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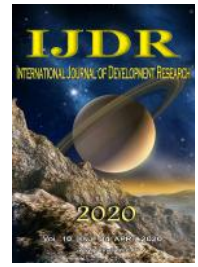
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RESEARCH ARTICLE

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## PSYCHOLOGICAL IMPACT OF THE BACK TO PRESENTIAL CLASSES IN THE COVID-19 PANDEMIC AMONG UNIVERSITIES: A CROSS-SECTIONAL OBSERVATIONAL STUDY

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### ABSTRACT

**Introduction:** In the context of pandemics, in November 2019, an outbreak of respiratory disease by the new coronavirus (SARS-CoV-2) was detected in the city of Wuhan, China, the coronavirus pandemic (COVID-19) caused an unprecedented crisis in the area of education, causing the massive closure of face-to-face activities of educational institutions in more than 190 countries, academics, who are experiencing a conflict between face-to-face study and fear of contamination, anxiety and remote study, the learning method, creating difficulties of concentration and loneliness. **Objective:** This cross-sectional observational study aimed to assess the psychological impact of back to school in the COVID-19 pandemic among university students, as well as to assess how academic knowledge influences the student's perspective of the pandemic, in addition to analyzing the emotional factors involved. **Methods:** The present study followed a cross-sectional observational-epidemiological model, following the STROBE rules. The methodology used consisted of a Google Forms questionnaire distributed to academics from different courses and universities in the State of São Paulo, consisting of a free and informed consent term and six (6) questions. A common descriptive statistical analysis was performed with mean and standard deviation values. The analyzes followed the Chi-square test (X<sup>2</sup>), with  $p < 0.05$  with statistical significance of association, with a 95% confidence interval (CI). **Results:** According to the results of this cross-sectional observational-epidemiological study, a total of 200 responses from university students were obtained, of which 39 responses were discarded for reasons of repetition and lack of data. Thus, the final total of validated responses was 161. The medical course had the highest participation of students, totaling 46.6% of the responses of the total of 161 students, followed by psychology students with 16.8%. There was a significant difference between the answers to each question, with  $p > 0.001$ . The frequency of personal hygiene habits among university students reflected the psychological changes of fear and anxiety. **Conclusion:** There was a marked presence of psychological changes such as fear and anxiety among university students. It is necessary to provide timely and targeted psychological treatment services and preventive measures in future pandemic situations.

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## INTRODUCTION

In the context of pandemics, in November 2019, an outbreak of respiratory disease by the new coronavirus (SARS-CoV-2) was detected in the city of Wuhan, China [World Health Organization,

across the world causing respiratory illnesses and deaths mainly in

groups at risk [World Health Organization, 2020]. Thus, the World Health Organization (WHO) declared, on January 30, 2020, that the disease outbreak caused by COVID-19 is a Public Health Emergency of International Importance. On March 11, 2020, COVID-19 was characterized by WHO as a pandemic [World Health Organization,

2020]. In this scenario, the coronavirus disease pandemic (COVID-19) caused an unprecedented crisis in the area of education, causing the massive closure of classroom activities by educational institutions in more than 190 countries [World Health Organization, 2020; World Health Organization, 2020]. According to data from the United Nations Educational, Scientific and Cultural Organization (UNESCO), by mid-May 2020, more than 1.2 billion students at all levels of education worldwide have stopped taking face-to-face classes. Of these, more than 160 million were students in Latin America and the Caribbean [Agência Nacional, 2020]. In Brazil, in February, the first patient was registered and measures of social isolation were adopted to contain the spread of the disease [Agência Nacional, 2020]. With social isolation and the number of deaths reported by the media, there was an increase in the emotional vulnerability of a good part of the population. Especially academics, who are experiencing a conflict between face-to-face study and fear of contamination, anxiety, and remote study, the learning method, generating difficulties in concentration and loneliness [Moreno *et al.*, 2018]. In this sense, the continuous spread of the epidemic, strict isolation measures, and delays in starting schools, colleges, and universities across the country can influence the mental health of university students [Chen *et al.*, 2008; Li *et al.*, 2020]. In this context, effective methods are needed to guide students to regulate their emotions during public health emergencies and to avoid losses caused by crisis events in colleges and universities. It is essential and mandatory that the scientific community and health professionals evaluate and analyze the psychological impact caused by the coronavirus pandemic on university students, in order to provide a basis for the promulgation of international and governmental policies [Shah, 2020]. However, no detailed study of the mental health status of university students facing the epidemic has been carried out to date. Therefore, this cross-sectional observational study aimed to assess the psychological impact of back to school in the COVID-19 pandemic among university students, as well as to assess how academic knowledge influences the student's perspective of the pandemic, in addition to analyzing the emotional factors involved.

## METHODS

**Study Design:** The present study followed a cross-sectional observational-epidemiological model, following the rules STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) [Elm, 2007].

