

COVID-19 AND THE MENTAL HEALTH OF HIGHER EDUCATION STUDENTS

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Covid-19 and the Mental Health of Higher Education Students ***A Covid-19 e a Saúde Mental dos Estudantes do Ensino Superior***

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Abstract

With the emergence of Covid-19, preventive measures were proposed by the World Health Organization (WHO) to inhibit the spread of the disease across various countries worldwide. Among these measures was social isolation, which brought changes to the teaching methodologies of many institutions and to the lives of university students. Thus, the aim of this study was to identify in the national literature what research presents as the main consequences of the Covid-19 pandemic on the mental health of higher education students, as well as the primary coping strategies. To this end, an integrative literature review was conducted using the Virtual Health Library (VHL) and the Coordination for the Improvement of Higher Education Personnel (CAPES) databases. After analyzing the studies, 42 eligible works were selected and organized using Excel software. Based on the findings, social isolation affected students' lives and routines significantly. They had to adapt to distance learning and cope with the lack of social contact with friends and family. Negative impacts included fear of death or infection, fear of losing loved ones, hopelessness, loneliness, and suicidal thoughts. These factors further contributed to mental health issues and the emergence of psychological symptoms and disorders, such as depression, anxiety, and stress, within the academic population. Both educational institutions and students developed strategies to help mitigate the mental health impacts of the pandemic.

Keywords: Mental Health; University Students; Social Isolation; Pandemic.

Resumo

Com o surgimento da Covid-19, medidas de prevenção foram propostas pela Organização Mundial de Saúde (OMS) para inibir a disseminação da doença em diversos países pelo mundo. Dentre as medidas estava o isolamento social que trouxe mudanças na metodologia de ensino de diversas instituições e na vida dos estudantes universitários. Dessa forma, o objetivo do presente estudo foi identificar na literatura nacional, quais e como as pesquisas apresentam as principais consequências da pandemia da Covid -19 na saúde mental de estudantes do ensino superior e as principais formas de enfrentamento. Para isso, foi realizada uma revisão integrativa de literatura a partir das bases de dados Biblioteca Virtual de Saúde (BVS) e Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES). Após análise dos estudos levantados, selecionou-se 42 estudos elegíveis que foram tabulados através do Software Excel. De acordo com os conteúdos encontrados, o isolamento social afetou a vida e a rotina dos estudantes. Eles tiveram que adaptar-se ao ensino à distância e lidar com a falta de contato social com amigos e familiares. Gerou-se impactos negativos como o medo de morrer ou de ser contaminado, medo de perder algum ente querido, desesperança, solidão e pensamentos suicidas. Esses fatores contribuíram ainda mais para o adoecimento mental e o surgimento de sintomas e doenças psicológicas como a depressão, ansiedade e estresse na população acadêmica. Estratégias foram elaboradas pelas instituições de ensino e pelos próprios alunos para auxiliarem no enfrentamento dos impactos gerados pela pandemia na saúde mental.

Palavras-chave: Saúde Mental; Universitários; Isolamento Social; Pandemia.

INTRODUCTION

In December 2019, the World Health Organization (WHO) was notified by the Chinese authorities about the emergence of a type of virus in the city of Wuhan, which triggered Coronavirus *Disease* 2019 or Covid-19. The disease is an acute respiratory syndrome spread mainly by saliva droplets and direct contact with people infected with the virus. After its discovery, the number of cases increased rapidly, spreading to all regions of the planet and consequently causing fatalities. The WHO then declared a pandemic situation, and advised countries to take preventative measures to inhibit the spread of the disease (MANICA, 2021).

Among the measures proposed was social isolation, which consists of the individual staying at home, thus avoiding physical contact with other people who may be infected with the disease. In Brazil, this measure became necessary to avoid a collapse in the health system, since the number of cases was increasing rapidly and hospitals did not have the infrastructure to receive so many patients. However, this measure had an impact on the country's public and private education network, in which it was necessary to adapt teaching activities that were previously face-to-face to the distance model, which resulted in an overload of academic activities and the mental illness of several students, especially higher education students (ESTEVES et al; 2021).

