

Demonstration of Inclination to Suicide, Anxiety, and Depression among Young People with Cyber Addiction

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Abstract: Summary. Analysis of the literature on the issue of formation of different types of cyber addiction indicates its interdisciplinary nature, regarded as part of psychiatry, narcology, medical, developmental, differential, and special psychology.

The aim is to analyse empirically obtained data on the demonstration of inclination to suicide, anxiety and depression among young people with cyber addiction.

Research hypothesis. Cyber addictions are one of the types of non-chemical addictions that cause changes in the mental states of the individual. Having identified certain mental states that are characteristic of young people suffering from cyber addictions, it will be possible to develop adequate psycho-correctional measures for them.

Methods: bibliographic, historical, psychodiagnostic, mathematical and statistical methods.

Results. According to the results, it was found that among those from cyber addictions, the indicators of medium and high degree of anxiety predominate, and among people who do not show manifestations of addictive behaviour, the level of anxiety is mostly low. Given the gender characteristics, it is possible to note that females are more prone to depressive states than males. When analysing the results of the study on suicidal tendencies, it was found that among cyber addicts, the largest number of those who has a tendency to commit suicide is among girls in the age group of 16 to 18; in all other major groups indicators do not exceed 10%. The highest rates in the main groups of examined people were found in the category of possible suicidal tendencies in critical situations.

Keywords: *non-chemical addiction, anxiety, depression, cyber addiction, suicide.*

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1. Introduction

The problem of non-chemical addictions is not new in the modern world. Analysis of the literature on the issue of formation of different types of cyber addiction indicates its interdisciplinary nature, regarded as part of Psychiatry, Narcology, medical, developmental, differential, and psychology for special needs. In the classification of ICD-10 there is a section with disorders – habits and urges, such as pathological inclination to gambling, arson and theft, etc. (Nuller & Czirkina, 2005). On May 25, 2019, the WHO included the “gaming disorder” in the updated international classification of diseases (ICD-11). However, it should be noted that gambling addiction can be officially considered a disease no earlier than 2026, as it is necessary to conduct another review of the Korean Standard Classification of Disease and Cause of Death (KCD) scheduled for 2025. During this time, it is necessary to conduct a number of studies and formal procedures. The criteria for diagnosing gaming disorders, according to the WHO, are the loss of control over participation in the game and the prioritization of games to the detriment of other daily activities. At least 12 months should be detected to diagnose signs of such behaviour, but in the case of severe symptoms, this period may be shorter.

Also, one of the first issues that is still controversial is to determine of which origin is a computer addiction: biological or psychological. In the new edition of ICD-11, it refers to behavioural and non-chemical disorders. It is believed that the risk of its occurrence is only a small percentage of people (even among children and adolescents) (Griffiths et al., 2016; Rumpf et al., 2018; Kuss, D. J., Griffiths, M. D., & Pontes, H. M. 2017).). This is not due to the nature of the game activity, but to the psychological characteristics of the people. On the one hand – with the presence of specifics at the brain level. On the other hand - with the surrounding factors of development, problems in the family, problems with other people and so on.

1.1. Literature review

In the formation of the concepts of cyber addictions, the following views were taken into consideration: the cognitive behavioural model (Davis et al., 2002), the behavioural deviation (Arestova et al., 1996; Voiskunsky & Smyslova, 2020), the basic provisions of psychological (Gregory, 2021; Young, 1996), biological (Sprints & Erishev, 2012), and biopsychosocial approaches (Aymedov et al., 2017; Bolbot, 2005; Markova, 2013; Egorov, 2007; Shotton, 1991;) etc. Having analysed the available scientific-theoretical and scientific-experimental research, we propose to understand under cyber addiction the type of non-chemical addiction, which is expressed in a mental

disorder caused by an obsessive desire to be in virtual reality, live and be realized in cyberspace using electronic devices despite the destruction of material and social reality, negative consequences for health and for the process of life in general.

