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**INFORMATION AND PSYCHOLOGICAL SAFETY OF RUSSIAN
STUDENTS IN THE INTERNET ENVIRONMENT**

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Abstract

The conducted theoretical and empirical research raises the important issue of improving the information and psychological literacy of modern Russian students. The possibility of fast and unlimited access to information and entertainment leads to the emergence of new risks and threats associated with the Internet environment. Modern students are often not ready to resist them. The article deals with the problem of information and psychological safety of Russian students in the Internet environment. A comparative analysis of the level of involvement in the Internet environment and perceptions of the psychological risks in it of Russian students studying in colleges and universities has been carried out. 289 people took part in the study. All students have a high level of involvement in the Internet environment, using it to search for and access a variety of information and interaction with others, experiencing interest, joy and pleasure when using the Internet. Students know the various risks and threats of the Internet environment. Among the main ones they outlined: technical difficulties, waste of time in vain, fraud and the threat of Internet addiction. The level of awareness of the threat of Internet risks by students from the standpoint of information and psychological safety, i.e. the impact of destructive information on the formation of personality is rather low. The experience of colliding with Internet threats of corrupting and aggressive nature in students is quite common, but it is not perceived as a danger.

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1. Introduction

The development of the information space in the modern world is fast. Modern preschoolers are already active Internet users. According to statistics of the Safe Internet Center in Russia, the average age of a child who starts using the Internet is about ten years. One third of them spend at least 3-5 hours a day online. According to the study “Children of Russia online”, carried out by staff of the Internet Development Fund in 2010-2011, every fifth student spends more than 5 hours a day on the Internet, and every tenth teenager notes that he “lives” on the Internet (Soldatova, Nestik, Rasskazova, & Zotova, 2013).

The Internet environment has both constructive and destructive potentials. It allows the emerging personality of a young person to satisfy many needs, such as the need for communication, self-expression, self-knowledge and self-development, personal self-determination through identification with the reference group, the acquisition of independence. At the same time, in the information space there are many risks that pose a potential threat to normal mental development and life activity in adolescents and young people. The dissemination of information materials that involve violence and cruelty leads to the fact that adolescents begin to perceive these destructive patterns of behavior as the norm and retransmit them in real behavior, they form aggression tolerance and the deformed system of moral values. It's proved that immersion of adolescents and young people in the network for more than 5 hours is connected to the development of depression and the emergence of suicidal thoughts (Bickham, Hswen, & Rich, 2015; Tandoc, Ferrucci, & Duffy, 2015; Woods & Scott, 2016).

One of the tendencies of the recent years is the Internet communities, which use a manipulative way to involve young people in groups that threaten both their life and health and the lives of others. In the network there are websites that promote self-harming behavior, aimed at changing eating behavior, inclining to suicide, romanticizing the prison lifestyle, promoting attacks in schools («school shooting»), etc. Such online communities are interactive and easily accessible around the world. The propaganda of destructive behavior among users is aimed at romanticizing actions and relationships that violate psychological and physical health and a positive assessment of these actions.

In this regard, the problem of information and psychological safety of the person becomes urgent, especially significant for students of colleges and universities. This period is characterized by a combination of adult capabilities and the psychological immaturity of youth. Characteristic for this age features of the emotional sphere are used by manipulators to effect the destructive influence of information on the mind of users of Internet space. The inability to fully control the flow of information and protect young people from negative external influences greatly increases their exposure to information risks. The high susceptibility of youth to destructive influences is a problem of security violations, which is recognized at the state level.

2. Problem Statement

The phenomenon of information and psychological impact is the subject of scientific research in the field of sociology, psychology, philosophy, political science and cultural studies. Russian researchers

classified information and psychological impacts, identified mechanisms of influence on the consciousness of an individual and a group.

Grachev and Melnik (2002) focus on the function of information as a specific means of influencing people, and distinguish the object of information impact — the human mind. According to Makarenko (2017), information and psychological impact, like any other psychological impact, can be both positive and negative and have an impact on human behavior. Depending on the goals pursued, the information and psychological impact is aimed at specific areas of individual, group, mass, and social consciousness: motivational, cognitive, emotional, and communicative.

As noted by Baranov (2017), informational and psychological impact is a type of purposeful psychological impact, specially organized to change the behavior of an individual or groups of people without open coercion. Based on the goals and nature of the influence, according to the author, the informational and psychological impact can be manipulative or developing.

