Original Research

Subjective Assessments of the Pandemic Situation and Academic Adaptation of University Students

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Academic Editor: Vsevolod Konstantinov

Abstract

Students' academic adaptation during the pandemic is the key problem for the educational system. Even though certain success has been achieved in the organization of education with distance learning technologies and additional learning tools, there are still plenty of other difficulties that affect students' adaptation. *The purpose* of the study is to conduct a comparative analysis of academic adaptation's structure during and before the pandemic and to study the role of subjective assessments of the pandemic situation in university students' academic adaptation. Nine hundred nineteen university students took part in the study. M = 19.54; SD = 2.47 (17.5% male). The following *methods* were used within the framework of the study: the method for assessing academic adaptation components developed by the authors, the direct scaling method via a questionnaire used to analyze subjective assessments of the pandemic situation, social frustration [1] assessment method and a differential 1uestionnaire used to assess the experience of loneliness [2]. The study established certain differences in the level of manifestation for emotional, motivational, and psychophysiological components of students' academic adaptation before and during the pandemic. The hypotheses were tested regarding the role of subjective assessment of the pandemic situation, social frustration,

and experience of loneliness under academic adaptation-related changes. Structural modeling allowed testing of the hypothesis concerning the direction of relations between variables. The pandemic situation is an important factor in reducing psycho-emotional and motivational components of academic adaptation. Interpersonal relations among students are the most important predictors of their academic adaptation. Assessment of the pandemic situation (29% variation), social frustration (49%), and loneliness (22%) are significant predictors of academic adaptation. The presence of diseases and attitudes regarding health risks, and satisfaction with relations with other educational process participants largely determines students' academic adaptation during the pandemic. At the same time, the direct effect of academic adaptation and the indirect one through the positive perception of distance learning is a more positive perception of Covid-19consequences.

Keywords

Pandemic situation; academic adaptation; university student; subjective assessments

1. Introduction

During the Covid-19 pandemic, universities had to urgently transition to distance learning. Students had to study online and had limited access to additional resources their universities could offer. They were faced with an almost complete lack of offline contact with their professors and peers and were subject to forced academic autonomy and distractions (i.e., family members, roommates, etc.). Lockdowns had an immediate, prolonged effect, as they lasted for almost one year [3], which revealed several new psychological problems and challenges for university students, who have essentially become social orphans amid the development of a sense of loneliness due to the lack of 'real' and efficient communication with the social environment.

The primary challenges university students faced during the pandemic were IT-related problems and self-regulation problems [4]. Consequently, anxiety and uncertainty due to the unprecedented situation caused additional stress [5]. According to a survey by Biwer F. et al. [6], the transition to distance learning negatively affected academic adaptation scores in university students. Thus, students observed a decrease in the internal regulation scores, identified by Dresel M. et al. [7], including time management, motivation, regulation of attention, and perseverance, based on which students autonomously design individual educational conditions. The same survey identified 4 types of adaptation based on the analysis of internal resource management strategies, i.e., the discouraged; the defeatist; the constant; the adapter (two of the latter adapted most favorably to the new conditions). The survey found that resource management strategies, such as perseverance and time management, as well as motivation, were positively associated with academic adaptation [8], which determined the importance of taking them into account in the process of adapting to emergency academic situations, such as distance learning during the pandemic period.

The importance of the topic under study is conditioned by the necessity to develop an effective algorithm for academic actions in situations similar to the emergency transition to distance learning during the Covid-19 pandemic. Another necessary measure is the timely identification of academic adaptation problems and provision of psychological assistance to students during problem periods

of the educational process, be it a pandemic or military conflicts [9]. J. Crawford and J. Cifuentes-Faura note that the pandemic gave impetus to rethinking educational targets, emerging innovations, and restructuring the higher education institutions' system [10]. In addition, the impact of a social catastrophe such as Covid-19 may promote very often delayed discussions regarding higher education problems, which is the guarantor of stability in difficult times, regardless of the way of learning [11]. To help the traditional university model remain sustainable in the long run, the level of well-being and satisfaction of students must remain high [12, 13].

