this tendency into a pronounced addiction.

It can also be argued that work aimed at the development of high level of confidence in these adolescents will have a positive impact on the prevention of Internet addiction. At the same time, when working with addicted adolescents, we need to remember that their level of confidence is quite low and they need attention of psychologists-counsellors, trainers and psychotherapists.

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Meaning of Self-Help Groups in the Treatment of Behavioural Addiction

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ABSTRACT

The article presents the meaning of self-help groups in the process of addictions treatment. The example of AA self-help group is presented as a background for the behavioural addictions therapy. The article shows the mutual aid of self-help groups, and also presents the AA Twelve Step Program's method.

Keywords: self-help group, addiction treatment, AA group, Twelve Step Program

Behavioural addictions, including gambling, are a relatively new phenomenon, so we can notice still increasing interest in the issues among specialists. Describing the concept of functional addiction we often refer to different aspects of the definition of chemical dependencies. “Based on the suggestions contained in the ICD-10 and for the addiction to psychoactive substances, it can be assumed that the dependence of behaviour/actions (behavioural addiction) involves symptoms associated with behaviour, cognition, and some-

times physiological, that develop after multiple repetition of certain activities and are usually characterized by a strong need to repeat these activities, by difficulties in controlling their execution, persistent repetition despite of harmful consequences, favoring these behaviours over other activities and obligations, increased tolerance, as well as the occurrence of any symptoms (irritability, anger, aggression, etc.) at attempts to stop or limit these behaviours” (Zdziarski, 2013, p. 11, as cited in Woronowicz, 2012). Due to the similar mechanisms of etiology and a similar set of symptoms, treatment of people addicted to certain activities is often modeled on the therapy applied to people with chemical addiction. The reason for this is also a new phenomenon and there is still a small percentage of research that could help develop a specific program for people addicted to certain activities. Confirmation of this fact can be found by analyzing the web offer of behavioural addiction treatment clinics. The recovery program available on official website of the National Intergroup of Anonymous Gamblers in Poland is a suggested way out of addiction and consist of 12 steps. They are based on Twelve Steps Program developed by Alcoholics Anonymous. It constitutes a recommended path for a person – a member of self-help group, which helps to attain liberation from addiction. The stages of the program are shown below:

- Step 1: We admitted we are powerless over gambling – that we have lost control of our lives.
- Step 2: We came to believe that a Power greater than ourselves can restore us to sanity.
- Step 3: We made a decision to turn our will and our lives over to the care of God as we understood Him.
- Step 4: We made an in-depth and fearless moral inventory.
- Step 5: We admitted to God, to ourselves, and to another human being the exact nature of our mistakes.
- Step 6: We became entirely ready to have God remove all these defects of character.
- Step 7: We humbly asked Him to remove our shortcomings.
- Step 8: We made a list of all persons we had harmed, and became willing to make amends to them all.
- Step 9: We made personal amends to such people wherever possible, except when doing so would injure them or others.
- Step 10: We continued to take personal inventory and when we were wrong promptly admitted it.
- Step 11: We sought through prayer and meditation to improve our conscious contact with God, praying only for knowledge of His will for us and the power to carry it out.
- Step 12: Having had a spiritual awakening as the result of these steps, we tried to carry this message to other gamblers, and to practice these principles in all our affairs (<http://www.anonimowihazardzisci.org/program-zdrowienia.html>).

Assuming that the treatment of pathological gamblers is largely modeled on the principles developed for persons addicted to alcohol, the distal part of the article is devoted to a more detailed analysis of the issue.

The Fundamental Nature of Self-Help

Mutual aid groups play a vital role in the treatment of behavioural addiction. Their members voluntarily meet with each other because they are in need of help and thus expect that

they will be able to confide their problems to other members. Problems shared with others are key elements in the development of group cohesiveness. This, in turn, allows group members to take the risk of expressing their hidden emotions and to create bonds which will guarantee support, acceptance, and the normalization of their experiences. Thanks to the existence of group norms, social modeling and by observing others, a mutual aid group member changes the way they perceive their own problems, views, and experienced emotions. In this way the social surrounding created by members of such a group becomes, on the one hand, an important system of their social support and, on the other, a factor leading to the change in their behaviour (Czabała & Sęk, 2000, p. 618; Nowak, 2013, pp. 244–246; Schoenholtz-Read, 2003, pp. 161–163). These mechanisms result from such elements of mutual aid groups as (Riessman & Carroll, 2000, pp. 38–44):

- changing any deficiencies and difficulties into assets – people who have managed to overcome their problems possess knowledge on their causes and on the ways of coping with them; this is the condition of giving support to those who face similar problems;
- interchangeability of roles – in a mutual aid group the roles of the donor and the recipient are interchangeable; depending on the circumstances, each member has a possibility of giving advice to others or following other peoples' advice; therefore, actual power within the group is evenly divided, which means that there does not exist any power elite and there is no bargaining between the ruling and the ruled;
- internal orientation – members of a mutual aid community above all make use of each other's experiences and, only to a lesser extent, of conventional knowledge coming from external sources (e.g. professionals); internal orientation spreads over the logistics involved in running the group; this is so because most of its members stick to the principle of self-sufficiency and self-reliance in terms of satisfying various needs (e.g. housing or material needs);
- focus on activity – the main characteristic of this type of group is that its members aim at undertaking action, handling matters quickly, making an effort, being responsible, resourceful, and approaching problems instead of taking a role of helpless victims;
- sticking to the principle 'helping others helps me' – supporting other people brings benefit to those who offer that support as their own self-evaluation increases and their general feeling improves.

On the basis of the above-presented regularities one can draw a conclusion that facing difficult situations in common improves the abilities of the group members to (Gaś, 1993, p. 68; Mudrecka, 2013, p. 53; Walesa, 1988, p. 345): (a) consciously share their feelings and values, (b) feel empathy for other people's experiences, (c) take into account the surrounding reality, (d) overcome their fears and doubts, (e) make decisions in a responsible manner, (f) make their choices in a flexible way.

The first known mutual aid movement was Alcoholics Anonymous (AA) founded in 1935 in Akron, Ohio, by two alcoholics—Bill W. (a stockbroker) and Dr. Bob (a surgeon). Before that they used to be members of the Oxford Group which aimed to revive first-century Christianity by realizing four absolutes: honesty towards oneself and others in speaking and acting; permanent readiness to help others; purity of one's body, mind, and intentions; love of God and one's neighbor. Some of these principles were incorporated in the formation of the Twelve Step Program (Niewiadomska, 2006, p. 49).

AA's functioning is based on the Twelve Traditions presented below ("AA w zakładzie karnym. Więzień do więźnia," 2002, p. 133):

1. Our common welfare should come first; personal recovery depends upon Alcoholics Anonymous unity.
2. For our group purposes there is but one ultimate authority—a loving God as He may express Himself in our group conscience.
3. The only requirement for AA membership is a desire to stop drinking.
4. Each group should be autonomous except in matters affecting other groups or AA as a whole.
5. Each group has but one primary purpose—to carry its message to the alcoholic who still suffers.
6. An AA group ought never to endorse, finance, or lend the AA name to any related facility or outside enterprise, let problems of money, property, and prestige divert us from our primary purpose.
7. Every AA group ought to be fully self-supporting, rejecting outside contributions.
8. Alcoholics Anonymous should remain forever non-professional, but our service centers may employ special workers.
9. AA, as such, ought never to be organized; but we may create service boards or committees directly responsible to those they serve.
10. Alcoholics Anonymous has no opinion on outside issues; hence the AA name ought never to be drawn into public controversy.
11. Our public relations policy is based on attraction rather than promotion; we need always maintain personal anonymity at the level of press, radio, and films.
12. Anonymity is the spiritual foundation of all our traditions, ever reminding us to place principles before personal traditions.