Most students entering higher education are in a transition from adolescence to adulthood, which is characterized by changes such as the end of high school and the start of college. From then on, challenges begin to appear at the beginning, middle and end of the degree. Among the challenges are stressors characterized by difficulties in acquiring academic materials, lack of motivation for studies and career, too many activities, disagreements with classmates and teachers, seminar presentations, among others. These factors can be directly linked to student mental illness (BRANDTNER & BARDAGI, 2009). In addition, it is possible that the pandemic has contributed to the increase in illness by triggering moments of uncertainty, insecurity and fear about the future in people, which has led to the emergence and increase of symptoms of anxiety and depression in students (ROCHA et al; 2021a).

In a study carried out by Maia & Dias (2020) to analyze Portuguese university students, samples collected in 2018 and 2019 before the pandemic were used, and samples collected after its onset, a significant increase in mental illness in students during the pandemic was found compared to the previous period.

Silva et al. (2020) carried out a study of medical students in Marabá, Pará, and found that 14.3% of them had anxiety, 1.1% depression, 4.4% both and 1.6% some other mental problem, giving a high percentage of 21.4% of students with some mental disorder. It is therefore thought that the mental well-being of these medical students is a worrying factor, due to the high rate of illness.

The study by Teixeira, Tavares & Barbosa (2021) carried out in higher education institutions in Alagoas showed an average of 13.6% depression and 15.5% anxiety. This research also linked these pathologies with the practice of physical activity during social isolation, showing that practicing physical exercise can reduce the level of severity of these illnesses, with less duration and prevalence of symptoms, as well as offering excellent physical health benefits.

However, there is a greater vulnerability of higher education students to psychological distress due to the intense routine of college and the effects caused by the Covid-19 pandemic (TEIXEIRA, TAVARES & BARBOSA, 2021).

Given the statistics presented and the changes that have occurred in the lives of higher education students during the pandemic, the following questions arise to guide this research: What and how do the publications in the Brazilian scientific literature present the main factors associated with the psychological illness of higher education students during the pandemic? What are the main psychopathological symptoms present?

Despite the research already carried out and the scientific effort on the subject, there is a need for more in-depth studies on the psychological illness of higher education students during the pandemic, so that data produced to date can be collected and improvement actions can be proposed that contribute to understanding the universe surveyed.

With this in mind, our main objective was to identify in the national literature what and how research presents the main consequences of the Covid-19 pandemic on the mental health of higher education students and the main ways of coping.

METHODOLOGY

To achieve the proposed objective, a literature review study was carried out using the integrative literature review method with a quantitative and qualitative approach.

To put the study into practice, the six phases of the integrative review process were followed. The first consisted of drawing up a guiding question to support the study; the second was the search for bibliographies related to the topic; the third was the definition of data to be studied; the fourth was a critical analysis of the data collected; the fifth was the results and discussions; and finally a presentation of the integrative review (SOUZA, SILVA & CARVALHO 2010).

The material was selected in January 2023 using the Virtual Health Library (VHL) and the Coordination for the Improvement of Higher Education Personnel (CAPES) databases. The descriptors were used in the following combinations: Depression *and* Students *and* Pandemic; Anxiety *and* Students *and* Pandemic; Stress *and* Students *and* Pandemic; Mental Health *and* University Students *and* Covid-19.

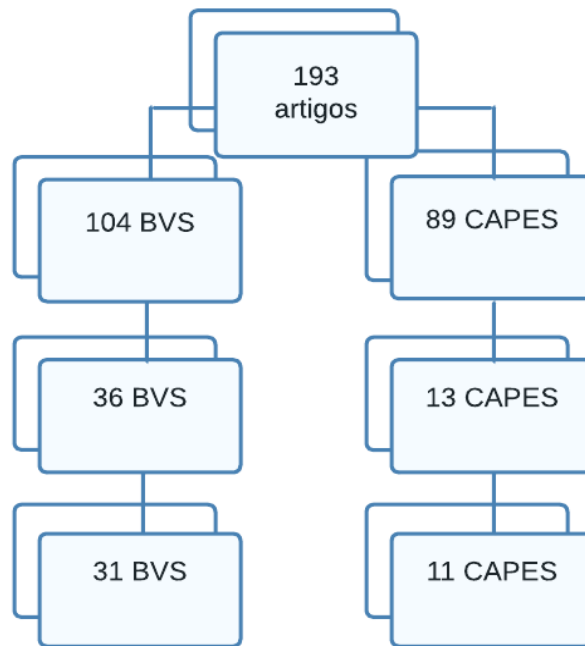
For the selection of articles, we filtered according to the publication period between 2020 and 2022; and language in Portuguese. The inclusion criteria were articles with full access and studies related to the mental health of university students in the COVID-19 pandemic.