Being online constantly interferes with real life (health, work, study, relationships, etc.), however, there is a fear of being in an information vacuum (offline), new types of addictions are formed. Meeting the needs of self-realization, self-identification, recognition and search for new types of entertainment through the network lead to the formation of passion not only for the network, but also for new types of games related to cyberspace. Formation of psychological addiction to certain types of activity in cyberspace, which allow a person to get special pleasure, improve well-being, distract from unpleasant reality, due to their frequency and intensity cause direct or indirect harm.

According to the 2020 survey, compared to January 2019, the number of people worldwide working on the Internet increased to 4,54 billion, an increase of 7% (298 million new users). Of these, there were 3.80 billion social network users, and this number increased by more than 321 million new users (9%) compared to last year. It should be noted that most new users are children, adolescents and young people (Kemp, 2020). According to numerous studies conducted by scientists in different countries and published in the media, a third of modern young people cannot imagine their lives without the Internet, computer, gadgets, and other electronic devices; from 10% to 20% of Internet users are addicted to communication on social networks; up to 70% of people, including up to 90% of children, in developed countries regularly play computer games, with one in ten of them experiencing significant real-world problems because of their hobbies.

The problem of cyber addiction is currently important, a relatively young field of scientific knowledge, and requires further study.

1.2. Aim

The aim is to analyse empirically obtained data on the demonstration of inclination to suicide, anxiety and depression among young people with cyber addiction.

1.3. Research hypothesis

Cyber addictions are one of the types of non-chemical addictions that cause changes in the mental states of the individual. Having identified certain mental states that are characteristic of young people suffering from cyber

addictions, it will be possible to develop adequate psycho-correctional measures for them.

The study was conducted from 2016 to 2020. A total of 663 people took part in the research, during the study 104 people have already refused to participate in further research.

This study included 559 people, 408 of whom had certain types of cyber addictions, and 151 people who agreed to join the comparison group (relatively healthy).

1.4. Research methodology

Such methods were used throughout the research as theoretical and historical (analysis, systematization of theoretical data and literature sources), psychodiagnostic methods, and mathematical-statistical method.

The theoretical method included theoretical-methodological analysis, generalization of social, psychological, medical achievements on the topic of research, it was also organized the systematization of existing modern literary sources on the prevalence of cyber addiction. Analysis and generalization of sociopsychological, medical-psychological, psychological and educational literature was aimed at reflecting the current state of the problem of cyber addiction.

The following psychodiagnostic methods were used in this work: Hospital Anxiety and Depression scale (HARS/HADS); Beck Depression Inventory (adolescent and adult) (Beck, 1961), Test: suicidal tendencies (Rajgorodskij, 2002; Sobchik, 2014).

Mathematical-statistical consisted in mathematical and statistical data processing performed with the program “Microsoft Excel, 2010”, and the statistical analysis package SPSS 17.0 for Windows XP, “Statistic for Windows 7.0” (Lapach et al., 2001).

1.5. Adherence to ethical aspects

The research is conducted in compliance with the principles of bioethics and deontology on the basis of Odesa National Medical University; ME Municipal Student Polyclinic №21 “Youth Friendly Clinic”, NGO LGBT Association “LEAGUE”. All respondents were announced the topic and purpose of the research, and during the conversation it was repeatedly emphasized that participation in this study is completely voluntary and confidential. Respondents were given the right not to answer any questions and were given the opportunity to interrupt the survey or participate in the survey without explaining anything. Among the total number of respondents, 559 adolescents were selected to participate in further work. Of

these, 269 boys (48,12% of the sample) aged 14-21 years, 290 girls (51,88% of the sample) aged 14-21 years. Three blocks of respondents depending on age were separated, which had an internal division into main (examination) and comparison groups in age categories: from 14 to 15 years, it is EGB1 – 59 young men with showings of addictions; CGB1 – 21 relatively healthy young men; EGG1 – 65 girls with showings of addiction; CGG1 – 25 relatively healthy girls; from 16 to 18 years, it is EGB2 – 72 young men with showings of addictions; CGB2 – 26 relatively healthy young men; EGG2 – 76 girls with showings of addictions; CGG2 – 28 relatively healthy girls; from 19 to 21 years old, it is EGB3 – 67 young men with showings of addictions; CGB3 – 24 relatively healthy young men; EGG3 – 69 girls with showings of addictions; CGG3 – 27 relatively healthy girls. Thus, 198 boys entered the main (examination) groups and 71 boys entered the comparison groups, and 210 girls entered the main study groups, and 80 girls entered the comparison group.

