

Emotions and mood swings of Pharmacy students in the context of a the COVID-19 pandemic

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Conflicts of Interest Statement: The authors report no conflicts of interest.

Financial Disclosure statement: São Paulo Research Foundation (FAPESP) grants #2019/18163-0 and #2020/08239-6 and this study was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil (CAPES) - Finance Code 001.

Acknowledgments: We thank Beatriz Buda Fuller for her assistance in data collection. This study was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil (CAPES) - Finance Code 001. We also thank the São Paulo Research Foundation (FAPESP) (grant #2019/18163-0 and #2020/08239-6).

Ethical Aspects: This study was approved by the National Research Ethics Commission of the Ministry of Health of Brazil - CONEP, CAAE 30604220.4.0000.0008.

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Abstract

Introduction: The COVID-19 pandemic has changed the university routine. These changes affected the mental health of the students. The aims of this study were to carry out a survey on aspects related to mental health of students of pharmaceutical course considering the previous and current context of the new coronavirus disease pandemic.

Methods: The Depression, Anxiety and Stress Scale (DASS-21), Impact of Event Scale - Revised (IES-R), and Brunel Mood Scale (BRUMS) were used. DASS-21 was completed before and during the pandemic. The validity and reliability of the data were verified. The prevalence (95%CI) of mental health symptoms was estimated. The relationship between the time spent watching/reading the news and the mean scores of the scales was evaluated (Pearson's correlation coefficient – r).

Results: the prevalence of depression symptoms (mild, moderate, severe and extremely severe) in students before the pandemic was 66.7% [95%CI=65.3-68.1] and during the pandemic it was 81.0% [95%CI=79.8-82.2]. More than 70% [95%CI=69.8-72.6%] of participants had some psychological impact as result of the pandemic (mild: 16.7% [95%CI=15.6-17.8]; moderate: 9.1% [95%CI=8.2-10.0]; severe: 45.4% [95%CI=43.9-46.9]). High values of tension, depressed mood, mental confusion, and anger were observed. There was a significant correlation between the time spend following the news of the pandemic and symptoms of anxiety ($r=0.356$; $p < 0.001$), stress ($r=0.248$, $p=0.014$), hyperarousal ($r=0.322$; $p=0.00$), and intrusion ($r=0.210$; $p=0.039$).

Conclusions: Students are highly vulnerable to depressive symptoms and mood swings due to the pandemic. These findings deserve consideration mainly from mental health professionals, but also from managers and educators.

Keywords: Anxiety; Depression; Psychological stress; Mood; Pandemic.

Conflicts of Interest Statement: The authors report no conflicts of interest.

Disclosures: This study was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil (CAPES) - Finance Code 001 and by São Paulo Research Foundation (FAPESP) grants #2019/18163-0 and #2020/08239-6. This study was approved by the National Research Ethics Commission of the Ministry of Health of Brazil - CONEP, CAAE 30604220.4.0000.0008.

Introduction

On March 11 2020, the World Health Organization (WHO) characterized the new coronavirus (Sars-Cov-2) disease, COVID-19, as a pandemic. At the end that month, as the number of people infected with coronavirus in Brazil was rapidly growing, a mandatory quarantine was declared in the country for all except essential services. Schools and universities were closed and their activities were suspended to minimize the speed of the virus' spread. Since then, most students have returned to their family's home and most have had their routines completely changed, especially those whose university activities were their main occupation. Without precise knowledge the full dimension of the pandemic, administration and teaching staff began to perform their activities remotely, in parallel to discussing strategies for the safe return to normal academic activities. Thus, debates are held related to pedagogical content, use of online teaching tools, remote learning assessment techniques, internet access logistics, and teaching materials to be used. A similar discussion occurred in 2009 during the H1N1 epidemic,^{1,2} and alternative teaching techniques were proposed and tested in the most affected countries such as Australia and China. In Brazil, the pandemic is an unprecedented situation that has imposed many challenges, mainly with regard to individual and collective adaptation to this new scenario.