**Electronic Questionnaire and Participants:** The methodology used consisted of a Google Forms questionnaire distributed to academics from different courses and universities in the State of São Paulo, consisting of a free and informed consent term, and six (6) questions defined as the name of the participant, a course that attends, if he has already been infected with the virus, if he has morbidities that can aggravate this situation, a scale of how the participant feels about going back to school, how he would react to a colleague who manifested symptoms at his side, and about his hygiene habits, including how often you wash your hands, use gel alcohol and change your masks.

**Statistical analysis:** The statistical analysis of the data was performed by an external collaborating professional and interpreted by the researcher. For data analysis, a database was built on the Microsoft Excel spreadsheet which was exported to the Minitab 18® statistical program (version 18, Minitab, LLC, State College, Pennsylvania, USA). A common descriptive statistical analysis was performed with mean and standard deviation values and the Anderson-Darling Normality Test (AD) for all variables, adopting  $p > 0.10$  as normal. The analyzes followed the Chi-square test ( $X^2$ ), with  $p < 0.05$  with statistical significance of association, with a 95% confidence interval (CI).

## RESULTS

According to the results of this cross-sectional observational-epidemiological study, a total of 200 responses from university students were obtained, of which 39 responses were discarded for reasons of repetition and lack of data. Thus, the final total of validated responses was 161. The numerical and percentage findings found about the number of responses obtained to each course are shown in Table 1. The medical course had the highest participation of students, totaling 46.6% of the responses from a total of 161 students, followed by students of psychology with 16.8%. Table 2 presents the results of questions 1 to 5 in numerical and percentage values, showing that there was a significant difference between the answers to each question, with  $p > 0.001$ . Figure 1 graphically represents the results of question number 6, showing the frequency of personal hygiene habits among university students.

**Table 1. Relationship to the number (N) of responses obtained to each course**

Course	N / Percentage (%)
Medicine	75/46.6
Psychology	27/16.8
Right	13/8.1
Nursing	15/9.3
biomedicine	06/3.7
Business management	04/2.5
Veterinary Medicine	05/3.1
Chemistry	01/0.6
Dentistry	01/0.6
Social Sciences	01/0.6
Nutrition	01/0.6
Physiotherapy	01/0.6
Engineering	04/2.5
Physics	02/1.2
Analysis and systems development	01/0.6
Architecture and urbanism	02/1.2
International relations	01/0.6
Administration	01/0.6

## DISCUSSION

The results of the present study revealed that fear, anxiety, and insecurity were marked among university students evaluated to the return to face-to-face classes in the COVID-19 pandemic, as well as showing that university students in medicine, psychology, law, and nursing contributed to the largest number of responses, this fact can be justified by the better academic knowledge on the subject by the students. In this context, a series of other studies carried out in the world confirms the findings of the present study. Thus, the epidemic brought not only the risk of death from infection but also a very strong psychological pressure. A study of university students at Changzhi medical school applied a questionnaire that included the 7-item Generalized Anxiety Disorder Scale (GAD-7). 7,143 responses were received. The results indicated that 0.9% of respondents were experiencing severe anxiety, 2.7% moderate anxiety, and 21.3% mild anxiety. Also, living in urban areas, stable family income, and living with parents were protective factors against anxiety. Also, having relatives or acquaintances infected with COVID-19 was a risk factor for increasing anxiety among college students.

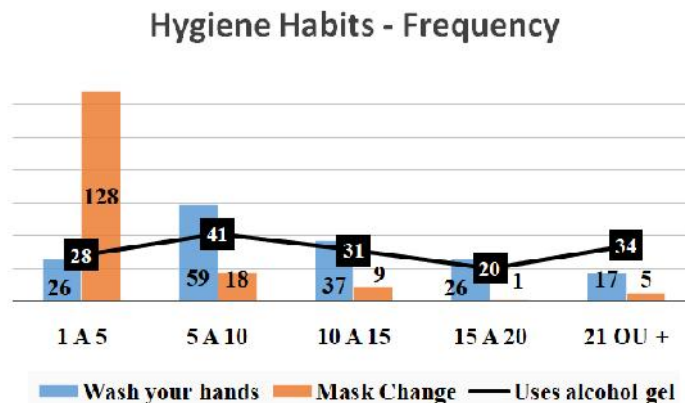
The results of the correlation analysis indicated that economic effects and effects on daily life, as well as delays in academic activities, were positively associated with anxiety symptoms ( $p < 0.001$ ). However, social support was negatively correlated with the level of anxiety ( $p < 0.001$ ). Therefore, it is suggested that the mental health of university students be monitored during epidemics [Cao, 2020]. Another cross-sectional observational study looked at the psychological impact of COVID-19 on the university community during the first few weeks of confinement. The Depression Anxiety Stress Scale (DASS-21) was used to assess symptoms of depression, anxiety, and stress. The emotional impact of the situation was analyzed using the Event Impact Scale. An online survey was carried out by 2530 members at the University of Valladolid in Spain. Moderate to extremely severe scores for anxiety, depression, and stress were reported by 21.34%,

34.19%, and 28.14% of respondents, respectively. A total of 50.43% of respondents had a moderate to severe impact on the outbreak.

psychological help to test the phased decision-making model (PDM). The survey was conducted among university students in Guangdong province using an online platform.