The exclusion criteria were review articles, articles in *preprint*, duplicates, articles dealing with other subjects and articles with unavailable access. After analysis, articles were discarded if, despite being within the proposed period, they dealt with subjects from a period prior to the pandemic, subjects that would not contribute to the proposed theme and research that was no longer available on the platform.

Excel software was used to describe the quantitative data from the research and to construct tables. To collect data from the articles, the following topics were considered: title, authors, journal of publication, research methodology, data collection, sample of participants and year of publication.

A total of 193 articles were selected, 104 from the VHL and 89 from CAPES. After reading the titles and abstracts, 49 studies were selected, 36 from the VHL and 13 from CAPES. After reading the full text, 42 papers were selected, 31 of which were obtained from the VHL and 11 from CAPES (Figure 1).

Figure 1. Flowchart showing the search for studies in the databases, according to the inclusion and exclusion criteria outlined in the methodology.



Source: Prepared by the author.

RESULTS AND DISCUSSION

After analyzing the 42 selected articles, some common themes were identified. Table 1 provides a brief overview of the articles, including details of the authors, journals, and their origin. Among the selected articles, 31 were obtained from the VHL database and 11 from CAPES. It was noted that some journals published more than one article on the topic: *Revista Brasileira de Educação Médica* - 11 publications; *Escola Anna Nery Revista de Enfermagem* - 2; *Revista da Escola de Enfermagem da USP* - 2; and *Saúde e Sociedade* - 2.

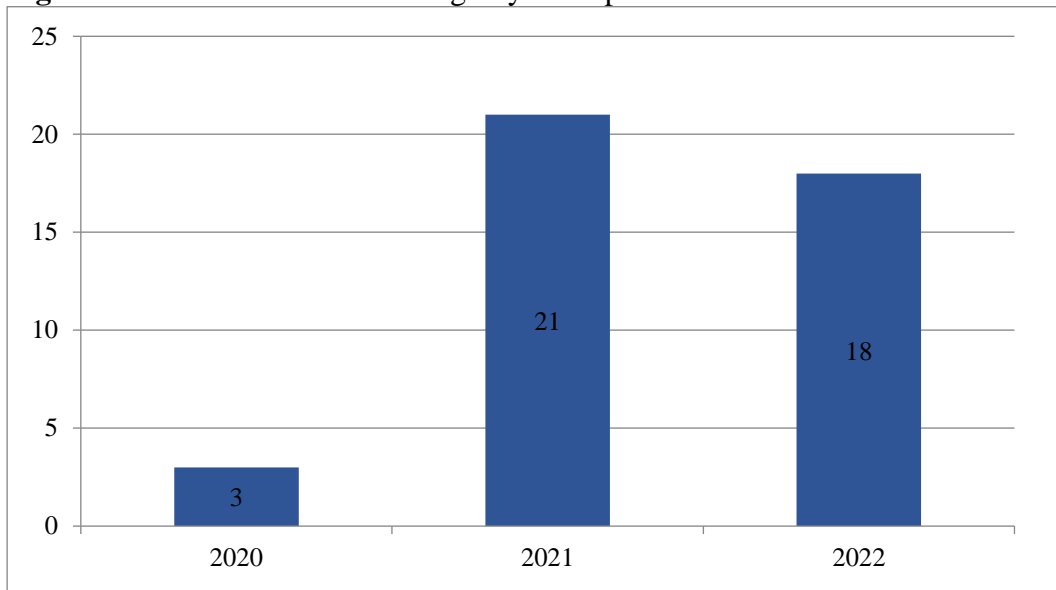
Table 1 - Presentation of the articles selected for the research according to authors, journals and origin.