1.6. Inclusion and exclusion criteria

The study involved only those participants who met all the following inclusion criteria, namely:

- were able to read and understand the data provided in the informed consent to participate in the research, as well as understand the instructions given in psychological test methods;
- personally signed an informed consent to participate in the research, psychodiagnostic survey, and counselling and therapeutic assistance;
- adolescents whose parents gave informed consent for their children's participation in the research;
- were in the age group of 14-21 years.

The exclusion criteria were the following:

- age under 14 years or over 21 years;
- lack of personally signed information consent to participate in the study for people aged 18 to 21 years;
- lack of information consent provided by parents or people who are responsible for the child in accordance with the legislation of Ukraine (parents, guardians, adoptive parents) for adolescents from 14 to 18 years;
- adolescents who have had psychotic disorders or severe manifestations of personality disorders (including schizophrenic states or severe depressive disorders);
- severe forms of somatic or neurological pathology.

1.7. The reliability of the data and statistical analysis

Mathematical and statistical methods. All data obtained as a result of the study were entered into a specially designed map of each respondent for further processing using modern statistical methods with “Microsoft Excel, 2010” and statistical analysis package SPSS 17.0 for Windows XP, “Statistic for Windows 7.0” (Lapach et al., 2001). Procedures of primary and secondary (correlation and variation) statistics were used for statistical data processing. In the process of statistical processing, the relative values (p), arithmetic mean (m) were calculated with the determination of the error of the mean value (t), the standard deviation (δ). Assessment of the probability of the results of the study involved determining the errors of representativeness, confidence limits of mean and relative values, the probability of their differences by Student's t-test (for parametric), Fisher's test (to check the equality of variances of the two samples). All data obtained are reliable ($p \leq 0.05$). Based on comparative statistical analysis, we made the main conclusions of the study.

2. Research results

This paper reveals the results of one of the stages of a study of cyber addiction among adolescents, which was aimed at identifying markers for psychological correction, one of which was to identify the degree of depression and anxiety.

According to the results of the survey of respondents on the selected methods, an analysis of the data was performed and is provided in Tables 1-4.

Table 1. Results of the survey according to the “Hospital Anxiety and Depression Scale (HARS / HADS)” method. Level of anxiety

Age partition of groups	Groups of respondents	low	mid	high
14 - 15 y.o.	EGB1 (n-59)	10,17	45,76	44,07
	CGB1 (n-21)	57,14	38,10	4,76
	EGG1(n-65)	12,31	43,08	44,62
	CGG1 (n-25)	56,00	36,00	8,00
16 - 18 y.o.	EGB2 (n-72)	9,72	43,06	47,22
	CGB2 (n-26)	53,85	38,46	7,69
	EGG2(n-76)	11,84	42,11	46,05
	CGG2 (n-28)	46,43	42,86	10,71
19 - 21 y. o.	EGB3 (n-67)	8,96	44,78	46,27

CGB3 (n-24)	54,17	41,67	4,17
EGG3 (n-69)	10,14	42,03	47,83
CGG3 (n-27)	51,85	40,74	7,41

Note: According to Student's criterion, the difference between the examination and comparison groups is authentic – $p \leq 0.05$.

According to the results of the study of anxiety, it was found that among the main sample groups the indicators of medium and high anxiety levels dominate, and among the comparison groups in all age categories, the level of anxiety is mostly low.

A detailed study of the level of anxiety among people aged 14 to 15 found that in EGB1 prevails a medium degree of anxiety – 45,76% of respondents, in EGG1 is dominated by a high degree of anxiety – 44,62% of respondents, CGB1 and CGG1 are dominated by low degree anxiety – 57,14% and 56,00% of respondents respectively.

Among the age group from 16 to 18 years in EGB2 and EGG2 a high degree of anxiety prevails – 47,22% and 46,05% of respondents respectively. In CGB2 and CGG2 a low degree of anxiety dominates – 53,85% and 46,43% of respondents respectively.

