ATTITUDE TO COVID-19 VACCINATION AND DISORDERS OF HEALTHY BEHAVIOR OF RUSSIAN UNIVERSITY STUDENTS DURING THE THIRD PANDEMIC WAVE

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Abstract

Under current conditions of social reality - during COVID-19 pandemic, which affected all spheres of society, students found themselves in a very difficult psychological situation involving a global health threat, psychological uncertainty, social isolation, sharply changing forms of education (full-time, distance and blended learning) and possible financial difficulties. In times of the different waves of the pandemic, comprehensive research on human welfare, health and the risks of psychosocial disorders among university students is of particular relevance and scientific significance. The paper discusses the results of the conducted empirical study of disorders of health behavior among Russian university students and their attitude towards vaccination against coronavirus disease (COVID-19) during the third wave of the pandemic. The study involved 181 students of the Russian regional university, whose average age was 19.53 ± 1.67 years. Each person surveyed was asked to answer the Bekhterev questionnaire on the attitude to vaccination against coronavirus disease (COVID-19) (attitude to the possibility of getting infected, to vaccination and vaccines; relying on the views of medical doctors, other specialists and mass media on vaccination and vaccines; fear of complications after vaccination, anxiety about becoming infected or about their loved ones getting infected and dying, etc.) and the "Questionnaire of disorders of health behavior" (E.L. Lutsenko, O.E. Gabelkova). The results obtained indicate that the students have an insufficiently formed attitude to vaccination, which is complicated by anxiety and fear due to the pandemic of coronavirus disease. These features are reflected in characteristics of disorders of health behavior, which is characterized by the desire to reduce mental distress and take control of the situation by reducing the risky and impulsive behavior. The male and female disorders of health behavior have their own specific characteristics. The study of psychosocial risks of health disorders, as well as the peculiarities of adherence to vaccination against coronavirus disease (COVID-19) among students, will enable to develop comprehensively organized measures aimed at minimizing and preventing risks in the educational space of a multidisciplinary university.

Keywords: attitudes towards COVID-19 vaccination, healthy behavior disturbances, Russian university students, period of the third wave of pandemic

1. INTRODUCTION

Currently, special attention of researchers is attracted by various aspects of the problem of health and well-being of student youth (Zakharova A.N., Talanova T.V. et al., 2018), since it is impossible to achieve high personal competitiveness in the labor market of future specialists without a high level of health (Morova N.S. et al., 2017; Zakharova A., et al., 2018). The problem of health and well-being of student youth has acquired special significance in the context of the COVID 19 pandemic.

The ongoing global pandemic of coronavirus disease (COVID-19) is affecting most, if not all, countries in the world. All countries have imposed measures to control and manage the spread of coronavirus disease. Covid restrictions and attitudes towards vaccination against coronavirus can cause mental health problems that may arise during and shortly after the pandemic. The COVID-19 outbreak led to high schools closures and forced them to initiate online teaching and learning.

Currently, numerous studies are being conducted on the prevalence of mental health problems and attitudes towards vaccination among the general population worldwide. In this regard, the study of these problems among students is of particular interest, as they are members of active population, who can experience the imposed restrictions to a greater extent and, as a result, are at risk for different types of mental disorders and psychological problems (Nikolaev E., 2021; Nikolaev E., Aleksandrov A., Poverinov, I., Niyazov, L., 2021; Nikolaev E., Hartfelder D., Lazareva E., Vasileva E. et al., 2021).

The conducted studies have found high prevalence of anxiety, depression and post-traumatic stress disorder among university students during the coronavirus (COVID-19) pandemic (Yuqing Zhao, Yuanyuan An, Xing Tan, Xiaohui Li, 2020).