One of the types of information and psychological impact on the modern person is the impact carried out through Internet technologies. The Internet is an integral part of modern life. This is a field for communication, training, searching and receiving new information, a platform for professional development. Today, the Internet is becoming one of the conditions and means of socializing of the younger generation; this is the main space in which young people interact with the outside world. However, in addition to developing opportunities (Kurek, Jose, & Stuart, 2017; Sokolova, 2017; Valkenburg, Koutamanis, & Vossen, 2017), the risks of a negative impact on the psychological health of the Internet user through manipulative influence increase many times. There are increasing risks to face information that threatens the immature psyche and psychological health in general (Boniel-Nissim et al., 2014; Goldstein, 2015; Mascheroni, Jorge, & Farrugia, 2014; Seiler, & Navarro, 2014).

According to foreign researchers (Oksanen et al., 2016), the scientific community does not provide enough information about the risks of the Internet environment inherent to adolescents and young people, who are a significant audience of users exposed to external influences.

Based on the analysis of scientific literature, it can be concluded that at present, both in Russian and foreign studies, the most widely presented researches on Internet addiction, causes and factors of addiction, as well as methods of its correction: Brooks & Longstreet (2015); Mendelevich and Sadykova (2003); Müller et al. (2016); Ostovar, Allahyar, Aminpoor, Moafian, Binti Md Nor and Griffiths (2016); Sorokina (2015); Van Zalk (2016); Vorobyova and Kruzhkova (2017).

In the works of authors dealing with the problem of the risks of Internet space, there are several classifications of Internet risks. For example, Khokhlova (2012), Soldatova et al. (2013) and Livingstone, Kirwall, Ponte and Staksrud, (2014). We adhere to the classification of Soldatova et al. (2013), which identified the following risk groups:

- content (materials containing illegal, unethical and harmful information such as violence, erotica, pornography, etc.);
- communication (cyberbullying, illegal contacts (for example, grooming, sexual harassment), online dating and subsequent meetings with Internet acquaintances in real life);
- consumer (risk of purchasing low-quality goods, various fakes, counterfeit and falsified products);

- technical (malware, the threat of damage to computer software, stored information on it, violation confidentiality or theft of personal information).

Livingstone et al. (2014), discussing the harm that can be caused to a child as a result of Internet risk, notes emotional harm (disorder, depression, fear, etc.), psychological harm (stress, addiction, low self-esteem, aggression, etc.), and social harm (ostracism, loss of friends).

Taking into account a large number of risks existing in the Internet space, and the harm they cause, it becomes obvious that it is necessary to ensure the information and psychological safety of young people in the process of using Internet resources.

According to the majority of authors, the information security of a person is a state of protection from destructive influences in the information environment. Objects of influence can be: the psyche, physical, spiritual, moral, intellectual spheres of personality.

In our view, the formation of information and psychological safety of the individual will be based on the ability of a person to independently resist destructive informational influences. We consider security as a state of protection (human and environment), as well as the ability to reflect adverse external and internal influences. Psychological safety of a person “manifests itself in its ability to maintain stability in an environment with certain parameters, including psychotraumatic effects: resistance to destructive internal and external influences, and is reflected in the experience of being protected / unprotected in a particular life situation” (Baeva, 2012, p. 13).

Thus, in the conditions of a modern information society, in which a young person is growing up, the problem of developing the information and psychological safety of a student’s personality becomes actual.

3. Research Questions

The study raised the following questions:

- How are Russian students involved in the Internet environment?
- What is the level of information and psychological safety of Russian students?

4. Purpose of the Study

The aim of the study is to identify the level of involvement of Russian students in the Internet environment and determine their level of information and psychological safety.

5. Research Methods

The study involved 289 students, of which 193 were college students (average age 17 years) and 96 university were university students (average age 19 years).

The survey was conducted in a group form taking into consideration all the necessary ethical standards.

To collect information, a questionnaire of 14 questions was developed, 11 of which contain answer options (closed), 3 questions are designed according to the type of “Association” and “Unfinished sentences” (open). Closed questions are combined into two blocks. The first block “Characteristics of

students' involvement in the Internet environment” includes questions concerning the start time, frequency, duration, use of technical means and occupation of the Internet. The second set of questions “Characteristics of the psychological security of the Internet space” includes an assessment of the experience and level of security of the Internet space, an idea of the positive opportunities and negative characteristics (threats) of the Internet space, as well as emotions and feelings associated with the use of the Internet.

Open questions are aimed at finding out the associations with the word “Internet” and completing the sentences: “From my point of view the most dangerous in the Internet is ...”, “As a rule, what attracts me in the Internet is ...”.