2. Subjective Assessments of the Pandemic Situation

Subjective response during a pandemic situation is the subject of numerous studies. There was increased stress, anxiety, and depression among representatives of various social groups, regardless of their residence [14]. The structure of pandemic-related anxiety involves two major aspects, i.e., fear of being infected and fear of negative consequences, particularly those related to the economic crisis [15]. Such anxiety is dysfunctional, it is associated with negative experiences only and reduces individual psychological well-being [16]. Fear of Covid-19 is higher in women than in men [17]; individual basic beliefs also affect the degree of Covid-19 fear manifestation [18]. The problems of isolation and loneliness, fear of infection, and uncertainty about the future were among the most disturbing for people [19]. Content analysis of fears during the pandemic allowed identifying the following groups: 1) global fears: the possibility of a crisis in the country and the world, wars, restrictions on freedoms, etc. (7.2% of respondents); 2) individual fears: disruption of personal and family plans, financial losses, emotional instability, etc. (11.6%); 3) social fears: fear of contacts, environment (2.1%); 4) existential fears: "not understanding something important," "not coping with uncertainty" (6.5%); 5) noncategorizable fears (72.6%) [20].

During the pandemic, students also reported high stress levels, generalized anxiety, and low level of life satisfaction [21]. About one-third of students demonstrated significant depressive symptoms (37%), suicidal thoughts (14.5%) [22], and various psychopathological symptoms (76.96%) [23]. Students expressed fear for their health and the health of their loved ones (91%), fears are caused by difficulty concentrating (89%), sleeping disorders (86%), reduced social interaction because of social distancing (86%), anxiety about academic performance (82%) [5]. Students' experiences were also associated with financial instability and unpredictability regarding the future, particularly their careers [24]. Interestingly, students enrolled in arts, humanities, and language programs responded more negatively to the Covid-19 situation [25]. In addition, factors that increase students' subjective experience of stress during a pandemic are as follows: living in an urban area, living with a family, having a sedentary lifestyle, and difficulties in implementing preventive measures [26]. Covid-19 fear is higher in female than in male students, as well as in those with a high risk of complications; fear scores also correlate with neuroticism ($r = 0.28$, $p < 0.05$) [17] and other personal traits (extroversion, complaisance, and conscientiousness) [27]. According to N.V. Murashchenkova [28], a manifestation of students' fear of Covid-19 depends on social axioms: fear is positively associated with the "destiny control" axiom and negatively associated with the "social complexity" axiom. Students living on and off campus mostly adhered to defensive behavior and had a positive attitude towards Covid-19 tests in university conditions; at the same time, they observed high anxiety levels, low mood, and guilt conditioned by the impact on others, and loneliness [29]. Short-term and long-term planning, communication with family, and helping other people contributed to the reduction of depressive

symptoms, feeling of loneliness, and greater satisfaction with life among students during the pandemic [30].

3. Students' Academic Adaptation during the Pandemic Situation

The multidimensional nature of academic adaptation, including cognitive, personal, motivational, emotional-evaluative, and communicative psychophysiological components [31], determines its determinism by the influence of several factors. Among them are basic psychological needs, educational motivation [32], anticipatory [33], and reflexive abilities of students, including the ability to analyze difficulties arising in educational activities and ways to overcome them [34] and others. Their impact may vary depending on other circumstances, for example, the level of general stress of the learning situation. So, in this students, demonstrated a high level of concern about the pandemic situation not only in connection with the spread of the infection but also in connection with their studies, which indicated academic adaptation difficulties [35]. They reported high uncertainty regarding their studies, significant stress, and associated difficulties. Females and students of color demonstrated more stress and uncertainty about their academic future compared to white students [36]. Academic-related fears of first-year students proved even more significant than family members' health and health [37]. A significant decrease in the scores of various adaptations to university components in first-year students was revealed during the pandemic, i.e., physiological adaptation ($p < 0.0001$), socio-psychological adaptation ($p < 0.05$), and academic adaptation ($p < 0.05$) [38]. Foreign students were also at particular risk in the COVID-19 situation. Three types of obstacles stood in the way of their academic adaptation: difficulties caused by COVID (risk of infection, restriction of access to university resources and premises); difficulties reinforced by COVID (anxiety, racism, and others); language and cultural barriers [39]. C. Yang et al. note that academic workload, isolation from an educational institution, and fear of becoming infected during the pandemic cause stress and negatively affect students' health [40]. When characterizing organizational factors of academic adaptation; it should be noted that distance learning has become widespread due to pandemic restrictions; at the same time, students assess it differently. According to S. Avijit and co-authors, the level of distress among students while studying using online technologies ranges from its absence (16.67%), mild (40%) to moderate (30.56%), and severe (12.78%) [41]. Students with a higher level of emotional stability demonstrated better attitudes toward online and hybrid classes [42]. Students' preference for online examinations is associated with academic specialization, efforts and time required for preparation, and correspondence of questions with educational material. However, the problem of academic dishonesty during the examination is acute [43]. Significant correlations were found between academic adaptation and quality of online classes, working space conditions, and communication with other students and teachers, as well as the emotional state of students [44]. At the same time, during distance learning, students missed academic rituals and traditions, communication with peers and professors, and often preferred traditional forms of education [45]. The decrease in the possibility of the educational process's external regulation under conditions of distance learning necessitated the actualization of students' subjective position. At the same time, the latter paid attention to the feeling of loneliness and isolation [46]. X. Zhang et al. [47] note that interpersonal relations significantly impact students' academic adaptation during the pandemic, as they enhance social support and resilience. H. Kim, S. OH, and M. Cho [48] state that depression during the pandemic does not directly affect academic