High levels of vaccination coverages with safe and effective vaccines worldwide will be an important achievement in fight against coronavirus disease. In this regard, vaccination acceptance among students and the general population is an important issue. The study of attitudes towards COVID-19 vaccination among nursing students in Greece, Albania, Cyprus, Spain, Italy, the Czech Republic and the Republic of Kosovo showed that only 1 in 12 students intended to get vaccinated. Vaccine acceptance was higher among Italian students, male students, students having no work experience in healthcare facilities during the pandemic and those who had been vaccinated against influenza in previous years. Students with trust in medical doctors, experts and governments, with high level of knowledge and fear of coronavirus disease are more likely to accept Covid-19 vaccines and get vaccinated (Patelarou E., et al, 2021). The studies conducted on the relationship between coronaphobia and attitudes towards vaccination against COVID-19 among students and elderly people showed that participants had a moderate level of coronavirus phobia and positive attitudes to vaccines. It was found that the positive attitudes to COVID-19 vaccines tend to increase with the increase in coronavirus phobia (Turana G.B., et al, 2021). For students, protection of family and friends is likely to be the key factor for intention to get vaccinated, concerns about vaccine side effects being the main reason for unwillingness to receive a vaccine (Belingheri M., et al, 2021).

The conducted study on the assessment of knowledge, attitudes and precautionary behaviors during the coronavirus pandemic among students showed that most of the respondents received information from mass media, government websites and international organizations being among the most credible sources of information. Most of the students surveyed expressed concerns about getting infected. They considered COVID-19 a dangerous disease due to its high contagiousness and rapid spread. The study showed that medical students tend to have a deep understanding of COVID-19 and engage in precautionary behaviors which are necessary to control and manage the spread of the disease (Salema M.R., et al, 2021).

In this regard, it is important to study the current psychosocial risks of health disorders, as well as the peculiarities of adherence to vaccination against coronavirus disease (COVID-19) among students. This will enable to develop comprehensive measures aimed at minimizing and preventing risks in the educational space of a multidisciplinary university.

The study involved 181 students of the Chuvash State University aged 17 to 25 years. The group's average age was 19.53 ± 1.67 years. 71.82% (130 participants) of them are female students, 28.18% (51 participants) being male ones.

Each person surveyed was asked to answer the Questionnaire on the attitude towards vaccination against coronavirus disease (COVID-19) and the Questionnaire on the disorders of health behavior. The analysis of the results obtained was carried out using a mathematical and statistical research method, involving the calculation of basic statistics and the study of the accuracy of the differences between the results obtained for the studied students and the normative data given in the questionnaire.

RESULTS OF THE STUDY AND THEIR ANALYSIS

The results of the survey of students through the Bekhterev questionnaire on their attitudes to vaccination against coronavirus disease (COVID-19) showed that almost half of the respondents - 46.41% (84 students) - were sure that they had not had coronavirus disease, 1 in 4 respondents - 24.86% (45 students) - had a mild case of Covid-19, approximately 1 in 5 respondents - 18.78% (34 students) - had a moderate case of the disease, 1 in 10 respondents - 9.39% (17 students) - had asymptomatic Covid-19, 0.55% of students (1 person) had severe disease. These data indicate that a little over half of the students believe that they have already had coronavirus disease and most of them had mild and moderate illness.

Relatives or friends of the majority of the respondents - 84.53% (153 students) - had mild cases of the disease, half of the respondents - 50.83% (92 students) - had asymptomatic Covid-19, almost 1 in 2 respondents - 42.54% (77 people) - know people or have relatives who were seriously ill and were hospitalized, 1 in 5 students surveyed - 18.78% (34 people) - suffered the loss of people they loved or knew due to coronavirus disease. The data obtained show that most of the students have relatives or know people who have already had coronavirus, many of whom were hospitalized.

Among the studied group, 1 in 3 respondents - 37.57% (68 students) - get vaccinated following the medical doctors' recommendations, 30.94% of respondents (56 students) get vaccinated from time to time, and only 1 in 6 respondents - 17.68% (32 students) - always do it according to the vaccination schedule, 1 in 7 participants - 13.81% (25 students) – avoid vaccination. Thus, most students are vaccinated against diseases, but 1 in 7 students do not always feel the need to get vaccinated and often try to avoid it.

