Using Mobile Phones by Young People: The Trends and Risk of Addiction[1]

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Abstract

The subject of the article is the issue of the use of mobile phones by young people and possible dangers resulting from the dysfunctional use of mobile phones. The analysis of this issue was started from the theoretical side of the phonoholism phenomenon presentation. The definitions related to the use of a mobile phone are presented and the risks and consequences of excessive use of a mobile phone are discussed. Typical features of a person who is psychologically addicted were also described. In the second part, the results of the research carried out among primary and high junior school students were presented. The main aim of the project was to determine the risk of phonoholism among adolescents in two school environments. Anonymous questionnaires were conducted in 2016 among 221 students (54.3% girls and 45.7% boys) aged 10-13 years old. The research results indicated that having a mobile phone is something common and normal. Gender and age of respondents differentiate the way adolescents use mobile phone, but especially the differences were visible when the group of boys and girls were compared. Recommendations for school practices and implications for future research were formulated at the end of the article.

Key words: phonoholism, addiction, prevention, education, mobile phone dependence syndrome

Introduction

Recently, due to the development of modern electronic media, especially in the field of digital technologies, the new behavioral problems have arisen. Since the appearance of the mobile phone, the anomalous use of this device has called into question whether the abuse of its use could lead to addiction. The new phones are used not only to make calls or sending short text messages, but they are already portable computers, music players, radio receivers, devices for car navigation, dictaphones, are also used for logging in to the internet, they are also calendars, notebooks and cameras (Andrzejewska, 2014, p. 22). The average Pole has 1.47 mobile phones, and 9.2 million actively uses social networking sites on a smartphone (We Are Social – Digital, Social & Mobile Worldwide in 2015). Students use it to communicate with other people - sending text messages (76%) and calling (70%), and 68% of young people believe that the phone is a source of entertainment and a way to socialize. Taking pictures and videos using the mobile phone is typical for 92% of teenagers, listening to music using the phone every day or almost every day affects 65% of students. Two-thirds of teenagers treat the phone as an indispensable tool for obtaining data. More and more contemporary teenagers can not imagine even one day without a mobile phone. Security and convenience are the most frequently presented arguments to justify frequent use. The belief that a phone is important in the life of a young person is demonstrated by the fact that one of the most severe penalties used by parents in the opinion of adolescents is to take a mobile phone (Raport TNS OBOP, 2012).

Taking into account the forms of mobile phones use presented above and their universality, it could be stated that it can be easily to lose control over rational use from these devices. De-Sola Gutierrez, Rodriguez de Fonseca and Rubio (2016) emphasized that this fact has become more evident in communications media, inspiring new pathologies, such as “Nomophobia” (No-Mobile-Phobia), “FOMO” (Fear Of Missing Out) which means the fear of being without a cell phone, disconnected or off the Internet, “Textaphrenia” and “Ringxiety” which can be understood as the false sensation of having received a text message or call that leads to constantly checking the device,

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and "Textiety" which is the anxiety of receiving and responding immediately to text messages (see also: Taneja, 2014; Guerreschi, 2006).

For this reason, researchers distinguished a new group of addictions, called functional addictions, or behavioral ones. The basic feature of these behaviors is: "no way to resist impulses or lust, drive or the temptation to perform acts that are harmful to addicts themselves or those around them" (Klimkiewicz & Wojnar, 2013, p. 6). Among behavioral disorders, addictions from technology are distinguished, resulting from the interaction of person with the machine (e.g. with a computer or a telephone), in the absence of simultaneous physical intoxication which is typical for substance addiction (see also: De-Sola Gutierrez, Rodriguez de Fonseca & Rubio, 2016). Therefore, the addiction to a mobile phone can be defined as an abnormal, dysfunctional way of using it and is referred to as phonoholism (or mobile phone dependence syndrome).