performance, but it can affect anger, which, in its turn, negatively affects students' academic adaptation. The experience of loneliness also has a significant impact on students' academic adaptation: it is most successful in students who reject loneliness, individuals with positive and pseudo-positive loneliness occupy an intermediate position. In contrast, students with neurotic loneliness are the least adapted ones [49].

Thus, contemporary studies actively discuss subjective assessment of the pandemic situation by various groups are widely discussed, and the crisis of the psychological functioning of the individual in its conditions is noted [50, 51]. Questions concerning various aspects of students' academic adaptation during the pandemic are also often raised. Thus, the risks of burnout among students of Russian and Azerbaijani universities and their connection with academic motivation during the spread of COVID-19 are analyzed [52], as trends in students' self-efficacy in distance learning [53], their preference for full-time, mixed or online learning format depending on the level of logical thinking, verbal intelligence, of course-scientific literacy [54], there is an increase in the educational and developmental activity of students during the period of self-isolation compared to normal life [55], etc. All these studies are undoubtedly of undoubted in understanding the impact of the pandemic situation on adaptation and its mechanisms. However, it does not allow for forming a systematic understanding of the relationship between subjective assessments of the pandemic situation and academic adaptation. At the same time, research implemented in the context under consideration can become very important for the organization and differentiation of psychological assistance to students in changing educational conditions. This determines the relevance of the study.

The purpose of the study is to conduct a comparative analysis of academic adaptation's structure during and before the pandemic and to study the role of subjective assessments of the pandemic situation in university students' academic adaptation.

H1. There has been a decrease in academic adaptation scores in university students during the pandemic.

H2. Assessing the impact of the Covid-19 situation on relations, health, and academic success plays a significant role in the academic adaptation of university students.

H3. Social frustration with relations and learning conditions negatively affects students' academic adaptation.

H4. Negative traits of experiencing loneliness reduce students' academic adaptation during the pandemic.

H5. Health conditions and subjective assessment of the pandemic situation determine variations in the academic adaptation of university students directly and indirectly through social frustration parameters. Academic adaptation conditions an optimistic attitude to overcoming the Covid-19 situation directly and through successful academic activities. A hypothetical model is presented in Figure 1.
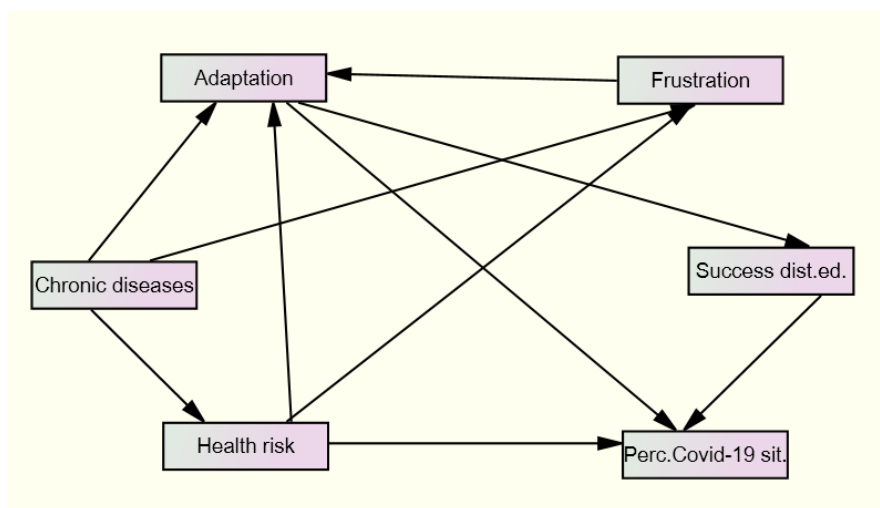
Figure 1 Hypothetical model of pathways of students' academic adaptation – social frustration – attitudes towards COVID-19-related changes.

