REFACS

Assessment of depressive symptoms in students during the COVID-19 pandemic*

Avaliação de sintomas depressivos em estudantes durante a pandemia do COVID-19

Evaluación de síntomas depresivos en estudiantes durante la pandemia de COVID-19

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This is a cross-sectional quantitative study, carried out in Alvorada, Rio Grande do Sul, Brazil, during the month of April 2020, with the objective of identifying the presence of depressive symptoms in students of a Federal Institute and its association with its variables for perception of considering the COVID-19 pandemic. 98 students participated who responded to a sociodemographic data sheet and the Depression, Anxiety and Stress Scale. Descriptive statistics were performed, and 34.7% had moderate to severe depressive symptoms. There were significant positive, strong correlations between anxiety, depression and stress. The correlation between anxiety and depression showed r = 0.675 (p <0.001; 95% CI [0.550-0.770]); between anxiety and stress r = 0.774 (p <0.001; 95% CI [0.681-0.843]) and between depression and stress r = 0.810 (p <0.001; 95% CI [0.729-0.869]. In addition, negative correlations were identified , weak between depressive symptoms and health perception The social distance caused by the COVID-19 pandemic may be interfering negatively in the students' mental health.
Descriptors: Mental Health; Pandemics; Depression; Students.

Este é um estudo quantitativo transversal, realizado em Alvorada, Rio Grande do Sul, durante o mês de abril de 2020, com o objetivo de identificar a presença de sintomas depressivos em estudantes de um Instituto Federal e, sua associação com suas variáveis para percepção de saúde, considerando a pandemia do COVID-19. Participaram 98 estudantes que responderam a uma ficha de dados sociodemográfico e a Escala de Depressão, Ansiedade e Estresse. Realizou-se estatística descritiva e, 34,7% apresentaram sintomas depressivos de moderados a graves. Verificaram-se correlações significativas positivas, fortes entre ansiedade, depressão e estresse. A correlação entre ansiedade e depressão apresentou r=0,675 (p<0,001; IC 95% [0,550-0,770]); entre ansiedade e estresse r=0,774 (p<0,001; IC 95% [0,681-0,843]) e entre depressão e estresse r=0,810 (p<0,001; IC 95% [0,729-0,869]. Ainda, identificou-se correlações negativas, fracas entre sintomas depressivos e percepção de saúde. O distanciamento social provocado pela pandemia do COVID-19 pode estar interferindo de forma negativa na saúde mental dos estudantes.
Descritores: Saúde mental; Pandemias; Depressão; Estudantes.

Este es un estudio cuantitativo transversal, realizado en Alvorada, Río Grande del Sur, Brasil, durante el mes de abril de 2020, con el objetivo de identificar la presencia de síntomas depresivos en estudiantes de un Instituto Federal y su asociación con sus variables para percepción de la salud, considerando la pandemia de COVID-19. Hubo 98 estudiantes que respondieron a una hoja de datos sociodemográficos y a la Escala de Depresión, Ansiedad y Estrés. Se realizaron estadísticas descriptivas y el 34,7% presentó síntomas depresivos de moderados a graves. Hubo correlaciones significativas positivas fuertes entre la ansiedad, la depresión y el estrés. La correlación entre la ansiedad y la depresión presentó r=0,675 (p<0,001; IC 95% [0,550-0,770]); entre la ansiedad y el estrés r=0,774 (p<0,001; IC 95% [0,681-0,843]) y entre la depresión y el estrés r=0,810 (p<0,001; IC 95% [0,729-0,869]). También se identificaron correlaciones negativas y débiles entre los síntomas depresivos y la percepción de la salud. El distanciamiento social causado por la pandemia del COVID-19 puede estar interfiriendo negativamente en la salud mental de los estudiantes.
Descriptores: Salud Mental; Pandemias; Depresión; Estudiantes.

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INTRODUCTION

In Brazil, on February 26th, the Ministry of Health received its first notification of a confirmed case of infection by the new Coronavirus[1]. Thus, since March of 2020, Brazil has been experiencing the COVID-19 pandemic that began at the end of 2019 in the city of Wuhan, China, and has since spread throughout the world. The outbreak of the new Coronavirus, also known as SARS-CoV-2 (Severe Acute Respiratory Syndrome), imposed a series of changes in people's lives, including social distance and schools closing, with the suspension of in-person classes[2].

