

¹AGH University of Science and Technology, Faculty of Geology,
Geophysics and Environment Protection,
Department of General Geology and Geotourism, Krakow, Poland
AGH Akademia Górniczo-Hutnicza,
Katedra Geologii Ogólnej i Geoturystyki w Krakowie

²Academy of Physical Education in Krakow, Poland
Institute of Sport - Department of Sports and Recreational Games
Akademia Wychowania Fizycznego w Krakowie
Instytut Sportu - Zakład Gier Sportowych i Rekreacyjnych

³Academy of Physical Education in Krakow, Doctoral Studies
Akademia Wychowania Fizycznego w Krakowie, Studia Doktoranckie

HENRYK DUDA¹, LUCYNA STANEK², PAWEŁ RÓŻYCKI¹,
MAGDALENA JASTRZĘBSKA³

*Threats in cyberspace in the opinion of students of the
Academy of Physical Education in Cracow*

**Zagrożenia w cyberprzestrzeni w opinii studentów Akademii
Wychowania Fizycznego w Krakowie**

Key words: Cyberspace, threats in the network, student youth

Słowa kluczowe: Cyberprzestrzeń, zagrożenia w sieci, młodzież studencka

INTRODUCTION

The Internet is currently one of the fastest growing media in the world. It slowly displaces traditional forms of communication, such as television or the press. The Internet at the beginning of its existence - about 30 years ago - was a computer network that connected academic centers first in the United States of America and then in the whole world. It was mainly used by scientists to exchange experience more quickly.

Information is currently one of the basic "goods" that the Internet network has to offer. Acquiring information before the period of popularization of the Internet boiled down to searching for and familiarizing with traditional publications or oral communication. These methods significantly limited the possibilities of acquiring and expanding knowledge [10]. Currently, it is the Internet that offers many opportunities that allow you to obtain information on virtually every area of knowledge. For example, it allows you to use library collections and magazines around the world.

Another possibility offered by the development of the Internet is the chance to participate in virtual communities. Thanks to participation in chat rooms, discussion forums, you can establish a new relationship and meet new people. It is worth adding that conversations are conducted in real time and are free, which is an additional benefit. People using a chat or discussion forum often transfer this relationship from the virtual world to the real world. One of the main reasons for entering such a "community" is the desire to meet new people, make contact with people who have similar interests or similar ideas, or even the desire to belong to a group or community. The Internet apart from the possibility of establishing contact with other people also gives the opportunity to anonymously speak on various topics.

Through the network, societies have undergone transformation. On the one hand, the Internet leads to the deconstruction of existing social ties, deepening, for example, the loneliness of shy people, detaching them from the real world, but on the other hand, the network initiates establishing social contacts that allow to learn social competences [10].

The Internet is increasingly used in teaching. Because it gives you the opportunity to communicate on the network in a postponed time, there is the possibility which allows learners to set individual work schedules, which also allows direct contact with the teacher. A computer with access to the Internet is becoming an ideal medium for distance learning. It ensures fast and effective exchange of information between participants of the teaching process, that is, lecturer and students, as well as mutual contact between students [5].

The Internet also creates opportunities for education for people with disabilities. People with various disabilities have the opportunity to participate in social life and, above all, in improving their qualifications. All this means that these people are no longer excluded from society as much as before the spread of the global network.

In addition to the possibility of educational development, the Internet has a huge impact on modern business. Information technology irreversibly affected the business market and transforms traditional companies and enterprises. The global network is becoming a platform for the functioning of both stationary and typically online businesses. The use of the Internet in running a business is associated with the following effects, which can include, for example:

- Eliminating the need for personal contact with the seller or service provider,

- Increased role of knowledge, supervision over the flow of information in the enterprise, the faster and more efficient the flow of information in this company, it works more efficiently and efficiently,
- No need to use intermediary support in making transactions,
- New role and quality of marketing in the field of company functioning [8].

There is no doubt that this new technology has permanently entered into social life. The virtual space is full of people who are constantly looking for new information, entertainment, work, goods, friends and acquaintances. Technological progress has repeatedly generated changes in interpersonal relationships. Electronic technology affects relationships between people and almost all aspects of human life. The so-called virtual reality is often treated as an alternative world that produces specific ties.

The intensive development of the Internet and the possibilities it has at its disposal, and at the same time threats resulting from its use, are very often subjected to a research and statistical exploration. The Eurobarometer survey commissioned by the European Commission in 2013 was conducted on 26.6 thousand people from all the Member States of the European Union.