1 in 3 students surveyed - 29.83% (54 respondents) - are wary of Covid-19 vaccines, they raised doubt about their efficacy. 1 in 3 students - 36.46% (66 respondents) - consider vaccination against coronavirus disease useful, and only 1 in 14 students - 7.18% (13 respondents) - consider vaccination unnecessary or dangerous. 1 in 6 students - 16.57% (30 people) - are not interested in this issue and remain indifferent to vaccination. Thus, only 1 in 3 students consider vaccination useful, the rest of the students either consider it dangerous and unnecessary, or remain indifferent, or have doubts about vaccine efficacy.

The study into confidence in coronavirus vaccines shows that almost a third of students - 30.94% (56 respondents) - do not trust vaccines, another third of students - 31.49% (57 respondents) - believe that all vaccines are good, the rest of the students - 28.73% (52 respondents) - trust domestic vaccines, and 1 in 11 students - 8.84% (16 respondents) - trust foreign vaccines. This range of opinions shows that students have diametrically opposing views on the available vaccines.

The study found that more than half of the surveyed students - 54.7% (99 respondents) - had already been vaccinated with the coronavirus vaccine. 1 in 9 surveyed students - 11.6% (21 respondents) - are planning to get vaccinated in the near future. 1 in 7 students are wary of vaccination - 14.36% (26 respondents) - and do not want to be vaccinated - 14.92% (27 respondents). They are either not planning to get vaccinated at all, or want to look at the long-term consequences of vaccination. 4.42% of students (8 respondents) have medical contraindications to Covid-19 vaccines. The data obtained indicate that almost half of the students do not want to receive a vaccine, they being wary of vaccination and there being a lack of confidence in vaccines.

The majority of the respondents believe that it is necessary to take an antibody test before vaccination, and only 4.42% of students (8 respondents) consider it unnecessary. 32.6% of students (59 respondents) answer that an antibody test can be taken at will. 13.81% of students (25 respondents) note that testing is useful when in doubt if one was infected with the disease or not, 26.52% of students (48 respondents) would take it if medical professionals recommended, and 22.65% of students (41 respondents) believe one should definitely take an antibody test.

Most students - 85.64% (155 respondents) - are not afraid that the quantity of vaccines will be insufficient, only 13.81% of students (25 respondents) fear it to some extent, and only 0.55% of students (1 respondent) have strong fears.

1 in 4 students - 24.86% (45 respondents) - will recommend vaccination to their loved ones. Most of the surveyed students are either hesitating to get vaccinated - 38.12% (69 respondents), or not going to do it at all - 32.6% (59 respondents). 4.42% of students (8 respondents) will try to persuade them to change their opinions. The results indicate that the majority of students still do not have enough confidence in the ongoing coronavirus vaccination.

Nearly half of those surveyed - 44.75% (81 respondents) - are not tracking the progress in vaccination in other countries, 17.68% of students (32 respondents) are tracking it to some extent, 34.25% of students (62 respondents) are a little concerned about it, and only 3.31% of students (6 respondents) do it carefully.

Information received from scientists and medically trained physicians often form the students' opinions on the coronavirus disease - 65.19% (118 respondents), 1 in 8 students - 12.71% (23 respondents) - tend to trust mass media, friends or relatives are deemed credible information sources for 11.6% of students (21 respondents), and 6.08% students (11 respondents) are likely to trust information provided by social network services.

Majority of the students admit the possibility of getting infected with coronavirus disease and only 29.28% of the surveyed students (53 respondents) deny it. 34.25% of students (62 respondents) have a mild fear of catching Covid-19, 27.62% of students (50 respondents) have a medium fear of getting the disease, 6.08% of students (11 respondents) have intense fears and 2.76% of students (5 respondents) have very intense fears of getting infected.

More than half of the students, to one degree or another, take into account the information on vaccines provided by mass media. At the same time, the information given by mass media has no significant effect on 46.96% of students (85 respondents).

