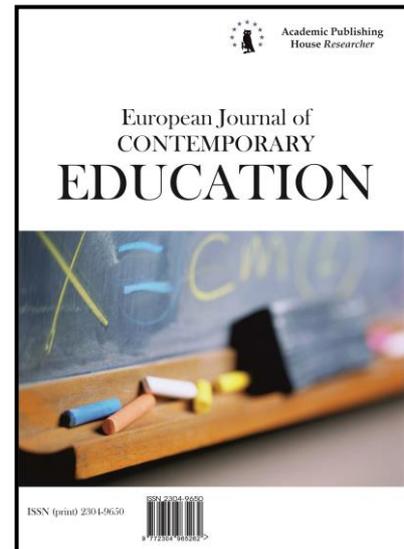




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Published in the Slovak Republic  
European Journal of Contemporary Education  
E-ISSN 2305-6746  
2018, 7(3): 521-530  
DOI: 10.13187/ejced.2018.3.521  
[www.ejournal1.com](http://www.ejournal1.com)

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## Internet Communication as a Factor of Psychological Challenges among Student Youth

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### Abstract

Continuous surfing the Internet has become one of the students' lifestyle markers. Some modern researchers argue that as a result of long and regular Internet networking, young people sooner or later begin to experience psychological challenges. The analysis of international and Russian psychological studies on the issue of Internet communication has made it possible to identify the main personal challenges young people may deal with. The paper presents the results of an empirical study of psychological challenges facing by young people who resort to Internet communication. The study involved young people aged 18 to 22 years old, taking advantage of the Internet communication, 45 people in total. All of the subjects are students of various Russian universities. The empirical study has been conducted in the virtual interaction mode. The general hypothesis maintains that, taking into account the exponential growth of information in general, the Internet as a modern communication environment contributes to the emergence of psychological challenges at youth, in particular: manifesting negative emotional states (experiencing depression); reducing the level of self-confidence and self-esteem; generating uncertainty; and exhibiting symptoms of Internet addiction and formation of obsessive need to virtual communication. The study has showed that, representing a huge communication zone for people, the Internet has its pros and cons. Using various possibilities of the worldwide network leads to structural and functional changes in the mental activity of an individual.

**Keywords:** Internet communication, psychological challenges, student youth.

### 1. Introduction

Over the past decade, the role of the Internet as a channel of communication, through which both personal and business networking take place, has been increasing. Many social processes are reflected in the virtual space; the interaction of individuals in the Internet happens almost more

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often than in reality (communication in social networks, forums, personal and business correspondence by e-mail, etc.). As a communication channel the Internet has many advantages, among which there is efficiency, informativeness, accessibility, and ability to remain anonymous.

A.E. Voyskunskiy describes three basic types of needs that people meet using the Internet: communicative, cognitive and gaming (Voyskunskiy, 2002).

Communicative need is satisfied through using e-mail services, chats, forums, etc. A significant part of the modern social activity of young people is realized within the framework of interaction in Internet communities and, above all, social networking services such as *Vkontakte*, *Odnoklassniki*, *My World*, and *Facebook*. Today more than 85 % of Internet users are registered in social networks. A typical user of social networks is a young person aged 18-24 years old (96 %). Russian Internet users actively take advantage of the network as a means for free expression of thoughts and feelings (Kulikova, 2018).

Cognitive need is provided by the web navigation tools, reading news and analytical reviews, searching for specific information or browsing the current news, remote education forms, and so on. Satisfaction of the cognitive need, i.e. the need for information – various websites, blogs, forums, diaries – allows us to obtain any information: for example, either official sites or travelogue posts. Using official sites and search engines, Internet users learn the news about events in the world, in their country, in their hometown. With the help of the software program "online translator" they can quickly translate any desired text from any international language into their native language and vice versa.

As for examples of meeting the gaming need, we can list individual and group games with a computer or with real partners via the Internet. The gaming need is provided by a wide range of games – from simple to complex scenario-based interactive gaming structures involving the participation of online communities. In fact, all services are games. Any social network itself is also a game. It defines rules for access to players, and there is a connection with real life.