4. Materials and Methods

4.1 Study Design

We selected a comparative design for the study, which was conducted as follows. First, we compared academic adaptation scores for students before and during the pandemic. Then, using regression analysis, we determined the role of individual assessment parameters concerning the pandemic situation, satisfaction/dissatisfaction with life (social frustration), and experiencing loneliness in students' academic adaptation during the pandemic.

4.2 Participants

1st – 4th year students of the Bachelor's degree program took part in the study. Sample data can be found in Table 1.

Table 1 Socio-demographic scores.

	During the pandemic (n = 500)		Before the pandemic (n = 419)		Total (n = 919)	
	%/Mean	SD	%/Mean	SD	%/Mean	SD
Age	**19.48**	**(2.16)**	**19.35**	**(1.56)**	**19.54**	**(2.47)**
Sex						
male	16.5%		18.4%		17.5%	
female	83.5%		81.6%		82.5%	
Residence						
Village	8.2%		13.6%		10.2%	
Town	31.8%		38.2		34.9	
City	50.0%		42.3		46.7%	
Metropolis	10.0%		5.7%		8.2%	
Chronic Disease	39.3%		34.8%		37.2%	

All participants provided their informed consent for inclusion before participating in the study. The experimental study was performed following the Ethical Standards (2000) and was approved by the local Research Ethics Committee of Saratov State University (Faculty of Psychological, Pedagogical, and Special Education). The sample was created in a simple randomized way. It includes students of different training profiles from different universities (in total, 99 profiles are being trained at the university). All students were transferred to distance learning during the pandemic, and after the restrictions were relaxed, they also remained in remote form from time to time due to quarantine measures.

4.3 Measurements

The following methods were used to conduct the study. The components of students' academic adaptation were evaluated using the students' academic adaptation scale [56]. The scale includes 44 items that characterize different aspects of adaptation. The respondent evaluated each item on the Likert scale (from 1 to 5 points). After completing the questionnaire, seven scales corresponding to the components of adaptation were obtained: personal, emotional-evaluative, cognitive, motivational, psychophysiological, communicative, and an additional scale for the integral assessment of academic adaptation. The scale demonstrated good psychometric indicators: Cronbach's $\alpha = 0.92$; checking the normality of the distribution of the integral score gave an acceptable result ($Z = 0.485$, $p = 0.97$). To analyze the subjective assessment of the pandemic situation, for example, its impact on health, fears, attitudes to vaccination, etc., we used scales developed by the authors of the scale. For example: "Try to assess the impact of the Covid-19 situation on your educational activities (1: extremely negative impact, 4: no impact, and 7: extremely positive impact)" [49].

During the pandemic, there was a restriction on students' social contacts. This contributed to the strengthening of their social frustration. Therefore, the study needed to analyze the relationship between academic adaptation and social frustration. Social frustration was measured by us using a modified technique by Wasserman et al. [1]. The modification involved adapting the questions in the questionnaire to the daily life of students. For example, "To what extent are you satisfied with your relationships with fellow students?", "To what extent are you satisfied with your relationship with teachers?" etc. To measure the level of satisfaction, we used a 5-point scale – from "completely satisfied" (1) to "completely dissatisfied" (5). The Cronbach alpha of the generalized scale was 0.91.

The restriction of social contact during the acute phase of COVID-19 also led to the feeling of loneliness for many students. In previous studies [57, 58], the connection between loneliness and social maladaptation was revealed. A differential questionnaire on the experience of loneliness [2] was used to assess the characteristics of loneliness. Three main scales were used: general loneliness ($\alpha = 0.91$), dependence on communication ($\alpha = 0.85$), and positive loneliness ($\alpha = 0.85$). A 4-point scale was used: disagree (1), mostly disagree, mostly agree, and agree (4). Alpha-Kronbach indicators in parentheses indicated an acceptable level of internal consistency.

4.4 Procedure

All data were collected during the first half of the academic year 2018-2019 and 2020-2022. The survey was conducted in two stages with the consent of the university administration. We used a randomized selection method. The student groups were selected randomly; the survey had not been

conducted before, which ensured the sample's representativeness. The data sources used in this study were accurate and reliable.