Majority of the studied students expressed fears of complications after vaccination. 5.52% of students (10 respondents) have very strong fears, 1 in 6 students - 15.47% (28 respondents) - have strong fears, 23.20% (42 respondents) have a medium level of fears, and 1 in 3 students experience mild fears. 1 in 4 students - 24.31% (44 respondents) - are sure that such fears are groundless. Majority of the students surveyed - 79.56% (144 respondents) - do not have any chronic diseases. At the same time, 1 in 3 students - 29.28% (53 respondents) - experience anxiety, 10.50% of students (19 respondents) are affected by depression. 6.63% of students (12 respondents) noted that they have psychotic episodes, 1.10% of students (2 respondents) have bipolar disorder. The data obtained show that the majority of students are not affected by chronic somatic or mental disorders, but only 1 in 4 students are not afraid of complications after vaccination.

Almost 1 in 2 students - 44.2% (80 respondents) - have very severe and intense fears of the chance of their relatives contracting coronavirus and dying, 1 in 5 students - 18.78% (34 respondents) - have severe and intense fears of it, 1 in 4 students - 22.65% (41 respondents) - are afraid of it to some extent, 1 in 9 students - 11.05% (20 respondents) - have mild fears, and 3.31% of students (6 respondents) are not afraid of it.

1 in 3 students - 33.7% (61 respondents) - do not experience anxiety about the possibility of catching coronavirus disease, 30.94% of students (56 respondents) rarely do it. 1 in 4 students - 22.65% (41 respondents) - sometimes experience anxiety about it, and 1 in 10 students - 10.50% (19 respondents) - feel it often. At the same time, the majority of students - 43.65% (79 respondents) - are not afraid to die from coronavirus, 1 in 3 students - 37.02% (67 respondents) - have a mild fear of it, 1 in 8 students - 12.15% (22 respondents) - experience intense fears, and 7.18% of students (13 respondents) have a very strong fear of getting infected with Covid-19.

The results obtained show that the ongoing global pandemic of coronavirus disease has not had a significant influence on the attitudes towards vaccination among the studied students. At the same time, the majority of students rely on the opinions of medical doctors and other professionals. The students consider the impact of the mass media on vaccination insignificant. It should be noted that the students have groundless fears of possible complications after vaccination, and they are worried that they or their loved ones might get infected with Covid-19 and die.

Such attitudes to coronavirus disease and vaccination may be reflected in the characteristics of disorders of health behavior among students. The results of the study of disorders of health behavior compared to the normative data are shown in Table 1.

Table 1. The results of the study of students using the Questionnaire of disorders of health behavior (Lutsenko, E. L., Gabelkova, O. E., 2013)

Scale	Students of the faculty of medicine N=181		Normative data N=253		Accuracy of differences	
	M	σ	M	σ	t	P
Nicotine cravings	11,4199	4,5559	15,2	7,9	5,7848	0,00001

Eating disorders	15,1989	3,7289	16,7	3,7	4,1538	0,00001
Disregard for safety	19,5083	4,5358	26,0	5,6	12,8652	0,00001
Craving for alcohol	12,9503	4,6371	17,0	5,7	7,8738	0,00001
Pursuit of fashion-conscious image	18,1050	2,8607	20,0	3,9	5,5543	0,00001
Low self-control	14,9558	2,8340	16,7	3,2	5,8688	0,00001
Emotional incompetence	12,5138	2,9732	13,1	2,8	2,0955	0,0367
Self-destructive behavior	4,5580	1,1800	5,5	2,2	5,2449	0,00001
General scale	109,2099	16,5146	130,1	20,4	11,3665	0,00001

Table 1 shows an accurate picture of differences on all scales of the health behavior disorder questionnaire. The students surveyed experience cravings for smoking ($p<0.00001$) and alcohol ($p<0.00001$) much less compared to the normative data. They more often have a healthy diet ($p<0.00001$) and significantly less engage in risky ($p<0.00001$) and self-destructive ($p<0.00001$) behaviors. Well-marked characteristics of safe behavior and an increased level of self-control ($p<0.00001$) may indicate intolerance to uncertainty when having increased level of anxiety and fear caused by the coronavirus pandemic. Low values on the "Pursuit of fashion-conscious image" scale ($p<0.00001$) show that perhaps due to the times of the pandemic, students care less about their appearance and image. This behavior may have a forced component associated with restrictions imposed due to the pandemic. Increased self-control and avoiding risky behaviors may explain increased anxiety and distrust in Covid-19 vaccines among the studied students.