Researchers of Internet networking usually divide ways to communicate on the Internet in terms of their interactivity. The most interactive communication media are messengers *WhatsApp*, *Viber*, *ICQ* and *MUDs*; the least interactive ones are e-mail services, guest books, forums and teleconferences. When posting on forums and e-mailing, communication occurs in the mode of a delayed response (offline) unlike chatting via the messengers *WhatsApp*, *Viber*, *ICQ* and *MUDs*, where people exchange their information in real time (online). Forms of network communication also differ in the number of users involved into the communication process (mono-, dia- and polylogue ones). Forum communication occurs on a certain topic matter, while chatting does not always have its own topic, and even if there is one, it is rarely observed (Kulagina, Tarasova, 2014).

Basic psychological studies on the Internet communication are aimed mainly at exploring types of communication, such as chats and forums (I.S. Shevchenko, I.V. Romanov, T.A. Naumova, I.V. Andreev, G.S. Chichkova, A.A. Meleshnikov, A.V. Kuznetsova). However, we are more interested in the psychological challenges of young people that arise as a result of a long and regular Internet communication.

The word "communication" comes from the Latin word '*communicatio*' that means 'message' or 'transfer'. S.V. Borisnev points out that communication should be understood as a process of transferring, receiving and assimilating information under conditions of group, personal or mass communication, determined by social circumstances, using various communication channels (Borisnev, 2003). Communication, mediated by a computer (electronic, computer, virtual, network, Internet-communication), is communicative interaction of people with the help of computer devices and networks (local, Internet, etc).

At the end of the last century, P. Wallace offered the term '*Internet psychology*' to refer to the range of scientific interests studying the psychological aspects of the activities mediated by modern information systems. The main research directions in this area are focused on studying the influence of Internet activity on the cognitive abilities of a person and studying the dependence on the Internet, or Internet addiction, intensively discussed in medical, psychological and pedagogical literature (Voyskunskiy, 2002).

The term '*Internet addiction*' proposed by Dr. A. Goldberg in 1996 describes uncontrollable, painful thrust to the Internet. Computer addiction is an issue that clinical psychologists deal with. K. Young starts the discussion on this topic in 1994 when puts a questionnaire on the site, which has resulted in the identification of 400 addicts out of 500 subjects. K. Young discovers that

Internet addiction is often associated with depression. Depressive patients who have difficulty with communication or social adaptation often resort to the help of the Internet to overcome the difficulties to interpersonally interact in reality (Young, 2000). It has been also found that the Internet-dependent often feel nervousness while being "offline", and students suffer from academic failure and deterioration of relations.

Later, researchers I. Goldberg, D. Greenfield, C. Surratt and others have been dealing with the Internet addiction (Shabalin, 2001).

Current research in neurophysiology, neuropsychology and genetics show that the risk of dependence formation is caused by insufficient activity of the dorsal part of the cerebral frontal medial cortex: metabolic disturbances of dopamine, which is part of the "reward circuits" (Bridgett et al., 2015; Lynn et al., 2014; Berrige, Kringelbach, 2015). There is a differentiated predisposition to the development of various dependencies (Buckholtz et al., 2010). Computer game developers use neuropsychological (dopamine) mechanisms to help to keep the person in the game, for example, supporting the player in a constant state of pleasure anticipation resulting from the levels progress.

From a psychological point of view, to generate varying dependencies there should be originally dependent personality, tracing the genesis of which, you can delve into infant and early age (Bowlby, 1988). Thus the content of dependence (food, game or emotional) is a secondary phenomenon.

The social context with respect to various addictions is ambiguous: social perception of teenagers' alcoholization, smoking and misuse of drugs is unequivocally negative; there are legal and social mechanisms limiting the spread of these forms of addictions among young people. In relation to non-chemical dependencies, the society is more tolerant, which prevents the implementation of early prevention, and an obvious need for help arises when negative consequences for the individual are already critical.

