Evaluation of threat of mobile phone – addition among Belarusian University students

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ABSTRACT

Introduction: The use of mobile phones has increased worldwide during the last decade, especially in adolescents.
Objective: The assessment role of mobile phone in the students' life, evaluation of the mobile phone addition symptoms among the Belarusian university students.
Material and Methods: The study comprised 160 students from Belarus. We used a questionnaire included the test of mobile phone addiction.
Results. The majority of the students had the mobile phones. Of the students 68.8% were convinced on the harmful effects of mobile phone. Nearly 1/3 of the respondents declared that mobile phone should switch off in the theatre (30%), and in the church (33.8%). Of the students 28.8% knew a monophobia definition. Most respondents (71.9%) have never switched off their phones. Only 10.4% of the students had the symptoms of mobile phone addiction.
Conclusions. Most students from Belarus were convinced on the harmful effect of the mobile phone using. Most respondents knew that mobile phone users could be addicted. Almost 1/10 of the students had the symptoms of mobile phone – addiction.
Key words: students, mobile phone, addiction, Belarus

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INTRODUCTION

The use of mobile (cellular) phones has increased worldwide during the last decade, especially in children and adolescents [1-4].

The mobile phone is also an important communication technology in everyday life. It directly or indirectly affects many aspects of human relationships and human interactions [5-6]. The mobile phones have penetrated most aspects of everyday life. Mobile users have sophisticated (and often emphatic) opinions about their phones. The mobile phone offers the users an easy way to escape from unfamiliar places and complicated situations.

Although voice calls account at present for about 80% of cell phone revenue, the extraordinary success of the short message service (SMS), particularly among younger cell phone users, continues to surprise network operators: SMS is now expected to dominate mobile messaging in both traffic volume and revenue well into the last quarter of the present decade [4-6].

Considerable evidence indicates that mobile phone users become highly dependent on the device and express extreme reluctance to give it up. A survey conducted by the London schools showed that 92% of the UK mobile phone users felt that they needed to have the mobile phone in their daily lives [7]. In other, survey included 1503 American people showed that 26% of mobile phone users claimed that they cannot live without the mobile phone [8].

In a study from the UK, researchers found that mobile phone users felt that they had a sense that were physically attached to the mobile phone. Many of the subjects reported that they felt they could not leave home without the mobile phone [9]. Furthermore, when mobile phone users lost their mobile phones, young users reported that they felt frustrated, angry and isolated [7]

In a Polish study comprised 113 nurse students, 96.5% had mobile phone. Most of the respondents were convinced that mobile phone facilitates the contact with people. Almost 1/3 was convinced on the harmful effects of mobile phone. Nearly 85% of the respondents were convinced, that people can become addicted to mobile phones. The symptoms of mobile phone – addiction had 25.7% of students [10].

Walsh et al. [11] posit that mobile phone involvement represents a person’s cognitive (such as the extent to which a person thinks about their mobile phone when not using it) and behavioral (such as constantly checking the mobile phone for missed messages or calls) association with their mobile phone. Recent literature has drawn on addiction symptoms to measure problematic mobile phone use [12-14].

To our knowledge, this the first study on the evaluation of mobile phone-addition among students in Belarus. The aim of this study was to examine the role of mobile phone in the students' life, and evaluation of the mobile phone-addition symptoms.

MATERIAL AND METHODS

The research was conducted among students of the University of Grodno in Belarus. The study included a total of 160 students. The study used a questionnaire specially designed for this study, created in the Department of Integrated Medical Care of the Medical University of Białystok [9]. The study was conducted between 2009 and 2010.

We used a questionnaire consisted of three parts. First part consisted of 13 questions, including 5 demographic (age, gender, year of study, faculty, residence) and 6 related to the topic of basic research. For example: have you got a mobile phone, mobile phone role played by the respondent's life (security, doctor contact, contact with close people, working tool; children control by parents), opinion on dangers of using mobile phones, costs of using the phone, using the mobile phone in the cemetery, doctor, a cafe/restaurant, cinema, theatre, church, train/ bus, at work, in a shop in the hospital, during classes at the University and in the offices. Second part contains six questions relating to: number of mobile, who pays phone billings, mobile phone addiction, what is a mean nomofobia term, which functions in the mobile phone respondent using (hardware to talk, SMS, camera, Internet connection, watch, games, taking notes) and when tested off the phone. Third part contains a test mobile phone addiction [4,5], consisting of 10 questions about attitudes to SMS, the impact on the test tones from your friends, boyfriend (girlfriend), what does the test with the phone when it is at school, the lecture or in a similar situation, what happens to your phone when in such a respondent goes on Saturday evening with friends, who knows his cell phone number, how often you change the mobile phone, which draws attention when purchased, and draws attention to the promotion of free SMS, when the charges the battery of your camera, and in what situations are enabled phone? The test responses in the three possible options: a, b and c. Selecting the most studied indications of a (group, I) have already testified that the mobile phone for the person concerned is not essential. Selecting the most answer "b" (Group II) - that the respondent uses a mobile phone in the right way. Most indications of 'c' (Group III) -demonstrated a cell phone addiction. Data analysis was performed using Statistica PL v.