Author(s)	Journal	Origin
Jantara et al. (2022)	Journal Enfer. UERJ	BVS
Araújo et al.(2022)	Rev. de Enfer. Reference	BVS
Vivenzio et al.(2022)	Rev. of Psychology	BVS
Miotto et al.(2022)	Anna Nery School Rev. de Enfer.	BVS
Ferreira et al.(2022a)	HU Magazine	BVS
Scorsolini-Comin et al.(2021)	Rev. Latino-Americana de Enfer.	BVS
Dalpia et al.(2021)	Brazilian Journal of Psychotherapy	BVS
Medeiros et al.(2020)	Brazilian Journal of Medical Education	BVS
Sunde et al.(2022)	Ibero-American Health Law Notebooks	BVS
Messiano et al.(2021)	CuidArte, Nursing	BVS
Gonçalves et al.(2021)	Psychology, knowledge and society	BVS
Torres et al.(2020)	Nursing	BVS
Gundim et al.(2022)	Portuguese Journal of Mental Health Nursing	BVS
Albuquerque et al.(2022)	Journal of the USP School of Nursing	BVS
Marquez et al.(2022)	Brazilian Journal of Medical Education	BVS
Teixeira et al.(2021a)	Brazilian Journal of Psychiatry	BVS
Serra et al.(2021)	Brazilian Journal of Medical Education	BVS
Rios et al.(2021a)	Brazilian Journal of Medical Education	BVS
Rocha et al.(2021)	Brazilian Journal of Medical Education	BVS
Souza Junior et al.(2021)	Health and society	BVS
Fagundes et al.(2022)	Cogitare Enfer.	BVS
Meneghel (2022)	Health and society	BVS
Mota et al.(2021)	Science and collective health	BVS
Visentini et al.(2021)	Rev. eletrônica de enfer.	BVS
Ortolan & Sei. (2021)	Brazilian Journal of Psychotherapy	BVS
Junior (2021)	UNESP Institutional Repository	BVS
Portela et al.(2022)	Revista Mineira de enfer.	BVS
Maia & Dias (2020)	Psychology Studies	BVS
Santos et al.(2021)	Health in networks	BVS
Lima et al.(2022)	Science, care and health	BVS
Portugal et al.(2021)	Rev. Eletrônica saúde mental álcool e drogas	BVS
Souza et al.(2022)	Catarinense Journal of Accounting Science	CAPES
Barros et al.(2022)	<u>Brazilian Journal of Medical Education</u>	CAPES
Anido et al.(2021)	<u>Interface - Communication, Health, Education</u>	CAPES
Baixinho & Ferreira(2021)	Anna Nery School	CAPES
Gadagnoto et al.(2022)	Rev. of the USP School of Nursing	CAPES
Ferreira et al. (2022)	Brazilian Journal of Medical Education	CAPES
Silva et al.(2021)	Brazilian Journal of Medical Education	CAPES
Liberal et al.(2021)	Brazilian Journal of Medical Education	CAPES
Rios et al.(2021)	Brazilian Journal of Medical Education	CAPES
Mendes et al.(2021)	Brazilian Journal of Sports Medicine	CAPES
Cardoso et al. (2022)	Brazilian Journal of Medical Education	CAPES

Source: Prepared by the author

According to the methodology, the publications were selected between the years 2020 and 2022. The highest number of publications was in 2021, with 21 articles; and the lowest number was in 2020, with 3 articles (Figure 2).

