

Features of psychological well-being in social isolation conditions

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The aim of the research. The study aimed to identify the characteristics of the psychological well-being of student youth with different somatic health in the pre-pandemic and pandemic periods associated with COVID-19. Pandemic periods associated with COVID-19 have been seen as periods of social isolation.

Material and methods. The presented results of an empirical study were obtained on a sample of students of a Medical University. Study design: • group 1 - conditionally healthy (100 people); • group 2 - persons with a history of an acute or chronic disease that does not affect their ability to work (110 people); • group 3 - patients with chronic diseases with rare and short-term disability (101 people). The study was carried out in 2 stages: stage 1 - in the pre-pandemic period, stage 2 - in the pandemic period (lockdown, social isolation). The study involved 311 students at each stage of the study. The method was used «The scales of psychological well-being» (C. Riff). The study was carried out using a specially developed module of psychological diagnostics [https://krasgmu.ru/index.php?page\[common\]=psy](https://krasgmu.ru/index.php?page[common]=psy), which allows collecting data, automatic processing, and obtaining statistical data on a specific set of respondents.

Results. Significant differences on the scales «Autonomy» ($p=0,046$) and «Environment Management» ($p=0,015$) were found in the second group. This indicates insignificant shifts in the direction of worsening psychological well-being. Also, significant differences were found on all scales of psychological well-being in the third group. The scores on the «Autonomy» ($p=0,015$), «Environment Management» ($p=0,046$) and «Personal Growth» ($p=0,009$ & $p=0,003$) scales for the third group dropped sharply. This indicates a total decline in psychological well-being.

Conclusion. It is concluded that it is the respondents with chronic somatic diseases that experience the pandemic period more difficulty. General isolation mode significantly affected the psycho-emotional condition of students in the third group. The data obtained indicate the relevance of the development of special programs of psychological support during the period of the epidemiological regime (social isolation conditions, lockdown).

Key words: psychological well-being of the person, chronic somatic diseases, dispensary observation groups, pre-pandemic period, pandemic period, social isolation, COVID-19.

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Introduction

The problem of formation, preservation and strengthening of public health is one of the priorities of the state. Special attention is paid to the health of the younger generation, including students (Order of the Ministry of Health of the Russian Federation of December 3, 2012 №1006n «On approval of the procedure for conducting medical examinations of certain groups of the adult population», Order of the Ministry of Health of the Russian Federation dated September 30, 2015 №683n «On approval of the procedure for organizing and implementing the prevention of non-communicable diseases and carrying out measures to promote a healthy lifestyle in medical organizations») [1, 2]. According to a number of regulatory legal acts, special attention is paid to identifying factors that have a negative impact on health, and those that contribute to positive dynamics in the somatic status. Particularly relevant for medicine and psychology are the tasks of identifying risk factors that contribute to the development of psychosomatic and chronic non-communicable diseases. The framework set by the criteria of belonging to the groups of dispensary observation determines the goals, among which are early detection and correction of diseases, timely treatment, prevention of complications and slowing the rate of progression of these diseases [3]. For this purpose, the procedures for the medical examination of certain groups of the adult population have been published and updated.

Today, there is no methodologically consistent definition of health in general in the literature. The most

widespread holistic approach, which considers health as a cumulative result of the influence of all possible conditions and factors of the living environment [4]. Within the framework of this interpretation of health, the study of resources that contribute to maintaining high health indicators is relevant. Currently, in clinical and psychological studies, the patient's somatic status correlates with the parameters of psychological well-being, determining the possibilities of his quality of life [5, 6]. Thus, there is a fairly extensive list of studies of the psychological well-being of surgical, endocrinological (diabetes, hypopituitarism, hypo- or hyperthyroidism, etc.), psychiatric (depressive states, eating disorders, PTSD, etc.) profile [7, 8]. It is shown that some psychological features allow some patients to successfully adapt to new living conditions with a chronic disease. Others, against the background of a maladaptive attitude to the disease, develop psychopathological conditions that require psychological and drug therapy. The psychological characteristics of such patients are characterized primarily by a loss of subjectivity, a low degree of self-control and reflection about their illness, and the development of depressive tendencies [9, 3]. When assessing the health resources and well-being indicators of student youth, the most significant resource is the presence of a life goal, a prosocial orientation as a resource for maintaining subjective well-being also takes place, but to a lesser extent than a goal in life [10].