**Table 2. Results of questions 1 to 5 in numerical and percentage values, with  $p < 0.05$  with statistical significance of association, with a 95% confidence interval (CI)**

<b>1) Do you and / or someone in your household have comorbidities that can worsen the condition of SARS-CoV-2 infection (COVID-19)?</b>	
Yes	121/75.1%
No	40/24.8%
p-value>0.001	
<b>2) Have you or anyone in your family become infected with SARS-CoV-2 (COVID-19)?</b>	
Yes	73/45.3%
No	88/54.7%
p-value>0.001	
<b>3) On a scale of 1 to 5, being 1-insecure and 5-safe, how do you feel about the back to school proposed by the government?</b>	
1	51/3.7%
2	38/23.6%
3	40/24.8%
4	21/13.0%
5	11/6.8%
p-value>0.001	
<b>4) How do you feel about going back to face-to-face classes?</b>	
Fear	85/52.8%
Anxious	79/49.1%
Panic	18/11.2%
Depressed	13/8.1%
Helddown	40/24.8%
Indifferent	18/11.2%
Relieved	14/8.7%
p-value>0.001	
<b>5) Hypothetically, if a classmate next to you manifested flu-like symptoms during class, you would feel</b>	
Worried	145/90.1%
Indifferent	14/8.7%
Quiet	02/1.2%
p-value>0.001	



**Figure 1. Graph showing the frequency of personal hygiene habits among university students to the question: 6) because of the covid-19 pandemic, how are your hygiene habits being? Answer how many times a day you wash your hands, change your mask, and use alcohol gel**

Students from Arts and Humanities and Social Sciences and Law had higher scores related to anxiety, depression, stress, and the impact of the event on Engineering and Architecture students [Odrizola-González, 2020]. Also, a descriptive study investigated the impact of quarantine on the mental well-being and learning behaviors of medical students. A questionnaire with a Five Point Likert Scale was used to collect the information. The questionnaire was distributed to 625 medical students through their e-mails with a response rate of 530 (84.8%), the majority being 294 (55.47%) female. The survey questionnaire consisted of a total of 20 items; 12 items were related to psychological well-being and questions combined with stress and 08 items were about learning behaviors. A combined cohort of 234 medical students, whether female or male, (44.1% of the total respondents) showed a feeling of being emotionally distant from family, friends, and colleagues, 125/530 (23.5%) students of medicine felt discouraged. Female and male medical students showed a marked drop in their overall job performance. Also, 56.2% of the total students (61.5% of women and 49.5% of men) experienced a decrease in study time [Meo, 2020]. Finally, another cross-sectional observational study analyzed the relationship between the mental health status of university students and the behavior of seeking

In total, 4,164 students were assigned to the "counseling group" or "non-counseling group", according to whether they had sought psychological help because of the COVID-19 outbreak. Fear, depression, and trauma were assessed using the COVID-19 Fear Screening Scale, Patient Health Questionnaire, and Impact of Event Scale-6. Scores for fear, depression, and trauma were significantly higher in the counseling group than in the non-counseling group ( $p < 0.001$ ). Fear (OR = 1.27,  $p < 0.001$ ), depression (OR = 1.02,  $p = 0.032$ ), trauma (OR = 1.08,  $p < 0.001$ ), low perceived mental health status (OR = 3, 61,  $p = 0.001$ ) and experience with seeking psychological help (OR = 7.06,  $p < 0.001$ ) increased the likelihood of seeking psychological help. Thus, these findings emphasized the importance of closely monitoring the psychological status of college students, providing psychological intervention, and improving the likelihood of seeking psychological help [Liang, 2020].

## CONCLUSION

The results of the present study showed that there is a marked presence of psychological changes such as fear and anxiety among

university students when it comes to returning to the classroom. Therefore, to provide timely treatment-oriented psychological services and take preventive measures in future pandemic situations, the mental health of college students must be carefully monitored.