The pandemic associated with the COVID-19 virus led to of adoption of measures by governments worldwide to contain and prevent contagion of the disease[3]. The measure adopted in several Brazilian municipalities was horizontal social isolation, restriction of social activities in public spaces[4, 5] and requesting people to remain in their own homes. It is estimated that, in Brazil, around 75% of the population adhered to social restriction, which helped to contain the spread of the disease and the burden on the Brazilian health system[6]. However, numerous studies have shown the harmful side effect that this measure ends up bringing, especially regarding physical and mental health, despite its essential character to fight the disease[7].

The suspension of in-person classes in the education network of public and private schools determined adoption of measures such as the transfer of classes and pedagogical activities to distance learning models, directly influencing the social relationships of students. Social interaction is considered an important factor for maintaining mental health. Thus, the social distance required due to COVID-19 can have consequences on social relationships and effects on individuals' mental health. Depression, anxiety disorder and chemical dependency are some examples[8].

Depression is a disorder that manifests itself with symptoms of loss of appetite, sadness, feeling of increased tiredness and loss of pleasure in performing routine activities. Individuals with this disorder may have difficulty concentrating, low self-esteem, feelings of guilt and suicidal ideations or acts. Depressive episodes can be classified as mild, moderate or severe[9]. In 2001, the World Health Organization warned that depression is one of the diseases that causes the most economic losses in the world, along with heart disease, cancer and AIDS[10].

Therefore, this study aims identify the presence of depressive symptoms in students at a Federal Institutions and its association with its variables for health perception, considering the pandemic of COVID-19.

METHOD

This was a quantitative, descriptive and cross-sectional study, carried out in 2020. Participants were invited to answer it electronically. The participants were students of the Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Sul (IFRS) from the metropolitan region of Porto Alegre/RS, Campus Alvorada, recruited in a non-probabilistic manner.

Participants were invited electronically to participate in the research. Data collection took place online during April of 2020, at the beginning of the period of social distance due to the pandemic of COVID-19.

To characterize the sample of the present study, the following instruments were used: a) Sociodemographic Data Sheet; b) Brazil[11] Economic Classification Criterion, which is a socioeconomic classification standard, based on households and developed by the Brazilian Association of Research Companies.

The Depression, Anxiety and Stress Scale (DASS-21)[12] was used to assess the symptoms of depression, which has good internal consistency for depression ($\alpha = 0.92$), anxiety ($\alpha = 0.86$) and ($\alpha = 0 , 90$) stress. The response scale for the items is a Likert type of four points ranging

from 0 (does not apply at all) to 3 (applies a lot or most of the time). For the depression domain, the cutoff points were: 0 to 13 (Normal and Mild), 14 to 20 (Moderate) and 21 or more (Severe and Very Severe). The instruments mentioned were all inserted in a self-administered online questionnaire.

For data analysis, descriptive statistics were used as mean, standard deviation and percentage for the presentation of data regarding the sociodemographic profile of the participants and the scores obtained on the instruments. From the analysis of the Kolmogorov-Smirnov test, which suggested the use of parametric techniques, the association between the variables "health perception" and "depressive symptoms" and between the variables "depressive symptoms", "anxiety" and "stress" was verified through the Pearson correlation. Weak interaction was considered if the r values were up to 0.29, moderate if up to 0.59 and strong from 0.60. The analyzes were conducted using SPSS software version 24 for Windows and significant results were considered when $p < 0.05$.

This study was approved by the IFRS Research Ethics Committee (CAAE: 08694919.1.0000.8024) and was authorized from the IFRS campus where the students belong. All participants of legal age gave their consent and, for underage students, parents and/or guardians signed the Free and Informed Consent Form and the students signed the Free and Informed Consent Form.

RESULTS

The participants were 98 students, aged between 15 and 61 years, with an average age of 26.9 years. Of these, the majority are female (80.6%), single (79.4%), with no children (62.2%) and declare themselves white (71.1%). In relation to training, 37.8% were students of technical courses integrated to High School, 30.6% of subsequent technical courses, 19.4% of undergraduate courses and 12.2% of the National Program for Integration of Professional Education (*Programa Nacional de Integração da Educação Profissional* - PROEJA).