For a person who is dependent on the Internet, the following behavioral reactions are inherent: "an active reluctance to get distracted even for a short time from web browsing; forgetting about household chores, studies or job duties, important personal and business meetings while web browsing; unwillingness to accept criticism of such lifestyle; preparedness to put up with the destruction of the family, the loss of the social circle due to the Internet absorption; neglecting their own health, reduction of the sleep duration; preparedness to be satisfied with random and monotonous food irregularly swallowed up with full concentration on the computer screen..." (Pokrovskiy, 1989). The constant use of a computer leads to a person's stressful state. No less significant is the fact that the non-systematic use of computers damages the social, psychological and interpersonal status of an individual (Morozova, 2010).

American psychologists at Carnegie Mellon University have conducted a study, the results of which showed that the more time Internet users spend on the Net, the more they are exposed to emotional disturbances. According to the researchers, information overload can be an obvious cause of stress (Kulikova, Maliy, 2015).

J. Suler emphasizes the effect of deliverance, within which two options are possible: to release negative emotions and satisfaction of destructive needs (insulting others, hacking websites) or to realize the possibility to be frank and not to close in some very personal aspects (Suler, 1996).

Online communication is very attractive. The following advantages for youth exist: there is no evaluation of the partner according to external data; there is no need to quickly form a thought; it is possible to communicate "on behalf of other person". Such communication may even bring a person to a new level (Ovcharova, 2000). Though, everything is good in moderation. When this excessive passion develops into an addiction, it leads to negative effects on the mental and physical life of a person.

Conducted by S. Filippova and E. Shelispanskaya, research showed a high severity of psychological distress, a tendency to neurotic states: obsessive-phobic, anxious, depressed. The presence of the expressed neurotic tendencies are found in *more* than half of the participants in the experiment. It was found that psychological well-being is related to the perception of the body: neurotic girls identified anxious-obsessive tendencies towards their own corporeality. The authors emphasize that the excessive fixation of female students on the problem of corporeality is due to the influence of the information environment: in particular, the importance of Internet communication in the life of modern youth (Filippova, Shelispanskaya, 2017). What is

typical for them that is the need for self-presentation in the network bordering on narcissism, the need to follow fashionable trends (diet, fitness, body modifications) with a low degree of awareness of personal motives and life goals.

## **2. Materials and methods**

All of the above mentioned defines the objective of our study that is to empirically identify and classify psychological challenges of young people using the Internet as a means of communication. We consider the psychological challenge as a psychological contradiction within the personality, which does not violate the mental norm, but creates discomfort, tension, complicates the functioning and adaptation of the individual. The empirical basis of the study involves young people aged 18 to 22 years old, taking advantage of the Internet communication, 45 people in total. All of the subjects are students of various Russian universities. The topical case study has been conducted in the virtual interaction mode.

We assume that there are causal relationships between the time students spend on the Internet, the types and severity level of psychological challenges, in particular: manifesting negative emotional states (experiencing depression); reducing the level of self-confidence and self-esteem; generating uncertainty; exhibiting symptoms of Internet addiction and formation of obsessive need to virtual communication.

Theoretical and methodological basis of the study are as follows:

- theoretical approaches to understanding structure and nature of the communication process (B.G. Ananyev, G.M. Andreeva, A.A. Bodalev, V.N. Myasishchev, A.V. Petrovskiy);
- theoretical concepts of the factors determining the nature of communication, and the possibilities for enhancing the success of communication (E. Berne, R. Bandler and J. Grinder, Ch. Teutsch and J. Teutsch);
- theoretical approaches to define specific features of Internet communication, patterns of interaction in virtual space (A. Burova, A. Zichkina, V. Nesterov and E. Nesterova).