In summing up the moral norms of the Twelve Traditions it has to be noted that Alcoholics Anonymous is a movement whose goal is for its members to overcome their common problem of alcoholism, to support others in remaining sober and to 'spread the message' to drinking alcoholics by sharing their experience, internal strength, and hope with them.

The sole and absolute authority in the group is a loving God and the sole condition of becoming a member—readiness to stop drinking. Members of the AA movement form 20–30-person groups which have regular meetings at least once a week. There are two types of meeting: closed (available for alcoholics only) and open (available for people from outside). Alcoholics Anonymous is not an organization as such. Each of its groups is independent in all aspects of its activity except for those which concern other AA groups or the whole movement. An appropriate number of groups can be formed into intergroups, and intergroups have a possibility of creating a Region with the aim of improving contacts between specific groups (Niewiadomska, 2006, pp. 49–50).

The National Office serving AA is managed by a selected group of representatives of all the groups from all the Regions. It functions as an organizational-control authority (e.g. by supervising the observance of the movement's principles and traditions, maintaining contacts with the international AA movement, supplying proper literature, supporting and organizing new groups). The National Office is not an official authority or body; it only performs service and ancillary functions towards its members. The activity of mandataries should at different levels be honorary and charitable in character. However, in certain cases AA groups are allowed to employ indispensable staff members. On account of the self-help

character of the AA movement, individual groups should remain self-sufficient. Therefore, they cannot accept outside donations but should be maintained on people's voluntary donations. One of the consequences of the fact that the AA movement is self-sufficient is that, on the one hand, it cannot become involved in any public polemic, join any religious creed, party, or institution, and, on the other, it should never support, finance or lend its name to any organization or company (Niewiadomska, 2006, p. 50).

The above-mentioned rules of the AA movement and the profound influence of the Twelve Step Program made the number of AA members in the 1990s rise to as many as 2 mln worldwide – the AA groups had meetings in over 96 thousand groups existing in 141 countries. The first Polish AA group Eleusis was formed in the mid-1970s. In 1984, the first Contact Point and the first helpline were set up in Warsaw. In October of the same year the first all-Poland AA convention took place. At the turn of the 21st century there existed about 1,500 AA groups in Poland (Niewiadomska, 2006, p. 50).

Also, it has to be noted that mutual aid communities, formed for their members to support each other in solving various problems, most frequently base their activities on Twelve Traditions and the AA Twelve Step Program. For example, in the mid-1940s in the USA there were formed first Family Clubs for families struggling with the problem of alcoholism. In 1954, The Board of Directors of Al-Anon groups was registered (people co-addicted to alcohol). In 1957 in the USA the Alateen community was founded, aimed at children and teenagers up to 18 years old who came from alcohol-ridden families. In 1976 in the USA the group Alateen was converted into the Adult Children of Alcoholics Community. Following the principles and program of AA, there appeared other types of mutual aid group in order to solve various specific problems, e.g. Drug Addicts Anonymous, Overeaters Anonymous, Sex Maniacs Anonymous, Workaholics Anonymous, Gamblers Anonymous, Nar-Anon (relatives of drug addicts), Gam-Anon (families of people addicted to gambling), Work-Anon (family members of workaholics). At present the popularity of mutual aid communities is so immense that “it is difficult to imagine any type of psychic problem, behaviour disorder, or life event for which there would not exist an appropriate group” (Yalom & Leszcz, 2006, p. 444).

The AA Twelve Step Program's Method of Functioning

In the Twelve Step Program, abstinence is understood as a process of recovery based on maintaining an individual's relationship with God, improving their interpersonal relationships and personal development in order to positively adapt to reality, acquire constructive prevention resources in difficult situations and gain more self-acceptance (Brown, 1992, p. 228). Producing these changes is possible by realizing the steps which are the following (Brown, 1992, pp. 305–315):

Step 1: We admitted we are powerless over alcohol – that we have lost control of our lives. An individual's loss of control over their drinking leads to dangerous consequences in all the aspects of their life. Alcoholics who have begun to regain their health claim that accepting one's helplessness is a necessary condition for beating their addiction. The moment they reconcile themselves to the fact that they are unable to control their own life, helps them to realize their real need of help. AA members claim that self-confidence impedes the

sobering-up process in those who are at the beginning of their recovery. However, when they realize their helplessness they come to feel a considerable need for finding support in a Higher Power and a necessity to accept help offered by another human being.

Step 2: We came to believe that a Power greater than ourselves can restore us to sanity.

The realization of the second step enables AA members to free themselves from:

- their egocentricity;
- their belief in the self-control over their own behaviour;
- the mechanism of the denial of their disease.

Step 3: We made a decision to turn our will and our lives over to the care of God as we understood Him. Members of the AA movement describe this stage of their recovery as 'a step towards action' because it concerns their decision to limit their own willpower.

Step 4: We made an in-depth and fearless moral inventory. The above principle is the starting point of an individual's autotherapy. From now on the person begins to change their self-image, which enables them to conquer their hypocrisy and to slowly approach the realistic perception of their own self. Taking this step teaches them how to evaluate themselves in an honest way, recognizing their own vices and virtues. Additionally, this stage brings about the change in their self-acceptance.

Step 5: We admitted to God, to ourselves, and to another human being the exact nature of our mistakes. AA members admit that confessing their wrongdoings to God and another human being liberates them from the feeling of isolation and loneliness, which strengthens their bond with others. At this stage individuals develop the feeling that they are part of a community and frequently begin to experience the so-far-unknown feeling of belonging. At the same time, by breaking down the barrier of self-deception and beginning to feel accepted by others, they gradually come to feel greater self-respect.

Step 6: We became entirely ready to have God remove all these defects of character.

At this stage there again arises the problem of submissiveness which is indispensable for a sobering-up alcoholic to show readiness to acquire new behaviour patterns and to undertake activities with a view to effecting changes. Step 6 involves the person's giving their consent that as a now responsible and ready-for-change individual they will cooperate with the High Power which is helpful in achieving their established goals.

Step 7: We humbly asked Him to remove our shortcomings. The above principle motivates an individual to undertake actions resulting from Step 6. According to AA members this step is the key to humility which helps the individual to acknowledge authority.

Step 8: We made a list of all persons we had harmed, and became willing to make amends to them all. Already while making a list of the persons an alcoholic has harmed they begin to free themselves from the feeling of guilt because they:

- discover the truth of their own participation in the harm inflicted on others;
- declare their readiness to compensate for the suffering they have caused.

Step 9: We made personal amends to such people wherever possible, except when doing so would injure them or others. The above principle concerns the individual's relationships with others as well. AA members emphasize that atonement is good not only for the harmed but also for the person who has done wrong because the act of restitution drives them to assume the responsibility for their wrongdoing. At this stage undertaking activities itself is important as it involves:

- their apology;
- confessing to their guilt;
- compensating for the inflicted harm.