In addition to finding strategies to resume academic activities, the vulnerability and unpredictability inherent to the pandemic and how those can affect the mental health of the people involved should also be considered. The imposed isolation and quarantine, despite the indisputable benefits for reducing the infection rate, can be profoundly felt³⁻⁶ by young adults, placing them at risk for the development of psychological symptoms.^{2,7,8} The impact on mental health in pandemics is generally more severe on the most vulnerable populations, such as the elderly, those with chronic physical and psychological weaknesses,⁹⁻¹¹ and health professionals at the front line of patient care.¹²⁻¹⁴ Few studies were aimed at the population of university students⁷ and, therefore, there is an important gap to be filled. Such studies will provide subsidies for managers and educators for the proper management of academic activities and for the support of students in order to maintain not only the teaching quality but also the well-being of this population.

Some symptoms are commonly associated with a pandemic context, such as depression, anxiety, stress, and mood swings.^{5,10,13-17} In a recent study, in Chinese individuals, Gao et al.¹⁸ reported a prevalence of 48.3% (95%CI=46.9-49.7) of depressive symptoms and 22.6% (95%CI=21.4-23.8) of

anxiety, and a significant relationship between these symptoms and the time spent with pandemic news in the media. Wang et al.¹⁹ reported a prevalence of 16.5% of moderate to severe depressive symptoms, 28.8% of anxiety, and 53.8% of moderate to severe psychological impact related to the pandemic in a Chinese sample. Studies on university students are scarce: Cao et al.⁷ reported that 24.9% of students showed symptoms of anxiety during the COVID-19 pandemic, and attributed this finding to social isolation and decreased interpersonal communication. Specifically in students, we believe that the identification of these symptoms could be relevant for the development of more assertive teaching and learning strategies. Van et al.² highlight that teaching institutions must seek a balance between academic continuity, infection control, and minimization of morbidity, both physical and mental.

In addition to the general symptoms of depression, anxiety, and stress that are commonly found in the academic life, in the context of a pandemic the psychological impact directly related to the event (peri and post-traumatic stress) should also be considered. Weiss and Marmar²⁰ proposed an instrument composed of 22 items distributed in three subscales: avoidance, intrusion, and hyperarousal. Avoidance relates to the effort of withdrawing from any stimulus that may bring memories related to the event, which can result in emotional distance and decreased social interaction, loss of interest in activities previously considered important, and increased isolation. Intrusion refers to symptoms of constantly reliving the event through invasive memories that are generally unpleasant and distressing. Hyperarousal is the exaggerated response to thoughts of the event and can be perceived through symptoms such as insomnia, irritability, difficulty concentrating, and hyperstimulation.²⁰

Mood swings are also reported in conditions of social isolation and highly stressful events.^{3,15} Rohlfs et al.²¹ proposed the Brunel Mood Scale (BRUMS), adapted from the Profile of Mood States,²² containing items of mood indicators related to anger, mental confusion, depressed mood, fatigue, tension, and vigor.

Due to the impact that the cited symptoms may have on students' academic activities and accomplishments, this study aimed to evaluate aspects related to the mental health of undergraduate students in a Pharmacy course considering the context before and during the COVID-19 pandemic.

Material and methods

Study design and Sample

This was a cross-sectional study carried out in two phases. The first phase originated from another study protocol developed before the confirmation of the first case of COVID-19 in the world. One of the aims of this study was to estimate students' symptoms of depression, anxiety and stress. All students (N = 530) enrolled in the undergraduate course of the School of Pharmaceutical Sciences of a public university in Brazil (São Paulo State University) were invited to participate in this phase. Data were collected in the second semester of 2019 (August to November) and a total of 294 students participated in this phase (response rate in the first phase = 55,5%). The second phase of the study was designed after the WHO characterized Sars-CoV-2 as a pandemic. In this phase, in addition to estimating the symptoms of depression, anxiety and stress, we also aimed to assess peri-traumatic stress and mood swings during the pandemic. Those who participated in the first phase (n=294) received the invitation to participate in the second phase of the study. Data were collected from May 18 to June 25, 2020.