According to these studies, 44% of Poles surveyed use the Internet (ie send e-mails, make purchases via the web, or browse news) at least once a day, 13% of respondents once a week. However, as much as 37% of our citizens do not use the Internet at all. And therefore compared to others representatives of the European Union, Poles are less active, as 54 percent Community citizens use the Internet at least once a day, 13% once a week, and only 28% do not use the network at all [6].

Age and education are the factors that have the greatest impact on the use of the Internet. According to surveys conducted by CBOS in 2015, the youngest acquire digital competences regardless of the operation of other aspects that determine the location in the social structure. That is why their presence in the network is almost universal. The older the respondents, the less Internet users among them [7].

Another characteristic feature for people using the Internet is the level of their education, according to CBOS research, the highest percentage of people using the network has higher education, two thirds of the respondents have secondary education, and the group with the lowest Internet use are people with basic education. For the most popular activities related to the use of the Internet, Polish respondents listed the following activities:

- Using e-mail - 79 percent of respondents,
- Viewing messages - 83 percent,
- Using social networks - 82 percent,
- Purchases of goods and services - 74 percent,
- Using internet banking - 50 percent,
- Watch TV channels online - 12 percent.

Apart from gathering these basic data, the main objective of the study was to identify various forms of threats that flow from the use of cyberspace and, to put it precisely, describe the level of security that Internet users have in the European Union.

One of the issues raised in the study was the protection of personal data on the web. In response to this question, as many as 71% of Poles surveyed stated that personal data is not properly protected by websites and public authorities. In addition, 70% of respondents agreed with the statement that the risk of cybercriminal attacks increased significantly. Among Polish Internet users, 55% fear identity theft. Another threat is thefts and frauds in online banking. More than half of the respondents declare their concerns [7]. These fears are closely related to the possibility of shopping online or using electronic banking.

An important element in the use of the network is the ability to use social networks as well as e-mail. Nearly 50% of respondents are afraid of a hacker attack on their accounts just on facebook, instagram or e-mail portals.

The most common threats to which Internet users are exposed (in addition to those listed above) include: addiction to the network, contact with pornographic content, contact with violence-generating material, contact with pedophiles, online frauds, unconscious participation in illegal activities, financial consequences, unconscious access to information and personal data (eg card numbers, addresses, passwords).

Most often, Internet users are young people and even children, so they should be equipped with knowledge about how to use this medium safely and responsibly [3].

It was mentioned earlier that the serious threat posed by the Internet is the possibility of becoming addicted to it. It is becoming one of the most serious civilizational threats and concerns both children, adolescents and adults. Particularly exposed are the shy people, whom the Internet allows to maintain anonymity and thus facilitates networking and exchange of views. It often happens that for such people the network becomes a substitute for reality. It is assumed that people with anxiety disorders, low self-esteem and lack of social acceptance (alienation) have the greatest predisposition to this type of addiction.

In addition, the catalog of Internet addiction also includes:

Information overload - it's a compulsion to browse and download information from the Internet, addiction to online games - it is characterized by spending most of the time on the web playing games of various types, addiction to online gambling - obsessive bidding, tracking the results of online auctions and playing online for money, internet erotomania, addiction to sexual activities, internet socomania - characterized by establishing one-off, shallow contacts through the use of chat rooms, instant messengers, social networking sites [4].

PURPOSE OF RESEARCH

The aim of the research was to get to know the opinions of students of the Faculty of Physical Education of the University of Physical Education in Cracow on the dangers arising from the use of the Internet.

- 1) In connection with the goal formulated in this way, the following set of research questions was adopted:
- 2) How much time do the respondents spend on surfing the web?
- 3) What are the motives of using the Internet in the studied environment?
- 4) What is the impact of the Internet in the opinion of respondents on their well-being?
- 5) What types of threats resulting from network activity were indicated by the surveyed students?

MATERIAL OF RESEARCH

The study involved 105 first and third year students from the 1st degree physical education at the Academy of Physical Education in Krakow. The study group consisted of 40% of men and 60% of women. More than half of the surveyed students, ie 56%, are residents of Krakow and the remaining group are respondents from outside of Krakow. The first year was a younger age category (55%) and the third was older.

RESEARCH METHOD

The study used the technique of an auditorium survey [1]. The survey tool, on the other hand, was a questionnaire, which is a basic tool in the methods of opinion polling, which is a set of questions formulated in a specific, purposeful manner, to which the respondents provide answers. The questionnaire included both closed, semi-open and open questions. They were dominated by questions of the cafeteria type, consisting in selecting one or several answers by the respondents.