The sense of taking this step also lies in the fact that the individual is ready to accept the consequences resulting from the harm they have done to other people. It has to be mentioned that in the person's process of recovery the foundations of the previous seven steps constitute the basis for steps 8 and 9 because amendments made by an egocentric person do not bring psychic relief to them.

Step 10: We continued to take personal inventory and when we were wrong promptly admitted it. This directive presents the individual's moral account, i.e. the frank evaluation of their own conduct which should from now on become their everyday routine. On the one hand, this enables the person to avoid returning to their drunken behaviours and attitudes and, on the other, it allows them to develop such abilities as slowing down the pace of their life or doing their self-reflection in a more effective way.

Step 11: We sought through prayer and meditation to improve our conscious contact with God, praying only for knowledge of His will for us and the power to carry it out. Stage 11 gives the AA program a religious and spiritual character. Participation in the community allows the recovering person to become accustomed to the existence of the Higher Power. Their starting the relationship with God helps them to:

- conquer their willfulness;
- strengthen their bonds and affiliations;
- break free from their conviction that the world is hostile and cruel.

At the beginning of their sobering-up process all of these steps seem strange to the individual and they only focus on their own helplessness. However, the more they recover from their addiction the deeper sense they can find in these principles. Stage 11 carries a message that their work on themselves expressed by means of the Twelve Steps is a never-ending process – the realized principles should constitute the individual's constant philosophy of life, giving them a plane of reference in relation to their behaviour.

Step 12: Having had a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics, and to practice these principles in all our affairs. The final principle is the key to action. At this stage AA members have been endowed with sobriety and new faith. The best way to maintain the new attitude is to promote it among other people. Carrying 'the message' gives them satisfaction and a possibility to regain their self-respect. The acquired sense of community reinforces them in their sobriety because they are now convinced that each AA member has various experiences from the time of their drinking which they can share as well as power and hope from the period of their sobriety.

In making generalizations about the way the Twelve Steps recovery program works it has to be noted that the program introduced a new way of thinking and clear norms of behaviour. New AA members are required to follow these principles both in their individual progress and in group work (Niewiadomska, 2006, p. 51). After incorporating the rules some members of a mutual aid group experience 'a rebirth,' which is comparable to a religious conversion or the re-establishment of an individual's links with the religion they once abandoned. This religious conversion can be a gradual or abrupt process, due to which a wrecked and unhappy 'self' becomes united, consciously righteous and happy by basing its life on a religious reality (Tobacyk, 1989, p. 235). Religiosity, including people's opinions and convictions concerning miraculousness, emotional experiences, and predisposition towards specific behaviours, is not a structure excluded from the individual's whole psychic life but something that dynamically shapes their personality (Jarosz & Wiechetek, 2010, p. 165; Prężyna, 1988, p. 262). Religious conversion is the sign of a change of man's attitude to life. In a situation when an individual suffers severely, their motivation for conversion is expressed by 'please, help me.' If, however, they continue by saying: 'do not change me,' then such a plea is not sufficient enough for them to experience a real transformation because this does not express their deep desire for authentic conversion, necessary readiness to work on themselves, as well as the rejection of their false ways of thinking and addictions (Bartczuk & Jarosz, 2006, pp. 37–40; Jaworski, 1999, p. 48). Empirical studies imply that religious conversion is a central reorganization of an individual's personality characterized by adaptive consequences for their individual functioning. This in turn ensures that the individual has a greater sense of life and their personal abilities, which at the same time increases their adaptive skills (Jarosz & Wiechetek, 2010, pp. 169–171). Individuals who have undergone religious conversion claim that they (Tobacyk, 1989, p. 242):

- have completely changed their activities after their religious experience;
- experience more control over their own life;
- changed their attitude towards their family and friends into a more positive one;
- derive more satisfaction from their life;
- accept themselves more.

Religious conversion frequently makes AA members change their attitudes towards (Brown, 1992, p. 37): (a) increasing their self-reflection; (b) forming new opinions; (c) re-orientating their value preferences; (d) changing their self-perception; (e) reducing their hostility towards the surrounding world; (f) increasing activity in their family, professional, and social life.

Non-drinking alcoholics stress the fact that they constantly have to work on their new attitude and strengthen their relationship with God in order to fight off their tendency to be egocentric and to use defensive mechanisms. This kind of attitude can be expressed by the following statement: 'God, help me be who I am' (Johnson, 1992, p. 169). A person who entrusts themselves to God no longer feels helpless in case of any difficulties. This gives them hope for the future, which is a must for any alcoholic who wants to maintain their abstinence. One of the elements of that hope is the person's desire to accept a system of moral values that would show them how to live and how to find the foundations on which they could base their life, crises, and everyday problems. The realization of the Twelve Steps is then a sort of personal declaration in relation to the Higher Power, which justifies a specific direction of the development of a human being as well as the efforts they make and the requirements they set for themselves (Ostrowska, 1990, p. 163).

The Role of a Mutual Aid Group in an Individual's Recovery Process

In the sobering-up process it is important to keep balance between an addicted individual's concentration on the psychoactive substance and the processes of the reinterpretation of themselves and broadening and deepening their relations with their surrounding (Brown, 1992). In achieving their established goals social support plays the basic role because, throughout this interaction, there takes place an exchange of emotions, information, and instruments of action (Chwaszcz & Augustynowicz, 2010a, pp. 140–142; Sęk & Cieślak, 2004, pp. 18–19). The alcoholic's stay in a detox clinic is a temporary phase from their drinking to abstinence. During this period the support on the part of professionals is vital in the sobering-up process. However, when the therapy comes to an end, the role of the alcoholic's family and mutual aid groups increases in sustaining their recovery.

The functioning of drinking alcoholics. Active alcoholism is a behavioural disorder understood as an act of taking a psychoactive substance by an alcoholic who, at the same time, is unable to abstain from this type of behaviour. The addiction syndrome is chronic in character – it develops gradually and enables the individual to function in quite an ordinary way (Niewiadomska, 2002, p. 221). The person often does not realize that they are addicted because (Chwaszcz, 2005b, pp. 119–121; Gorski & Miller, 1991, p. 38):

- at the early stage there are no physical problems or problems connected with their behaviour;
- at the advanced stage the experienced difficulties are not associated with their drinking;
- at the chronic stage – as a result of a thinking disorder – their ability to evaluate the encountered situation is lowered. The main reason for excessive drinking is an alcoholic's decrease in their tolerance of stress (Chwaszcz, 2008, pp. 81–84; Quingley & Marlatt, 2000, p. 124).

Among the frequent causes of high psychic tension (stress) in addicted persons are the following (Mellibruda, 2000, p. 707):

- autodestructive attitude – connected with their low self-esteem, negative self-image, negative image of their own life and suicidal thoughts;
- deficits in interpersonal relationships and destructive schemes of interpersonal relationships resulting from the persons' defensive or aggressive attitude, their readiness to withdraw from their contacts, their suspiciousness and lack of trust, as well as antisocial or asocial features;
- the collapse of their value system and the lack of any constructive life vision, which are frequently accompanied by doubt and nihilism;
- deficits in their intrapsychic abilities – particularly their low self-awareness and difficulty in understanding their own feelings and wishes;
- deficits in task competences which in consequence lead to professional and family problems.