It was observed that 43.9% of the students live on a street paved with earth or gravel and 6.1% use water from a well or spring, and, according to the Criterion Brazil classification, most are classified as B2 (32.9%) and C1 (31.5%). Still, 65.3% of participants only study and 34.7% study and work. Table 1 describes the situation of people according to their work during the pandemic, indicating that the majority of students in this situation are working in home offices.

Table 1. Students regarding their work during the pandemic, Alvorada-RS, 2020.

Work situation	Frequency (%)
I'm still employed, but I'm at home and not working because of Coronavirus	35.4
I continue to work normally at my place of work (not my home)	47.0
I am working from home	17.6

Regarding students' habits related to the COVID-19 pandemic during the period of social distancing, 64.3% reported leaving home only to work and/or basic needs, such as going to the supermarket, pharmacy and hospital/health center. Still, 54.1% indicated that they were experiencing difficulties sleeping.

Regarding the subjective perception of health, 39.2% were dissatisfied with their health, 27.8% were neither satisfied nor dissatisfied and 39.2% were satisfied. There were negative, weak and statistically significant associations between the variables "health perception" and "depressive symptoms" ($r = -0.26$; $p < 0.01$).

Table 2 describes the frequency and intensity of depressive symptoms. It is possible to verify that 34.7% experience moderate to severe depressive symptoms.

Table 2. Intensity of depressive symptons in students, Alvorada-RS, 2020

Intensity of depressive symptoms	Frequency (%)
Minimal/mild	65.3
Moderate	20.4
Severe	14.3

When analyzing the correlation between anxiety, depression and stress, there were n = 98, positive, strong and statistically significant correlations found. The correlation between anxiety and depression showed r = 0.67 (p <0.001; 95% CI [0.55-0.77]); between anxiety and stress r = 0.77 (p <0.001; 95% CI [0.68-0.84]) and between depression and stress r = 0.81 (p <0.001; 95% CI [0.73- 0.87].

DISCUSSION

It was identified that 34.7% of students had depressive symptoms with moderate to severe intensity. When assessing the prevalence and factors associated with depression in medical students at the Universidade Federal do Amapá[13], 24.4% of students showed symptoms of moderate to severe depression. In a previous research[14], the prevalence rates of depression among students were 8.9% for students of the Faculdade de Ciências Médicas de Minas Gerais, 6.7% for those of Physical Therapy and 28.2% for those of Occupational Therapy.

In addition, when comparing the data from the present study with others carried out worldwide, it appears that the prevalence of depressive symptoms is considered high, considering that, as cited by several studies, rates between 9 and 30% can already be considered worrying[15, 16]. The data obtained may be related to several factors (added to the pandemic), such as a high violence rate at the city of Alvorada (considered the 6th most violent in Brazil[17]), a high level of social vulnerability in this region and a Human Development Index below the national average[18].

From a socioeconomic point of view, several consequences were pointed out to Brazilian citizens related to the pandemic. There was an increase in the number of dismissals and unemployment, as well as bankruptcy of establishments, while there was a considerable increase in the proportion of informal and self-employed workers[6], strongly impacting the economy[19]. As a side effect of this perspective, we can mention the increase in social inequality in the Brazilian population[6].

In this context, social/economic inequality constitutes a high risk factor for the increase of the contagion[20]. Such a situation may be a hypothesis to justify the high rate of depressive symptoms found in the present study, considering that the city of Alvorada presents a context of high vulnerability and social/economic inequality.

It was also found that there was a statistically significant correlation between the variables "health perception" and "depressive symptoms". The subjective perception of health involves several areas of the individual's life, such as: functional ability, physical capacity, social, economic and social condition, in addition to the perception of the general health status. Therefore, as it increases, there is an increase in functional incapacity, a feeling of pain or a reduction in the quality of their social relationships, which may be caused by the social distance experienced during the pandemic, there is a decrease in relation to satisfaction of the interviewees with their health. Therefore, it is inferred that the participants' self-assessment regarding their health takes into account aspects of diseases diagnosed or not by health professionals, impacting on physical, social and mental well-being.