Data were collected about sex, age, period and year of the course, average monthly family income, number of people living in the same house as the student, and time spent with the news about the pandemic or obtaining information about the new coronavirus, social isolation, and mental health (Table 1). Symptoms of depression, anxiety, stress, peri-traumatic stress (during the pandemic), and mood swings were evaluated using the Depression, Anxiety and Stress Scale (DASS-21),^{23,24} the Impact of Event Scale - Revised (IES-R),^{20,25} and the Brunel Mood Scale (BRUMS),²¹ described below.

Measuring Instruments

The symptoms of depression, anxiety, and stress were assessed with the Portuguese version of DASS-21.^{23,24} The scale has 21 items divided into three factors with is a 4-point Likert-type response scale ranging from 0 to 3 (0: did not apply to me at all, 1: some of the time, 2: a good part of time, 3: most of the time). The scores were calculated by adding the answers of the items of each subscale and the participants were classified using the cutoff points proposed by Lovibond & Lovibond²⁶ (Depression: Normal - 0 to 9, Mild - 10 to 13, Moderate - 14 to 20, Severe - 21 to 27, and Extremely severe ≥ 28 ; Anxiety: Normal - 0 to 7, Mild - 8 to 9, Moderate - 10 to 14, Severe - 15 to 19, and Extremely severe ≥ 20 ; Stress: Normal - 0 to 14, Mild - 15 to 18, Moderate - 19 to 25, Severe - 26 to 33, and Extremely severe ≥ 34).

Symptoms related to peri-traumatic stress from the pandemic were identified using the Portuguese version of the IES-R.²⁵ The tool contains 22 items distributed in 3 factors (avoidance, intrusion, and

hyperarousal) rated in a 5-point Likert type scale ranging from 0 to 4 (0 - not at all, 1 - slightly, 2 - moderately, 3 – quite a bit, and 4 - extremely). The general score (calculated by the sum of responses) of the IES-R was used following the recommendation of Wang et al.¹⁹ to categorize individuals with levels of impairment as Normal (0 to 23), Mild (24 to 32), Moderate (33 to 36), and Severe (≥ 37). Then, the corresponding percentiles of the cutoff points were used for each subscale separately (Avoidance and Intrusion: Normal (0 to 8), Light - (9 to 11), Moderate (12 to 13), Severe - ≥ 14); Hyperarousal: Normal (0 to 6), Light (7 to 8), Moderate (9 to 10), Severe - (≥ 11)).

The BRUMS was developed to allow a quick screening of the mood state and was adapted to Portuguese by Rohlf's et al.²¹ BRUMS has 24 simple mood indicators with responses in a 5-point Likert scale on how much a certain mood is experienced (0: not at all, 1: a little, 2: moderately, 3: quite a bit, and 4: extremely). The scale has 6 subscales (anger, confusion, depression, fatigue, tension, and vigor) with four items each. The cutoff points for mood swings due to a stressful event are based on previously established percentiles in a reference population.²⁷ Values below the 50th percentile (P50) for Vigor and above P50 for the other subscales require attention.

Procedures and Ethical Aspects

Only students who agreed and signed the written Informed Consent participated in the study. In data collection from the first phase of the study, students individually filled out a demographic questionnaire and the DASS-21 on paper version. Data collection during the pandemic (second phase of study) was carried out online using Google Forms. The students received the survey link via the institutional email containing the demographic questionnaire, an exploratory questionnaire to evaluate aspects related to the pandemic context, DASS-21, IER-S, and BRUMS (peri-traumatic stress and mood swings related to the pandemic).

This study was approved by the National Research Ethics Commission of the Ministry of Health of Brazil - CONEP.

Data Validity and Reliability

The validity and reliability of the DASS-21, IES-R, and BRUMS data were estimated using a confirmatory strategy and robust estimation method by weighted least squares means and variance adjusted (WLSMV) and the ratio of chi-square to degrees of freedom (χ^2/df), Comparative Fit Index

(CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and ordinal alpha coefficient (α) indices.^{28,29} The MPLUS 7.2 (Muthén and Muthén, Los Angeles, CA) and R (R Core Team, 2016, “lavaan” and “semTools” packages) programs were used to carry out the analyses.