And during the pandemic, scientists actively discuss not only the problem of psychological well-being

of patients with a somatic non-infectious profile, but also students who are in self-isolation in the context of responsibility and value orientations [11], as well as in the relationship of personal responsibility and such a psychological phenomenon as psychological well-being [12]. The study of the psychological well-being of a person in conditions of forced self-isolation indicates an increase in stress and emotional load, since there is no understanding of the duration of isolation, possible consequences, there is no comprehensive information about the virus and ways to combat it. During the coronavirus pandemic, people of many professions are forced to carry out professional activities in unusual conditions, in particular, in remote mode, which may be a factor that reduces the level of psychological well-being of the individual [13].

Indeed, the pandemic brings a lot of uncertainty, which makes it difficult to meet even the basic needs of people [14]. Although a large number of people around the world demonstrate resistance to the profound losses, stress and fear associated with COVID-19, the virus is likely to exacerbate existing mental health disorders and contribute to the emergence of new stress-related disorders for many [15].

The purpose of the article is to identify the features of psychological well-being of students with different somatic health in the pre-pandemic and pandemic period associated with COVID-19. The hypothesis of the study was based on the assumption that the students of the second and third groups of dispensary observation with a low level of psychological well-being during the pandemic associated with COVID-19, psychological well-being will be lower than in the pre-pandemic period, and the students of the first group of dispensary observation psychological well-being will not change.

Material and methods

The study corresponded to the ethical standards of the Bioethical Committee of the V.F. Voino-Yasenetsky State Medical University of the Russian Ministry of Health, developed in accordance with the Helsinki Declaration of the World Association «Ethical Principles of Scientific Medical Research with Human Participation» as amended in 2000 and «Rules of Good Clinical Practice» approved by the Order of the Ministry of Health of the Russian Federation dated April 1, 2016. №200n. [16]. All persons participating in the study have received informed consent to participate in it.

The study was conducted on the basis of the University Clinic of Family Medicine of KrasSMU in the Department of General medical practice during the scheduled medical examination. The students who agreed to take part in the study signed an informed consent. The study involved 311 students of KrasSMU at each stage of the study. Accordingly, the total sample size was 622 people.

The study was carried out in 2 stages:

- The first stage is the period from September 2019 to January 2020 inclusive (pre-pandemic period);
- The second stage is the period from September 2020 to January 2021 (pandemic period).

Due to the fact that many researchers in the field of psychology correlate with the concept of «psychological well-being» a number of concepts similar in meaning, such as: «normal personality», «positive lifestyle», «high quality of life», «mental health», «emotional comfort», «internal picture of health», «mature personality», «self-actualizing personality», «fully functioning personality», etc. we considered it appropriate to use the methodology of the «Scale of psychological well-being» («The scales of psychological well-being») [17]. The study was conducted using a specially developed module of psychological diagnostics [https://krasgmu.ru/index.php?page\[common\]=psy](https://krasgmu.ru/index.php?page[common]=psy), which allows data collection, automatic processing, and obtaining statistical data for a certain set of respondents.

Statistical analysis of empirical data was carried out using the IBM SPSS Statistics v.19 statistical package.

Verification of quantitative data for compliance with the law of normal distribution was carried out using the Shapiro-Wilk test. Quantitative data are presented in the form of an average value and its standard deviation M (SD) in the case of a normal distribution of a trait or in the form of median, first and third quartiles – in the case of a distribution of a trait other than normal; qualitative data are presented in the form of absolute values (n) and/or frequencies (%).