On the obtained data was mathematically processed using the program «Statistica», also quantitative and qualitative analysis was done. For quantitative analysis, we used the method of ranking averages and for comparative analysis was used the Fisher ϕ -criterion, correlation analysis.

6. Findings

Data on involvement in the Internet environment (see Table 1) show that students of both groups use the same technical devices for accessing the Internet and coincide in frequency of their use, but the time spent online varies.

Table 01. Characteristics of students' involvement in the Internet environment

	University Students		College Students	
	Rank	%	Rank	%
1. Devices used to access the Internet				
Mobile phone	1	93**	1	81**
Own computer or laptop	2	28*	2	39*
Tablet PC	3	5	3	7
2. Frequency of use of Internet resources				
Every day	1	100**	1	93**
1-2 times a week	-	0**	2	4**
Less than once a month	-	0**	3	3**
3. The time spent on the Internet per day				
1-3 hours	1	35**	4	13**
3-5 hours	2	32**	3	18**
5-8 hours	3	21	2	23
8-12 hours	4	5**	1	36**
4. Affairs on the Internet				
Search for interesting information	1	88**	1	76**
Reading social network	2	78**	2	65**
Search for information for study	2	78**	3	58**
Online communication	3	67*	4	53*

* $p \leq 0.05$, ** $p \leq 0.01$

The majority of students (from 81% in college to 93% in the university) use a mobile phone as a technical tool to access the Internet. Also, from 28% to 39% have their own computer or laptop. Less

often (in 5-7% of cases) use the tablet. In some cases (from 1-3%), a game console, TV, a family and public computer (for example, in a library) are used to access the Internet.

The frequency of visits to the Internet space in groups have similarities and differences. The absolute majority of students (93% in college and 100% in university) visit the Internet every day. However, among college students there are 4% who use it 1-2 times a week, and 3% who use the internet less than once a month.

University students spend 1–3 hours (35%) and 3–5 hours (32%) online during the day, while college students spend 8–12 hours (36%) and 5–8 hours (23%) online. Some survey participants spend less than an hour on the Internet (4-6%) and more than 12 hours (6%), claiming that they are there «24 hours a day.»

The type of activities in the Internet of the subjects of our research has the same importance, but differs in frequency. So, most of the subjects put the search for interesting information in the first place, then reading the news in social networks, searching for information for study and communication follow. 76% of college students and 88% of university students are engaged in search of interesting information; reading news in social networks – 65% in college and 78% at university; searching for information for study – 58% in college and 78% at university; communication – 53% in college and 67% at university. These figures are statistically significantly different.

Significant differences in the assessment of the nature of classes on the Internet manifested as follows: university students are much more likely to search for information, including studying, reading news, communicating on social networks, they actively use educational portals and remote learning opportunities. College students more often choose actions related to downloading information (without a critical assessment of its content).

The comparative analysis of the level of feeling psychologically safe on the Internet (see Table 2) showed no differences between groups. The majority of all respondents assess the level of security as medium (58-59%), while more university students perceive the Internet space as dangerous. 15% of students at the university and 21% at the college assess the Internet security level as high.

The most attractive for students appeared to be the following useful properties of the Internet space: fast access to the necessary information - 98% at the university and 87% at the college; social networks - 83% at the university and 68% at the college; watching videos and listening to music - 76% and 75% respectively.

The greatest threat in the representation of students have such consequences of using the Internet as technical problems (due to viruses, etc.) - 64% at the university and 66% at the college; a waste of time - 61% at the university and 43% at the college; fraud - 55% at the university and 57% at the college; psychological addiction to the Internet - 33% and 46% respectively.

Significant differences manifested the existence of students' friends who were affected in the Internet environment. For university students, this is the third part of the sample (31%), while in college it is one tenth (11%).

It is established that the level of awareness of Internet threats and negative experience of using the network is much higher in college than among university students. This applies to the threat of Internet

addiction, feelings of anger and experience of sexual harassment on the Internet. Although at the same time, university students have much more friends affected by Internet threats.

Among the emotions and feelings arising when using the Internet, pleasant positive emotions predominate: interest (86-94%) in the first place, joy (74-78%) is second; in the third and fourth are surprise (63-72%) and pleasure (64-66%). Least of all, college students have disgust, contempt, shame and fear (10-11%), university students - fear (2%) and anger (5%).

The feeling of fear, as an indicator of experiencing insecurity, is at a fairly low level, which may indicate a lack of students' assessment of psychological threats in the Internet space.