The age group from 19 to 21 years in EGB3 and EGG3 is dominated by a high degree of anxiety – 46,27% and 47,83% of respondents respectively, in CGB3 and CGG3 a low degree of anxiety dominates – 54,17% and 51,85% of respondents respectively.

The Hospital Anxiety and Depression Scale (HARS/HADS) and the Beck Depression Inventory were used to identify the degree of depression (results are given in Tables 2 and 3).

Table 2. Results of the survey according to the “Hospital Anxiety and Depression Scale (HARS/HADS)” method. Level of depression

Age partition of groups		Groups of respondents	low	mid	high
14 - 15 y.o.		EGB1 (n-59)	40,68	59,32	0,00
		CGB1 (n-21)	90,48	9,52	0,00
		EGG1 (n-65)	40,00	60,00	0,00
		CGG1 (n-25)	88,00	12,00	0,00
16 - 18 y.o.		EGB2 (n-72)	34,72	65,28	0,00
		CGB2 (n-26)	84,62	15,38	0,00

19 - 21 y.o.	EGG2 (n-76)	30,26	69,74	0,00
	CGG2 (n-28)	82,14	17,86	0,00
	EGB3 (n-67)	32,84	67,16	0,00
	CGB3 (n-24)	79,17	20,83	0,00
	EGG3 (n-69)	28,99	71,01	0,00
	CGG3 (n-27)	77,78	22,22	0,00

Note: According to Student's criterion, the difference between the examination and comparison groups is authentic – $p \leq 0.05$.

It was found that none of the respondents had a high degree of depression. Among people in the age group from 14 to 15 years, it was found that in EGB1 and EGG1 the medium degree predominates – 59,32% and 60,00% of respondents, respectively, and among CGB1 and CGG1 the low degree predominates – 90,48% and 88,00% of respondents, respectively.

Among people aged 16 to 18 it was found that in EGB2 and EGG2 the medium degree prevails – 65,28% and 69,74% of respondents, respectively, and among CGB2 and CGG2 the low degree prevails – 84,62% and 82,14% of respondents, respectively.

Among people in the age category from 19 to 21, years it was found that in EGB3 and EGG3 the medium degree exceeds – 67,16% and 71,01% of respondents, respectively, and among CGB3 and CGG3 the low degree exceeds – 79,17% and 77,78% of respondents, respectively.

When considering age differences, it is possible to note that the older the sample group of people be, the higher the percentage of people with medium depression degree is. When comparing comparison groups, the older people are, the more of them have a medium degree of depression. In view of gender differences, it is possible to note that girls in both the examination and comparison groups are more prone to depression than boys.

In order to study in more detail, the depressed states of the respondents and their compliance with the inclusion/exclusion criteria, a more sensitive psychodiagnostic method – “Beck Depression Inventory” – was used (Table 3).

Table 3. Results of the survey according to the “Beck Depression Inventory” method

Age partition of groups	Groups of respondents	of depressive symptom	Mild depression n	Moderate depression n	Severe depression n	Extreme depression
14 - 15 y.o.	EGB1 (n-59)	40,68	52,54	6,78	0,00	0,00
	CGB1 (n-21)	90,48	9,52	0,00	0,00	0,00
	EGG1(n-65)	40,00	50,77	9,23	0,00	0,00
	CGG1 (n-25)	88,00	12,00	0,00	0,00	0,00
16 - 18 y.o.	EGB2 (n-72)	34,72	54,17	11,11	0,00	0,00
	CGB2 (n-26)	84,62	15,38	0,00	0,00	0,00
	EGG 2(n-76)	30,26	57,90	11,84	0,00	0,00
	CGG 2 (n-28)	82,14	17,86	0,00	0,00	0,00
19 - 21 y.o.	EGB3 (n-67)	32,84	56,72	10,44	0,00	0,00
	CGB3 (n-24)	79,17	20,83	0,00	0,00	0,00
	EGG 3 (n-69)	28,99	57,97	13,04	0,00	0,00
	CGG 3 (n-27)	77,78	18,52	3,70	0,00	0,00

Note: According to Student's criterion, the difference between the examination and comparison groups is authentic – $p \leq 0.05$.