In view of the pandemic scenario and the consequent social distance, numerous aspects in the Brazilian lifestyle have changed. There was an increase in the consumption of alcohol and cigarettes, a reduction in the practice of physical activity and an increase in the consumption of unhealthy foods[21,22], factors that can contribute to the increase in psychological distress.

There was also a notable increase in time spent in front of computer screens and other electronic devices[3], which can be explained due to the adoption of distance learning by educational institutions. Within this context, results of studies have shown that people with symptoms of depression have difficulties in learning and memorizing, which can lead to poor learning performance[23]. Therefore, it is inferred that the presence of depressive symptoms of moderate to severe intensity may be a factor that is hindering the teaching-learning process of these students, which may contribute to the psychic illness during the pandemic period.

With the pandemic, people who respected quarantine and remained in social distance had a higher prevalence of anxiety and depression, according to the results of the research conducted by Berti *et al*[24]. The feelings of sadness and depression were twice as frequent in women, when compared to the same feelings with men. In yet another result, the presence of signs of anxiety and feelings of sadness was more frequent in people who had previously been diagnosed with depression[24].

The present study also found a strong correlation between anxiety, depression and stress. This result is corroborated by another study[25] that also registered a strong correlation between depression, anxiety and stress. The positive correlation found between anxiety and stress may infer that the determining factors for developing stress may be the same as those that develop anxiety in individuals exposed to a pandemic situation. Still, results with changes in depression and stress levels were also found previously[25], which reported that university students had increased levels of anxiety, depression and stress in the pandemic period, when compared to periods in which there was no pandemic.

In a study carried out with university students in Portugal, results were analyzed regarding depression, stress and anxiety in the normal and pandemic periods. The results showed that, during the two periods, male participants had higher averages of depression. Female participants had higher averages of anxiety and stress in both periods[25].

A study[26] that analyzed impacts on individuals' mental health, based on social distancing caused by COVID-19, according to documents produced in specialized mental health care services, depression is one of the most common immediate psychiatric disorders. Corroborating these results, another investigation[27], with medical students from a university center in Brazil, found that in the consultations of those who sought assistance by phone or video call, the greatest complaints were depression and anxiety symptoms. The presentation of the virtual modality, consultations or conversations by phone or video, made more students look for mental health assistance services[27].

A good number of students are in social isolation, which may be a possibility for them to be suffering psychological consequences. Another important marker observed was the changes in sleep due to the pandemic. There were important changes in the routine associated with sleep in Brazilian individuals, which are strongly related to stress levels, a consequence that is markedly present in situations of social distance[19,29].

An investigation[3] showed that there was a significant increase in sleep-related issues, both in individuals who already had this condition previously, and in individuals who did not have it, which is more prevalent in young adults, women and people with a previous diagnosis of depression. Thus, studies are consonant in demonstrating that social distance ends up causing changes in lifestyle and changes in sleep, both factors that are harmful to mental health.

CONCLUSION

In this research, it appears that there is a possibility that social distancing caused by the pandemic of COVID-19 is interfering negatively in the mental health of students at IFRS Campus

Alvorada, by influencing the high incidence of depression. Thus, measures must be adopted by professors and the entire academic community, aiming at reducing psychological impacts caused by the pandemic. In addition, it is important to train these professionals to be able to act in the early identification and prevention of students' psychological distress.

It will be necessary to work with professors' tools to approach students in returning to in-person activities and, in the same way, to have considereation in the way of conducting classes and activities during social isolation, considering that there is no predictions for the end of the pandemic, which can be a factor in increasing levels of anxiety and depression in these individuals.

Among some limitations of this research, it is possible to mention the number of respondents. As the classes started to be entirely online, contact with students became more restricted, which may have been a reason for some not to participate in the study (although all were invited on more than one occasion). In addition, another limitation was the fact that other psychiatric comorbidities were not analyzed.

Thus, it is important that more frequent and longitudinal studies are carried out to identify and monitor these symptoms in students and, with this, adopt preventive and assertive measures to reduce this incidence of these disorders. This study does not exhaust the subject of assessing depression in students enrolled in educational institutions. Considering the experience of a pandemic, it is suggested that more research should be carried out with a view to increasing the production of knowledge and, likewise, studies that identify ways to reduce the psychic effects on students in order to generate, for them, a better quality of life.