Comparison of qualitative characteristics between the studied groups was carried out using the exact Fisher criterion, quantitative characteristics – the Mann-Whitney criterion due to the absence of a normal distribution of variables. $P < 0.05$ was taken as the critical value of the significance level.

Statistical analysis of the differences in the results of the study at the first and second stages was calculated on the basis of the McNemar criterion used to analyze related measurements in the event of a change in the reaction using a dichotomous variable. $P < 0.05$ was taken as the critical value of the significance level.

At the time of the implementation of the first stage of the study, students were enrolled in 2 and 3 courses, at the time of the second stage – 3 and 4 courses, respectively. At the time of the formation of this material, those students who, for various reasons, could not take part in the second stage (expulsion, illness, academic leave, etc.) were excluded from the sample.

In the process of analyzing medical documentation, the main sample was divided into groups depending on the presence and severity of the disease. The students were divided into groups for health reasons on the basis of Order №1006n of 03.12.2012 «On approval of the procedure for conducting medical examinations of certain groups of the adult population» [1]. In accordance with this order, we assigned representatives of the first group of dispensary observation to the healthy group, which includes persons who do not make any complaints, do not have a history of chronic diseases or disorders of the functions of individual organs and systems, whose medical examination did not find deviations from the established limits of the norm (100 respondents).

The second group included 110 respondents (persons with a history of acute or chronic disease that does not affect the functions of vital organs and does not affect the ability to work). The third group consisted of 101 respondents (patients with chronic diseases, with a compensated course of the disease, rare and short-term disability losses).

The criteria for inclusion in the study were age from 18 to 25; compliance of the diagnosis data with the generally accepted criteria for ICD-10; absence of exacerbations for the study period; absence of severe concomitant pathology in the anamnesis (mental illness, TBI, GM tumors, epilepsy); signing of informed consent.

The conclusion about the health status of the respondents was made based on the analysis of the outpatient patient's medical records (f.025/y) and the journal of dispensary observation. The diagnosis data corresponded to the generally accepted criteria for ICD-10. All respondents of the 2nd and 3rd groups of dispensary observation were in remission at the time of the examination.

Table 1 presents the nosological characteristics of respondents with somatic disease and belonging to the 2nd and 3rd groups of dispensary observation.

The data were obtained as a result of the analysis of medical documentation based on the results of a medical examination. On correlating the ICD-10 codes with the clinical diagnosis, it was found that the main part of the diseases refers to psychosomatic. Thus, 71.2% of respondents have respiratory diseases (J45.0 – bronchial asthma (23.7%), J41.0 – chronic bronchitis) and digestive diseases (K29.7 – unspecified gastritis (42.6%), K26.7 – duodenal ulcer 1%).

The distribution of students by gender in each group is shown in table 2.

The median age of the subjects at the first stage of the study was 19 (18;19) years. The data are presented in the form of median and interquartile range: Me [Q1; Q3]. There were no significant differences in the comparison groups by gender. There were no significant differences in the comparison groups by gender ($p=0.886$).

Table 1

Nosological characteristics of the subjects of the second and third groups

№n/n	Code ICD - 10	Q-ty	%
2nd group of dispensary observation (N=110)			
1	H52.1	50	45,5
2	H52.2	23	20,9
3	M95.9	18	16,4
4	I34.1	10	9,1
5	I34.0	9	8,1
3- I group of dispensary observation (N=101)			
1	E23.2	2	2,0
2	G40	1	1,0
3	H40.3	1	1,0
4	I47.9	1	1,0
5	I10	4	4,0
6	J30.1	1	1,0
7	J41.0	4	4,0
8	J45.0	24	23,7
9	J93.4	1	1,0
10	K86.1	2	2,0
11	L20.8	1	1,0
12	N11.29	1	1,0
13	N11.9	6	6,0
14	Q87.4	5	5,0
15	K26.7	1	1,0
16	K29.7	43	42,6
17	K81.1	3	3,0

Table 2

Distribution of respondents by gender in three groups

Gender	I group		II group		III group	
	abs.	%	abs.	%	abs.	%
male	28	28,0	29	26,4	22	21,8
female	72	72,0	81	73,6	79	78,2

At the second stage, the median age of the studied individuals was 20 (19;20) years. The data are presented in the form of median and interquartile range: Me [Q1; Q3]. There were also no significant differences in the comparison groups by gender. There were no significant differences in the comparison groups by gender ($p=0.886$).