According to the results of the survey, the selected respondents do not show signs of severe and extreme depression, which gives us the opportunity to leave them in our sample in full. In the analysis of the obtained data it was found that among the age group from 14 to 15 years, in EGB1 the most predominated is mild depression – 52,54% of respondents, there are also people with moderate depression – 6,78% of respondents, in EGG1 the exceeded one is mild depression – 50,77% of respondents, there are also people with moderate depression – 9,23% of respondents, in CGB1 and CGG1 the absence of depressive states prevails – 90,48% and 88,00% of respondents, however, there is a small percentage of people who show mild depression in CGB1 – 9,52% of respondents, and CGG1 – 12,00% of respondents.

Among the age group from 16 to 18 years it was established that in EGB2 the most dominated is mild depression – 54,17% of respondents, there are also people with moderate depression – 11,11% of respondents, in EGG2 the prevailed one is mild depression – 57,90% respondents, there are

also people with moderate depression – 11,84% of respondents, CGB2 and CGG2 are dominated by the absence of depressive states – 84,62% and 82,14% of respondents, also found a small percentage of people who show mild depression in CGB2 – 15,38% of respondents, and CGG2 – 17,86% of respondents. It should be noted that when compared with the younger age group, the percentage of people with mild depression among the comparison group increases, as does the percentage of people and the main group in the category of moderate depression.

Among the age group from 19 to 21 years it was discovered that in EGB3 mild depression predominates – 56,72% of respondents, the presence of people with moderate depression – 10,44% of respondents, in EGG3 the most exceeded is mild depression – 57,97% respondents, and there were also found people with moderate depression – 13,04% of respondents, CGB3 and CGG3 are dominated by the absence of depressive states – 79,17% and 77,78% of respondents, respectively, but the percentage of people who show mild depression as in CGB3 – 20,83% of respondents, and CGG3 – 18,52% of respondents are much higher than in comparison groups in previous age groups. Additionally, in the comparison group in this age group, there are respondents (female) who show mild depression – CGG3 – 3,07% of respondents, which may indicate that the older young people are getting, the more factors that affect their level of depression, and given the gender characteristics, it is possible to note that females are more prone to depressive states than males.

As the next marker for the formation of psycho-correctional programs for adolescents who have manifestations of cyber addictions propensity to suicidal behaviour was chosen. To test the hypothesis, a psychodiagnostic study was performed using the “Test: suicidal tendencies” method (results are given in Table 4).

Table 4. Results of the survey according to the “Test: suicidal tendencies” method

Age	Groups of respondents	No inclination n to	Possible in critical situations	Presence of suicidal tendency	Manifest inclination n to suicide
14 – 15 y.o.	EGB1 (n-59)	16,95	45,76	32,20	5,08
	CGB1 (n-21)	85,71	14,29	0,00	0,00
	EGG1 (n-65)	21,54	43,08	32,31	3,08
	CGG1 (n-25)	68,00	24,00	8,00	0,00

16 - 18	y.o.	EGB2 (n-72)	20,83	43,06	29,17	6,94
		CGB2 (n-26)	73,08	19,23	7,69	0,00
		EGG2 (n-76)	17,11	42,11	30,26	10,53
		CGG2 (n-28)	60,71	21,43	17,86	0,00
19 - 21	y.o.	EGB3 (n-67)	20,90	40,30	35,82	2,99
		CGB3 (n-24)	62,50	25,00	12,50	0,00
		EGG3 (n-69)	17,39	42,03	31,88	8,70
		CGG3 (n-27)	51,85	33,33	14,81	0,00

Note: According to Student's criterion, the difference between the examination and comparison groups is authentic – $p \leq 0.05$.

When analysing the results, it is possible to claim that among the comparison groups there was not any respondent who would show a manifest inclination to suicide. Among the examination groups of respondents, a manifest tendency to suicide in the largest number of respondents was found among girls in the age group from 16 to 18 years EGG2 – 10,53% of respondents; in all other main groups, the indicators do not exceed 10%; the lowest rate of suicidal tendencies was found among boys in the age category from 19 to 21 years EGB3 – 2,99% of respondents.