The above-mentioned factors cause that addicted individuals frequently use evasive strategies in order to deal with their problems. These strategies are implemented by abjuring of their consciousness the stress factor and its effects and by externalizing their emotions connected with the stress but without making any attempts to resolve their situation (Brennan & Moss, 2000, pp. 147–151; Kupiec, 2010, p. 179). Alcoholics' behaviour who

drink if faced with difficult situations—manifested by concentrating on their past, lacking in any strategy of solving their addiction problem, pitying themselves, blaming themselves for any misfortunes, isolating themselves from other people, using chemical substances to anaesthetize their problems—follows the pattern of learnt helplessness whose basic determinant is their passiveness and unwillingness to undertake any actions as well as their subjective conviction that no individual can prevent their painful experiences (Chwaszcz & Augustynowicz, 2010b, p. 415; Niewiadomska, 2001, p. 173). The reasons for the persons' passiveness lie, on the one hand, in their subjective anticipation of a failure and, on the other, in their difficulty perceiving the connection between the undertaken activity and its effects (Rosenhan & Seligman, 1994, pp. 392–395). Apathy appears most frequently when the individuals experience a failure in performing tasks important to them and at the same time subjectively reckon that they do not possess any characteristics or features necessary to work out the constructive ways of handling their difficult situation. Passive anticipation of a failure is permanent in its character, i.e. in case the individual experiences a similar situation in the future, there is a high probability that they will react in an analogous way.

The life of addicted persons is thus dominated by their experience of helplessness, frustration, loneliness, hostility, aggressiveness and sadness. With each new excess they suffer a more intense feeling of fault and shame. Their negative emotional reactions are so severe that, as a result, they form a negative self-image and chronically lower their self-esteem (Chwaszcz, 2005a, p. 250–252).

However, the more a person's addiction develops, the less sensitive they become to their own psychic discomfort and to other peoples' suffering because by using the defensive mechanism of rationalization they build up a wall between themselves and reality. In the face of a failure, every person tries to justify their behaviour, but in confrontation with a real situation they can quite easily withdraw from the previously-used defense mechanisms.

In an addicted individual, the process of rationalization works more strongly, which leads to the person's exhibiting more and more strange behaviours and a drastic lowering of their ability to evaluate the existing facts. The less the person is self-satisfied, the more frequently they display the phenomenon of self-delusion. In the end, the alcoholic falls victim to their own defense mechanism because, on the one hand – by using different excuses – they maintain their self-esteem but, on the other – when they use rationalization, they bring about important changes in their value preferences, the violation of the existing moral norms and the loss of control over their own conduct (Johnson, 1992, pp. 40–44). This regularity is confirmed by acts of violence, disorders in interpersonal relationships and material poverty observed in the families struck by the problem of alcoholism (Rode, 2009, pp. 14–17). The advanced stage of the individual's addiction is characterized by their gradual loss of control over their own behaviour and by the fact that any temporary cessation of alcohol drinking results in their suffering. The person becomes more and more isolated, gradually loses their emotional and intellectual abilities and reduces the range of their psychic experiences to constant thinking about alcohol (Brown, 1992, p. 48; Johnson, 1992, p. 55). People from their social surrounding begin to notice their health, marital, professional, and/or legal problems which are most frequently interpreted as their lack of responsibility. They most frequently do not understand that the individual does not choose these types of behaviour because they constitute one of the elements of the person's addiction (Gorski & Miller, 1991, p. 37).

Changes in alcoholics' behaviour during their treatment. An alcoholic's recovery is not the reverse of the process of their becoming addicted to alcohol. It occurs when the person has new experiences which enhance each other; therefore, taking up abstinence is a specific development process (Brown, 1992). The first stage of alcoholism treatment is detoxication, i.e. eliminating the toxic substance from the alcoholic's organism. The symptoms of the acute abstinence syndrome which follow detoxication can be very dangerous. As a rule, during the detoxication stage, the patient is given a replacement substance whose doses are gradually reduced until all the abstinence symptoms disappear. The alcoholic is not fully detoxicated until the replacement substance has been discontinued and completely removed from the patient's body. Detoxication itself is not treatment yet because alcohol addiction influences all the spheres of human life – physical, psychic, spiritual, and social. Individual and group therapies are the basic element in withdrawal management centers. Their aim is to make it easier for their patients to develop those abilities which will help them to maintain sobriety and will prove useful in the long process of their recovery (Gorski & Miller, 1991, pp. 41–43; Rode, 2010, pp. 14–17).

An alcoholic who undergoes intensive therapy in hospital undergoes significant changes in their functioning. Their dynamics can be divided into four stages (Johnson, 1992, pp. 129–135).

During the first stage, the patient is supposed to become aware of the state they are in. Their decision to take up abstinence signifies that they have accepted the fact that they are an alcoholic and have realized that they lost control over their drinking. Only then does their logical structure break down. Up to that moment their belief that they are able to control their drinking had been based on that structure (Brown, 1992, p. 142; Gorski & Miller, 1991, p. 40). Taking up abstinence can be treated as a new phase of the development of an addicted individual because at that moment they completely reorganize their intellectual and behavioural spheres which are accompanied by emotional balance disorders. The person who, while drinking, seemed to function at a higher cognitive and emotional level can now exhibit symptoms of losing their previous abilities. At this stage, the patient's relationships with their surrounding are usually painful and difficult as they mount resistance to the idea of giving up drinking and overcoming denial (Brown, 1992, pp. 130–131).

During the second stage the alcoholic becomes conformable to their disease. The patient is frequently passive and they do not take on any responsibility for their own development. The results of a survey among a group of 80 sobering-up alcoholics have shown that the moment they become aware of their failure by admitting to the fact that drinking got out of their control they experience progressive disorientation in terms of their own selves and the surrounding world (Brown, 1992, p. 138). As a result of their adaptive problems the patients may exhibit negative psychic states in the form of, e.g. fear, helplessness, depression, suicidal thoughts, or sleep disorders. They also present a strong need to become dependent on the persons able to show them the direction of their behaviour in a given situation. Therefore, it is important to organize that person's behaviours with which it is possible to fill their feeling of emptiness, to compensate for their loss, and to relieve the symptoms of their depression (Brown, 1992, pp. 171–177).

At the third stage, the individual begins to accept their own responsibility for their recovery. On the one hand, they have more self-respect and begin to demonstrate the need for starting close relationships with other people. On the other hand, they lack a realistic attitude towards their future and they do not take into account all the dangers threaten-

ing their abstinence after leaving hospital. Another important element of their sobering-up process at this stage is the appearance of a new defense mechanism manifested through their denial of the existence of any difficulties (Brown, 1992, p. 77). The alcoholic's poor insight into their own selves and their inability to keep sober on their own constitute the basis for their decision to be extremely dependent on others. Therefore, the patient needs a secure and protective surrounding and efficient help on the part of professionals. While summing up the second and third stages of addicted persons' stay in detoxication centers, one can state that at these stages their recovery can fluctuate between two extreme states of mind: that of a 'honeymoon' which is accompanied by rapture, pleasure, and the denial of their problems and, more frequently, that of depression which can indicate that the patients mourn their loss of alcohol or that they experience the feeling of guilt after a long period of alcohol drinking (Brown, 1992, pp. 175–176).

