

# Psycho-emotional repercussions in Nursing students during the COVID-19 pandemic: a descriptive-exploratory study

## Repercussões psicoemocionais em estudantes de enfermagem na pandemia do COVID-19: estudo descritivo-exploratório

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### ABSTRACT

**Objective:** To determine the psycho-emotional impact of the Covid-19 pandemic on final-year nursing students and their coping strategies. **Method:** This is a qualitative, descriptive, exploratory research conducted through interviews with a semi-structured questionnaire consisting of open-ended questions on the topic. **Results:** Two thematic categories were identified: Repercussions of the Covid-19 pandemic on the psycho-emotional dimension of final-year nursing students and coping strategies adopted by final-year nursing students during the Covid-19 pandemic. The results indicated a significant increase in anxiety crises, demotivation, concentration difficulties, sleep disturbances, and rest-related problems. **Conclusion:** Developing interdisciplinary health promotion and prevention strategies related to mental health in partnership with educational institutions becomes necessary.

**Descriptors:** COVID-19; Students, Nursing; Mental Health.

### RESUMO

**Objetivo:** Identificar as repercussões psicoemocionais da pandemia da Covid-19 em estudantes do último ano do curso de Enfermagem e as estratégias de enfrentamento adotadas por eles. **Método:** Trata-se de uma pesquisa qualitativa descritiva exploratória realizada por meio de entrevista com questionário semiestruturado composto por questões abertas sobre o tema. **Resultados:** Foram criadas duas categorias temáticas: Repercussões da pandemia da Covid-19 na dimensão psicoemocional de estudantes do último ano do curso de Enfermagem e Estratégias de enfrentamento adotadas, durante a pandemia da Covid-19, pelos estudantes do último ano do curso de Enfermagem. Os resultados apontaram um aumento significativo das crises de ansiedade, desmotivação, dificuldade de concentração, distúrbios do sono e do repouso. **Conclusão:** Faz-se necessário o desenvolvimento de estratégias intersetoriais de promoção da saúde e prevenção relacionadas à saúde mental em parceria com as instituições de ensino.

**Descritores:** COVID-19; Estudantes de Enfermagem; Saúde Mental.

### INTRODUCTION

The high transmissibility of Covid-19 required drastic measures of social isolation by health authorities worldwide. These measures ranged from strict lockdowns, halting public and private activities, to border closures, with only essential services remaining operational. Such measures were deemed necessary to contain the spread of the virus and prevent health systems from collapsing due to the mismatch between patient demand and system response capacity<sup>(1)</sup>. The closure of educational institutions in more than 194 countries, affecting more than 91% of enrolled students<sup>(2)</sup>, was justified by the high circulation of individuals in these settings, which could potentially amplify the spread of the virus.

Institutions had to adapt to a new educational reality from primary to higher education to avoid a complete shutdown of their activities. At the university level, Emergency Remote Teaching (ERT) was introduced. As a result, both professors and students had to adapt their teaching and learning methods to digital platforms and their study strategies and locations<sup>(2-3)</sup>.

However, social isolation resulting from confinement has been identified as a major contributor to the negative mental health outcomes of individuals exposed to such situations. A Chinese study of 1,210 participants found that 53.0% of incarcerated individuals experienced psychological effects, including depressive symptoms, anxiety, and stress. The greatest impact was felt by women, students, and those with symptoms associated with Covid-19<sup>(4)</sup>. Another study of 237 students at a public university in the Brazilian Midwest showed that social distancing caused by the pandemic led to experiences characterized by worry, anxiety, distress, upheaval, and emotional instability<sup>(5)</sup>.

It is believed that the mental health consequences of the pandemic may persist for many years, leading to an increase in mental illnesses such as post-traumatic stress disorder and burnout. It has been attributed partly to the socialization of mental health issues, resulting in socioeconomic impacts and feelings of loneliness due to the Covid-19 control measures<sup>(2,5,6)</sup>.