For the survey, we used Google Forms, links to which were sent to students. In the first stage, students filled out a questionnaire on academic adaptation (before the pandemic). In the second stage (during the pandemic), all the questionnaires of the current study were filled out.

We used Google Forms for the survey, and these forms were sent out to students.

4.5 Statistical Analysis

We used the IBM SPSS Statistics and PS IMAGO PRO statistical software package to process the primary data. First, the schools were tested for internal consistency using Cronbach's alpha coefficient. Then the data were checked for the normality of the distribution using the Kolmogorov-Smirnov criterion and the analysis of the indicators of asymmetry and kurtosis. All data showed a normal distribution. Then the socio-demographic data were analyzed using descriptive statistics (displayed as means, standard deviations, and percentages) and presented in clause 4.2.

Next, we conducted comparative analysis of students' academic adaptation scores before and during the pandemic. Finally, we conducted regression analysis (step-by-step method), where academic adaptation was introduced as a dependent variable. In contrast, parameters for assessing the pandemic situation, social frustration, and loneliness were introduced as independent variables. In conclusion, the hypothesis of direct and indirect effects of variables was tested using the quadratic equation modeling method (SEM).

5. Results

Table 2 shows three academic adaptation scores during the pandemic significantly decreased compared to pre-pandemic data. Moreover, the integral score also demonstrates a downward trend.

Table 2 Academic adaptation structure in university students before and after the pandemic.

	N = 500	SD	N = 419	SD	F	p	t	p
Personal	5.28	1.15	5.36	0.98	10.51	0.00	-1.20	0.23
Emotional	4.87	1.30	5.18	1.12	13.83	0.00	**-3.89**	**0.00**
Cognitive	5.42	1.00	5.40	0.91	2.72	0.10	0.41	0.68
Motivational	5.48	1.28	5.69	1.23	1.41	0.24	**-2.58**	**0.01**
Psychophysiological	3.99	1.19	4.30	1.14	0.47	0.49	**-3.89**	**0.00**
Communicative	5.51	1.01	5.43	0.91	5.30	0.02	1.14	0.25
Adaptation	30.56	5.12	31.36	4.41	9.40	0.00	**-2.56**	**0.01**

Emotional and psychophysiological components of students' academic adaptation are significantly reduced (t = -3.89, p = 0.00 in both cases) (see Table 2). The motivational component of academic adaptation was also reduced after the pandemic (t = -2.58, p = 0.01). The integral academic adaptation score during the pandemic also decreased significantly (t = -2.56, p = 0.01). The remaining components of academic adaptation, i.e., personal, cognitive, and communicative, did not undergo significant changes during the pandemic (see Table 2).

Table 3 shows that pandemic-related experiences and thoughts are significant determinants of students' academic adaptation. This involves transitioning from the usual organization of academic activities at a university to a distance learning format (β = 0.12) and other factors. The most significant positive predictor is the absence of health deterioration risk shortly (β = 0.37). Positive predictors are changes in the current health status for the better compared to the recent past (β = 0.18) positive influence of the Covid-19 situation on plans (β = 0.14). Negative predictors are the negative impact of the Covid-19 situation on academic work (β = -0.14), worrying about vaccination (β = -0.10), and the negative impact of the Covid-19 situation on relations with people around (β = -0.10).

Table 3 Pandemic situation assessment parameters as predictors of students' academic adaptation.

Pandemic situation assessment parameters	β	t	Value
No risk of health deterioration in the near future	0.37	8.16	0.00
Change in current health status for the better compared to the recent past	0.18	3.88	0.00
Worrying about Covid-19 vaccination	-0.10	-2.65	0.01
Negative influence of Covid-19 situation on academic work	-0.14	-3.05	0.00
Positive influence of online learning on academic work	0.12	2.93	0.00
Low likelihood of Covid-19 situation's negative impact on future plans	0.14	3.16	0.00
Negative impact of Covid-19 situation on relations with people around	-0.10	-2.05	0.04

$R^2 = 0.29$; F = 28.72; $p < 0.001$

Table 4 shows that social frustration lowers all academic adaptation scores except one. Thus, negative predictors are a decrease in satisfaction with one's education (β = -0.21), relations with instructors (β = -0.19), social/national situation (β = -0.15), relations with fellow students (β = -0.12), academic conditions (β = -0.10), lifestyle in general (β = -0.13), the content of academic work as a whole (β = -0.12). A positive predictor of students' academic adaptation is a lack of satisfaction with services (β = -0.09).