Stage four is characterized by the increase in the self-reflection in the alcoholic. The patient begins to appropriately fear their future and to deliberately seek the strategies which will enable them to more efficiently overcome any difficulties encountered when they leave hospital. They also realize that it is only their participation in the open treatment program and in mutual aid groups that will help them to both break from their previous habits and to acquire new life abilities (Brown, 1992, pp. 43–76). In generalizing the issues concerning the alcoholic's stay in hospital, it has to be noted that this type of situation can be interpreted as a critical life change event. Such a conclusion can be drawn on the basis of the following observations (Şek, 2001, p. 252):

The alcoholic's decision to undertake treatment concerns vital and high values. Therefore, this moment is emotionally significant for the individual. The greater burden the therapy imposes on the alcoholic the more these values are endangered.

Changes taking place during the recovery process and which the individual subjectively perceives as threats frequently lead to their feeling of helplessness and to the high risk of the disorders in the person's functioning.

The beginning of the person's abstinence disrupts the functioning of the configuration: the individual – the environment, causing in the alcoholic such a destabilization state and such disorders of the balance in the established forms of their adaptation that the hitherto forms of their behaviour prove insufficient and useless. Therefore, their discontinuation of drinking requires vital changes in their adaptive mechanisms. This is the way through which the most critical character of the undertaken therapy is expressed.

Depending on the subjective interpretation of the facts, the withdrawal therapy can cause ambivalent feelings in terms of content. Its evaluation undergoes dynamic changes in the course of the patient's attempts to cope with their critical life change event.

The patient's stay in a detoxication centre can become the turning point of their life on condition that the individual introduces changes in their behaviour. The possibility of there taking place the turning point in alcoholics' critical life change event is the element which clearly distinguishes it from stress phenomena.

The mechanism of coping with the psychic burden experienced by alcoholics undertaking treatment is complex in its character. At first their stay in hospital evokes primary evaluation in the form of losses and threats. Only at the second stage do the individuals evaluate their preventive possibilities in a given situation. It is a secondary evaluation in which the person subjectively concludes that the situation is hopeless, possible to deal with or that they lack the possibilities of tackling it or that it is a chance for them to prove themselves, or

that it is a chance for them to solve their addiction problem. Only when the individual carries out those two types of evaluation, i.e. primary and secondary, which are accompanied by diverse emotions and physiological reactions, does this determine their further preventive behaviour (Sęk, 2005, pp. 101–102).

The fact that undertaking abstinence is frequently a critical life change event is confirmed by the difficulties the patients encounter in their attempts to cope with stress. Alcoholics that have just begun to sober up are frequently unable to differentiate between small and big stress and therefore overreact to even small psychic tension. They often feel tense in situations that normally should not be worrying to anyone, which, in consequence, provokes behaviours incompatible with those situations. Such reactions are the effect of the vicious circle principle in which the symptoms of the patients' chronic abstinence syndrome are intensified by their stress, and the intensity of the withdrawal syndrome increases the level of their psychic tension (Gorski & Miller, 1991, p. 52). Disorientation, the feeling of chaos, concentration and memory problems as well as difficulty in solving problems are the typical symptoms of the first stage of the sobering up process which disappear with the patients' recuperation. However, their unawareness of this fact may arouse the feeling of shame and guilt, loss of self-respect, which intensifies the tension and aggravates their abstinence syndrome symptoms (Gorski & Miller, 1991, p. 53).

Changes in the behaviour of alcoholics at the initial stage of their abstinence. At the initial stage of the addicted persons' recovery, covering the first two years of their abstinence, one can observe the following regularities in their functioning (Cierpiałowska, 2000, pp. 171–174):

- high intensity of their physical and psychic need to drink alcohol;
- the process of their deepening identification with other addicted persons;
- learning new behaviours from other sobering-up alcoholics.

At the initial stage of abstinence, an individual experiences the weakening of their defense mechanisms. Therefore, sobering-up alcoholics begin to perceive in different spheres of their lives the problems which are the effect of their long-term drinking. These conclusions frequently lead the recovering persons to (Cierpiałowska, 2000, p. 174): (a) internal conflicts, (b) a high level of apprehension, (c) depression, (d) the feeling of guilt, (e) anger, (f) suicidal thoughts, (g) the feeling of helplessness and lack of faith in the possible change of their situation.

Support of mutual aid groups at the initial stage of abstinence. The basic task and challenge at this stage of a sobering-up process is for the non-drinking alcoholic to deepen their identity. Only at two levels – concrete (place, people) and symbolic (idea, program) – does the recovering person's identification give them sufficient internal bases for diverting their attention from alcohol and for directing their activities towards other spheres of life (Cierpiałowska, 2000).

AA members, who base their activities on the Twelve Step idea, aim at changing their own conduct and at eliminating any behaviour causing problems. The only condition of their participation is their resolution. The AA community offers two forms of help which are of vital importance for supporting the alcoholics' sobering-up process (Cierpiałowska, 2000, pp. 197–200):

- care for the potential and newly added members of the community (relationship: initial sponsor – potential AA member);
- assistance in the members' completion of the Twelve Steps (relationship: program sponsor – AA community participant).

At the initial phase of an individual's abstinence the relationship: initial sponsor – potential AA member assumes the crucial importance. The significance of this type of contact results from the fact that most alcoholics join the AA movement while in the state of growing crisis accompanied by all its symptoms, i.e. the feeling of intense physical and psychic suffering, confusion, and/or loneliness, and the lack of hope for any change. For this reason the vital role plays the first relationship between the AA member and the person who has begun to sober up. This kind of relationship can take place outside the group – e.g. in the case of social or professional relationships. The initial meeting can take various forms but most frequently the initial sponsor helps the person at the initial stage of their abstinence to determine the character and graveness of their problems. The role of the initial sponsor is frequently reduced to that of a person who only talks about their own alcoholism by presenting facts from their 'drinking autobiography,' and who listens attentively and acceptingly (Cierpiałowska, 2000, pp. 197–198). Due to such conversations, the alcoholic at the initial stage of their sobering-up is able to notice the similarity between their own problem and the difficulties experienced by the sponsor and other AA members. The sponsor, who listens acceptingly, allows their interaction partners to discover common experiences, gain in mutual understanding, and build up mutual trust. After determining the similarities of each other's problems the sponsor briefly presents the benefits they have personally derived from their participation in the AA movement and encourages the person at the initial stage of their recovery program to take part in AA meetings.

The functioning of addicted persons at the persistent stage of their recovery. At this stage sober alcoholics are characterized by (Cierpiałowska, 2000, pp. 181–184):

- more stabilized sense of their new identity – 'I am an alcoholic;'
- more realistic and appropriate way of perceiving their 'own self;'
- more frequent occurrences of their positive self-evaluation;
- more frequent manifestations of their habitual abstinence behaviours;
- greater awareness of their experienced emotional states;
- growth in their ability to recognize situations conducive of their greater desire to drink alcohol.

The support of mutual aid groups offered to individuals at the persistent stage of their recovery. Social support offered to alcoholics at this stage is based on the relationship: program sponsor – AA member. On joining the AA movement the new member can choose their program sponsor, who is, most frequently, a person with a long-term participation.