REFERENCES
1. Ministério da Saúde, Secretaria de Vigilância em Saúde (Brasil). Doença pelo coronavírus COVID-19. Bol Epidemiol. [Internet]. 2020 [cited in 08 Oct 2020]; 33(Esp):1-65. Available from: http://portalarquivos2.saude.gov.br/images/pdf/2020/October/01/Boletim-epidemiologico-COVID-33-final.pdf
2. G1 Rio Grande do Sul. Governo do RS suspende aulas da rede estadual a partir desta quinta devido ao coronavírus [Internet]. [Porto Alegre]: RBS TV; 2020 [cited in 30 Oct 2020]. Available from: https://g1.globo.com/rs/rio-grande-do-sul/noticia/2020/03/16/governo-do-rs-suspende-aulas-da-rede-estadual-a-partir-desta-quinta-devido-ao-coronavirus.ghtml
3. Barros MBA, Lima MG, Malta DC, Szwarcwald CL, Azevedo RCS, Romero D, et al. Relato de tristeza/depressão, nervosismo/ansiedade e problemas de sono na população adulta brasileira durante a pandemia de COVID-19. Epidemiol Serv Saúde [Internet]. 2020 [cited in 25 Oct 2020]; 29(4):e2020427. Available from: https://www.scielo.br/pdf/ress/v29n4/2237-9622-ress-29-04-e2020427.pdf. DOI: https://doi.org/10.1590/s1679-49742020000400018
4. Silva WAD. Covid-19 no Brasil: estresse como preditor da depressão. Scielo Preprints [Internet]. 2020 [cited in 30 Oct 2020]; versão 1:1-21. Available from: https://preprints.scielo.org/index.php/scielo/preprint/view/1132/1691. DOI: 10.1590/SciELOPreprints.1132
5. Silva LLS, Lima AFR, Polli DA, Razia PFS, Pavão LFA, Cavalcanti MAFH, et al. Medidas de distanciamento social para o enfrentamento da COVID-19 no Brasil: caracterização e análise epidemiológica por estado. Cad Saúde Pública [Internet]. 2020 [cited in 30 Oct 2020]; 36(9):e00185020. Available from: https://www.scielo.br/pdf/csp/v36n9/1678-4464-csp-36-09-e00185020.pdf. DOI: https://doi.org/10.1590/0102-311X00185020
6. Almeida WS, Szwarcwald CL, Malta DC, Barros MBA, Souza Júnior PRB, Azevedo LA, et al. Mudanças nas condições socioeconômicas e de saúde dos brasileiros durante a pandemia de covid-19. Scielo Preprints. [Internet]. 2020 [cited in 30 Oct 2020]; versão 1:1-30. Available from: https://preprints.scielo.org/index.php/scielo/preprint/view/1272/1971. DOI: https://doi.org/10.1590/SciELOPreprints.1272

7. Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. Lancet. [Internet]. 2020 [cited in 27 Oct 2020]; 395:912–20. Available from: https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30460-8/fulltext. DOI: https://doi.org/10.1016/S0140-6736(20)30460-8

8. Pimentel DEM, Costa JV. Distanciamento social, saúde mental e suicídios: breve análise para o Nordeste e os efeitos indiretos da pandemia. In: Observatório do Nordeste para análise sociodemográfica da Covid-19 [Internet]. Natal: Programa de Pós-graduação em Demografica da UFRN; 2020 [cited in 23 May 2020]. Available from: https://demografiaufrn.net/2020/05/19/saude-mental-suicidios/

9. Organização Mundial da Saúde. CID-10 Classificação Estatística Internacional de Doenças e Problemas Relacionados à Saúde. 10ed. Porto Alegre: Artmed; 1997. 1192p.

10. American Psychiatric Association. Manual diagnóstico e estatístico de transtornos mentais: DSM-5 [Internet]. 5ed. Porto Alegre: Artmed; 2014. 992p.