The data were considered valid and reliable (DASS-21: $\chi^2/df=1.49$, CFI=0.972, TLI=0.968, RMSEA=0.069, $\alpha=0.882-0.932$; IES-R: $\chi^2/df=1.56$, CFI = 0.953, TLI=0.947, RMSEA=0.074, $\alpha=0.856-0.916$; BRUMS: $\chi^2/df=1.45$, CFI=0.977, TLI=0.973, RMSEA=0.066, $\alpha=0.721-0.927$).

Data analysis

The prevalence and 95%CI of the investigated outcomes were calculated. The mood swings were estimated in percentiles from the reference population. The relationship between the time spent with the news of the pandemic and the average scores of the factors of the instruments was estimated using Pearson's Correlation Coefficient (r). For decision making, a significance level of 5% was used.

To estimate the probability of having psychological symptoms according to sex, economic level (low, high), sense of safety in relation to the pandemic (safe, unsafe), health problems (absent, present), and frequency of socialization (lower than usual, the same or higher than usual), a multiple logistic regression model was performed with calculation of the odds ratio (OR) per point and 95% confidence interval.

Results

Sixty-six students participated in the second phase of the study (response rate: 22,4%; 75.8% women; mean age: 21.7 (SD 3.0) years). Of the respondents, 80.3% were enrolled full time, 28.8% were in the 2nd year of the course, 22.7% in the 3rd year, 13.6% in the 4th year, 28.8% in the 5th year, and 6.1% the 6th year, and 19.7% were working concurrently with their studies. The average monthly family income of 4.5% of students was up to R\$ 1,254.00, 13.6% from R\$ 1,255.00 to R\$ 2,004, 63.7% from R\$ 2,005 to R\$ 8,640, 9.1% from R\$ 8,641 to R\$ 11,261 and 9.1% above R\$ 11,262 (US\$1.00=R\$5.36, quotation of 07/01/2020 of the Central Bank of Brazil).

The mean number of people living in the same home was 3.7 (SD=1.0; minimum=1 median=4, maximum=6) and the mean time spent per day listening, watching, or reading the news about the pandemic was 131.1 minutes (SD=146.8 min; minimum=0, median=90 min, maximum=18 hours).

Table 1 presents the descriptive statistics related to the answers given to the sample characteristics' questions.

Most students believed that the coronavirus is dangerous and that social isolation was important. A high proportion of students felt unsafe in relation to the pandemic and approximately half of the participants reported knowing someone who tested positive for the new coronavirus. In addition, most students reported that the pandemic had an impact on their mental health, and the most frequent symptoms were anxiety, anguish, insomnia, and fear.

Figure 1 shows the prevalence (point estimate and 95% confidence interval) of depression, anxiety and stress symptoms among students before and during the pandemic. For this analysis, the mild, moderate, severe and extremely severe levels were considered as the presence of these symptoms. It is observed that there was a significantly increase in prevalence of depressive symptoms during the pandemic. The prevalence of anxiety symptoms decreased while the prevalence of general stress was unchanged between before and during the pandemic.

More than 70% [95%CI=69.8-72.6] of the students had some psychological impact due to the pandemic, with 16.7% [95%CI=15.6-17.8] having a mild impact, 9.1% [95%CI=8.2-10.0] moderate, and 45.4% [95%CI=43.9-46.9] severe, a finding that deserve attention.

Table 2 shows the prevalence of depression, anxiety, and stress symptoms, and avoidance, intrusion and hyperarousal behaviors according to the level of impact during the pandemic.

The high prevalence of moderate and severe symptoms of depression, anxiety and stress among students stood out. In addition, a high prevalence of avoidance, intrusion, and hyperarousal behaviors was found, which can complicate daily activities.

High levels of tension, depressed mood, mental confusion, and anger were found. The percentile of mood components assessed in students is shown in Figure 2.

A positive and significant correlation was found between the time spent following news of the pandemic and the symptoms of anxiety ($r=0.356$; $p<0.001$), stress ($r=0.248$, $p=0.014$), hyperarousal ($r=0.322$; $p=0.001$), and intrusion ($r=0.210$; $p = 0.039$). The chance of a student presenting different psychological symptoms according to sex, economic level (low, high), sense of security in the pandemic (safe, unsafe), health problems (absent, present), and frequency of socialization (lower than usual, equal / higher than usual) is shown in Table 3.