TEST RESULTS

The entire population surveyed confirmed that he is using the Internet. He usually does it at home and at work. The least people connect to the Internet with their friends or friends because only about 7% of respondents. The use of a mobile phone for this purpose is equally popular. It shows how much the technique has evolved, because even a few years ago Internet cafes were one of the basic places of using the Internet. Today mobile phones, tablets and other devices are slowly taking over this function.

When it comes to the amount of time spent online, a large proportion of the surveyed students - over 40% - spend 3 or more hours of surfing. A significant part of respondents, ie 36.7%, declared that they spend 2 hours online. And about one hour of Internet use is used by almost every fifth student.

The following table (tab.1) informs about the purpose of using the Internet. Her analysis yielded the following information: most people connect to the Internet to use e-mail. Both men and women most often indicated this answer (an average of 20%). An equally large group are people listening to music via the Internet. The majority of respondents watching movies online is very popular, it is a group of

almost 17% of respondents. Almost 12% of respondents participate via the Internet in various games. It is worth noting that men more often pointed to such a reason (27.3% vs. 9.2%, respectively). In addition, 10.6% of respondents decide to look for interesting materials from different areas, of which women are more often.

Table 1. Reasons for using the Internet according to gender [%]

Types of reasons	Answers		
	Men	Women	All together
	%	%	%
Looking for materials needed for work	7,2	14,7	10,5
Looking for interesting materials from various fields	13,3	8,8	10,6
participating in games	27,3	9,2	18,8
listening to music	14,6	20,5	17,8
watching movies	13,4	18,3	16,4
use of e-mail	22,4	20,6	20,7
checking the weather forecast	1,8	7,9	5,2
All together	100,0	100,0	100,00

Internet games, movies, music and other software and files can be downloaded from the Internet. The procedure of downloading illegal files is a very common phenomenon in our country. Analysis of the data obtained provides information that all surveyed students have used this type of files. 12.8% of respondents admitted to the daily illegal downloading of files, and every fourth student was admitted to several times a week. Wandering through websites or chatting are so addictive that you lose the sense of time. In the studied environment, this fact was confirmed by 1/3 of the respondents.

Respondents are aware of the impact of the Internet on their lives and behavior (tab. 2). Among the categories of indications for the first position, the "loss of sense of time" spent on the web clearly appeared. Women are much more likely to lose control in this matter (33.9% vs. 6.2%, respectively). The opposite proportion of answers can be seen in the variant: "I feel free." In this case, the more often the declarations were made by the surveyed men (28.4% vs. 6.8%, respectively).

Table 2. The impact of the Internet on the well-being of respondents by gender [%]

Types of reasons	Men	Women	All together
	%	%	%
to de-stress	13,6	11,7	12,9
to feel free	28,4	6,8	18,0
Forget about the troubles	22,2	14,9	18,8
Losing time	6,2	33,9	19,3

Henryk Duda, Lucyna Stanek, Paweł Różycki, Magdalena Jastrzębska
 Threats in cyberspace in the opinion of students
 of the Academy of Physical Education in Cracow

	Men	Women	All together
Improvement of humor	13,6	10,8	12,4
Can not tear away from the internet	12,3	9,7	10,9
Boring quickly	3,7	12,2	7,7
All together	100,0	100,0	100,0

As is clear from the previous findings, the students participating in the study are eager to use the Internet. Therefore, they exhibit different feelings in a situation in which connection to the network is impossible for various reasons. Almost 40% of respondents said that this situation is indifferent to them. Every fifth student feels nervous when he can not connect to the Internet (19.7%). A similar percentage of indications concerned a strong sense of absence in case of difficult access to the network. Slightly fewer representatives of the surveyed group of students can not focus on other matters (15%). Extreme emotions related to the impossibility of surfing the web are revealed by over 8% of respondents. It can therefore be concluded that the phenomenon of Internet addiction does not occur in the studied population.

An important research problem was to determine the symptoms of the negative impact of the network on health. To be precise, the respondents had to indicate the types of health hazards they possibly experienced. The analysis of the obtained data shows that the vast majority of the studied environment, i.e. 90% of people from the studied population, considered that sitting in front of a computer to use the Internet did not have any impact on their health so far. However, there are also people who have noticed negative changes in their health condition. For example, 5% of respondents said their eyesight deteriorated. Another negative symptom was the discomfort associated with the proper functioning of the spine. There were also problems with the posture (slouching). The reason for this is probably a bad attitude while sitting in front of the computer, as well as the time we spend before him.