The highest rates in the main groups studied in all age categories were found in the category of possible suicidal tendencies in critical situations. Thus, among people in the age category from 14 to 15 years in EGB1 – 45,76% of respondents, in EGG1 – 43,08% of respondents; in the age category from 16 to 18 years, in EGB2 – 43,06% of respondents, in EGG2 – 42,11% of respondents; in the age category from 19 to 21 years in EGB3 – 40,30% of respondents, in EGG3 – 42,03% of respondents. Slightly lower but still quite high are the rates of presence of suicide tendencies among the main groups in all age samples. Consequently, among people in the age category from 14 to 15 years in EGB1 – 32,20% of respondents, in EGG1 – 32,31% of respondents; in the age category from 16 to 18 years, in EGB2 – 29,17% of respondents, in EGG2 – 30,26% of respondents; in the age category from 19 to 21 years in EGB3 – 35,82% of respondents, in EGG3 – 31,88% of respondents.

Low rates are in the main groups in all age samples in terms of lack of inclination to suicide. Accordingly, among people in the age category from 14 to 15 years in EGB1 – 16,95% of respondents, in EGG1 – 21,54% of respondents; in the age category from 16 to 18 years, in EGB2 – 20,83% of respondents, in EGG2 – 17,11% of respondents; in the age category

from 19 to 21 years in EGB3 – 20,90% of respondents, in EGG3 – 17,39% of respondents.

When analysing the results of suicidal tendencies among respondents of comparison groups in all age categories, it can be noted that most respondents do not show suicidal tendencies, a small percentage of people (up to 15%) demonstrates the presence of suicidal tendencies, and no manifest inclination to suicide is noticed in comparison groups. On the scale “No inclination to suicide” in the age category from 14 to 15 years there are in CGB1 – 85,71% of respondents, in CGG1 – 68,00% of respondents; in the age category from 16 to 18 years there are in CGB2 – 73,08% of respondents, in CGG2 – 60,71% of respondents; in the age category from 19 to 21 years in CGB3 – 62,50% of respondents, in CGG3 – 51,85% of respondents. According to the scale “Possible in critical situations”: in the age category from 14 to 15 years, in CGB1 – 14,29% of respondents, in CGG1 – 24,00% of respondents; in the age category from 16 to 18 years, in CGB2 – 19,23% of respondents, in CGG2 – 21,43% of respondents; in the age category from 19 to 21 years in CGB3 – 25,00% of respondents, in CGG3 – 33,33% of respondents. According to the scale “Presence of suicidal tendencies” there are in the age category from 14 to 15 years in CGB1 – 0% of respondents, in CGG1 – 8,00% of respondents; in the age category from 16 to 18 years, in CGB2 – 7,69% of respondents, in CGG2 – 17,86% of respondents; in the age category from 19 to 21 years in CGB3 – 12,50% of respondents, in CGG3 – 14,81% of respondents. Therefore, it is possible to note that there is a tendency to increase the probability of suicidal inclinations among girls with their growth, as the indicators by groups increase in terms of risk. However, this hypothesis should be tested in subsequent studies, whether this trend is related to age, or individual psychological features.

2.1. Discussion

It should be noted that the official recognition of gambling addiction to the disease suggests that its consequences are so significant that they require medical intervention. In the WHO classification, it is assigned the code 6C51, and it falls into the category of mental, behavioural disorders and disorders of the nervous system. The ICD-11, which will include 55,000 diseases and significantly expand the classification of health hazards, will enter into force on 1 January 2022 in 194 WHO member countries. It (ICD-11) identifies gambling addiction, which is considered a disorder that has serious *behavioural disorders that negatively affect personal, family, community, educational, professional, or other important aspects of life* (Nuller & Czirkina, 2005;

Rumpf et al., 2018). However, in our opinion, and in the opinion of some modern scientists (Arestova et al., 1996; Voiskunsky & Smyslova, 2020), we should already talk about cyber addiction, which is a much broader concept that includes both gaming and the Internet and computer addiction.