The phenomenon of phonoholism – the nature, manifestations and consequences

The phenomenon of phonoholism is relatively new, because it appeared about 15 years ago. China was the first country in which researchers began to recognize them and write about it. Also in the medical literature, the term "mobile phone dependence syndrome" was used for the first time (Guerreschi, 2006, p. 207). This phenomenon is particularly important in relation to young people whose character, personality or ability to function properly in various social groups - professional, friendly and family - are just beginning to shape.

Psychologists involved in the diagnosis and treatment of this addiction claim that people who are addicted attach great importance to having a mobile phone and do not leave it for a moment; mobile phone is for them the most important tool for everyday contacts with others; they feel strong discomfort which is manifested by bad mood, anxiety, sometimes even panic attacks when they do not have a charged battery; using the mobile phone is in their case dictated not by persistence, but by emotional and social factors; the telephone is for them an intermediary in dealing with others; the telephone is necessary for them to exercise constant control over the object of feelings; they feel compelled to stay in touch with someone; they provide convenience and security as justification for their behavior; they have a strong need to belong to the group and gain its recognition; they often suffer from a social phobia or are afraid of loneliness and they usually mask the fears associated with it or deny their existence (Guerreschi, 2006, p. 198-199).

Addiction to a mobile phone according to Potembska and Pawłowska (2009) is an incorrect, dysfunctional way of using a mobile phone, which is characterized by the occurrence in the last 12 months of at least five of the following symptoms:

1. A strong desire to use a mobile phone, conduct conversations or send text messages (SMS), expressed in constant thinking about the mentioned activities.
2. The need to increase the frequency and time of phone calls and to increase the amount and frequency of sending SMSs.
3. Repeated, ineffective attempts to stop or limit the number of calls and SMSs sent.
4. The occurrence of withdrawal symptoms such as anxiety, low mood, depression during attempts to stop or reduce the number and time of calls made by the mobile phone and the number of SMSs sent.
5. Conducting longer conversations and sending more SMSs than previously planned.
6. To lie to family and friends in order to hide costs and time spent on phone calls and sending text messages.
7. Using a mobile phone as an escape from real problems or to improve the bad mood (loneliness, anxiety, depression, guilt.

8. Financial, professional, family and social problems caused by using a mobile phone.

In the case of children and adolescents, there are also difficulties in establishing new friendships and social relationships; lack of control of one's emotions and behavior; lack of concentration on the classes (problem with focusing attention, in addition to controlling the telephone); committing language mistakes; degradation of current interests, which in turn leads to social isolation of an addicted person who can not communicate with others without a telephone (Kozak, 2013). Mental addiction is a strong and extremely difficult to control the need, and sometimes even mental compulsion, to continue to take a certain measure or to repeat a particular activity. The mechanism of this addiction leads to the need to achieve an emotional effect, to relieve tension caused by psychological hunger, for pleasure, to alleviate unpleasant well-being (Olszewska, 2013). Psychological dependence, e.g. from a mobile phone, can be identified when an addicted person is not able to stop compulsive behaviors by himself, which leads to a continuous performance of a given activity from which the individual is dependent (Jędrzejko & Taper, 2010, p. 20-21). Furthermore, there is evidence that the smartphone, with its breadth of applications and uses, tends to induce greater abuse than regular cell phones (Taneja, 2014).

The criteria discussed above are similar to those that characterize substance addiction and that occur in DSM-IV-TR (Choliz, 2010; De-Sola Gutierrez, Rodriguez de Fonseca and Rubio, 2016). It is worth mentioning that considering time, a non-addicted user can spend the identical amount of time on the cell phone as an addicted user, but the non-addicted user's time is constant, more focused on concrete tasks and less disperse (Tosel et all., 2015).

Kozak (2013) distinguishes three stages of mobile phone addiction, each of them lasting for some time. For the first phase, the occurrence of euphoria, curiosity about the new device or the performance of a given activity is characteristic. It makes happy and causes to break away from everyday problems. The second phase means compulsive use of a device, compulsive performance of an activity while devoting more and more time to it, bordering other interests. This condition shows addiction. In the third phase - the last one - there is neglect of duties and social relationships. The person experiences strong discomfort caused by the lack of access to the device. The appearance of negative changes in behavior confirms that the person lives for a given addictive mean and nothing else matters.