11. Associação Brasileira de Empresas de Pesquisa. Critério de Classificação econômica Brasil 2018. São Paulo: ABEP; 2018 [cited in 20 Oct 2020]. Available from: http://www.abep.org/criterio-brasil

12. Vignola RC, Tucci AM. Adaptation and validation of the depression, anxiety and stress scale (DASS) to Brazilian Portuguese. J Affect Disord. [Internet]. 2014 [cited in 27 Oct 2020]; 155:104-9. DOI: https://doi.org/10.1016/j.jad.2013.10.031

13. Oliveira GS, Rocha CA, Santos BEF, Sena IS, Favaro L, Guerreiro MC. Prevalência e fatores associados à depressão em estudantes de medicina da Universidade Federal do Amapá. Rev Med Saúde Brasília [Internet]. 2016 [cited in 27 Oct 2020]; 5(3):186-99. Available from: https://portalrevistas.ucb.br/index.php/rmsbr/article/view/7359/4892

14. Cavestro JM, Rocha FL. Prevalência de depressão entre estudantes universitários. J Bras Psiquiatr. [Internet]. 2006 [cited in 23 Oct 2020]; 55(4):264-7. Available from: https://www.scielo.br/pdf/jbpsiq/v55n4/a01v55n4.pdf. DOI: http://dx.doi.org/10.1590/S0047-20852 006000400001

15. Adewuya AO, Ola BA, Aloba OO, Mapayi BM, Ibigbami OI, Adewumi TA. Depression amongst Nigerian university students: prevalence and sociodemographic correlates. Soc Psychiatr Psychiatr Epidemiol. [Internet]. 2006 [cited in 29 Oct 2020]; 41(8):674-8. Available from: https://www.researchgate.net/ publication/7101510_Depression_amongst_Nigerian_university_students_Prevalence_and_soc iodemographic_correlates. DOI: http://dx.doi.org/10.1007/s00127-006-0068-9

16. Cerchiari EAN, Caetano D, Faccenda O. Utilização do serviço de saúde mental em uma universidade pública. Psicol Ciênc Prof. [Internet]. 2005 [cited in 29 Oct 2020]; 25(2):252-65. Available from: https://www.scielo.br/pdf/pcp/v25n2/v25n2a08.pdf. DOI: https://doi.org/10.1590/S1414-98932005000200008

17. G1 Rio Grande do Sul. Alvorada aparece como 6ª cidade mais violenta do Brasil no Atlas da Violência [Internet]. [Porto Alegre]: RBS TV; 2019 [cited in 29 Oct 2020]. Available from: https://g1.globo.com/rs/rio-grande-do-sul/noticia/2019/08/06/alvorada-aparece-como-6a-cidade-mais-violenta-do-brasil-no-atlas-da-violencia.ghtml

18. Instituto Brasileiro de Geografia e Estatística. Cidades e estados RS [Internet]. Rio de Janeiro: IBGE; 2018 [cited in 23 Oct 2020]. Available from: https://www.ibge.gov.br/cidades-e-estados/rs/alvorada.html

19. Bezerra ACV, Silva CEM, Soares FRG, Silva JAM. Fatores associados ao comportamento da população durante o isolamento social na pandemia de COVID-19. Ciênc Saúde Colet. [Internet]. 2020 [cited in 25 Oct 2020]; 25(Supl 1):2411-21. Available from: https://www.scielo.br/pdf/csc/v25s1/1413-8123-csc-25-s1-2411.pdf. DOI: https://doi.org/10.1590/1413-81232020256.1.10792020

20. Demenech LM, Dumith SC, Vieira MECD, Neiva-Silva L. Desigualdade econômica e risco de infecção e morte por COVID-19 no Brasil. Rev Bras Epidemiol. [Internet]. 2020 [cited in 25 Oct 2020]; 23:e200095. Available from: https://www.scielo.br/pdf/rbepid/v23/1980-5497-rbepid-23-e200095.pdf DOI: http://dx.doi.org/10.1590/1980-549720200095

21. Malta DC, Szwarcwald CL, Barros MBA, Gomes CS, Machado IE, Souza Júnior PRB, et al. A pandemia da COVID-19 e as mudanças no estilo de vida dos brasileiros adultos: um estudo transversal. Epidemiol Serv Saúde. [Internet]. 2020 [cited in 25 Oct 2020]; 29(4):e2020407. Available from: https://www.scielo.br/pdf/ress/v29n4/2237-9622-ress-29-04-e2020407.pdf. DOI: https://doi.org/10.1590/s1679-49742020000400026