To this date, scientists have identified some special features of cyber addicts. Violations in the emotional and volitional sphere, in the communicative, and in the motivational sphere, are taken into account. There are a number of studies on the separation of preconditions, stages of development, symptoms, proposed diagnostic criteria for cyber addictions, the possibility of its formation on the basis of other forms of addictive behaviour, and others. But no matter how rapidly research is conducted and models of prevention and treatment are proposed, technological progress is becoming the basis for the emergence of new types of cyber addictions. At present, the diagnosis of cyber addiction and the identification of risk groups and markers for the formation of psycho-correctional programs play an important role in the prevention of this type of addiction, and research on this issue is almost non-existent.

3. Conclusion

Based on the analysed material and the conducted experimental study, the research hypothesis was confirmed. According to the results of an experimental study on the manifestations of anxiety and depression among young people prone to cyber addiction, the following conclusions were formed.

1. Cyber addiction is a multidisciplinary problem that has recently spread to a younger generation. It is a type of non-chemical addiction, which is expressed in a mental disorder caused by an obsessive desire to be constantly in virtual reality, live and be realized in cyberspace through the use of gadgets or electronic devices despite the destruction of material and social reality, negative consequences for health and life in general.

2. According to the results of the study, it was found that the manifestations of anxiety, depression and suicidal tendencies can be considered as markers for the development of psycho-correctional programs.

3. In reliance on the results of the study obtained by the “Hospital Anxiety and Depression Scale (HARS/HADS)” method (level of anxiety) it was found that among the main examination groups the indicators of medium and high anxiety dominate, and among the comparison groups in all age categories manifestation of anxiety is mostly low.

4. On the basis of the results of the study obtained by the of “Hospital Anxiety and Depression Scale (HARS/HADS)” (level of depression), it was found that none of the respondents had a high degree of depression. Additionally, it was found that the older the age of the main and the comparison group, the higher the percentage of people with mild depression, and there is a significant difference between the groups $p \leq 0.05$. When considering gender differences, it is possible to note that girls in both the main and comparison groups are more prone to depression than boys.

5. In order to study in more detail, the depressed states of the respondents and their compliance with the inclusion/exclusion criteria, a more sensitive psychodiagnostic method – “Beck Depression Inventory” – was used. According to the results of the survey, it was found that the selected respondents do not show symptoms of severe and extreme depression, which gives us the opportunity to leave them in our sample in full. When analysing the obtained data, it was found that among all age groups in the main groups, indicators of mild depression predominate, and in the comparison groups – the absence of depressive states. However, it should be noted that when comparing with the younger age group, the percentage of people with mild depression among the comparison group increases, as well as the percentage of people in the main group in the category of moderate depression. This may indicate that the older young people, the more factors that affect their level of depression and, given gender, it may be noted that females are more prone to depression than males.

6. When analysing the results of the study on suicidal tendencies, it was found that among the comparison groups there was no respondent who would demonstrate a manifest inclination to suicide. Among the main groups of the study, a manifest inclination to suicide in the largest number of respondents was found among girls in the age group from 16 to 18 years EGG2 – 10,53% of respondents; in all other major groups it did not exceed 10%; the lowest rate of a manifest inclination to suicide was found among boys in the age category from 19 to 21 EGB3 – 2,99% of respondents. The highest rates in the main groups of subjects in all age categories were found in the category of possible suicidal tendencies in emergency situations. When analysing the results of suicidal tendencies among respondents of comparison groups in all age categories, it can be noted that most respondents do not show suicidal tendencies, a small percentage of people (up to 15%) demonstrates the presence of suicidal tendencies, and no manifest inclination to suicide is noticed in comparison groups. Therefore, it is possible to note that there is a tendency to increase the probability of

suicidal inclinations among girls with their growth, as the indicators by groups increase in terms of risk. However, this hypothesis should be tested in subsequent studies, whether this trend is related to age, or individual psychological features.

4. Prospects for further research

The study provides us with the opportunity to include the demonstration of inclination to anxiety, depression, and suicide in the markers for the development of psycho-corrective programs for adolescents. However, additional research should also be conducted to establish individual psychological characteristics and styles of family upbringing and to conduct a correlation analysis of the data obtained in order to develop a psycho-correctional program for people prone to cyber addictions in adolescence.

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