Addiction to a mobile phone poses various threats to the mental and physical health of its owner and other people. For example, people who talk for a long time on a mobile phone, start to have a headache, have a hot ear, are tired or irritable. The most dangerous radiation may be transmitted by telephones for young children. The developing brain of the child is more susceptible (Pawłowicz, 2010). De-Sola Gutierrez, Rodriguez de Fonseca and Rubio (2016) recalled also other physical and psychological problems resulted from cell-phone abuse. These problems include rigidity and muscle pain, ocular afflictions resulting from Computer Vision Syndrome reflected in fatigue, dryness, blurry vision, irritation, or ocular redness, auditory and tactile illusions which means the sensation of having heard a ring or felt a vibration of a cell phone, and pain and weakness in the thumbs and wrists leading to an increased number of cases of de Quervain's tenosynovitis which relates to SMS texting (see also: Ali et all., 2014).

Research on phonoholism phenomenon

Considering the popularity of mobile phones especially in the group of children and adolescents, as well as possible negative consequences of improper use, these issues are subject to research and analysis. Most of all, researchers are interested in the prevalence of the problem and sociodemographic differences. Synthesis of data on prevalence in various countries has been done by De-Sola Gutierrez, Rodriguez de Fonseca and Rubio (2016). Researchers pointed out that various criteria are considered in the studies. Subject of analysis are addiction, dependence, problematic use,

excessive use, and risky behavior. It can lead to different conclusions. Therefore, in some countries the prevalence of the problem is set at 5%, while in others it reaches almost 65%. While undertaking research on phonoholism phenomenon, researcher should remember about many difficulties. They are an effect, for example, of a broad spectrum of positions taken by researchers, ranging from the absolute existence of addiction to a broader interpretation of these symptoms, as the result of an impulse control disorder or of problematic or psychopathological personality traits, which offer a greater range of behavioral possibilities beyond addiction itself. In this situation, it can be accepted the conclusion of Sansone and Sansone (2013) who have stated that the delineations between abuse, misuse, dependence, and addiction have yet to be clearly defined. Furthermore, Toda et al. (2006) note that mobile phone dependence can also be seen as a behavior congruent with a certain lifestyle.

Regarding research on this issue in Poland (not included in De-Sola Gutierrez, Rodriguez de Fonseca & Rubio, 2016) can be referred the first and - so far - the only one report on research into compulsive phone use and detailed characteristics of the phenomenon of phonoholism in Poland prepared by Dębski (2016). The main objective of this project was to increase the knowledge of Polish society in responsible use of new communication tools. This goal can be achieved by making a scientific diagnosis, dissemination of research results, as well as planning professional support for various target groups struggling with the uncontrolled use of digital devices, with emphasis on school youth. The research was carried out in 2015-2016 with the participation of school youth. The research was representative in nature and 22086 students completed the on-line questionnaire. Teachers also took part in the research (N = 3471). Results indicated that almost all surveyed students regularly use mobile devices (86.6%), the clear majority of used devices have direct internet access (92%). Half of the students indicate that they use the same frequency on a smartphone or cellphone on school days (from Monday to Friday), which is on weekends. At least once a day, over 85% of respondents use the phone (35% several dozen times a day). The vast majority of the students are convinced that someone can become addicted to the use of mobile devices (77%) and on the question of whether you yourself are a person addicted to a mobile phone every fifth student (20.8%) responds in the affirmative, almost every tenth answer "hard to say". Dębski (2016) stated that about 2% - 3% of students display clear symptoms of dependence on digital devices connected to the Internet. These symptoms concern emotions (e.g. lack of sense of security, lack of influence on events happening, anxiety and fear related to being outside the main flow of information - FOMO syndrome), but also behaviors (e.g., constantly touching the mobile phone and unlocking the screen, using the phone at any time of the day or night, compulsory waiting for others) and beliefs (e.g., hard to imagine a day without using a smartphone). The respondents were largely unaware of the negative psychosocial effects of habitual use of mobile devices and often believes that "sticking" to the mobile phone is the "sign of the times". These research results provide a way to formulate many recommendations and emphasize that dealing with the issue of phonoholism is particularly important and necessary. Indeed, this issue is increasingly being undertaken in Poland on a smaller scale and concerns various environments and age groups. A study conducted by Warzecha and Pawlak (2017) among secondary students or study conducted among Majchrzyk-Mikuła and Matusiak (2015) among pedagogy students are ones of the examples. Research carried out by the team of the EDUSA Foundation is also part of this trend of interest and will be the subject of this text. However, only a part of the results will be presented. Detailed analysis of other data collected as a part of the project "Fonoholizm – Ciemna Strona Mocy" (Mobile Phone Dependence Syndrome – The Dark Side of the Force)" implementation and relationships between them are the subject of publication in Polish prepared by Adamczyk and Adamczyk (2016).