The program sponsor can fulfill many functions towards their charge but their activity mainly focuses on the following (Cierpiałowska, 2000, pp. 198–200; Nowak, 2012, p. 315):

- helping them in difficult situations;
- giving them hope in times of doubt;
- providing them with constructive advice derived from their own autobiography;
- shaping the way of thinking of the person under their care;
- modeling their behaviours.

If an addicted person is supported in this way, their relationship with an individual facing a similar problem gives them hope for overcoming their own addiction and of upholding their faith in keeping abstinence. The sponsor with a long period of sobriety is the most convincing proof of the fact that it is possible to achieve this aim by becoming involved in the Twelve Step Program. Additionally, through establishing a relationship with the sponsor based on mutual respect, the charge can overcome their loneliness. In addition, this relationship usually gives them many opportunities to work through different problems appearing in their interpersonal relationships, especially in contacts with their closest persons. Meanwhile, throughout the relationship both the program sponsor and their charge aim at upholding their abstinence. Therefore, the sponsor's behaviours – especially their ability to cope with difficult situations – constitute an important model of abstinence behaviours of the aided person. This type of relationship is also crucial for the sponsor due to, above all, factors such as (Cierpiałowska, 2000, pp. 199–200): (a) strengthening their own abstinence by analyzing their personal experiences from their periods of drinking and sobriety, (b) reducing the risk of idealizing their past – thanks to their personal reports involved in their 'drinking autobiography', (c) constant confirmation of the new identity of the non-drinking alcoholic, (d) gaining a position and prestige – a person who in the past experienced negative social reinforcement and has found themselves in a situation where they are a program sponsor, now becomes an authority. Due to this they can find sense in becoming engaged in AA activities.

It has to be noted that long-term engagement in AA activities contributes to an individual's change of prevention strategies in difficult situations. In relation to drinking alcoholics such changes are mainly characterized by (Niewiadomska, 2001, pp. 173–174; Wiechetek, 2011, p. 318):

- greater concentration on the occurring events;
- more frequent attempts to solve their problems;
- more frequent seeking support and help in others;
- less frequent stress relieving by using medicaments or other psychoactive substances;
- less frequent self-pitying,
- better emotional self-control in problematic situations.

The efficiency of the influence of mutual aid. The role of mutual support in the persistent sobering-up process is confirmed by the results of scientific studies. First, it has been observed that hospital and ambulatory treatments have low efficiency – mainly because they focus their activity on the medical effects of addiction instead of psychological problems (Brennan & Moss, 2000, pp. 154–156).

Second, AA communities have been discovered to have high efficiency in upholding abstinence by addicted persons – 67% of the members who participated in AA meetings for more than a year managed to keep abstinence, and 85% of the persons connected with the movement for more than two years maintained their sobriety (Ouimette et al., 1999, pp. 545–551).

Third, persons who have managed to uphold alcohol abstinence for more than eight years were characterized by the stability of their life environment. Among the factors stabilizing their existence, apart from the well-functioning relationship with their life partner and having a job, were also their engagement in AA activities, hope for the future, great-

er self-respect as well as the appearance of new authorities (Vaillant & Hiller-Sturmhofel, 2000, p. 43).

Fourth, the comparison between alcoholics engaged in the AA movement and individuals upholding abstinence who are outside the movement has led to the conclusion that mutual aid community members are characterized by (Longabaugh et al., 1998, pp. 1313–1333):

- lower intensity of anxiety;
- better social adaptation;
- more effective prevention strategies in solving their problems;
- a sense of stronger social support.

Additionally, comparative analyses of an individual's completion of the Twelve Steps and of other forms of help offered to addicted persons have shown a long-term effectiveness of this program. Its effectiveness was more strongly connected with (Morgenstern et al., 1997, pp. 768–777):

- regular participation in meetings;
- possessing a sponsor;
- increasing engagement in community activities;
- deepening their religiosity;
- increasing the sense of meaning of their own actions;
- improving the organization of their personal life;
- modifying their opinions;
- modeling constructive behaviours.

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Behavioral Addictions Publications – Brief Review

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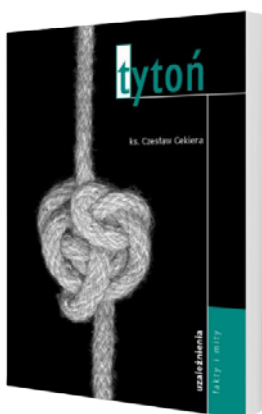
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Behavioral addictions are still the explored field, the scientific literature is getting richer, and book publications present the issue in a comprehensive way. Currently, there are many foreign publications, both books and articles, some are not available in Poland. Over the past 10 years, there were many Polish publications on behavioral addictions. Scientific development of this field, contributed to the interesting studies that take a description of a new phenomenon that is behavioral addictions. This article is a revision presentation of the most important and complex publications which have been issued since 2004 in Poland.

Between 2004 and 2005 at the publishing market appeared very interesting and comprehensive series of books on psychoactive substance and behavioral addictions. A series of *Uzależnienia. Fakty i Mity* [Addictions. Facts and myths] edited by Niewiadomska, is a set of 10 books dealing with all kinds of addictions.



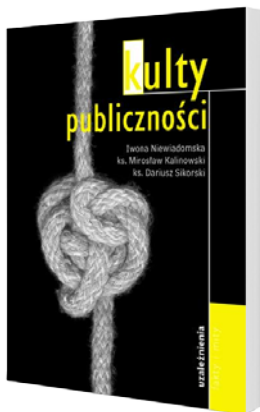
The book *Tytoń* [Tobacco] by Gekiera tackles the issue of nicotine addiction. Publication takes issues of smoking, both in the past and currently. It is a concise presentation of nicotine dependence, shows signs of addiction, as well as the effects of passive and active smoking. The author presents the concepts of dependence on tobacco, also gives a typology of smokers. It describes the ways and means of preventing problems arising from the use of tobacco and tobacco dependence treatment. The book includes an assessment of whether the ethical use of tobacco products, and debunks the myths associated with the use and addiction to nicotine.



Another item in the series under the title *Seks* [Sex] by Niewiadomska, Chwaszcz, Kołodziej, and Śpila treats about the dependence of sex behaviors. The book describes the functions of sexuality in human life, presents issues of human eroticism on the background of historical and cultural circumstances. An interesting issues which are brought up by publication, are subjective and aside-subjective factors that increase the risk of dependence syndrome of sexual behavior. The book is a synthetic characteristic of sex addiction, raises the question of somatic, psychological and social consequences of erotomania. Importantly, the authors also present strategies to prevent problems of a sexual nature, their treatment and the addresses of institutions which may be useful in the prevention of such problems. In the last part the myths and stereotypes about human sexuality are disproved.



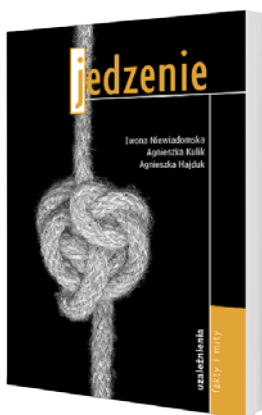
Series also includes a position on issues related to gambling, especially gambling addiction. The book *Hazard* by Niewiadomska, Brzezińska, and Lelonek concisely explains the basic concepts related to the use of gambling. Shows the popularity of gambling in different cultures, the factors that increase the risk of pathological gaming. The authors present the physical, psychological and social consequences of excessive involvement in gambling addiction, describe the strategies for prevention and assistance for compulsive gamblers. As in previous positions, a misconceptions about the players and games of chance and their results closes all issues.