Table 4 Social frustration scores as predictors of students' academic adaptation.

Social frustration/satisfaction with	β	t	p
One's education	-0.21	-4.35	0.00
Relations with instructors (professors)	-0.19	-4.10	0.00
Social (national) situation	-0.15	-3.82	0.00
Relations with fellow students	-0.12	-2.93	0.00
Academic conditions	-0.10	-2.28	0.02
One's lifestyle as a whole	-0.13	-3.23	0.00
Content of academic work as a whole	-0.12	-2.40	0.02
Services	0.09	2.24	0.03

$R^2 = 0.49$ F = 58.05 $p < 0.001$

Positive predictor of students' academic adaptation is experiencing the problem of loneliness (β = 0.19), while negative predictors are alienation (β = -0.41) and dysphoria (β = -0.11) (see Table 5).

Table 5 Loneliness scores as predictors of students' academic adaptation.

Loneliness	β	t	Value
Alienation	-0.41	-9.43	0.00
Problematic loneliness	0.19	3.83	0.00
Dysphoria	-0.11	-2.12	0.04

$R^2 = 0.22$ F = 42.19 p < 0.001

The hypothesis regarding mediation and direction of links from chronic diseases, health risk assessment, and social frustration to academic adaptation and from the latter to perception of COVID-19 consequences was tested using the structural modeling method (see Figure 2). The consent indices below indicate the accuracy of the model's compliance with the original data; all estimated parameters are statistically significant at the p < 0.01 level. From the model above, we can see that presence of chronic diseases, social frustration at university, and perception of increased health risks explain up to 60% of the dispersion of students' academic adaptation. Academic adaptation, together with attitudes that distance learning affects educational activities' success explains up to 12% of attitudes regarding COVID-19's impact on various aspects of life. In addition, in this model, the perception of health risks acts as a mediator of the direct causal relationship between chronic diseases and academic adaptation and a moderator of the direct causal relationship between chronic diseases and social frustration; the assessment of distance learning acts as a mediator of the causal relationship of academic adaptation and the relationship with COVID-19.
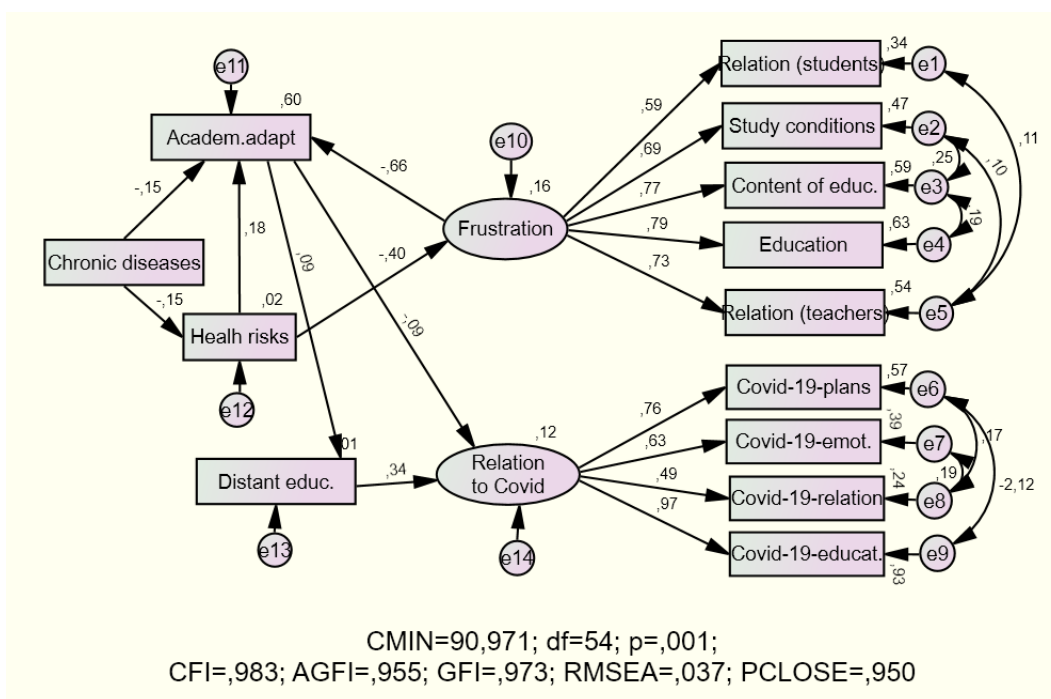

CMIN=90,971; df=54; p=,001;
CFI=,983; AGFI=,955; GFI=,973; RMSEA=,037; PCLOSE=,950

Figure 2 Model of pathways of students' academic adaptation – social frustration – attitudes towards COVID-19-related changes.