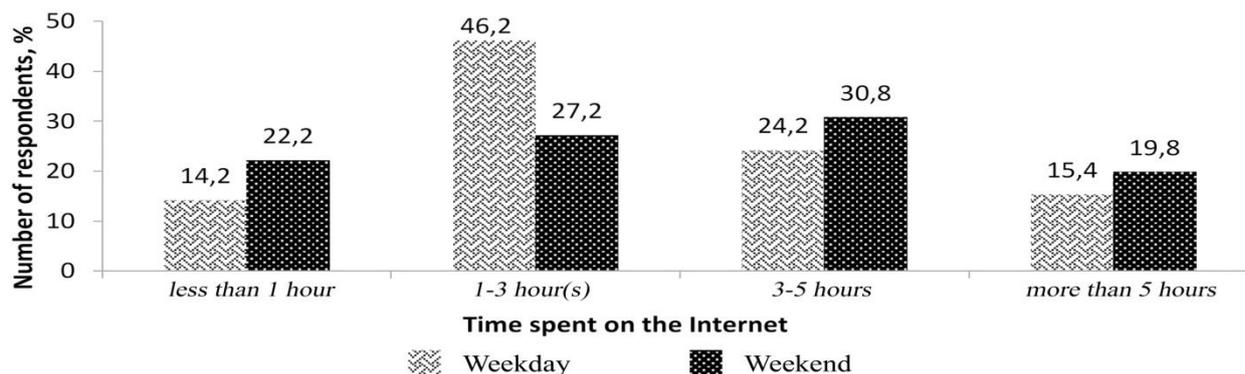
Analyzing international and Russian psychologists' research works makes it possible to identify the main personal challenges of young people who resort to Internet communication, and determines the choice of diagnostic techniques:

- depression scale (adaptation by T.I. Balashova). The questionnaire is developed for differential diagnosis of depressive states and conditions close to depression for screening diagnostics in mass studies and for preliminary diagnostics;
- test-questionnaire on self-conception (V.V. Stolin). As a starting point, it makes a distinction between the content of the "Self-image" (self-knowledge or self-image, including in the form of evaluating the certain features manifestation) and self-relation;
- test on self-confidence (V.G. Romek). The test responds to an understanding of confidence as a stable generalized positive attitude toward one's own skills and abilities (including their effectiveness);
- questionnaire on attitudes towards the Internet (E. Gubenko). The questionnaire can be used to measure the overall indicator (common scale) of the problematic use of the Internet.

When choosing the methods, we have tried to take into account the positive evaluation of the applicability and reliability of the methods, according to a number of international and Russian researchers; accessibility of methods for the study participants; possibility of a qualitative and quantitative analysis of the results obtained.

## **3. Results and discussion**

To determine the time students spend on the Internet, we conducted a survey of respondents about how much time they spend on the Internet-communication on weekdays and at the weekend. The results of the survey are presented in the [Figure 1](#).



**Fig. 1.** Respondents' distribution by time spent on the Internet

According to the respondents' "confessions", the student youth spends a significant part of their "useful" time on the Internet. The majority of respondents (46.2%) indicate that on weekdays they spend on an average one to three hours per day on the Internet. Almost 15.4% of students communicate chatting online more than five hours a day. On weekends, as a rule, the amount of time spent on the Internet increases. It is established that 30.8% of students devote from 3 to 5 hours to the Internet on Saturday and Sunday (or on holidays). 19.8% of the respondents are online more than five hours a day.

According to the results of the method "Depression scale" (adaptation by T.I. Balashova), it is found that 36.2% of the participants in the general sample of young people have a state without depression / low level (average coefficient of feature severity is 3.0 stens), whereas the average and high levels are detected in 35.2% and 28.6% of participants, respectively, with feature severity 4.0 and 7.0 stens. We consider the average level as a depressive state, which can be expressed by episodes of hypothyria and apathy. The results show that relaxation, self-assurance, and all other positive reactions occur only during their time on the Internet. When young people return to the real world with all its conflicts, experiences and challenges, they are overcome by despondency and depression.

According to the results of the method "Test-questionnaire on self-conception" (V.V. Stolin), we have found out that in the group of subjects there are no respondents with a low level of global self-realization, that is, the respondents have not revealed a negative attitude towards themselves. The prevalent number of subjects has a pronounced favorable attitude to their "Self" and is aware of its value. This indicator correlates with the level of self-esteem. Nevertheless, it has been revealed 30.8% of respondents with low self-esteem in the group (average coefficient of feature severity is 2.0 stens), which indicates an internal conflict between the real and ideal "Self". The level of self-esteem determines the success of an individual and his or her level of happiness. A high level of self-esteem leads to success, as well as to high achievements in all spheres of life, and, conversely, a low level of self-esteem precedes many disappointments and failures.