The cycle *Uzależnienia. Fakty i Mity* also includes *Kulty publiczności* [Public cults] by Niewiadomska, Kalinowski, and Sikorski. This book deals with issues of addiction of audience cult. This is a presentation of human religiosity, shows the phenomenon and its functions, explains substitute forms of religiosity. In a multi-faceted shows the risk factors and the mechanisms leading to the loss of control over the behavior associated with the audience cult. Moreover, the publication characterizes consequences of excessive involvement in substitute forms of religiosity, tackling the issue of prevention of engaging in the cult offers and shows cult myths about the effectiveness of alternative forms of religiosity that are included in the advertised products and services.

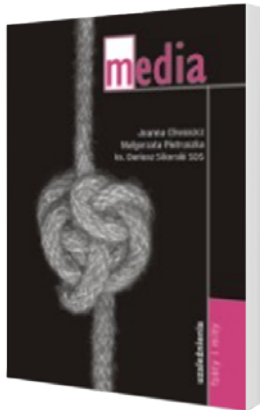


The fifth item in the series, titled *Praca* [Work] by Kalinowski, Czuma, Kuć, and Kulik, takes the subject of the abuse and addiction to work. The publication describes the basic functions of the job that include: the subjective function, the objective function and the function of social relations. It presents the issue of working in the perspective of human development and progress of civilization. In a synthetic way the subject shows dependence on labor, gives a definition of workaholism also illustrates the dynamics of this type of addiction. An important element is the presentation of risk factors that may lead to the development of addiction. Another part of the publication creates a description of the consequences of workaholism, in the somatic, psychological and social area. As in previous series positions, the book includes strategies for preventing occupational problems, ways of therapy of people experiencing workaholism and addresses of institutions providing assistance for prevention and treatment. Completion considers the facts and myths about the control of professional activity and on the consequences of workaholism.

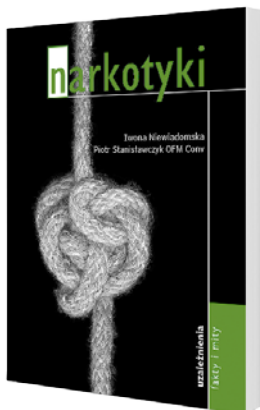


Publication *Jedzenie* [Food] by Niewiadomska, Kulik, and Hajduk deals with issues of food addiction. The book presents the functional significance of food in human life, from the biological, psychosocial and cultural heritage point of view. Shows the dependence of food, aims to show the factors leading to the creation of an eating disorder, the mechanism regulating the behavior of the addict and multidimensional effects of the loss of control over eating. It describes eating disorders such as anorexia, bulimia, obesity, orthorexia nervosa and eating disorders not classified otherwise. It is a characterisation of risk factors leading to eating disorders, both subjective and external. Also presents physical, psychological and

social consequences of dependence on activities related to food, shows the prevention and treatment of eating disorders, and gives the addresses of institutions which help people deal with these problems. In the final part debunks myths about eating, food addiction and its treatment.

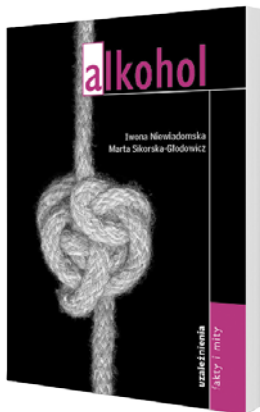


Series also includes the position considering the psychological analysis of the mechanisms of influence of media on human rights and the consequences of their abuse, this is the book *Media* by Chwaszcz, Pietruszka, and Sikorski. The book describes the functions of each of the media and the specificity of their impact, brings the role of the media in culture, reveals the essence of dependence on the mass media and diagnostic criteria to help recognize it. Dependence of the mass media is a psychic, and its effects manifest themselves in all spheres of human functioning. The authors characterize the physical, mental and social damage caused by misuse of the mass media and dependence on them, give suggestions of prevention addressed to the senders and receivers of media messages, and crack down on myths and mistaken beliefs about the role of media in society.

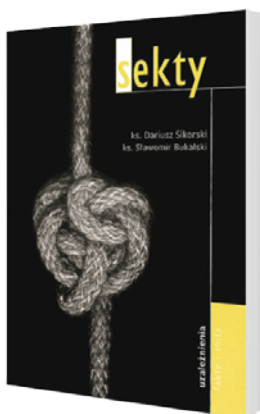


In turn, the book *Narkotyki* [Drugs] by Niewiadomska and Stanisławczyk consider the drug addiction. The aim of the book is to show the factors leading to drug abuse, to present the mechanism of action of drug addiction and methods of prevention and treatment of addicts. This book deals with issues of substance use. It presents the most commonly used drugs, and the specificity of their actions, shows the historical and cultural conditions of their use, presents the physical, mental and social damage caused by drug use, describes the phenomenon of addiction to psychoactive substances. The publication discusses the issues related to the prevention of drug abuse and debunks the myths associated with the use of

drugs. The book also includes useful addresses in the prevention and treatment of drug addiction.



The publication *Alkohol* [Alcohol] by Niewiadomska and Sikorska-Głodowicz is a multilateral representation of the problem of alcohol use, abuse and addiction, and codependency. It also talks about the possibilities of prevention of addiction. The book presents the properties of alcohol, describes metabolism of alcoholic beverages in the human body and their effect on the nervous system. The authors also show the history of consumption of alcoholic beverages in different cultures and contemporary models of drinking. They describe the physical, psychological and social harm done by excessive drinking, characterized by a multi-faceted problem of addiction and codependency. The publication is also a presentation of ways to prevent alcoholism, shows the forms of assistance and important addresses for people experiencing alcohol problems. In the final part, as in the whole series, it debunks myths related to the effects of alcohol addiction and treatment of the disease of alcoholism.



The last position in the series *Uzależnienia. Fakty i Mity* refers to the cult groups. Publication *Sekty* [Sects] by Sikorski and Bukalski shows psychophysical substrate dependence of the cult group, discusses the mechanisms of its action, as well as ways to free from its destructive influence. Publication considers the addiction of destructive cult groups, from the point of view of psychology. The reader may refer to the short characteristics of seven worship groups, which are generally considered as destructive. The book also reveals the psychosocial aspects of addiction worship groups and the mechanisms associated with it, as well as the risks associated with participation in cult groups on psycho-spiritual, physical and social spheres of human life. Shows the prevention of the risks involved with addiction

to cult groups and the sources and forms of assistance to persons seeking professional support. An interesting issue are the myths that have arisen about the sects, the book's authors expose and refute them.

The series *Uzależnienia. Fakty i Mity* is prepared in the form of guides, can therefore serve specialists, parents, educators, as well as young people—the most vulnerable to all kinds of addictions.