The sense of unsafety in the pandemic significantly increased the student's chance of presenting depression and anxiety symptoms, and intrusive and hyperarousal behaviors. Having a health problem increased the likelihood of anxiety. Given the decrease in socialization, there is a greater chance of avoidance behavior.

Discussion

This survey highlights important psychological impacts of the covid-19 pandemic on the mental health of undergraduate Pharmacy students, indicating the need for careful and strategic planning to carry out academic activities, since students are clearly in a vulnerable condition.

Thus, for resuming and maintaining academic activities, whether face-to-face or online, strategies for welcoming and monitoring students should be planned, preferably with the support of mental health professionals. The increased prevalence of depressive symptoms can suggest states of hopelessness, anhedonia, inertia, and loss of interest and involvement,^{26,30} which can also be confirmed by the high prevalence of avoidance behavior. The loss of interest in activities previously considered important will certainly lead to difficulty not only in attending classes, but also in assigning meaning to them, resulting in the low absorption of the activity or distress.

Another aspect observed was the decrease in the prevalence of anxiety symptoms and maintenance of the prevalence of stress symptoms in the sample. These results can be explained by the temporal orientation related to psychological symptoms.^{31,32} In this theory, stress symptoms are related to stimuli of the present moment, anxiety to future threatening events, while depression symptoms are related to past loss events. Data from the second phase were collected at the beginning of the pandemic. Thus, it can be speculated that the students did not present psychic strategies for thinking and feeling oriented towards a future that until that moment had been diffuse and unpredictable. Regarding stress, the students had a high prevalence of stress symptoms related to the difficulties imposed in their academic routine before the pandemic. At the beginning of the pandemic, students' daily lives were interrupted, in which previous stressors disappeared and opened up space for new stressors. However, as the pandemic was a new situation, new stressors only overlapped previous stressors at that immediate moment, maintaining the prevalence of these symptoms. Still, according to this theory, in times of crisis and in high impact events (such as a pandemic), previous experiences are

potentialized in the face of the losses inherent to the transformations that have occurred. This increases the chances of triggering depressive symptoms, which corroborates the data found in the present study.

Furthermore, the relationship between stress and anxiety symptoms and the impact of intrusion and hyperarousal behaviors must be carefully examined. The time of exposure to news related to the pandemic may have contributed to an increase in intrusive thoughts and hyperarousal, which was also observed by Gao et al.¹⁸ For these authors, in addition to the uncertainties related to the pandemic itself, there is a large amount of false or manipulated information, which can generate unfounded fear and confuse people.

In addition to the health crisis caused by the pandemic, Brazilians are also experiencing a profound economic, social, and political crisis in the country that has permeated the news and has increased the feeling of unsafe and fear of the population. The effects of economic, social, and political crises on the population's mental health during a pandemic have been reported in previous studies.^{5,7,17,33,34} This whole context creates an environment of vulnerability and unpredictability that affects especially those who do not have enough skills to deal with the conflicts that this scenario imposes. States of hyperarousal (or hyperstimulation) can increase fear and anxiety and in many cases result in post-traumatic stress.⁵ In university students, the uncertainty about the future of their careers, economical restraints for their studies, the insecurity that accompanies the change in pedagogical strategies, the interruption of interpersonal relationships, and the change in the conditions for studying (for example: physical facilities, access to the Internet) can further aggravate the psychological impact of the pandemic and the future decisions of these young adults.

Participants reported feeling unsafe, and a high prevalence of symptoms such as anxiety, anguish, insomnia, and fear was found, which corroborates with previous studies.^{11,19} The feeling of unsafe significantly increases the likelihood of depression and anxiety symptoms, intrusive thoughts, and hyperarousal. Thus, ensuring that the correct information about the pandemic and prevention methods is provided to the students could increase their sense of safety. Such results could be accomplished, for example, through lectures, courses, and production of informative materials, which can be easily implemented within a Pharmaceutical Sciences school. In addition, it is suggested the inclusion of courses or activities aimed at mental health care for coping with the pandemic, concomitantly with the regular program of the school.