Method

Model

The main aim of the project was to determine the risk of phonoholism among adolescents in two school environments. Due to the fact that this problem was not analysed in these schools,

researchers were interested in how young people use mobile phones. Apart from the exploration purpose, it was assumed that the project is to contribute to the development of a plan of prevention or intervention activities for schools.

Anonymous questionnaires were conducted in 2016 among students of the 4 – 6th grades of Primary School and among the 1st grade of Junior High School in the Bemowo District of Warsaw, the Capital City of Poland. The questionnaire consisted of 13 questions that concerned issues such as having a mobile phone and ways of using it, time spent on using mobile phone and beliefs about mobile phone abuse and its consequences.

Participants

Research was conducted among 221 students (54.3% girls and 45.7% boys) aged 10-13 years old (average age: 11.10). 4th grade students accounted for 28.1% of all respondents, 5th grade - 41.2% of all respondents, 6th grade - 24.0% of all respondents, junior high school students - 6.8% of all respondents. Detailed characteristics of the participants are presented in Table 1.

Table 1. *Gender and age characteristics of participants.*

			Age				
			10 years	11 years	12 years	13 years	Total
Gender	Girls	Frequency	37	41	33	9	120
		% of gender	30,8%	34,2%	27,5%	7,5%	100,0%
		% of age	59,7%	45,1%	62,3%	60,0%	54,3%
		% of total	16,7%	18,6%	14,9%	4,1%	54,3%
	Boys	Frequency	25	50	20	6	101
		% of gender	24,8%	49,5%	19,8%	5,9%	100,0%
		% of age	40,3%	54,9%	37,7%	40,0%	45,7%
		% of total	11,3%	22,6%	9,0%	2,7%	45,7%
Total		Frequency	62	91	53	15	221
		% of gender	28,1%	41,2%	24,0%	6,8%	100,0%
		% of age	100,0%	100,0%	100,0%	100,0%	100,0%
		% of total	28,1%	41,2%	24,0%	6,8%	100,0%

Girls aged 10 constituted 30.8% of the total sample of girls, aged 11 - 34.2% of the total girls sample, at the age of 12 - 27.5% of the total girls sample, aged 13 - 7.5% of the total number of girls. Boys at the age of 10 constituted 24.8% of the total sample of boys, at the age of 11 - 49.5% of the total sample of boys, at the age of 12 - 19.8% of the total sample of boys, at the age of 13 - 5.9% of the total boys sample.

Data analysis

An analysis of the distribution of selected variables and their differentiation in terms of age and gender was made. In addition to the basic characteristics, the measures of dispersion were considered. On this basis, it became possible to interpret the values of the obtained measurements in the context of the distribution of the examined feature and its differentiation. Statistical significance of the differences was also verified. The formula for Cramer's V coefficient was used to measure the strength of the relationship between the variables.

Results

The first question was: Do you have a mobile phone? All girls and 99% of boys gave an affirmative answer. One student wrote that he does not have a mobile phone, but he intends to buy it.