According to the test by V.G. Romek, self-confidence level results indicate that low rate on the scale of "self-confidence" has been revealed at 35.2% of the respondents among the subjects (average coefficient of feature severity is 2.0 stens). Despite the fact that excessive self-confidence is often not encouraged by young people, low scores determine the inability of test subjects to make complex decisions on their own, to independently control their actions and their results.

Low rate on the scale of "social courage" has been identified at 40.6% of the subjects (average coefficient of feature severity is 2.0 stens). Social courage consists of such components as social intelligence, self-confidence, and ability to take risks. In order to show social courage people need to overcome fear by their willful action. Therefore, the constituent elements of the manifestation of social courage are fear, will and willingness to act (Esaulova, 2017). Acting as a certain psychological barrier, fear restrains a person without allowing a certain action to be performed; and courage manifests itself in the fact that, despite feeling the fear, we can perform the action.

In the context of this study, it should be said that subjects with a low score on this scale experience difficulties in real communication, they are much less likely to enter social contacts, and virtual communication seems to them as an alternative to face-to-face communication (Karpova,

2013). Social perception in the network interaction can be distorted under the influence of conscious manipulation of users with a certain reputation (image adjustments, exaggeration of achievements). Thus, through the Internet, a distorted reality is created, which is broadcast to the individual consciousness; the state of psychological distress is the result of dissonance when comparing the real "Self" with networked self-presentations. Fear of nonconformity forces them to become isolated in themselves, avoiding social contacts, and also to imitate the desired image in the network.

The Internet makes it possible to create an alternative and rather safe environment in which the person is deprived of frustrating factors, and, consequently, the need for development. In some ways the Internet performs the functions of psychological defenses, contributing to the displacement, avoidance, substitution, denial and other forms of avoiding contact with real conflicts and difficulties.

The results of the questionnaire on attitudes towards the Internet (E. Gubenko) allow us to state that 12.0% of the subjects tend to use the Internet to achieve social comfort, i.e. to have the opportunity to communicate with other people and develop their own social network, as well as to achieve a feeling of peace and security due to belonging to a virtual social environment, even though it is virtual (average coefficient of feature severity is 3.0 stens).

It should be noted that high indicators on a scale of "social comfort" show a lack of subjects' faith in their forces (61.6%), an underestimation of their capabilities, including those in the field of interpersonal communication (average coefficient of feature severity is 9.0 stens). Such people are largely characterized by a low ability to control their own lives, to make responsible decisions and to understand themselves.

High level of the rate on the scale "loneliness" (average coefficient of feature severity is 7.0 stens) in a subjects group (30.8%) indicates the feeling of loneliness in the real world and, as a result, involvement into virtual communication as a way to supplement the deficit of interpersonal communication in real life.

In 26.4% of the subjects, low level of self-control has been revealed (average coefficient of feature severity is 3.0 stens), i.e. the inability to control one's behavior in the context of the conflicting social environment influence, in particular, exposure to impulsive outbursts and strong dependence on external influences, which shows the involvement of young people in the active use of the Internet as a means of networking and communication.

For the convenience of interpreting the data obtained during our experiment, we present the results in the summary [Table 1](#).

**Table 1.** Summary table of subjects' distribution by levels of the analyzed indicators

<b>Subjects indicators</b>	<b>Subjects distribution by levels, in %</b>		
	<b>high</b>	<b>average</b>	<b>low</b>
<b><i>Depression</i></b>	28.6	35.2	36.2
<b><i>Self-esteem</i></b>	42.8	26.4	30.8
<b><i>Self-confidence</i></b>	26.4	38.4	35.2
<b><i>Social courage</i></b>	24.2	35.2	40.6
<b><i>Social comfort</i></b>	61.6	26.4	12.0
<b><i>Loneliness</i></b>	30.8	42.8	26.4
<b><i>Self-control</i></b>	35.2	38.4	26.4

In order to establish the focus and tightness of the correlation between the signs of psychological challenges at student youth, the R-Pearson correlation was performed; the calculation was carried out using the software program *Statistica*. For the convenience of interpreting the data obtained during our experiment, we present the results in the [Table 2](#).