In this regard, another study of 477 members of an academic community at a nursing school, including professors and students, found that 19.29% experienced psychological distress that may have been triggered or exacerbated by the social isolation caused by Covid-19<sup>(7)</sup>.

In addition, the abrupt interruption of university life and the possibility of being hired as emergency workers in the units where they were doing their nursing internships for graduate students means an abrupt interruption of their training. This means a reduced acquisition of competencies to face responsibilities at work, leading to feelings and psycho-emotional changes due to increased vulnerability to psychosocial disorders. Nevertheless, the full extent of the impact of the Covid-19 pandemic on students' mental health remains uncertain<sup>(2-3,7)</sup>.

Given the expected impact of the pandemic on students, it is crucial to conduct studies focusing on their experiences to contribute to the development of health promotion strategies related to mental health. Based on the above, the present study aimed to identify the psycho-emotional impact of the Covid-19 pandemic on final-year nursing students and their coping strategies.

## METHOD

A descriptive, exploratory study with a qualitative approach was conducted at a private administration higher education institution located in Juiz

de Fora, Minas Gerais (MG).

The study participants were 18 undergraduate Nursing students, selected intentionally from students in their final year of the course – graduates – during the year 2020. The invitation was extended through phone contacts. Inclusion criteria were: age 18 or older, being in the final year of the Nursing course and working on their Final Course Project (TCC), and willingly agreeing to participate in the study. Exclusion criteria were: dropping out of the course, medical leave, and refusal to participate, resulting in the exclusion of 4 students.

The saturation criterion employed was reaching a minimum of 80% of interviews with final-year Nursing undergraduate students.

Data collection occurred through interviews between September and October 2020 in a remote environment via video call using Google Meet. This communication method was chosen due to the need for social distancing stemming from the Covid-19 pandemic. Interviews were scheduled according to participants' availability and were conducted by the study researchers, who were trained by the principal researcher and had no prior relationship with the interviewees.

A semi-structured questionnaire with demographic data to characterize the participants was utilized for the interview direction, along with open-ended questions related to the topic. These questions included: How did you feel when the Covid-19 pandemic began? What were the consequences of the interruption of practices for you, being near the end of the course? What feelings did these evoke? What concerns you the most? What strategies did you use to alleviate emotional consequences? How did you complete your TCC? From the responses, it was possible to understand the experiences of final-year students during the Covid-19 pandemic and how they dealt with emotional consequences.

The interviews were recorded and had an average duration of 45 minutes. To ensure accuracy, they were transcribed after the interviews then shared with the students for reading and validation of the information.

Data analysis was conducted using the thematic-categorical content analysis technique<sup>(8)</sup>. Initial floating readings were done for researchers to familiarize themselves with the findings and the contexts of the statements. Subsequent repeated and exhaustive readings facilitated the identification of registration units (themes), and their marking in the testimonies was subsequently grouped

into units of meaning to form thematic categories, considering the similarity of extracted meanings from the excerpts. This process was conducted without software use. The presentation and interpretation of data considered thematic segments and corresponding text fragments grounded in available national and international literature.

All ethical principles for research involving human subjects were observed, including compliance with the General Data Protection Law (LGPD). This research was approved by the Research Ethics Committee (CEP) of the *Sociedade Universitária para o Ensino Médico Assistencial* (SUPRE-MA) institution, which belongs to the *Faculdade de Ciências Médicas e da Saúde*, located in Juiz de Fora-MG (CAAE 40091520.2.0000.5103; Opinion: 4.643.563).

Alphanumeric codes identify participants to ensure information anonymity. All participants read, signed, and received a copy of the Informed Consent Form (TCLE).

This research adhered to the COREQ (Consolidated Criteria for Reporting Qualitative Research) guidelines for qualitative research.