Figure 2 - Articles found according to year of publication

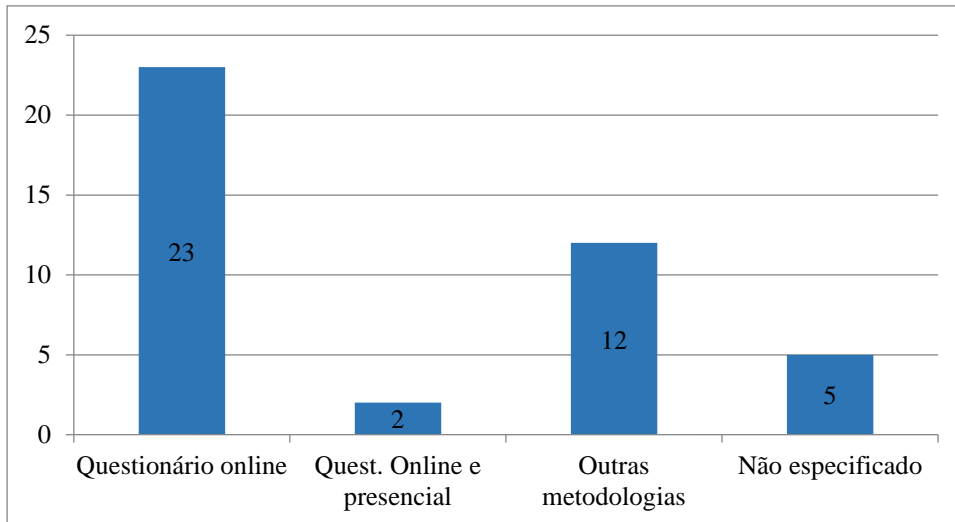


Source: Prepared by the author

Everything indicates that, although 2020 was marked by the emergence of the Covid-19 pandemic (DALPIAZ *et al.*, 2021), there were still not many studies related to the disease, which made it necessary to carry out research on the impact of the virus on the health of the population and possible forms of treatment (BRASIL, 2020). In 2021, the year following the emergence of Covid, the largest number of research publications was concentrated, as there were already official studies on the virus and the first vaccines were being manufactured to start the vaccination campaign around the world. In Brazil, on January 17, 2021, the National Health Surveillance Agency (Anvisa) authorized the emergency use of the Sinovac vaccines from the Butantan Institute and AstraZeneca from Fiocruz, with vaccination starting on January 18 for priority groups such as the elderly, pregnant women, healthcare workers and people with comorbidities (BRASIL, 2021).

Due to the WHO's proposed measure of social isolation, activities that used to take place in person were transferred to an online environment, which enabled the authors to apply virtual questionnaires (VAZQUEZ *et al.*; 2022). Analyzing the studies, 23 authors used online questionnaires as their main data collection method, only 2 used both online and face-to-face questionnaires, 12 used other collection methods and 5 did not specify (Figure 3).