22. Malta DC, Gomes CS, Szwarcwald CL, Barros MBA, Silva AG, Prates EJS, et al. Distanciamento social, sentimento de tristeza e estilos de vida da população brasileira durante a pandemia de COVID-19. Scielo Preprints [Internet]. 2020 [cite in 30 Oct 2020]; versão 1:1-22. Available from: https://preprints.scielo.org/index.php/scielo/preprint/view/1371/2147. DOI: https://doi.org/10.1590/SciELOPreprints.1371

23. Pereira AF, Lopes ECBS, Almeida KM, Brasileiro ME. Depressão dificulta a aprendizagem ou dificuldade na aprendizagem provoca depressão? Rev Cient Multidiscipl Núcleo Conhec. [Internet]. 2019 [cited in 30 Oct 2020]; 8(4):126-48. Available from: https://www.nucleodoconhecimento.com.br/saude/depressao#:~:text=Os%20estudos%20evidenciam%20que%20existem,interfere%20durante%20a%20forma%C3%A7%C3%A3o%20profissional

24. Barros MBA, Lima MG, Malta DC, Szwarcwald CL, Azevedo RCS, Romero D, et al. Relato de tristeza/depressão, nervosismo/ansiedade e problemas de sono na população adulta brasileira durante a pandemia de COVID-19. Epidemiol Serv Saúde. [Internet]. 2020 [cited in 27 out 2020]; 29(4):e2020427. Available from: https://www.scielo.br/pdf/ress/v29n4/2237-9622-ress-29-04-e2020427.pdf. DOI: https://doi.org/10.1590/S1679-49742020000400018

25. Maia BR, Dias PC. Ansiedade, depressão e estresse em estudantes universitários: o impacto da COVID-19. Estud Psicol. [Internet]. 2020 [cited in 23 Oct 2020]; 37:e200067. Available from: https://www.scielo.br/pdf/estpsi/v37/1678-9865-estpsi-37-e200067.pdf. DOI: https://doi.org/10.1590/1982-0275202037e200067

26. Lima RC. Distanciamento e isolamento sociais pela Covid-19 no Brasil: impactos na saúde mental. Physis [Internet]. 2020 [cited in 23 Oct 2020]; 30(2):e300214. Available from: https://www.scielo.br/pdf/physis/v30n2/0103-7331-physis-30-02-e300214.pdf. DOI: https://doi.org/10.1590/s0103-73312020300214

27. Major CR, Barbosa DVS, Silva Júnior GMN, Oliveira JMR, Macedo J, Silveira MMM, et al. O papel do núcleo de apoio psicopedagógico ao discente do curso de medicina em tempos de pandemia. In: Anais do 39º Seminário de Atualização de Práticas Docentes; 2020; Anápolis. Anápolis, GO: UniEvangélica; 2020 [cited in 28 Oct 2020]. p. 364-8. Available from: http://anais.unievangelica.edu.br/index.php/praticasdocentes/article/view/5780/3244

28. Apóstolo JLA, organizador. O conforto pelas imagens mentais na depressão ansiedade e stresse [Internet]. Coimbra, Portugal: Imprensa da Universidade de Coimbra; 2010 [cited in 27 Nov 2020]. 193p. Available from: https://digitalis.uc.pt/pt-pt/livro/o_conforto_pelas_imagens_mentais_na_depress%C3%A3o_ansiedade_e_stresse. DOI: http://dx.doi.org/10.14195/978-989-26-0036-9

29. Apóstolo J, Ventura A, Caetano C, Costa S. Depressão, ansiedade e stresse em utentes de cuidados de saúde primários. Referência [Internet]. 2008 [cited in 27 Nov 2020]; Série 2(8):45-9. Available from: http://www.index-f.com/referencia/2008pdf/8-4549.pdf

CONTRIBUTIONS
Cristiane Silva Esteves, **Irani Iracema de Lima Argimon** and **Priscila Silva Esteves** contributed to the study concept, data collection and analysis, writing and review. **Lucas Remião Sampaio** and **Rose Mari Ferreira** participated in writing and review.

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