Results and discussion

The analysis of the testing data using the «Psychological Well-being Scale» method allowed us to determine the degree of severity of the components of the psychological well-being of students belonging to the groups of dispensary observation (table 3).

At the first stage of the study, the following features of psychological well-being were identified in the first group of dispensary observation. According to the «Positive relationships with others» scale, 63% of the testees revealed high and average values, which indicates that this category of testees is characterized by having close, trusting relationships with others, they feel a desire to take care of other people, are able to find compromises in relationships, are capable of empathy. At the same time, 37% of respondents in this group have low values on this scale, which indicates that they lack a sufficient number of close trusting relationships, that they are closed and have difficulties in showing warmth and caring towards other people. They experience a state of their own isolation and frustration and are unwilling to compromise in order to maintain ties with others.

According to the «Autonomy» scale in this group, high and average values were obtained in 75% of the testees, which indicates their independence and ability to resist social pressure, they are able to regulate their own behavior and evaluate themselves, guided by their own beliefs and standards. 25% of respondents in the same group on this scale have low values, which indicate that when making an important decision they are focused on the opinions of others and are unable to resist external pressure, are concerned about the expectations and assessments of others.

High and average indicators on the «Environment Management» scale characteristic of 74% of respondents indicate that these testees are able to effectively use various life circumstances, are able to independently choose and create conditions to meet personal needs. And 26% of the subjects have low values on this scale. They feel a sense of powerlessness in managing the environment, they feel the impossibility of changing or improving their own living conditions.

The results obtained on the scale of «Personal growth» indicate a high and average level of psychological well-being in 72% of respondents. It follows from this that this category of students realizes their own potential by tracking personal growth and improving over time. 28% of the testees have no sense of personal progress, they experience boredom and disinterest in life and experience personal stagnation.

Table 3

Distribution of research results for subjects belonging to the first group of dispensary observation at the first and second stages of the study

Scales PW	Stage one			Stage two		
	Level	Number of testees		Level	Number of testees	
		aбс.	%		aбс.	%
Positive relationships with others	low	37	37	low	38	38
	average	53	53	average	54	54
	high	10	10	high	8	8
Autonomy	low	25	25	low	26	26
	average	57	57	average	58	58
	high	18	18	high	16	16
Environmental management	low	26	26	low	27	27
	average	57	57	average	58	58
	high	17	17	high	15	15
Personal growth	low	28	28	low	29	29
	average	61	61	average	62	62
	high	11	11	high	9	9
Having a life goal	low	19	19	low	20	20
	average	67	67	average	68	68
	high	14	14	high	12	12
Self-acceptance	low	24	24	low	25	25
	average	61	61	average	62	62
	high	15	15	high	13	13

According to the «Having a life goal» scale, 81% of students had high and average values. It follows from this that the presence of life goals and a sense of meaningfulness of life are inherent in a significant majority of students belonging to the 1st group of dispensary observation. And yet 19% of respondents have low values, which suggests that they are characterized by a feeling that the present and the past are meaningless, they lack goals, they lack life guidelines that can give meaning to life.

According to the «Self-acceptance» scale, 76% of respondents in the study group have high and average values. They recognize all the diversity of their personal characteristics and accept both the positive and negative sides of their own personality. And also 24% of the subjects in this group have low values on this scale, which indicates that this category of students is dissatisfied with themselves and desire to be different, they are disappointed in the past, concerned about some of their own personality traits.