Figure 3 - Representation of the methodologies used

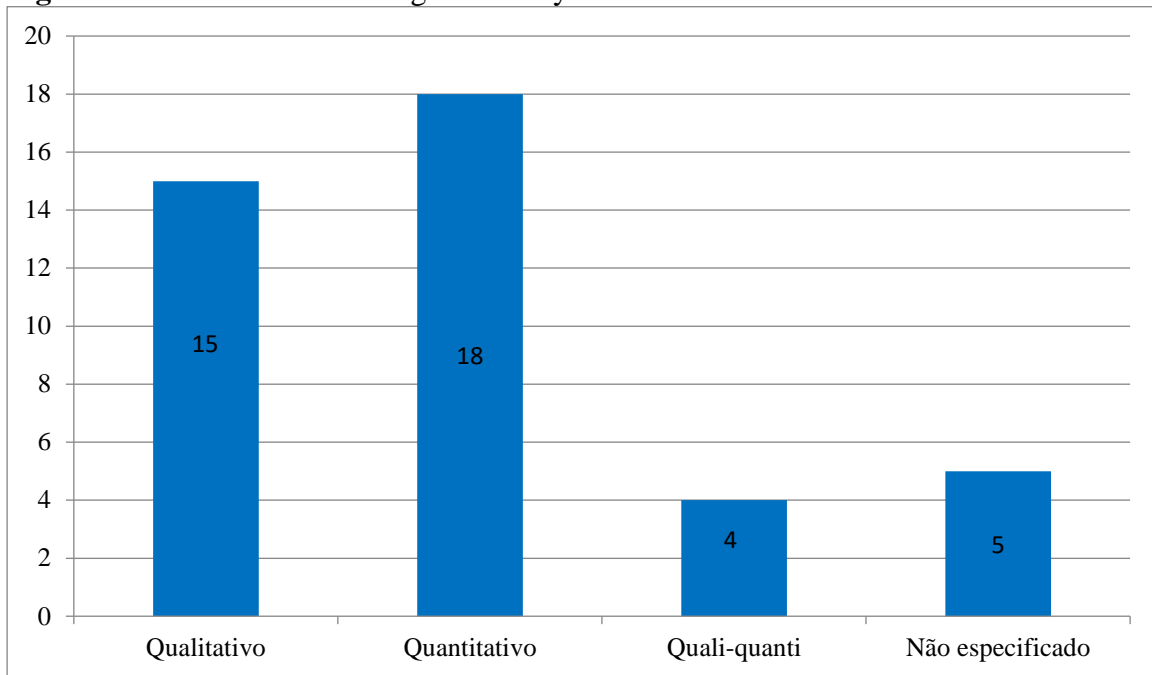


Source: Prepared by the author.

In a way, the use of online questionnaires as the main means of data collection by the authors can be explained by the fact that, in times of pandemic, they have a greater reach among the population studied compared to face-to-face questionnaires, and make it easier to analyze the data collected (ANDRES *et al*; 2020). However, this method has limitations, such as not being able to clarify the respondent's doubts about a question and excluding people who do not have skills with virtual environments (FALEIROS *et al*; 2016).

With regard to the research methodology used, in general, most of them were cross-sectional studies (39 articles). There was one study that carried out a clinical trial, and another that compared two groups, collecting data at different times, making it a longitudinal study. According to the qualitative methodology, there were 15 studies; 18 quantitative; 4 quali-quantitative; and 5 authors did not make it clear which methodology they used in their research (Figure 4).

Figure 4 - Research methodologies used by the authors



Source: Prepared by the author.

The number of cross-sectional studies can be justified by focusing on a certain period of time, during the pandemic, with studies of the effects caused on students' mental health and routine, analyzing samples and participants, and identifying the absence or presence of some symptoms (HOCHMAN *et al.*, 2005).

With regard to the sample, there are more health students, such as medicine (12) and nursing (7), although there have been studies covering psychology, accounting sciences, dentistry, law, physiology, geology, biological sciences, history and postgraduate students, totaling 6 works. The reason why the author studied postgraduates may be because they are being neglected during the specialization period (SCORSOLINI-COMIN *et al.*; 2021). There was one specific study that worked with adolescents and 17 others that did not specify.

The higher number of studies of medical and nursing students may be linked to the fact that they are at the forefront of the control and treatment of Covid-19, in addition to the university challenges they often face, such as the demands of professors and the overload of course subjects (TEIXEIRA *et al.*, 2021a).

Consequences of the pandemic and social isolation on the mental health of university students

Faced with a pandemic scenario, it became necessary to take protective measures to prevent the proliferation of the disease, and social isolation came as a consequence, depriving people of social contact with each other and causing changes in routine. Remote learning was a strategy created by institutions in order to promote distance education, but this had a negative impact on the mental health of university students who felt more tired and overloaded with activities (GONÇALVES *et al.*; 2021). In a study by Messiano *et al.* (2021) 59.8% of their interviewees reported frequent overload in relation to the teaching modality. A high rate of withdrawal from subjects was found because many students face financial difficulties and are unable to reconcile work and studies (GUNDIM *et al.*; 2022).

In addition to the challenges in the academic environment, students have had to deal with changes in their life routine, anguish and uncertainty about the future during the pandemic, which has had a negative impact on the mental health of many young people (LIMA *et al.*; 2022). Thus, among the negative impacts most experienced by students during the lockdown period is the fear of dying, being contaminated or having sequelae left by the disease, losing a loved one, hopelessness, nervousness, loneliness, deep sadness and suicidal thoughts (GUNDIM *et al.*; 2022).

Loneliness was an aspect experienced a lot by university students who were left without contact with friends. According to Jantara *et al.* (2022), who related social isolation to loneliness, around 72.8% of those interviewed felt more alone during the lockdown. This fact, together with stressful events, was favorable to the emergence of psychiatric symptoms and psychological illnesses such as depression, anxiety and stress.

Dalpia *et al.* (2021) investigated the effects of the pandemic on the mental health of university students. With regard to the most common psychiatric symptoms and illnesses, he found a 72.3% prevalence of anger among students, 65.3% somatic symptoms, 48.6% repetitive thoughts, 57.9% sleep problems, 89.5% anxiety, 77.9% depression, 61.5% personality disorders, 43.8% use of psychoactive substances and 29.1% thoughts of self-extermination. In addition, according to the author, 54.9% of his interviewees said they were dissatisfied and unmotivated to carry out day-to-day tasks and 29.4% reported being dissatisfied with themselves.