Another important aspect is the impact that decreased socialization, imposed by the quarantine, has on avoidance behavior.^{6,16} Administrators and professors must be aware of this fact during academic activities, since social interactions are being carried out differently from before the pandemic. Students not only have to adapt to new formats of classes and evaluation but also the reestablishment of bonds,³ and the time required to achieve those depends on each individual and can be especially difficult among first-year students.

Severe mood swings were also reported by students, which may be a consequence of social isolation or of the entire context of the pandemic.¹⁵ Students were predominantly tense, angry, mentally confused, and with depressed mood, which can make the accomplishment of academic activities a great challenge. These data highlight the need for careful planning of activities by professors so that students can endure a quality and significant learning process. Because of the psychological impacts of the pandemic on students, there is a risk of non-attendance and high rates of student dropout. Professors should also be prepared to deal with sensitive issues and situations that may arise during class.

Among the limitations of this study, a low rate response of students was attained. This could be a reflection of the data presented here, revealing depressive symptoms and avoidance behavior. Therefore, it is suggested that future studies consider these symptoms and behaviors to find different strategies in order to increase student adherence and engagement. Despite this limitation, this study can help educators and researchers facing the unprecedented context of a coronavirus pandemic. In addition, the evidence was found to be valid and reliable, and provides new information in Pharmaceutical Sciences education.

Hopefully, this study may provide subsidies and foundation for educators, administrators, and the academic community during and after the covid-19 pandemic to adopt measures to welcome and maintain or recover mental health of students so that the educational process can be fully accomplished. We also hope to provide a background for further investigations on the relation of pandemic-related mental health symptoms and individual characteristics of the students.

Conclusion

During the covid-19 pandemic, Pharmacy students were highly vulnerable to the development of depressive symptoms, peri-traumatic stress, and mood swings. These conditions deserve attention

mainly from mental health professionals, but also from administrators and educators. Regardless of the methodology to be used for resuming or maintaining academic activities, this community needs a welcoming and careful approach.

Acknowledgments

We thank Beatriz Buda Fuller for her assistance in data collection. This study was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil (CAPES) - Finance Code 001. We also thank the São Paulo Research Foundation (FAPESP) (grant #2019/18163-0 and #2020/08239-6).

Figures Legend

Figure 1. Prevalence (point estimates and 95% Confidence Interval – CI_{95%}(p)) of depression, anxiety and stress symptoms (mild, moderate, severe and extremely severe) among students (n = 66) before and during the pandemic.

Figure 2. Average percentile of the scores of mood components obtained from the students (n = 66; Dashed line: 75th percentile; Continuous line: 50th percentile).

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Tables and Figure

Table 1. Answers given by Pharmacy students to questions related to the COVID-19 pandemic.

Table 2. Prevalence and 95% confidence interval (95%CI) of symptoms of depression, anxiety and stress, and avoidance, intrusion and hyperarousal behaviors according to the level of impact in students during the pandemic.

Table 3. Odds ratio (OR) and 95% confidence interval (95%CI) for psychological symptoms according to characteristics of interest.

Figure 1. Prevalence (point estimates and 95% Confidence Interval – CI_{95%}(p)) of depression, anxiety and stress symptoms (mild, moderate, severe and extremely severe) among students (n = 66) before and during the pandemic.

Figure 2. Average percentile of the scores of mood components obtained from the students (n = 66; Dashed line: 75th percentile; Continuous line: 50th percentile).

Table 1. Answers given by Pharmacy students to questions related to the COVID-19 pandemic.