People surfing the Internet are exposed to various dangers (tab.3). The most serious of almost 20% of respondents included easy access to pornographic websites, which can have a very negative impact on the development of young people. Very dangerous not so much for the users themselves, what for their computers is sending viruses via the Internet. Over 15% of them are afraid of such a threat. Nearly 13% are aware that the Internet can easily be addicted. People buying via the Internet are exposed to the activities of online fraudsters. Other dangers coming from the network are violence and aggression (over 10% of indications), which are saturated with many statements, games or blogs. You can come across many pages that are supposed to encourage hostility towards people of other nationality, religion or even skin color.

They provide inadequate information and content that may negatively affect the psyche of young people. Using the Internet, and in particular such recently popular social networking sites, you may encounter inappropriate association, but only 2% of respondents perceive such threats.

Table 3. Threats created by the Internet according to gender [%]

	Men	Women	All together
Types of threats	%	%	%
easy access to pornographic sites	19,4	18,1	18,7
virus transmission	15,4	14,9	15,1
Internet addiction	13,4	12,0	12,8
waste of time	1,5	4,4	3,1
health risk	0,5	0,8	0,7
internet scammers	12,9	15,7	14,5
access to illegal computer programs, films, music	20,4	12,5	16,0
violence, aggression	8,0	12,0	9,8
inappropriate content and information	5,5	9,27	7,6
inappropriate company	3,0	1,2	2,0
All together	100,00	100,00	100,00

In addition to persuading criminal acts, you can meet with attempts to recruit Internet users to various types of groups. These may be, for example, sects, criminal groups or organizations hostile to other people. Almost all 90% respondents stated that no one had ever tried to persuade them to join any groupings.

Both pedophiles and other people can persuade young people to have sex. The majority of surveyed students - almost 70% - confirmed that they received such a suggestion from their Internet interlocutors.

Internet websites contain a great threat to Internet users. Almost all of the surveyed population (98%) very often or often discovered pages containing pornography or other erotic content.

Also a new phenomenon when using the Internet is the so-called hejting. The name derives from the English word hate-hate. Hejting has a negative connotation and in free translation means hating everything that appears on the web. Among the surveyed students, the level of knowledge of the phenomenon of hate-healing is very high, 96% of respondents have heard and know what is hating, only 4% did not know this phenomenon. The vast majority of the surveyed students 87% did not personally experience the effects of hate-ing, the remaining part, i.e. 13%, said they were victims of hijackers' activity.

Quite similar indications concerned active practicing of internet hiding. The majority (80%) do not participate in this procedure, while 20% of respondents, ie every fifth respondent, admitted being a hater.

Another phenomenon that takes place on the Internet and poses a threat to health and the time and life of users is stalking. The word, like hejting, is derived from

English and literally means "stalking." On the Internet, however, it has a very negative overtone and means persistent harassment or persecution of the victim. This phenomenon was observed in the early 1980s in the USA and it concerned mainly known people: actors, singers. However, due to the development of technology and easier access to the Internet, ordinary citizens have become victims of stalkers. In Poland, stalking is treated as a crime and regulated by the provision of art 190. Penal Code. For persistent harassment is considered harassment, teasing another person, deaf or offensive phone calls, unwanted text messages and e-mails, tracking, observing, etc. overlap.

Among respondents, almost everyone knew what stalking is and similarly as in the case of hating, the victim of stalkers in the surveyed students' environment was only 4% of the respondents. None of the students surveyed admitted that he had ever persecuted anyone on the Internet.

Although the level of knowledge of hating and stalking is very high among the students, it did not protect some people from attempting suicide. Two people confirmed the attempt of suicide, and the reason for such a desperate decision was stalking or hejting which they experienced on the Internet.

SUMMARY AND CONCLUSIONS

As it results from the above-mentioned data, the use of the Internet carries many risks. The surveyed students exchanged successively: easy access to pornographic sites, transmission of viruses, Internet addiction, loss of time, health risk, activity of online scammers, access to illegal computer programs, films, music, violence and aggression, inappropriate content and information. In addition to the above mentioned, they also indicated threats such as hacking, hacking into bank accounts, theft of personal data from IT databases, or even impersonation of someone else on social networks.