6. Discussion

As a result of the study, all the hypotheses were confirmed. Therefore, it is advisable to discuss the results by the order of results obtained. Based on comparative analysis, it was possible to establish significant differences in academic adaptation parameters. The study results demonstrate higher rates of academic adaptation of students before the pandemic. The decrease in the emotional component of academic adaptation (see Table 2) is associated with the increase in anxiety in a situation of uncertainty concerning specific causes and consequences of the disease, worries about the deterioration of one's health, and health of one's close people, and saving one's life. The decrease in the psychophysiological component is conditioned by the fact that there are changes in life stereotypes and their usual course in addition to physical health deterioration. Students had to rethink their habitual skills of organizing life and activities and change some of them, which required significant energy. A decrease in the motivational component of academic adaptation indicates a shift in emphasis from the academic process and results in more relevant processes related to physical health and its protection. These data are consistent with the results of studies that have established significant changes in subjective well-being and discomfort and a decrease in students' motivation due to the onset of the pandemic [59, 60].

The relative stability in the level of manifestations of personal, cognitive, and communicative components of student's academic adaptation during the pandemic (see Table 2) indicates their role in adaptation, regardless of situational factors. It is also possible that these components of students' adaptation are more resultant and complex than the emotional, psychophysiological, and motivational components. The latter, in turn, perform resource functions to a greater extent and are depleted faster during stressful periods, to such an extent that their decrease causes a decrease in the overall academic adaptation score.

As follows from regression analysis results (Table 3), 29% of the variations in students' academic adaptation during the pandemic are explained by the parameters of subjective assessment of the pandemic situation. The absence of health deterioration risk in the near future and health improvement compared to the recent past positively affect students' academic adaptation. This is obviously conditioned by the fact that many students have been ill with Covid-19 and, hoping for acquired immunity, feel calmer, their anxiety is reduced, and their emotional background and physical well-being are leveling off positively. The pandemic situation has a positive impact on plans. Students may adjust their plans, which become more variable and, therefore, increase the adaptive capabilities of young people.

The pandemic situation also has a negative effect on academic adaptation. Previously, it was found that students' expectations associated with a possible disease can affect their mental state [59, 61, 62]. Students are aware of the academic results' deterioration. At the same time, there is an improvement in academic performance during distance learning, which may be conditioned by the greater possibility of using additional information resources during distance learning compared to traditional learning, especially in terms of academic assessment. At the same time, students observed a decrease in learning quality. These data are consistent with the previously obtained results regarding the attitude of students and schoolchildren to distance learning during the pandemic [63].

Relations with people around during the pandemic are not changing for the better, which affects academic adaptation negatively. Communication among students in reality, which is not burdened

by the problems of the pandemic period, is more conducive to overcoming academic difficulties. Anxiety about vaccination reduces students' academic adaptation, as it is associated with the experience of uncertainty about the vaccination consequences and decision-making in a new life-threatening situation [64].

Social frustration parameters explain about 49% of students' academic adaptation variations. It is obvious that dissatisfaction with one's education, relations with instructors, social/national situation, relations with fellow students, academic conditions, one's lifestyle in general, and the content of academic work negatively impact academic adaptation. Such a massive negative impact of several factors does not contribute to academic adaptation, as it reduces the body's internal resources, promotes a reassessment of values, and reorientation from mastering a profession to maintaining health and providing for life. Since the social-academic component plays the most significant role in academic adaptation [38], this situation does not seem surprising. In addition, during the pandemic, life satisfaction decreases [21].

Loneliness plays a significant role in students' academic adaptation. We found that 22% of the variations for this variable are conditioned by loneliness parameters (see Table 5). The experience of alienation reduces students' academic adaptation, which shows the social nature of academic adaptation: the adaptation processes of university students are inseparable from collective phenomena, as many social processes are involved in them: support for others in the process of overcoming difficulties, perception of classmates' behavior patterns, orientation towards study group norms, etc. Alienation deprives students of these external adaptation resources; adaptation during the pandemic and relative social isolation becomes more of an individual process, and students do not have an opportunity to fully correlate their experiences and orientations with social opinions. Therefore, the experience of loneliness also serves as a negative factor in academic adaptation during the pandemic [49].