Item	n(%)
Do you think the new coronavirus is dangerous?	
No	2(3.0)
Yes	64(97.0)
Do you think social isolation is important right now?	
No	1(1.5)
Yes	65(98.5)
Do you have any health insurance?	
No	3(4.5)
SUS/UPA (public health care)	20(30.3)
Private health insurance	43(65.2)
Private doctor	-
Do you have any health problems?	
No	47(71.2)
Yes	19(28.8)
Are you in social isolation?	
No	5(7.6)
Yes	61(92.4)
During social isolation, what is the predominant type of socialization that you have?	
Face-to-face	7(10.6)
Remote / Virtual / Distance	59(89.4)
The frequency of socialization is:	
Much less than usual	33(50.0)
Less than usual	18(27.3)
Same as usual	10(15.1)
Higher than usual	5(7.6)
How do you feel in the current pandemic scenario?	
Very unsafe	18(27.3)
Unsafe	34(51.5)
Safe	12(18.2)
Very safe	2(3.0)
Do you know someone who tested positive for COVID-19?	
No	36(54.5)
Yes	30(45.5)
During this pandemic period, did you experience any of these symptoms?	
Anxiety (yes / no)	61(92.4)/5(7.6)
Anguish (yes / no)	51(77.3)/15(22.7)
Shortness of breath (yes / no)	19(28.8)/47(71.2)
Fear (yes / no)	39(59.1)/27(40.9)
Panic (yes / no)	16(24.2)/50(75.8)
Tachycardia (racing heart) (yes / no)	19(28.8)/47(71.2)
Insomnia (yes / no)	44(66.7)/22(33.3)
I had no symptoms	2(3.0)
During the pandemic, did you notice any changes regarding your mental health?	
No	11(16.7)
Yes	55(83.3)

Table 2. Prevalence and 95% confidence interval (95%CI) of symptoms of depression, anxiety and stress, and avoidance, intrusion and hyperarousal behaviors according to the level of impact in students during the pandemic.

Instrument	Factor	Level of impact p[IC95%]			
		Normal	Mild	Moderate	Severe Extremely severe
DASS-21	Depression	21.2 [19.9-22.5]	9.1 [8.2-10.0]	19.7 [18.5-20.9]	50.0 [48.5-51.5]
	Anxiety	47.0 [45.5-48.5]	6.0 [5.4-6.8]	19.7 [18.5-20.9]	27.3 [25.9-28.6]
	Stress	33.3 [31.9-34.7]	19.7 [18.5-20.9]	18.2 [17.0-19.4]	28.8 [27.4-30.2]
IES-R	Avoidance	19.7 [18.5-20.9]	18.2 [17.0-19.4]	13.6 [12.5-14.7]	48.5 [47.0-50.0]
	Intrusion	36.4 [14.9-37.9]	15.1 [14.1-16.3]	10.6 [9.7-11.5]	37.9 [36.4-39.4]
	Hyperarousal	33.3 [31.9-34.7]	16.7 [15.6-17.8]	13.6 [12.5-14.7]	36.4 [34.9-37.9]

Table 3. Odds ratio (OR) and 95% confidence interval (95%CI) for psychological symptoms according to characteristics of interest.

Characteristics	Symptom OR[95%CI]					
	Depression	Anxiety	Stress	Avoidance	Intrusion	Hyperarousal
Sex	0.80	1.12	0.75	1.23	0.49	0.44
Female / male ^a	[0.15-4.22]	[0.31-4.13]	[0.18-3.10]	[0.26-5.67]	[0.11-2.24]	[0.10-1.94]
Health problem	2.10	5.71	2.03	1.14	2.00	4.66
Absent ^a / present	[0.33-13.36]	[1.41-23.13]*	[0.45-9.05]	[0.18-7.10]	[0.48-8.45]	[0.86-25.29]
Socialization	1.65	0.70	3.86	6.33	1.73	2.08
Less than usual / same or higher ^a	[0.33-8.31]	[0.17-2.92]	[0.96-15.47]	[1.34-29.88]*	[0.41-7.32]	[0.53-8.21]
Feeling towards pandemic	8.65	5.38	3.79	0.90	10.76	4.81
Unsafe / safe ^a	[1.93-38.8]**	[1.13-25.68]*	[0.93-15.45]	[0.17-4.81]	[2.20-52.68]**	[1.11-20.76]*
Economic level	4.01	2.70	1.02	0.71	1.10	1.01
Low / High ^a	[0.37-43.37]	[0.62-11.78]	[0.23-4.55]	[0.14-3.62]	[0.25-4.87]	[0.23-4.38]

^aReference category. *p<0.05; **p<0.001