**Table 2.** Correlation matrix of signs of student youth's psychological challenges (level of statistical significance  $p < 0.05$ )

Symptoms	<i>D</i>	<i>SE</i>	<i>SC</i>	<i>SCr</i>	<i>SCmf</i>	<i>L</i>	<i>SCTr</i>	<i>Ii</i>
<b>Depression (D)</b>	×	-0.42	<b>-0.79</b>	0.12	<b>0.79</b>	<b>0.64</b>	<b>-0.60</b>	<b>0.64</b>
<b>Self-esteem (SE)</b>		×	<b>0.57</b>	0.47	<b>0.55</b>	-0.33	0.40	<b>0.55</b>
<b>Self-confidence (SC)</b>			×	<b>0.70</b>	0.33	0.16	0.30	0.40
<b>Social courage (SCr)</b>				×	0.44	<b>0.57</b>	0.33	<b>0.57</b>
<b>Social comfort (SCmf)</b>					×	<b>0.57</b>	<b>-0.64</b>	-0.44
<b>Loneliness (L)</b>						×	0.26	<b>0.57</b>
<b>Self-control (SCTr)</b>							×	<b>0.55</b>
<b>Integral indicator (Ii)</b>								×

Analyzing data in Table 2, we can see certain causal relationships between the investigated individual symptoms of psychological challenges among student youth. First of all, there is an inverse correlation between the state of depression and loneliness experiencing. The correlation coefficient in this case is  $r = 0.64$ .

Also there is a direct relationship between criterion of social comfort and the level of social courage ( $r = 0.71$ ). Thanks to the Internet, they do things that they would have never decided in real life. According to the study by T.V. Kondrat'yeva, young people experience psychological discomfort – a "computer hunger", if at least one day they do not have access to a computer (Kondrat'yeva, 2000).

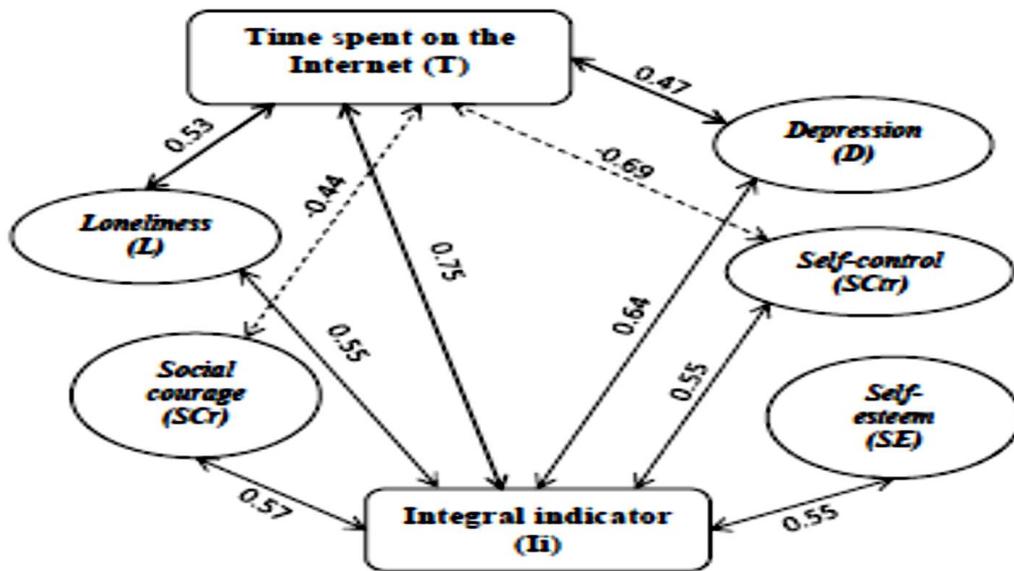
We should also highlight a direct relationship between criterion of self-confidence and criterion of social courage ( $r = 0.70$ ). Confirmation of this fact can be found in a comparative study of the modification of the lifestyle of the Russians, conducted under the leadership of A.A. Vozmitel', a leading Russian scholar in the field of lifestyle research. It has turned out that the percentage of 'microenvironments' in which all people are confident in the future has decreased by 8 times (compared with the Soviet period). The proportion of microenvironments consisting of compassionate people has reduced by 40%. On the contrary, an amount of people have increased by more than 4 times, in the immediate surroundings of whom all are concerned solely with personal well-being (Vozmitel', Osadchaya, 2010). The general vector of changes shows that "better to work" is gradually replaced by "better to consume".