## RESULTS

### Characterization of participants

The study included 18 final-year undergraduate nursing students in 2020. Four students were excluded based on predetermined criteria. Of the

18 students selected, all agreed to participate in the research. The participant profile was predominantly female ( $n = 15$ ; 83.3%), single ( $n = 15$ ; 83.3%), living with a family ( $n = 11$ ; 61.1%) - among the rest, one ( $n = 5.5\%$ ) lived in a shared residence and six ( $n = 33.3\%$ ) lived alone - and from a middle socioeconomic level ( $n = 15$ ; 83.3%). The age range included young adults - 21 to 31 years - with an average age of 23.4 years. Notably, ten students ( $n = 55.5\%$ ) had paid jobs. In terms of their current academic semester, 13 ( $n = 72.2\%$ ) were in their 8th semester and five ( $n = 27.8\%$ ) were in their 7th semester.

### Process of coding and categorization of findings

From the reading and coding of the testimonies, it was possible to identify 15 units of registration, which were grouped into 4 units of meaning. Subsequently, based on the similarity of meanings, these formed the thematic categories: Repercussions of the Covid-19 pandemic on the psycho-emotional dimension of final year nursing students and Coping strategies adopted by final year nursing students during the Covid-19 pandemic, as shown in Figure 1.

### Repercussions of the Covid-19 pandemic on the psycho-emotional dimension of final-year nursing students

The effects of the Covid-19 pandemic on the

Registration Units	Units of Meaning	Theme Categories
Anguish	Negative feelings and emotions triggered by the Covid-19 pandemic	Repercussions of the Covid-19 pandemic on the psycho-emotional dimension of final year nursing students
Fear		
Frustration		
Demotivation		
Sleep problems	Psycho-emotional responses to the Covid-19 pandemic	
Stress		
Uncertainty		
Worry about the future	Negative coping with psycho-emotional responses arising from the Covid-19 pandemic	Coping strategies for psycho-emotional factors experienced by nursing students in the Covid-19 pandemic.
Self-medication		
Tobacco use		
Alcohol use		
Withdrawal		
Social support	Positive coping with psycho-emotional responses arising from the Covid-19 pandemic	
Physical activity		
Leisure activity		

**Figure 1** – Systematization of the thematic-categorical content analysis of the interviews. Juiz de Fora, MG, Brazil, 2020

mental health of the nursing students studied can be divided into two types: negative feelings and emotions related to depressive symptoms, and various psycho-emotional responses related to future expectations.

The graduating students reported experiencing feelings associated with distress that negatively impacted their lives and triggered unpleasant reactions. These feelings disrupted their sleep patterns, disrupted their daily routines, and led to thoughts of insecurity and loss of the ability to act voluntarily and freely. This is evident in the following accounts:

*[...] I had a panic attack when I left home in the middle of the pandemic. I had trouble concentrating and sleeping. It was a feeling of insecurity mixed with a bit of fear, but these feelings were present even before the peak of the pandemic. (E2)*

*I found it hard to concentrate and sleep. (E3)*

*I had a lot of anxiety because we did not know what it was about, if we were going to have to stay without going to college. And being part of the at-risk group, I felt a lot of uncertainty. (E12)*

On the other hand, other graduates mentioned fear as an emotional repercussion of insecurity related to the new and unexpected situation, which represented a danger to their lives and those of their families, as observed in the reports:

*[...] I had a lot of fear, not of it happening to me, but of contracting it and passing it on to my family. I had minimal contact with people who had Covid-19, but I still felt a lot of fear and uncertainty. (E13)*

*It was a very difficult time, I felt lost and very scared. [...] I also felt insecure because we left the clinics (internships) and didn't have a set date to return. (E14)*

*I felt very scared because it happened so fast. [...] Not knowing how we would proceed with the final course project, I felt frustrated. (E15)*

Another aspect to highlight is the psycho-emotional reactions, such as demotivation and lack of interest in usual activities, as these statements reveal:

*I felt unmotivated, I had an anxiety attack, I also felt discouraged by the whole situation around me. (E1)*