The second question was: Do you always have (or try to have) a phone with you? And has been presented on a scale (Yes / No). Results were presented in the table below.

Table 2. *Distribution of responses to question 2 due to age.*

			Do you always have (or try to have) a phone with you?		
			Yes	No	Total
Age	10 years	Frequency	18	44	62
		% of age	29,0%	71,0%	100,0%
		% of total	8,1%	19,9%	28,1%
	11 years	Frequency	54	37	91
		% of age	59,3%	40,7%	100,0%
		% of total	24,4%	16,7%	41,2%
	12 years	Frequency	36	17	53
		% of age	67,9%	32,1%	100,0%
		% of total	16,3%	7,7%	24,0%
	13 years	Frequency	12	3	15
		% of age	80,0%	20,0%	100,0%
		% of total	5,4%	1,4%	6,8%
Total		Frequency	120	101	221
		% of age	54,3%	45,7%	100,0%
		% of total	54,3%	45,7%	100,0%

$\bar{x}$ *=1,46; s =0,499*

The obtained results indicated the average variation in the responses (V_z = 34.18%), in such a way that 29% of the ten-year-olds students stated that they always have or try to have a mobile phone with them, at the age of eleven it is 59.3 %, sixth grade students constitute 67.9%, while at the age of thirteen almost every student declare s/he always has a mobile phone with her/him. The distribution of responses to all respondents indicated that every second student always has (or tries to have) a mobile phone with them.

The third question was: which of the functions of the mobile phone do you use most often? And was presented with the possibility of multiple choice of answers. The results allowed to state that the mobile phone is used primarily by students to check the time (66.1%), to send SMSs (63.3%), to make calls (61.5%), to use the Internet (57.5%). Every second student listens to music (52.5%) and takes pictures using a cell (47.5%). Every third girl most often uses the following phone functions: SMS (36.2%); pictures (32.6%), Internet (33.5%), conversation (34.4%), music (31.2%), time (34.4%). Every third boy most often uses the telephone functions such as: SMS (27.1%), conversation (27.1%), time (31.7%), every fourth uses the Internet (24.0%) and games (26.2%).

Table 3. *Distribution of responses to question 3 due to gender.*

Gender	Which of the functions of the mobile phone do you use most often?								
	SMS	Video	Pictures	Internet	Games	Notes	Calls	Music	Time
Girls	80 36,2%	23 10,4%	72 32,6%	74 33,5%	39 17,6%	17 7,7%	76 34,4%	69 31,2%	76 34,4%
Boys	60 27,1%	15 6,8%	33 14,9%	53 24,0%	58 26,2%	13 5,9%	60 27,1%	47 21,3%	70 31,7%
Total	140 63,3%	38 17,2%	105 47,5%	127 57,5%	97 43,8%	30 13,6%	136 61,5%	116 52,5%	146 66,1%

Analysis of the variation of answers in terms of the age of students, allowed to state that the age is the factor differentiating the way they use the mobile phone in such a way that the fifth-grade students using it more often than younger students from fourth grade. Almost twice as often eleven-year-olds (26.2%) than ten-year-olds (15.4%) use SMS, Internet, Games, Calls. Among twelve-year-olds compared to eleven-year-olds, there is a clear decline in the use of the most attractive functions of a mobile phone, which are text messages and conversations, while the remaining results remain at a similar level.