To establish the tightness of the correlation between the time students spend on the Internet and signs of psychological challenges, Pearson's pair correlation was also calculated (Figure 2).

As a result of determining the tightness of the correlation between the time students spend on the Internet and signs of psychological challenges, the following has been established:

1) there is a strong direct correlation between the time spent on the Internet (**T**) and the integral indicator of students' psychological challenges (**Ii**), namely, the *more* time students spend on Internet communication, the *more* their psychological challenges become more evident. The correlation coefficient in this case is  $R = 0.75$  at  $\alpha = 0.05$ ,  $SEM = 0.19$ ,  $CI = (0.64, 1.38)$ , which indicates a strong correlation;

2) there is a strong direct correlation between the time spent on the Internet (**T**) and the sense of depression (**D**) and experiencing loneliness (**L**). In the first case, the correlation tightness is  $R = 0.47$  at  $\alpha = 0.05$ ,  $SEM = 0.19$ ,  $CI = (0.39, 1.22)$ , and, in the second one, it is  $R = 0.53$  at  $\alpha = 0.05$ ,  $SEM = 0.19$ ,  $CI = (0.39, 1.08)$ ;



**Fig. 2.** The tightness of the correlation between the time students spend on the Internet and signs of psychological challenges (*level of statistical significance  $p < 0.05$* )

3) there is an inverse correlation between the time spent on the Internet (**T**) and the criteria of social courage (**SCr**) and self-control (**SCtr**). The correlation coefficient in the first case was  $R = -0.44$  at  $\alpha = 0.05$ ,  $SEM = 0.19$ ,  $CI = (0.35, 1.2)$ , and in the second case,  $R = -0.69$  at  $\alpha = 0.05$ ,  $SEM = 0.19$ ,  $CI = (0.48, 1.13)$ .

#### 4. Conclusion

The data obtained in the course of the empirical study make it possible to draw conclusions that the subjects:

- have the tendency to experience depression;
- lack in the ability to make serious decisions, to take responsibility for their own life;
- show low self-confidence, which indicates difficulties in communication in real life;
- note the feeling of loneliness in real life and, as a result of it, large engagement in the process of active use of the Internet as a way to communicate, including making acquaintances, coupled with the presence of obsessive thoughts about the Internet.

During the theoretical analysis of psychological literature on the issue of Internet networking and communication, the main approaches to studying communication challenges and basic definitions of communication have been identified. It has been concluded that communication is an important factor to form a mature personality, in particular, in the period of early adolescence. The study has showed that young men and women who prefer virtual communication demonstrate a high level of depression and situational anxiety; their self-esteem is significantly understated; the ability to independently make important decisions in their lives and responsibility for their results is not sufficiently formed; subjects who choose the Internet as the main means of communication do not understand enough the connection between their actions and significant events in life, do not consider themselves capable of controlling their development and believe that most of these events are the result of an accident or other people's actions.

Thus, it is possible to say that the Internet is a phenomenon of social reality, which has its pros and cons. In addition to the vast amount of information, the Internet is a huge area for people to communicate. Internet communication has its specific features and characteristics. Using various possibilities of the worldwide network leads to structural and functional changes in the mental activity of the individual.

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