The theme of behavioral addiction is also considered by other authors. *Uzależnienia od substancji psychoaktywnych, przedmiotów, czynności i osób: analiza kulturowo-społeczna, filozoficzno-aksjologiczna, psychologiczna, psychobiologiczna, psychopatologiczna, neuropsychologiczna zjawisk i procesów etiopatogenezy uzależnień oraz ich terapii* [Psychoactive substances, objects, actions and people addictions: an analysis of cultural-social, philosophical and axiological, psychological, psychobiological, psychopathological, neuropsychological phenomena and processes of etiopathogenesis of addiction and its treatment], Vol.1 and 2, by Madeja (2008). For over 900 pages of this monograph, the author makes an exhaustive description of the phenomenon of addiction. The publication consists of 20 chapters, which are divided according to their problems discussed in five parts:

1. Historical and cultural objectification of the need of drugs and drug substances.
2. Types of addictions and their contexts.
3. Analysis of new types of addiction and the psychological and psychopathological aspects of addiction to psychoactive substances.
4. Neurobiological, neuropsychological and psychopathological interpretations of psychoactive substance dependence.
5. Treatment of addiction. Because of the subject undertaken in this issue, particularly interesting seems to be chapter 8, in which the author analyzes new types of addiction and codependency—the Internet, cell phones, jobs, sex, consumption (buying and collecting).

In turn, Przybysz-Zaremba (2008) has developed the publication *Uzależnienie młodzieży od współczesnych mediów* [Youth's addictions to modern media]. As pointed out by the author herself, this work is intended for teachers, educators, parents, and all users of the computer and the Internet. Its goal is to increase the awareness of the importance of dependence on media in social life. The publication has a theoretical-empirical style and considers issues such as addiction to modern media as a social problem, including virtual sex, dependence on friendly relations and/or love, playing computer-networking, online gambling, youth addiction of modern media prevention, methodological assumptions of own research, young people in computer addiction and prevention of addiction to computer and network. Worthy of note is the *Appendix*, which contains a questionnaire for adolescents that use a computer and the Internet, interview questionnaire for parents of children and adolescents that use a computer and the Internet, agreement regarding the use of the Internet, diagnostic criteria for Internet addiction by Young—Young's test *Check if you are addicted. How to recognize addiction to computer games?* by Griffiths, addresses of the centers involved in the treatment of *netaholic*, prevention lesson plans for elementary and middle school, and meetings with parents.

Also in 2010, a number of publications in the field of functional addiction appeared. Majchrzak and Ogińska-Bulik published *Uzależnienie od Internetu* [Internet addiction]. Authors answer to the social and scientific need of exploration of rapidly growing phenomenon of Internet addiction, present the results of research concerning the determination

of “psychological determinants of behavior associated with the use of the Internet, determining the risk of dependence on network” (Majchrzak & Ogińska-Bulik, 2010, p. 7). In addition to the cognitive dimension, the publication has also been the application target—preparation of guidelines for designing the prevention programs to protect against the risk of dependence on cyberspace. In the publication, the authors present the theoretical context of this phenomenon, and then present the methodology, analysis and interpretation of the results of own research conducted on a group of 400 students from universities in Łódź. The book also contains *Appendix*, which provides guidelines for the program of minimizing the risk of dependence on the Internet for children and adolescents.

Człowiek i uzależnienia [Man and addictions] by Jędrzejko and Sarzała. The inspiration for this publication has become a debate on *new addiction* organized by the Office of the President of Poland in 2010. As emphasized by the editors of this work, it is “the voice of the collective discussion of the phenomena causing increasingly serious problems of social, economic and health” (Jędrzejko & Sarzała, 2010, p. 10). The book is divided into two parts—the first one relates to issues related to the etiology of contemporary addiction, a reference to their social and moral aspects, the issue of social patterns and health risks, while the latter applies to new addiction dynamically developing in modern society. Because of the issues tackled by the publication, special attention deserve chapters devoted to: cyberbullying (Pyżalski, Sarzała, Jędrzejko, Wrzesień, & Wojtasik), video games (Taper), computer addiction (Augustynek), cell phones as a new source of addiction (Sarzała) and the prevention of gambling (Niewiadomska & Lelonek).

Augustynek published *Uzależnienia komputerowe. Diagnoza, rozpowszechnienie, terapia* [Computer addictions. Diagnosis, popularization, therapy]. This book is theoretical and empirical, which is reflected in its two parts—*Man and the Internet: a review of literature* and *Computer Addiction: own research*. In the first part the author describes the history of the Internet, aspects of its use and the prevalence of dependence, personality determinants, diagnostic criteria and epidemiology of addiction to the Internet, attempts to create a theoretical model and discusses the issue of computer addiction therapy. The second part is devoted to own research, which aim was to “verify on the basis of Polish reality the world information about the addiction to the Internet and also the search for possible new mechanisms to explain the origin, symptoms, course and prognosis of therapeutic about this addiction” (Augustynek, 2010, p. 13).

In 2013, the publication *Uzależnienia behawioralne. Rozmowy z ekspertami* [Behavioral addictions. Conversations with experts] by Zdziarski was released, which was co-financed by the Gambling Problem Solving Fund. It is a collection of interviews conducted by the author with experts in the field of behavioral addictions—Bohdan Woronowicz, Agnieszka Duda-Kubik, Bernadeta Lelonek-Kuleta, Stanisław Pilewski, Katarzyna Wyszynska, Bartłomiej Szmajdziński, Anna Andrzejewska, Józef Bednarek, Beata Ziółkowska, Beata Mroczkowska, Beata Szurowska, Dorota Mącik, Jacek Bucznym, Robert Rutkowski, Małgorzata Lisowska-Magdziarz and Jerzy Rządcki. As pointed out by the author, the publication is of popularizing and is the proposal of interdisciplinary approach. Individual discussions on issues related to pathological gambling, sexoholism, addiction to the Internet, computer, mobile phone, media, shopaholism, anorexia and bulimia. Author together with its callers are seeking answers to the questions: What is the behavioral addiction similar to chemical addiction, and how they differ? How similarities and differences affect the treatment and prevention? What is the significance of cultural context and civilization in the development

of non-chemical addictions? (Zdziarski, 2013, p. 12). In addition to interviews with experts, publication also contains statements of people experiencing problems related to behavioral addictions.

In the last decade, also many articles on particular behavioral addictions were published in Polish magazines. These articles can be divided into several categories: (a) academic articles—presenting the results of empirical research, (b) theoretical articles—presenting classifications of behavioral addiction, (c) trade articles—appearing in journals, (d) presenting therapeutic approaches, and (e) medical articles—featuring, among other things, the use of medicines, the functioning of neurotransmitters and other medical aspects of the issue. Due to the large number of such articles, in this study are listed the main sources of bibliography in which articles in the area of addiction functional are published.

Articles on behavioral addiction appear in the following journals: *Psychiatria*, *Psychiatria Polska*, *Current Problems of Psychiatry*, *Postępy Psychiatrii i Neurologii*, *Przegląd Psychologiczny*, *Roczniki Psychologiczne*, *Polish Journal of Applied Psychology*, *Terapia Uzależnienia i Współuzależnienia*, *Alkoholizm i Narkomania*, *Serwis Informacyjny Narkomania*, *Świat Problemów*. Many interesting articles are also on Internet sites, e.g.: www.psychologia.net.pl and www.psychologia.edu.pl.

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