The fourth question concerned the time students spend daily using a mobile phone. The respondents had the opportunity to indicate the answer from four options: less than half an hour, 0.5 - 1 hour, 1-2 hours, more than 2 hours. The obtained results allowed us to conclude that gender largely differentiates the answer to this question (V_z = 44.76%). Girls (19.2%) spend twice as often as boys (10.9%) with a mobile phone more than two hours a day. The distribution of responses to all respondents indicated that everyday spending time with a mobile phone looks as follows: girls - 11.3% (less than half an hour); 21.7% (0.5-1 hour); 10.9% (1-2 hours); 10.4% (more than 2 hours); boys - 14.5% (less than half an hour); 17.2% (0.5-1 hour); 9.0% (1-2 hours); 5.0% (more than 2 hours). The results also showed that the age of students largely differentiates the answers to this question (V_z = 44.76%), in such a way that among students in a given age group, 3.2% of ten-year-olds, 8.8% eleven-year-olds, 34.0% of twelve-year-olds and 40.0% of thirteen-year-olds spend time with telephone over 2 hours a day. The distribution of responses to all respondents also indicated that every fourth student (25.8%) spends time with a mobile phone less than half an hour a day, 38.9% - from half an hour to an hour a day, 19.9% - an hour up to two hours, 15.4% - more than two hours. 35.2% of the surveyed students spend too much time with a mobile phone.

The next question concerned how long the student has a mobile phone. There was a differentiation of responses due to the gender and age of respondents. Girls (29.2%) have a mobile phone for more than three years twice as often as boys (15.8%). In the case of all students, every fourth respondent (23.1%) has a mobile phone for over three years. 9.7% of fourth grade students, 17.6% of 5th grade students, 32.1% of 6th grade students and almost every high junior school student (80.0%) have a mobile phone for more than three years.

In the next step, students were asked about how many text messages they send per day. Obtained results allowed to conclude that the gender differentiates the answer to this question (Vz = 49.91%) in such a way that girls send text messages more often than boys during the day. The results

also indicated that boys are characterized by a lower need to send and receive text messages, every second (46.5%) sends only two messages a day. For all students, 33.5% of them send less than two text messages daily, 29.9% to five daily, 17.6% to ten daily, 19.0% ten and more. It can be noted here that the report on the state of the telecommunications market presented by the Office of Electronic Communications shows that the number of messages sent in Polish mobile phone networks amounted to on average 4 SMSs per day per one inhabitant (Raport o stanie rynku telekomunikacyjnego w Polsce, 2015).

The seventh question in the questionnaire was: How many telephone calls do you make per day? The results of the research allowed to conclude that gender largely differentiates the answer to this question (V_z = 40,59%). Girls (15.0%) do more than five calls a day, twice as much as boys (8.9%). Almost every second student (39.2%) and every third student (29.7%) perform three to five telephone calls a day. With regard to all students, every fifth (22.2%) performs one call a day, every third (30, 8%) performs two calls a day, every third (34, 8%) performs three to five calls a day and every the eighth (12, 2%) performs more than five calls a day. In addition, differences were identified from the point of view of the age of students. Every third student of the fourth class (30.6%) conducts one conversation per day, every third (35.5%) two conversations a day, every third (30.6%) three to five a day and every thirty-first (3.2%) more than five calls a day. Every fifth-grade student (22.0%) makes one call a day, 28.6% two calls a day, 37.4% from three to five a day and every eighth (12.1%) more than five calls a day. Almost every seventh sixth-grade student (15.1%) makes one call a day, every third (30.2%) two calls a day, one third (32.1%) three to five a day and almost one fourth (22.6%) %) more than five calls a day. Over every seventh student in the high junior school (13.2%) performs one conversation a day, every fourth (26.7%) two conversations a day, every second (46.7%) from three to five a day and over one in seven (13.3%) more than five calls a day.

The eighth question was: Do you turn off your mobile phone for the night? And it was presented in the Yes / No scale. It turned out that 36.7% of girls and 44.6% of boys care about turning off the cellphone for the night. Detailed results are presented in the Table 4.