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## REFERENCES

- Agência Nacional De Vigilância Sanitária (Brasil). Nota Técnica nº 04/2020. Orientações para serviços de saúde: medidas de prevenção e controle que devem ser adotadas durante a assistência aos casos suspeitos ou confirmados de infecção pelo novo coronavírus (SARS-CoV-2). Atualizada em 31 mar. 2020. Disponível em: [http://portal.anvisa.gov.br/documents/3385\\_2/271858/Nota+T%C3%A9cnica+n+04-2020+GVIMS-GGTES-ANVISA/ab598660-3de4-4f14-8e6f-b9341c196b28](http://portal.anvisa.gov.br/documents/3385_2/271858/Nota+T%C3%A9cnica+n+04-2020+GVIMS-GGTES-ANVISA/ab598660-3de4-4f14-8e6f-b9341c196b28). Acesso em: mar. 2020.
- Cao W, Fang Z, Hou G, Han M, Xu X, Dong J, Zheng J. The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Res.* 2020 May;287:112934. doi: 10.1016/j.psychres.2020.112934. Epub 2020 Mar 20. PMID: 32229390; PMCID: PMC7102633.
- Chen, Q., Liang, M., Li, Y., Guo, J., Fei, D., Wang, L., He, L., Sheng, C., Cai, Y., Li, X., Wang, J., Zhang, Z., 2020a. Mental health care for medical staff in China during the COVID-19 outbreak. *The Lancet Psychiatry.*
- Elm EV, Altman DG, Egger M, et al, for the STROBE Initiative. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement: Guidelines for Reporting Observational Studies. *PLoS Med.* 2007, 4:296. <http://dx.doi.org/10.1371/journal.pmed.0040296>.
- Li, S.W., Wang, Y., Yang, Y.Y., Lei, X.M., Yang, Y.F., 2020. Analysis of influencing factors of anxiety and emotional disorders in children and adolescents during home isolation during the epidemic of novel coronavirus pneumonia. *Chinese Journal of Child Health.* 1–9.
- Liang SW, Chen RN, Liu LL, Li XG, Chen JB, Tang SY, Zhao JB. The Psychological Impact of the COVID-19 Epidemic on Guangdong College Students: The Difference Between Seeking and Not Seeking Psychological Help. *Front Psychol.* 2020 Sep 4;11:2231. doi: 10.3389/fpsyg.2020.02231. PMID: 33013582; PMCID: PMC7499802.
- Meo SA, Abukhalaf AA, Alomar AA, Sattar K, Klonoff DC. COVID-19 Pandemic: Impact of Quarantine on Medical Students' Mental Wellbeing and Learning Behaviors. *Pak J Med Sci.* 2020 May;36(COVID19-S4):S43-S48. doi: 10.12669/pjms.36.COVID19-S4.2809. PMID: 32582313; PMCID: PMC7306952.
- Moreno, E., Muñoz-Navarro, R., Medrano, L.A., González-Blanch, C., Ruiz-Rodríguez, P., Limonero, J.T., Moretti, L.S., Cano-Vindel, A., Moriana, J.A., 2019. Factorial invariance of a computerized version of the GAD-7 across various demographic groups and over time in primary care patients. *J. Affect Disord.* 252, 114–121.
- Odrizola-González P, Planchuelo-Gómez Á, Iruñia MJ, de Luis-García R. Psychological effects of the COVID-19 outbreak and lockdown among students and workers of a Spanish university. *Psychiatry Res.* 2020 Aug;290:113108. doi: 10.1016/j.psychres.2020.113108. Epub 2020 May 19. PMID: 32450409; PMCID: PMC7236679.
- Shah K, Mann S, Singh R, Bangar R, Kulkarni R. Impact of COVID-19 on the Mental Health of Children and Adolescents. *Cureus.* 2020 Aug 26;12(8):e10051. doi: 10.7759/cureus.10051. PMID: 32999774; PMCID: PMC7520396.
- World Health Organization. Advice on the use of masks the community, during home care and in health care settings in the context of the novel coronavirus (2019-nCoV) outbreak Interim guidance, 29 Jan. 2020. WHO/nCov/IPC\_Masks/2020.1. Disponível em: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance>. Acesso em: mar. 2020.
- World Health Organization. Clinical management of severe acute respiratory infection when novel coronavirus (2019-nCoV) infection is suspected: Interim guidance. Jan. 2020. Disponível em: [https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-\(ncov\)-infection-is-suspected](https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-(ncov)-infection-is-suspected). Acesso em: janeiro 2021.
- World Health Organization. Clinical management of severe acute respiratory infection (SARI) when COVID-19 disease is suspected: Interim guidance. Mar. 2020. V. 1.2. Disponível em: [https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-\(ncov\)-infection-is-suspected](https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-(ncov)-infection-is-suspected). Acesso em: mar. 2020.
- World Health Organization. Report of the WHO-China joint mission on Coronavirus Disease 2019 (COVID-19). 2020.
- Yang, Y., Li, W., Zhang, Q., Zhang, L., Cheung, T., Xiang, Y.T., 2020. Mental health services for older adults in China during the COVID-19 outbreak. *Lancet Psychiatry* 20 30079-1.

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