Therefore, a number of actions should be taken to minimize all risks if not eliminating all threats. When using the Internet, it is a good idea to obtain programs blocking certain content appearing on the network. In this way, you will not see the page pornographic or other sexually explicit. In addition, you must install a licensed antivirus program on your computer with the help of which the computer will be protected against viruses that can be transmitted when using the Internet. Do not open suspicious messages, links of unknown origin or emails, as they may contain viruses. It is worth applying the principle of limited trust to newcomers and messages they send. In addition, it is worth securing both your computer and e-mail accounts or social or banking portals with passwords that will be complicated enough that hacking or theft of data will be difficult. It should be mentioned here that these passwords are different for different accounts, and not the same everywhere, because knowing one password that we use for many accounts, the internet fraudsters will also have access to them.

In conclusion, it is worth to be aware that some of the threats posed by using the Internet are classified as a crime (eg stalking), therefore such phenomena should be reported - especially if you are a victim - to appropriate services.

CONCLUSIONS

- 1) Definitely the majority of the surveyed students (nearly 80%) use the Internet about three hours a day.
- 2) The most frequently cited reasons for using the Internet network were: contact by e-mail, watching movies, listening to music and participating in games. Slightly fewer indications concerned the search for information and various materials.
- 3) The students' environment is aware of the impact of cyberspace on well-being and health. Most often they paid attention to the loss of a sense of time. They also emphasized that surfing the web gives them a sense of freedom and lets them forget about their troubles.
- 4) Web sites containing pornographic content pose a great threat to Internet users. Almost all of the surveyed population (98%) very often or often discovered pages containing pornography or other erotic content.
- 5) The catalog of indicated threats also included the following types of activities: Internet fraudsters, virus transmission, data insecurity, violence, aggression as well as heming and stalking phenomena.

REFERENCES

1. Duda H., Stanek L., Stachura A., Płatek Ł., Różycki P., Kubieniec P., Jastrzębska M. 2017. Physical activity in the environment of students Aspirants School of National Fire Service in Krakow, W:Duda H., Biskup M., Wójcik T. Prevention and health education, Monografia, NeuroCentrum, Lublin 2017, 29-38.
2. Gałkowska-Braun M., Dziecko w świecie mediów, „Edukacja i Dialog”, nr 6 (148), czerwiec 2003.
3. Mastalerz E., (red.), Cyberuzależnienia – przeciwdziałanie uzależnieniom od komputera i Internetu, Niezależne Zrzeszenie Studentów Akademii Pedagogicznej w Krakowie, Kraków 2006, s. 5-6.
4. Sarzała D., Walancik M., , Człowiek w wielkiej sieci zjawisko -zagrożenia-profilaktyka, Oficyna Wydawnicza ASPRA-JR, Warszawa 2011, s. 89
5. SołtysikT., (red.), Zagrożenia w wychowaniu i socjalizacji młodzieży oraz możliwości ich przewycięzania, Wyd. Akademii Bydgoskiej, Bydgoszcz 2005, s. 375.
6. www.naukawpolsce.pap.pl, data odczytu: 2.03.2016.
7. www.cobos.pl, data odczytu: 2.03.2016.
8. www.heuristic.pl, data odczytu:2.03.2016.
9. www.gazeta-it.pl, data odczytu: 1.03.2016.

ABSTRACT

The aim of this work is to try to get the opinion of students of the University of Physical Education in Cracow about the threats related to activity in cyberspace. The source material was obtained in the course of own research, carried out in 2016. The technique used in the research process was the audience survey. The analysis of empirical data has shown that the level of knowledge of the studied population on the subject of threats arising from the use of the Internet is high. Most of the surveyed students are aware of the dangers threatening them on the Internet and take action to avoid them.

STRESZCZENIE

Celem niniejszej pracy jest próba poznania opinii studentów Akademii Wychowania Fizycznego w Krakowie na temat zagrożeń związanych z aktywnością w cyberprzestrzeni. Materiał źródłowy został pozyskany w toku badań własnych, przeprowadzonych w 2016 roku. Techniką wykorzystaną w procesie badawczym była ankieta audytoryjna. Analiza danych empirycznych wykazała, że poziom wiedzy badanej populacji na temat zagrożeń płynących z korzystania z Internetu jest wysoki. Większość badanych studentów jest świadoma grożących im niebezpieczeństw w sieci internetowej i podejmują działania aby ich unikać.

Artykuł zawiera 26860 znaków ze spacjami