8.0 software. The significance level was set at $p < 0.05$.

RESULTS

A total of 68.1% students were between 18 - 20 years of age, and 39.1% were between 21 and 30 years of age. 123 (76.9%). lived in the city others in the villages. Women were 55.6% and men 44.4%.

In Belarus, most of the participants had a mobile phone 109 (68.1%). Almost 1/3 of the students had two mobile phones.

Significantly more respondents owned mobile phones from 2 to five years 111 (69.4%), from 6 to 10 years 46 (28.8%), and above 10 years only 3 (1.8%) students.

All (100%) students used mobile phones to make and receive calls. More than half 94 (58.8%) of the respondents used mobile phones for sending text messages. Almost 1/3 used the phones to take photos. Only 30 (18.8%) of the respondents used cellular phones for games and 41 (25.6%) used the phones to access to the Internet.

Parents covered the bills for 20.6% students. Thirty (18.8%) students paid from a pocket money, 24 (15.0%) with self-earned money, and only 4 (2.5%) by grandparents or siblings.

Similar proportion of the respondents 138 (86.3%) felt that the mobile phone facilitates their contact with people. Almost 96 (60.0%) of participants answered that mobile phone is a working tool.

More than half, 68.8%, of the respondents were convinced that mobile phone using is harmfulness, and 8.8% thought it is particularly harmful to children.

Most of the respondents (59.4%) considered that sometimes there are the situations in which subjects feel vulnerable to annoying or embarrassing to the mobile phones. Only 9 (5.6%) of the respondents did not have an opinion on this matter.

According to the respondents, the cell phones should be switched off in the theatre (30.0%) of students, and church 33.8% respondents. Details are shown in table 1.

Nearly half, 43.1%, of the students were convinced that the mobile phone can be addicted and 49.4% had an opposite opinion.

Only 46 (28.8%) of the respondents knew nomofobia term. Almost 49 (30.6%) of the students, did not have an opinion on this matter.

Most of the students 71.9% declared that they have never switch-off their phones.

Analysis of the mobile phone test addiction led to the conclusion that the majority of the respondents had to be in Group II. Most of the respondents selected options "b" 121 (75.6%) from Belarus. Variants of the "c" (group, III) preferred 31 (10.4%) students. Variants of the "a" (group, I) selected 8 (5.0%) respondents.

DISCUSSION

In the present study, almost all students had mobile phones and 1/3 had even two. They used mobile phones also for sending text messages, making photos and access to the Internet. Most of the respondents declared that they have never switch-off their phones. Analysis of the mobile phone test addiction led to the conclusion that the majority of the respondents had to be in Group II, the respondents used the mobile phones in the right way. Our results are in the agreement with previous reports [6,7,10-12] .

Krajewska-Kułak et al. [10] evaluated 113 nursey students on role of mobile phone in the students' life. More than half of the respondents declared that sometimes there are situations, they felt irritated or embarrassed due to behaviour of the mobile phones owners. Furthermore, most of the respondents reported that the mobile phone should switch off at the theatre -68 (62.4%), at the University 66 (60.6%), in the church 62 (56.9%), and the doctor 60 (55%). Nearly 85.3% of the respondents were convinced, that people can become addicted to mobile phones, and 54% of students have known nomophobia definition.

Similar results Krajewska-Kułak et al. [15] found in physiotehtrapy students. All students had mobile phones. Most of the respondents (71.2%) declared that sometimes there were situations, they felt irritated or embarrassed due to behavior of the mobile phone's owners. Nearly 70% of the respondents were convinced, that people can become addicted to mobile phones. Almost 19% of the students had symptoms of mobile phone – addiction.