The study of the peculiarities of health behavior disorders among students, depending on gender and compared to the normative indicators, is presented in tables 2 and 3.

Table 2. The results of the study of female students using the Questionnaire of disorders of health behavior

Scale	Students of the faculty of medicine N=130		Normative data N=128		Accuracy of differences	
	M	σ	M	σ	t	P
Nicotine cravings	10,7385	3,6590	15,3	7,8	6,0283	0,00001
Eating disorders	15,3462	3,7802	16,9	3,8	3,2925	0,0011
Disregard for safety	18,3769	3,9908	24,5	5,4	10,3687	0,00001
Craving for alcohol	12,6615	4,1755	17,0	5,8	6,9032	0,00001
Pursuit of fashion-conscious image	18,4077	2,8056	21,5	3,6	7,7023	0,00001
Low self-control	14,9231	2,5627	17,2	3,1	6,4342	0,00001
Emotional incompetence	12,9923	2,8270	13,4	2,6	1,2052	0,2293
Self-destructive behavior	4,3385	0,9027	4,9	1,4	3,8348	0,0002

General scale	107,7846	15,4503	130,7	19,8	10,3727	0,00001
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Table 2 shows that there are significant differences on almost all scales. This indicates that female students are less likely to experience cravings for alcohol ($p<0.00001$) and smoking ($p<0.00001$), have an eating disorder ($p<0.001$), take risks ($p<0.00001$), and display impulsivity ($p<0.00001$) and self-destructive behavior ($p<0.0002$). They follow the rules of safe behavior, supposedly for a sense of control of the current situation.

Table 3. The results of the study of male students using the Questionnaire of disorders of health behavior

Scale	Students of the faculty of medicine N=51		Normative data N=125		Accuracy of differences	
	M	σ	M	σ	t	P
Nicotine cravings	13,1569	5,9912	15,1	8,0	1,5638	0,1197
Eating disorders	14,8235	3,6039	16,4	3,7	2,5834	0,0106
Disregard for safety	22,3922	4,6003	27,5	5,5	5,8474	0,00001
Craving for alcohol	13,6863	5,6267	16,9	5,6	3,4491	0,0007
Pursuit of fashion-conscious image	17,3333	2,8821	18,3	3,5	1,7449	0,0828
Low self-control	15,0392	3,4581	16,2	3,1	2,1784	0,0307
Emotional incompetence	11,2941	3,0153	12,8	2,9	3,0894	0,0023
Self-destructive behavior	5,1176	1,5703	6,2	2,6	2,7711	0,0062
General scale	112,8431	18,6337	129,4	21,2	4,8619	0,00001

Unlike female students, male ones (Table 3) were found to have no significant differences compared to the normative results in smoking and pursuit of fashion-conscious image. This may be explained by different responses of girls and boys to an alarming situation due to the coronavirus disease. Boys may be trying to manage anxiety and stress with the help of smoking and by maintaining good physical health. Young men were found to choose more adaptive ways to cope with stressful situations ($p<0.0023$).

CONCLUSION

The results obtained indicate that the students have an insufficiently formed attitude to vaccination, which is complicated by anxiety and fear due to the pandemic of coronavirus disease. These features are reflected in characteristics of disorders of health behavior, which is characterized by the desire to reduce mental distress and take control of the situation by reducing the risky and impulsive behavior. The male and female disorders of health behavior have their own specific characteristics.

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