At the second stage of the study, the psychological well-being in this group of respondents practically did not change.

Table 4 presents the results of a study of psychological well-being in representatives of the second group of dispensary observation.

The results of the first stage of the study of psychological well-being according to the scales in the second group of dispensary observation were approximately the same as

in the first group. Thus, according to the scale of «Positive relationships with others», there is a high and average level of psychological well-being, which the majority of respondents (66.4%) and 33.6% of the subjects in this group have low indicators. According to the «Autonomy» scale, 86.4% of the testees have a high and average level of psychological well-being and, accordingly, 13.6% of the testees are characterized by a low level. The data obtained on the «Environment Management» scale indicate that 74.5% of students have a high and average level of psychological well-being and 25.5% are subjects with low indicators. Also, according to the «Personal Growth» scale, 69.1% have high and medium values and, respectively, 30.9% have low values. According to the «Having a life goal» scale, 79.1% of the testees have normative values and 20.9% have low. According to the «Self-acceptance» scale, 78.2% of respondents have high and average values and 21.8% have low values.

At the second stage of the study, shifts in the indicators of «Autonomy» and «Environmental management» in the direction of decreasing indicators are detected in the second group of dispensary observation.

The data obtained during the study of the 3 groups of dispensary observation are presented in table 5.

At the first stage of the study for the third group, high and average indicators of psychological well-being on the scale of «Positive relationships with others» showed 58.4% of the testees and low - 41.6%. On the «Autonomy» scale,

Table 4

Distribution of research results for subjects belonging to the second group of dispensary observation at the first and second stages of the study

Scales PW	Level	Number of testees		Level	Number of testees	
		abs.	%		abs.	%
Positive relationships with others	low	37	33,6	low	39	35,5
	average	65	59,1	average	66	60,0
	high	8	7,3	high	5	4,5
Autonomy	low	15	13,6	low	17	15,5
	average	76	69,1	average	78	70,9
	high	19	17,3	high	15	13,6
Environmental management	low	28	25,5	low	31	28,2
	average	67	60,9	average	70	63,6
	high	15	13,6	high	9	8,2
Personal growth	low	34	30,9	low	34	30,9
	average	67	60,9	average	68	61,8
	high	9	8,2	high	8	7,3
Having a life goal	low	23	20,9	low	23	20,9
	average	67	60,9	average	70	63,6
	high	20	18,2	high	17	15,5
Self-acceptance	low	24	21,8	low	25	22,7
	average	70	63,6	average	71	64,6
	high	16	14,6	high	14	12,7

the average ones were 88.1% and the low ones were 11.9%. According to the «Environment Management» scale, normative – 80.2%, low – 19.8%. On the scale of «Personal growth» normative – 76.2% and low 23.8%. According to the «Having a life goal» scale, the normative values were 75.2% and 24.8% - low. According to the «Self-acceptance» scale, the normative ones are 63.4% and the low ones are 36.6%.

At the second stage of the study, a significant decrease in indicators on the scales of «Autonomy», «Environmental management» and «Having a life goal» was found in the third group of dispensary observation.

Special attention in our study is attracted by indicators of psychological well-being scales, which have low values. The low level of psychological well-being in these areas is due to the predominance of negative affect (a general sense of one's own unhappiness, dissatisfaction with one's own life).

An interesting fact is that at the first stage of the study there were no statistically significant differences between the groups of dispensary observation (the Karaskel–Wallis criterion, intergroup differences were considered statistically significant at $p < 0.05$), but at the same time there is a tendency to decrease psychological well-being from the first to the third group, since the low level of PW was in the first 25% in the group, 28.2% in the second, and 33.7% to a greater extent in the third group.