In the literature there are few reports on nomophobia [16]. King et al. [16] presented the case report of a patient who has continuously kept his mobile phone with him since 1995 because of his overwhelming need to feel safe and to be able to immediately call emergency services and people he trusts should he feel sick. Flynn et al. [17] described two cases to illustrate the use of mobile phones with in vivo exposure treatment of refractory driving phobias.

Reid and Reid [18] found that lonely participants preferred making voice calls and rated texting as a less intimate method of contact to be used only as a last resort, whilst anxious participants estimated making fewer voice calls and preferred to text, achieving expressive and intimate contact using this medium. In the current study, we did not examine psychological profile of the students.

Dixit et al. [19] found that 18.5% students were nomophobes. In gender-based observation,

19% males and 18% females were found to be nomophobes. Approximately 73% students kept their mobile phones with them even when they go to sleep (for 24 h a day) and 18.5% students used mobile phone during college hours. Analysis of test dependence of mobile phone led to the conclusion that the majority of respondents (75.6%), cellular phone, treated as a technical measure, which is used during the day. Such a choice responses testified that the respondents use the most of it in an appropriate manner. However 10.4% students showed features of a mobile geek, being a fanatic, a mobile phone.

In a Tunisian study [20], investigated mobile phone use and dependence in high school students. Questionnaires were anonymously distributed to 120 adolescents looking for the modalities of use of mobiles. SMS dependency was assessed with the French version of the Igarashi scale. The majority of the students sent more than six missing calls per day. According to the Igarashi scale, adolescents reported perception of excessive use in 31. The authors concluded that demonstrated a new addiction to mobile phone among tunisian high school students. In the present study, we did not examine SMS dependency.

Khan [21] investigated whether the symptoms of ill health reported by young people may be associated with the use of mobile phone. Most of the subjects (83.57%) had some knowledge about the adverse effects of mobile phone use. More than half, 55.94%, of the subjects reported the average daily mobile phone use of less than 30 min, 27.97%, of 30-60 min, 11.53%, of 60-90 min and 4.54% of more than 90 min. Impaired concentration was reported by 34.27% of respondents, memory disturbances by 40.56%, sleeplessness by 38.8%, hearing problems by 23.07%, and facial dermatitis by 16.78%. Out of 286 subjects who participated in this study, 44.4% related their symptoms to mobile phone use. In the current study, we did not evaluate health. The findings of the present study indicated that mobile phones play a large part in the daily life of medical students.

The present study has some limitations. The greatest limit of the research is the small size of the sample: the validity of the conclusions drawn up to this point would certainly be increased with a larger sample. A second limitation is the lack of psychometric scales such as: the Personality Questionnaire, the Self-Rating Depression scale, the Self-Rating Anxiety Scale.

CONCLUSIONS

1. Most of the students were convinced on the harmful effect of the mobile phone using.
2. More respondents knew that mobile phone users could be addicted.
3. Almost 1/10 students had the symptoms of mobile phone –addiction.

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Table 1. Preferred behaviors of the mobile phone owners, as soon as the telephone will ring.

	To pick up the phone		**He/She should switch off the mobile phone**		**It difficult to say**
Place	**to talk freely**	**so to talk so not to disturb anyone**	**and not to talk**	**earlier before he/she will find himself/herself in this place**	
cemetery	4.4 %	20.0 %	45.0 %	25.6 %	5.0 %
party	1.9 %	10.0 %	45.6 %	40.6 %	1.9 %
date	21.3 %	36.9 %	25.0 %	9.4 %	7.5 %
doctor	1.9 %	13.8 %	58. %	25.0 %	1.3 %
cafe, restaurant	32.5 %	55.6 %	5.0 %	6.3 %	0.6 %
ciemna	4.4 %	38.1 %	36.9 %	20.6 %	0
church	1.9 %	5.6 %	56.9 %	33.8 %	1.9 %
train, bus	57.5 %	39.4 %	0.6 %	1.3 %	1.3 %
job	24.4 %	58.1 %	8.1 %	2.5 %	6.9 %
shop	65.6 %	31.3 %	2.5 %	0	0.6 %
hospital	11.3 %	46.9 %	28.8 %	11.3 %	1.9 %
theatre	1.9 %	22.5 %	45.0 %	30.0 %	0.6 %
during the tasks	3.1 %	19.4 %	50.0 %	23.8 %	3.8 %
office	3.8 %	14.4 %	48.1 %	28.8 %	5.0 %