Table 4. *Distribution of responses to question 8 due to gender.*

			Do you turn off your mobile phone for the night?		
			Yes	No	Total
Gender	Girls	Frequency	44	76	120
		% of gender	36,7%	63,3%	100,0%
		% of question 8	49,4%	57,6%	54,3%
		% of total	19,9%	34,4%	54,3%
	Boys	Frequency	45	56	101
		% of gender	44,6%	55,4%	100,0%
		% of question 8	50,6%	42,4%	45,7%
		% of total	20,4%	25,3%	45,7%
Total		Frequency	89	132	221
		% of gender	40,3%	59,7%	100,0%
		% of question 8	100,0%	100,0%	100,0%
		% of total	40,3%	59,7%	100,0%

$\bar{x}$ =1,60; s =0,492

With regard to all respondents, almost every second (40.32%) turns off the mobile phone at night, and 59.7% does not. The obtained results were also differentiated due to the age of the respondents (V_z = 30.75%). Students from 4th grade (48.4% - Yes, 51.6% - No) and 5th grade (45.1% - Yes, 54.9% - No) answered similarly, which means that every other one turns off the mobile phone for night. On the other hand, among students of the 6th grade (26.4% - Yes, 73.6% - No) and junior high school students (26.7% - Yes, 73.3% - No), only one in four of them turns off the mobile phone at night.

The next question concerned students' opinions on whether using a mobile phone is dangerous to health. The students could answer in the affirmative or negative way. 69.2% of girls, 75.2% of boys believe that using a mobile phone is dangerous to health. For all students, 71.9% of them think that using a mobile phone have negative consequences to health, while every fourth of them is of a different opinion. Quite interesting was the variation of the results from the point of view of the age of respondents. 4th grade students (88.7% -Yes, 11.3% - No), 5th grades student (76.9% - Yes, 23.1% - No) and junior high school students (80.0% - Yes, 20.0% - No) respond similarly, that the use of a mobile phone is harmful to health. On the other hand, 58.5% of the 6th grades felt that using a mobile phone couldn't have negative consequences on health.

The tenth question was: Do you think someone can become addicted to a mobile phone? The students had three answer options: yes, no, I do not know. 86.7% of girls and 82.2% of boys thought that someone can become addicted to a mobile phone. Obtained results allowed to conclude that almost all surveyed students, regardless of their age, thought that one could become addicted to a mobile phone. Only every fifteen student (6.8%) stated that one can not become addicted to a mobile phone, and every twelfth (8.6%) had no opinion on this issue.

The students were also asked if they hear how the mobile phone rings, even if it is not true. It turned out that this type of experience is not frequent - 15.0% of girls and 13.9% of boys experienced the illusion of the phone's vibrations, even though in fact it did not occur. Most often this experience was signaled by older students. Among students of the sixth grade and junior high school students the percentage was around 25. This result may be associated with a higher frequency of use of the phone by older students, which has been previously demonstrated, as well as the fact that older students have longer experience of using the telephone than younger students.

The twelfth question was: Are you impatiently waiting for each SMS/conversation? The results allowed to conclude that the gender in the middle extent differentiates the answer to this question (V_z = 20.99%). Every fourth girl (24.2%) eagerly waits for each text message or conversation, while such impatience is shown by only every tenth boy (9.9%). Regarding all students, every sixth (17.6%) eagerly waits for each SMS or conversation. Considering the age of the respondents, it can be stated that eagerly waiting for every text message/conversation is 8.1% of ten-year-olds, 12.1% of eleven-year-olds, 34.0% of 12-year-olds and 33.3% of 13-year-olds.

The last question was: Could you live without a cell phone? The results showed (see Table 5) that gender in the medium level differentiates the answer to this question (V_z = 35.0%). 35.8% of girls and 17.8% of boys think that they could not live without a mobile phone.

Table 5. *Distribution of responses to question 13 due to gender.*

		Could you live without a cell phone?		
		Yes	No	Total
Girls	Frequency	77	43	120
	% of gender	64,2%	35,8%	100,0%

		% of question 13	48,1%	70,5%	54,3%
		% of total	34,8%	19,5%	54,3%
Gender	Boys	Frequency	83	18	101
		% of gender	82,2%	17,8%	100,0%
		% of question 13	51,9%	29,5%	45,7%
		% of total	37,6%	8,1%	45,7%
Total		Frequency	160	61	221
		% of gender	72,4%	27,6%	100,0%
		% of question 13	100,0%	100,0%	100,0%
		% of total	72,4%	27,6%	100,0%

$\bar{x}$ =1,28; s =0,448

With regard to all students, every third (27.6%) would not be able to live without a mobile phone. Furthermore, almost every fourth ten-year olds (22.6%) and eleven-year old (23.1%) and every third twelve-year-old (39.6%) and thirteen-year-old (33.3%) would not be able to live without a mobile phone.