Also, the first stage of the study shows that, regardless of the presence of a somatic disease, some objectively (according to the results of a medical examination) healthy respondents have a low level of psychological well-being,

as well as some students with a history of chronic somatic disease have an average and high level of psychological well-being [18]. This fact somewhat contradicts the traditional notion that a person's state of health is considered as a factor determining his psychological well-being. Consequently, it is not so much the objective state of health that matters more, as the subjective assessment of health. The data obtained do not contradict the results of the analysis of the psychological well-being of doctors and medical personnel in the conditions of the COVID-19 pandemic, since the presented sample belongs to this professional group [19].

Statistical analysis of the differences in the results of the study of the first and second stages was calculated by us on the basis of the McNemar criterion used to analyze related measurements in the case of a change in the reaction using a dichotomous variable. The results of the statistical analysis are presented in table 6.

The data obtained allow us to state

1) the absence of significant differences in the representatives of the first group of dispensary observation, which suggests a connection between somatic health and the ability to maintain psychological well-being in difficult life situations (for example, in the conditions of the Covid-19 pandemic);

2) noticeable differences in a number of parameters among representatives of the second and third groups of dispensary observation, indicating that respondents with somatic diseases are more difficult to survive the pandemic period (confirmed by a decrease in the second stage in the number of respondents demonstrating a high level on

Table 5

Distribution of research results for subjects belonging to the third group of dispensary observation at the first and second stages of the study

Scales PW	Level	Number of testees		Level	Number of testees	
		abs.	%		abs.	%
Positive relationships with others	low	42	41,6	low	43	42,6
	average	54	53,5	average	55	54,5
	high	5	4,9	high	3	2,9
Autonomy	low	12	11,9	low	15	14,9
	average	68	67,3	average	71	70,3
	high	21	20,8	high	15	14,8
Environmental management	low	20	19,8	low	23	22,8
	average	63	62,4	average	67	66,3
	high	18	17,8	high	11	10,9
Personal growth	low	24	23,8	low	24	23,8
	average	62	61,4	average	65	64,4
	high	15	14,8	high	12	11,8
Having a life goal	low	25	24,8	low	27	26,7
	average	58	57,4	average	65	64,4
	high	18	17,8	high	9	8,9
Self-acceptance	low	37	36,6	low	37	36,6
	average	62	61,4	average	63	62,4
	high	2	2,0	high	1	1,0

**Results of the analysis of the differences between the pre-pandemic and pandemic periods
for related samples in the dispensary observation groups**

Scales PW	Level	I group	II group	III group
		p	p	p
Autonomy	low	0,318	0,158	0,084
	average	0,318	0,158	0,084
	high	0,158	0,046	0,015
Environmental management	low	0,318	0,084	0,084
	average	0,318	0,084	0,046
	high	0,158	0,015	0,009
Having a life goal	low	0,318	1,000	0,158
	average	0,318	0,084	0,009
	high	0,158	0,084	0,003

the scale of «Autonomy» and «Environmental Management» in both groups, as well as a decrease in the number of respondents of the third group of dispensary observation, belonging to the average level on the scale of «Environmental management» and the average and high level on the scale of «Having a life goal»).

3) the absence of significant differences on the scales of «Positive relationships with others», «Personal growth», «Self-acceptance» in all three groups, which indicates the stability of these indicators of psychological well-being in the pandemic period.

Previously, a comparative analysis of indicators of psychological well-being in groups of patients differing in the severity of the clinical picture of rheumatoid arthritis established a statistically significant difference only in the indicator of psychological well-being «Autonomy» [20].

Conclusion

People with a low level of psychological well-being and with a history of acute and chronic somatic diseases as a result of prolonged social distance and compliance with safety measures during the COVID-19 pandemic, psychological health is more likely to develop anxiety and depression, as well as other symptoms of distress. In this case, one of the risk factors for exacerbations of chronic somatic diseases and psychosomatic disorders may be a low level of psychological well-being of the individual [21]. In the conditions of ongoing anti-epidemic measures, it is necessary to provide psychological assistance to this category of persons.

The data obtained indicate the relevance of the development of special psychological support programs during the epidemiological regime.

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