In addition, there has been a change in the quality of life of many young people, who acquired bad habits during confinement and became subject to addictions. The use of illicit drugs intensified and was associated with the stress experienced and the psychopathological symptoms themselves. Around 43.8% of students claim to have consumed drugs and alcohol during the time they were socially isolated, and as a justification, reported that it was a way of coping with the stressful events they were exposed to (PORTELA *et al.*; 2022; DALPIAZ *et al.*; 2021).

The stress factor was also associated with the appearance of oral herpes in dentistry students at the Federal University of Juiz de Fora (UFJF), 9 students said they had herpes during the pandemic, 7 women and 2 men, which showed that females were more affected by the emotional effects during the pandemic period (FERREIRA *et al.*; 2022a). In a study by Miotto *et al.* (2022) which related chronic pain to anxious and depressive symptoms in nursing students, it was found that women were the most affected by pain, with a prevalence of 39.6%. The fact that women are more affected by psychological symptoms may be linked to psychosocial and genetic factors (MIOTTO *et al.*; 2022). In this way, it is important to broaden the reception of young university students, especially women.

Coping strategies found to mitigate the impacts of the pandemic on students' psychological health

In light of the negative impacts the Covid-19 pandemic has had on university students, educational institutions have developed online methods to welcome and support students at a time that is detrimental to them. But there are also strategies created by the students themselves to cope with isolation during the pandemic. Below we will discuss some of these strategies created by institutions and students.

The online therapeutic groups were created to provide a space where students could be heard and share their experiences. It was an experience in which we worked with music therapy, self-esteem and external demands. The students shared how they felt about the pandemic, challenges in their studies and their expectations for the future. The importance of this type of approach in coping with the impacts of the pandemic was highlighted, as well as the urgency of expanding environments like this to listen to and welcome students (VIVENZIO *et al.*; 2022).

Just as the online therapeutic groups were created by the institutions, the online

mentoring program for freshmen and senior students, also conceived within the universities, aimed to create a virtual space for interaction between mentors and mentees, strengthening bonds and welcoming students. At the end of each session, students were invited to give feedback on the negative and positive points and suggestions for possible improvements to the program (RIOS et al; 2021a; SILVA et al; 2021; ROCHA et al; 2021). According to Serra et al. (2021), this project not only had a positive impact on the lives of university students, but also encouraged further research into the effectiveness of mentoring on a digital platform.

Finally, there are some strategies found by the students themselves, known as coping strategies to reduce the effects of stressful situations (SCORSOLINI-COMIN et al; 2021). In a study by Gundim et al. (2022), around 67.1% of the students interviewed in their study used strategies to reduce psychological distress. According to them, the most effective strategies for promoting good mental health are partying, getting a good night's sleep, psychoactive drugs, watching movies and series, doing some physical activity and music therapy. It is important to note that stopping reading or watching news that causes distress and is broadcast in the media is an effective way of promoting mental health.

CONCLUSION

Given the pandemic and social isolation scenario, this study examined the main consequences of the Covid-19 pandemic on the mental health of higher education students. The study identified several negative effects of isolation on university students, including the lack of social contact with friends and family, changes in daily routines, and the shift from in-person to online classes, which resulted in increased academic workload. These factors contributed to the mental health deterioration of young people, who experienced heightened anxiety, worry, insecurity about the future, and loneliness during this period.

However, it is important to highlight the coping strategies implemented by educational institutions, such as mentoring programs and online therapeutic groups, which still need improvement. Additionally, students themselves developed strategies during isolation to mitigate the negative effects of the pandemic on their academic and personal routines.

The limitations of this study include the short timeframe in which it was conducted, the use of only two databases, and the inclusion of only national articles. It should be noted that this is still an understudied topic, and further research is needed to provide international data on the effects of the

pandemic on the psychological health of university students. There is also a need for field research to identify students' post-pandemic needs and propose public policies aimed at supporting students.

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