Conclusions, limitations and implications

The purpose of the presented study was to find out how the teenagers aged 10 -13 years old from two selected schools use mobile phones. The presented research results indicate that having a mobile phone is something common and therefore normal. Results indicate that the gender and age of respondents differentiate the way they use mobile phone, but especially the differences were visible when the group of boys and girls were compared. Every second student always has a mobile phone with him, more often girls than boys. Over half of the students do not turn off their mobile phone for the night. Every seventh student experienced the feeling of so-called vibrating unit. It should be noted that this experience was much more common in the group of older students who generally use the mobile phones more often and for a long time. Every third student would not be able to live without a mobile phone.

Taking into account the obtained results, attention should be paid to clear gender differentiation. Presented research shows that girls use mobile phones much more often, have longer conversations, send more text messages than boys, less frequently switch off the phone for the night and look forward to answering or talking more eagerly. On this basis, it can be concluded that girls are more vulnerable to addiction to mobile phones. Although they are aware that someone can become addicted to mobile phones. This type of differentiation was also noted in other studies of this issue (see i.e. Warzecha & Pawlak, 2017; Dębski, 2016; Goswami & Rani Singh, 2016). However, researchers explain gender diversity in the use of phones by pointing to specific gender sub-cultures by indicating that boys' use of phones is of a different meaning than girls'. In a way that, girls use it mainly as a tool to communicate and maintain peer groups and contacts and social aspects (such as design, bell and color), boys use it more for themselves, examining its features and as a toy (see Goswami & Rani Singh, 2016).

The results of the presented study also allowed to state that some of the students manifest symptoms that are typical for excessive use of a mobile phone, such as the compulsion to send and receive text messages, the illusion of vibration and the fear of losing a mobile phone. A similar result was obtained in studies conducted by Dębski (2016). This indicates a clear need for intervention. Preventive measures can help to reduce a scale of phonoholism (see also: Hoffmann, 2017). A

significant role is played by information and education strategies which on the one hand should aim to raise the awareness of young people about the proper and safe use of mobile phones and about possible threats. On the other hand, it may be important to develop skills such as managing own free time, rest, "detachment" from virtual reality. The idea is that activities undertaken during the day are not limited to the continuous use of new technologies. This is especially important when excessive use of phones is an escape from problems.

The presented research, apart from the scientific goal, had also a practical one. The obtained results were analyzed by the EDUSA Foundation team in cooperation with the school managements, pedagogues and parents. On this basis, a preventive action plan was developed, which takes into account, inter alia, parents education in the use of mobile phones by children and possible dangers resulting from the dysfunctional use of mobile phones (the importance of this type of activities was also emphasized by Bednarek & Andrzejewska, 2014), preventive classes with students were also planned and carried out. There was also organized at school an action titled "a day without a phone".

Finally, some research limitations and implications for further research should be noted. Modern technologies are developing extremely fast, new telephone applications are constantly being developed, which are becoming fashionable among children and young people. For this reason, it would be necessary to conduct continuous research on the ways of using mobile phones by young people or longitudinal studies to capture the dynamics of changes over time. To diagnose mobile phone addiction, it would be necessary to use standardized and psychometrically verified tools developed on the basis of diagnostic criteria for addictions. Moreover, in the presented study, only text messaging (SMSs) and telephone conversations were taken into account. Meanwhile, perhaps more important thing for teenagers is writing messages in Messenger (the official application intended for communication with Facebook friends, the largest social network). It would be worth considering whether in this case young people become addicted to tools, or rather addicted to activities, or maybe they are dependent on "being up to date". On the other hand, maybe the analyzed activities are in fact only an expression of present times?

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