*I felt demotivated. At first, I did not feel safe to leave the house. (E3)*

*I felt demotivated, without energy to continue with my responsibilities, I wanted to leave everything every day. (E5)*

Amidst the pandemic, anxiety about the future arose in response to the circumstances affecting their professional training, exacerbating psychosocial stress. This anxiety is evident in their feedback:

*We were expecting to graduate at the end of the year [...]. There was a lot of uncertainty and anxiety about graduation; we had already set a date and the pandemic disrupted it. I saw my plans fall apart because of the time we spent at home without classes, and since I was close to graduating, I was very worried. (E4)*

*The interruption of the internship was stressful because we had planned to finish as soon as possible. We became anxious and put a lot of pressure on ourselves. (E7)*

*I felt completely lost and very scared of everything. I had no say in anything; I did not know what was going to happen, if I would be able to graduate, if I would be able to work. It was one of the worst moments of my life; I didn't know what to do. (E9)*

*It made me sad because I did not know what would happen. (E18)*

### **Coping strategies for psycho-emotional factors experienced by nursing students in the Covid-19 pandemic**

Faced with the challenges posed by the pandemic, graduates had to use coping strategies to manage the psycho-emotional impact and adapt their usual activities to the new reality. Among the strategies mentioned, social support and engagement in physical and recreational activities were identified as positive, as they not only alleviated the psycho-emotional stress of the pandemic but also promoted health and well-

-being. Conversely, negative mechanisms such as isolation, self-medication, and alcohol and tobacco use were mentioned.

Social support was the most frequently mentioned coping strategy in the participants' accounts. This may be due to the human aspect of the nursing education process, which involves empathic listening and collaboration. In addition, the use of messaging applications was noted as a tool to bridge distances in an attempt to cope with the situation, as seen in the following statements:

*The support of my family was crucial because we spent a lot of time together talking. If it was not for my family, friends, professionals and people I care about, I don't know how I would have made it. (E5)*

*I talked a lot with the people I like and am close to, I talked about being unmotivated, about having lost my way. [...] I talked a lot on WhatsApp with my friends. (E6)*

*I went to the country to be with my family and to talk to my friends, if only on the Internet. (E14)*

Regarding the positive strategies, which not only addressed the stressor – the pandemic – but also effectively impacted the levels of health and well-being of the graduates, engaging in physical activities and leisure activities such as watching movies, going for walks, and reading were mentioned, as indicated in the provided statements:

*I had my distractions, which was watching movies. (E6)*

*I did physical activity every day and it helped me a lot. (E7)*

*I was trying to cope with it, because I saw that at the beginning we had no prediction of when the pandemic would pass, we had no prediction of anything, so I was learning to cope, trying to occupy my time as much as possible. I read books and saw psychologists' congresses, I was adapting. (E9)*

*I did physical activity, even at home, and that helped me. (E11)*

*Physical activity helped me a lot. (E13)*

However, self-medication to cope with the effects of the Covid-19 pandemic was also mentioned, although this is a group that would be expected to know the risks of this practice. This was probably due to anxiety and attempts to improve sleep problems. The following excerpts illustrate this reality:

*I have used self-medication, but not anxiolytics or antidepressants, although I feel like it; I don't feel safe when I leave the house. (E5)*

*I had the need to seek psychological help, and used self-medication (anxiolytics and antidepressants), as I had problems concentrating and sleeping. (E13)*

*I had the need to seek psychological help and resorted to self-medication. (E16)*

However, two students mentioned the use of medication with medical prescription, as observed in the following statements:

*I used medication prescribed by the doctor (paroxetine). (E10)*

*I started taking anxiolytics, but with monitoring. (E12)*

The act of smoking and the use of alcoholic beverages were also mentioned by one graduate as strategies to alleviate pandemic-related anxiety:

*During this pandemic period, I noticed that my smoking habit increased significantly, serving as a way to cope. The use of alcoholic beverages also became more frequent. (E16)*