Among the negative situations in the Internet environment that have been encountered over the past year, the most common are obscene sexual images (43-44%), photo and video with scenes of violence (34-37%), malware (35-37%), hacking profile in social networks (33-42%). The situation of fraud and theft of money via the Internet was more common for university students (37%) than for college (20%). On the contrary, suicide propaganda is more common in college (23%) than at university (8%). 12% of university students and 14% of college students faced the propaganda of extremism, with sexual harassment - 2% at university and 12% at college. Between a quarter and a third of students encountered situations of insult, humiliation and harassment - 25% at the university and 31% at the college.

Half of university students (51%) and one third of college students (32%) have a request for more information about online threats.

Thus, there are situations in the Internet environment that pose a potential psychological threat is recognized by university and college students, but the feeling of psychological safety also remains high enough for both.

Table 02. Characteristics of students' perceptions about the psychological safety of Internet space (data from closed questions)

	University Students		College Students	
	Rank	%	Rank	%
1. Assessment of the level of safety of the Internet space by students				
Medium security level	1	59	1	58
Low security level	2	26	2	21
High security level	3	15	2	21
2. Useful properties of Internet space				
Quick access to relevant information	1	98**	1	87**
Social media	2	83**	3	68**
Watching videos, listening to music	3	76	2	75
3. Threats to the Internet environment				
Technical (viruses, etc.)	1	64	1	66
Waste of time	2	61**	4	43**
Fraud	3	55	2	57
Internet addiction	4	33*	3	46*
4. The presence of friends affected in the Internet environment				
No	1	69**	1	89**
Yes	2	31**	2	11**
5. Emotions and feelings experienced in the Internet environment				

Interest	1	94*	1	86*
Joy	2	74	2	78
Surprise	3	72	4	63
Pleasure	4	66	3	64
Admiration	5	51	5	47
Disgust	6	13	8	10
Contempt	6	13	8	10
Shame	7	12	7	11
Anger	9	5**	6	19**
Fear	10	2**	7	11**
Others	8	7	9	6
6. Negative situations in the Internet environment, met in the last year				
Indecent images of a sexual nature	1	44	1	43
Photo/video with scenes of violence	4	34	2	37
Hacking profile in social networks	2	42	4	33
Malware	3	37	3	35
Fraud, theft of money	3	37**	8	20**
Insults, humiliation, harassment	5	25	5	31
Propaganda of alcohol, drugs, tobacco	6	23	6	27
Propaganda of extremism	8	12	9	14
Suicide propaganda	9	8**	7	23**
Dissemination of personal information	10	5	11	8
Sexual harassment	11	2**	10	12**
Informational attack in social networks	11	2	12	4
Not experienced anything like this	7	16	8	20
7. Need for more information about Internet threats				
No	1	51**	1	68**
Yes	2	49**	2	32**

* $p \leq 0.05$, ** $p \leq 0.01$

The results of the qualitative analysis confirm the quantitative results. Associations of university and college students to the word «Internet» are mostly neutral and positive (see Table 3).

Examples of characteristics (associations):

- positive - «opportunities», «entertainment», «security», «help»;
- neutral - «network», «web», «information», «means of communication», «social networks»;
- negative - «evil», «danger», «bad», «killer», «addiction».

Students see the greatest danger in the following risks:

- technical - «hacking pages in the VC», «information theft», «viruses», etc.;
- content - «websites promoting suicide», «websites selling drugs», «porn sites», etc.;
- communication - «threats in social networks», «communication with strangers», etc.

The possibilities of the Internet, which were mentioned by students:

- information availability - «fast», «simple», «free», «easy»;
- interesting pastime - «games», «video», «music»;
- opportunity of communication - «friends», «relatives», «new acquaintances»;
- the opportunity to express themselves, earn - «video blogging», «work».

Table 03. Students' perceptions about the psychological safety of Internet space based on open questionnaire questions

	University Students	College Students
1. Associations to the word «Internet»		
Positive	47	54
Negative	25*	37*
Neutral	28**	9**
2. The dangers of the Internet		
Technical	59	62
Content	32**	16**
Communication	9**	22**
3. The possibilities of the Internet		
Information availability	42**	23**
Interesting pastime	28**	46**
Opportunity of communication	18*	27*
The opportunity to express themselves, earn	12**	4**

* $p \leq 0.05$, ** $p \leq 0.01$

Correlation analysis showed the following relations of the sense of security of the Internet environment with potential threats. They are reliable and at high level of significance ($p \leq 0.01$)

The level of psychological safety in the Internet environment of university students correlates with the lack of friends affected by the use of the Internet. As the research shows, those who have friends, who suffered from the use of the Internet, feel psychologically insecure in the Internet environment. For college students, the level of psychological safety negatively correlates with anger. It can be assumed that college students react to threatening situations in the Internet space with aggression.