Study results show that dysphoria during the pandemic also reduces students' academic adaptation. Low mood, often accompanied by melancholy, irritability, anger, and other negative effects, negatively impacts academic adaptation's integral score, possibly due to the reorientation of a person's internal resources from activity problems to internal problems associated with life safety, which is consistent with the results of studies establishing a connection between loneliness and a decrease in adaptive potential [65, 66].

Students' awareness of the problem of loneliness is a positive predictor of their academic adaptation, which may be related to the possibility of deep reflection, building new trajectories of personal and professional development, and finding new ways out of the state of loneliness.

The CEM model demonstrates that a high degree of academic adaptation is a significant factor in the attitude towards both Covid-19 positively as an opportunity to develop motivation, relationships, etc., and distance learning as a positive opportunity to increase educational performance. Meanwhile, other studies also confirmed these data, which established an inverse relationship between academic adaptation and academic motivation and success [6]. At the same time, social frustration is negatively associated with academic adaptation. The model shows that during the pandemic era, an important adaptation factor is the presence of chronic diseases of various etiologies. This parameter is a direct predictor of adaptation, which is also related to it through the assessment of risks of poor health and social frustration, which act as mediators, reinforcing the causal relationship. In other words, students' academic adaptation during the pandemic is largely determined by the presence of diseases and attitudes regarding health risks and satisfaction with

relations with educational process participants. At the same time, the direct effect of academic adaptation and the mediated effect through a positive perception of distance learning is a more positive perception of Covid-19 consequences (mediator) at the level of educational work, plans for the future, relations with others, and emotional states.

Thus, our research has allowed us to obtain new data on the impact of chronic diseases and health risk assessments during the pandemic and the social frustration of students on their academic adaptation and its effects on the subjective assessment of the effectiveness of distance learning and the pandemic situation itself. This knowledge fits into the general context of recent research, according to which fear of COVID-19 is a leading factor in changes in mental states [67], Perception of health risks in new living conditions [68], the effects of adaptation on the perception of distance learning and its assessment [63], finally, the change in the attitude to COVID-19 itself in connection with adaptation processes [69].

7. Conclusion

The results of this study indicate that the global pandemic situation has significantly influenced students and their ability to adapt to the educational system. Academic adaptation, as an integral characteristic of adaptation processes at the level of personal regulation of behavior, cognitive and emotional spheres, psychophysiological sensations, motivation, and connection with others, has also undergone changes. The study has established that during the pandemic, academic adaptation scores decreased compared to the pre-pandemic level. The emotional, motivational, and psychophysiological components of academic adaptation turned out to be the most sensitive ones to situational changes: these indicators have decreased compared to the pre-pandemic level.

Chronic diseases and health risks assessment and social frustration/satisfaction are significant factors in students' academic adaptation. Satisfaction/dissatisfaction with relations with others, education, and its attributes largely explain positive/negative changes in students' academic adaptation. At the same time, subjective assessment of the pandemic situation fears associated with the pandemic, and at the same time, optimism associated with beliefs in its insurmountability is largely explained by positive/negative changes in students' academic adaptation.

The perception of health risks acts as a mediator of the direct causal relationship between chronic diseases and academic adaptation and a moderator of the direct causal relationship between chronic diseases and social frustration; the assessment of distance learning acts as a mediator of the causal relationship of academic adaptation and the relationship with COVID-19.

Finally, parameters of loneliness are also associated with academic adaptation. The most important factor in reducing academic adaptation, as follows from the study results, is the social factor, namely, dissatisfaction with relations with classmates and teachers and the loneliness experienced by students.

Study limitations. The limitations of this study are related to the lack of some measurements before the pandemic. Therefore, the main predictors were established only in half of the cases. In addition, there is a disproportion in the male and female segments of the sample due to the natural gender disproportion in university students.

Author Contributions

Conceptualization, S.R. and G.M.; methodology, S.R. and G.M.; software, S.A.; validation, S.R., G.M., G.E., B.A., and S.A.; formal analysis, S.R. and G.M.; investigation, S.R. and G.E..; data curation, S.R., G.M.; writing—original draft preparation, S.R., G.E. and G.M.; writing—review and editing, S.R., B.A. and G.E.; visualization, supervision, project administration, and funding acquisition, S.R. All authors have read and agreed to the published version of the manuscript.

Funding

Competing Interests

The authors declare no conflict of interest.

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