The increased level of fear among university students is related to the limitation of the time spent in the network to less than an hour per day. Obviously, users who have been traumatized by the situations that occurred tend to avoid diving into the Internet, which makes them feel insecure. The opposite is also possible - the perception of the existence of psychological threats in the Internet environment cause a reaction to avoid immersing themselves in it. In both cases, this behavior strategy can hardly be called effective, since the protective avoidance response indicates the lack of constructive coping strategies regarding the threatening factors of the Internet environment, which can lead to potential neuroticism and maladaptation of the individual.

The fear among college students is associated with a sense of shame and awareness of online fraud cases in the recent past. Shame indicates familiarity with obscene content. Obviously, an intrapersonal contradiction manifests itself here, prompting to follow instinctive motives when consuming information from the network while realizing its obscenity at the same time. There is inverse relationship of the level of fear and use of video and music. It can be said that those who use the Internet space to consume musical and film-making products experience less fear or weaken it with art therapeutics.

The risk of wasting time for university students is interconnected with the perception of the threat of psychological addiction, and for college students - with the loss of real «live» communication and being online for 5-8 hours a day. The negative relation for this threat is between use of the Internet for

mobile games and the fear of fraud and technical risks. Those who are not afraid of fraud, computer viruses and play a lot of virtual games do not consider time spent on the Internet to be useless.

Awareness of the threat of becoming addicted is interconnected among university students with the fear of losing real communication and awareness of fraud situations that have occurred in the recent past. The threat of Internet addiction is also related to the Internet usage to search for information needed for study. Obviously, in this case, we can talk about the impact of emotional component of the person (fear) on cognitive and behavioral (the ability to consciously regulate their movements in the Internet space in accordance with the practical constructive purposes of selective information search).

For college students, the threat of addiction is associated only with the fear of losing real communication opportunities. This threat is quite significant for them and has a large number of relationships in the personality structure: positive - with the opportunity to express themselves, the threat of addiction and time wasted, and negative - with playing mobile games and awareness of technical hazards. It can be said that the more a person is aware of the threat of losing real communication, the more he or she is afraid of addiction and wasting time. So he or she plays less mobile games, and the probability of being affected by virus programs decreases.

Awareness of the threat of technical hazards is associated with experience colliding with malware during the year and the feeling threatened of becoming a victim of fraud for college students. The negative connection manifested itself with the threats of wasting time and losing the opportunity of real communication. Obviously, the opposition of technical and psychological threats indicates the importance of personal characteristics in matters of the exposure to the influence of Internet threats on user. This makes the study of personal factors of exposure to the influence of Internet risks relevant.

The threat of a possible collision with aggression is more meaningful for girls and is directly interrelated with reading news on social networks, threatening to become a victim of manipulation and experience colliding with corrupting actions. Practical experience confirms this picture, showing that girls are more prone to display aggression in the form of cyberbullying. This type of aggression is carried out through social networks in the form of alteration and distribution of intimate photos of the victim, with the aim of humiliating her.

The threat of becoming a victim of fraud is associated with the desire to learn more information about Internet risks for university students. The threat of becoming a victim of fraud, probably related to the experience of a collision with it, stimulates the need for information on this topic. This fact can become the basis for the construction of preventive educational work in educational institutions.

For college students, this threat is one of the most significant. It shows the greatest number of interconnections using the possibilities of playing mobile games, understanding the threat of becoming a victim of manipulation, corruption and collisions with situations of fraud and theft over the past year, as well as technical hazards associated with the experience of malware.

The students of both groups clearly identified a system of interrelations uniting such threats as the risk of facing aggression, and becoming a victim of fraud, manipulation, and actions that include corruption.

7. Conclusion

Summing up the results of the analysis of the level of involvement Russian college and university students, this level can be called very high. There are two leading goals of using the Internet - the search for useful and interesting information for studies, as well as communication in social networks.

University and college students assess their level of information and psychological safety as medium. The most frequently identified threats of the Internet environment are technical (malware), waste of time, fraud and addiction. Among the feelings and emotions that accompany the use of the network, positive ones dominate - interest, joy, pleasure and surprise. Fear occupies the last place in importance. The negative situations observed on the network over the past year are sexual images, photo and video materials containing scenes of violence, profile hacking, malware and fraud.

It can be concluded that young people underestimate or have no perceptions about the real threats to mental health and positive development that exist on the Internet. Purposeful work is needed to accompany and develop the level of awareness and psychological safety of students.

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