Some strategies mentioned by the graduates indicate a passive response to the problem, involving withdrawal and distraction, as highlighted in the following descriptions:

*I focused more on my year-end project and some personal projects. I felt relieved about the pandemic because I wasn't in the hospital. (E8)*

*I stopped watching the news, stopped looking for information about the pandemic, and made an effort to leave my apartment. (E10)*

*I tried studying other subjects. I took courses on the Internet. (E14)*

*I focused on other things, and that made me more relaxed. (E17)*

## DISCUSSION

The results presented show important aspects to guide discussions about the psycho-emotional impact of the Covid-19 pandemic on nursing students, along with the coping strategies adopted by them. It is also necessary to consider the relevance of the respondents' profile, which is similar to that of participants in other studies. It is important to understand gender relations, given the cultural, social, and hormonal influences on the development of mental disorders. A higher prevalence of mental health problems has been found among female university students<sup>(9)</sup>. The psychosocial and cultural determinants of mental health problems prompt reflection on the context in which women are placed. This includes inferiority and subordination to the male figure, inequalities in the labor market, responsibility for household work, care for relatives, and imposition of beauty standards, among other conditions that shape patriarchal society and influence their health and well-being. In addition, the perception of fear of Covid-19 is greater among women, whose demands for multiple social roles have increased during this pandemic period. This underscores the importance of including a discussion of gender in nursing education<sup>(10)</sup>. This study observed the presence of increasingly younger nursing students, with graduates identified at approximately 21 years of age, a recurring finding in the literature<sup>(11-12)</sup>. This reflects the rejuvenation of the field, due to factors such as policies to promote higher education in Brazil and the importance placed on financial independence and delaying marital commitments, reinforced by the predominantly unmarried and employed sample of this study. However, one study points out that working students have greater difficulties in balancing academic activities, which may lead to lower academic performance<sup>(9)</sup>. Underscoring the need to consider the profile of university students in discussions of mental health, a study showed that living with parents and knowing individuals or relatives infected with Covid-19 may have contributed to increased anxiety levels<sup>(13)</sup>, which is consistent with the findings of this study.

However, it is worth considering that being a student, especially in the healthcare field, can be a protective factor against feelings of distress and anxiety due to access to pandemic-related information. This reduces feelings of helplessness and promotes the adoption of health prevention and promotion strategies<sup>(13)</sup>. These considerations are consistent with a Brazilian study showing that being a student is a protective factor against perceived anxiety and distress related to the victimization of family members<sup>(10)</sup>.

The Covid-19 pandemic found a fertile ground for chaos in Latin American countries - unstable political situations, economic crises, and collapsing health systems - and accentuated social inequalities in Brazil. Despite the repeated studies of the pandemic's impact on mental health over the past two years, it is valid to continue studying the topic, given the ever-changing global and international landscape and the mental health issues that are considered the fourth wave of the pandemic<sup>(14)</sup>.

The effects of the pandemic were diverse in the psycho-emotional domain, as expressed by the respondents, who highlighted a significant increase in anxiety crises, demotivation, concentration difficulties, and sleep disturbances. These manifestations occur as a consequence of the isolation and social distancing measures adopted to prevent viral transmission, which could have been essential factors in the results presented, similar to other studies<sup>(2,6-7,10,15)</sup>.

The anxiety felt by people is understandable given the impact of the pandemic on their lives. During the period of social distancing, concerns about its duration, frustration or boredom due to reduced social contact, and lack of care and information about the progress of the pandemic and future economic issues are stressors. All of these can lead to changes in eating habits, mood, and anxiety, as shown by the results of this study. In addition, there may be family conflict and excessive use of alcohol or illicit drugs. These findings are consistent with studies in Portugal and Greece that found an increase in cases of various mental disorders and psycho-emotional manifestations after the suspension of face-to-face classes<sup>(15-16)</sup>.

The information disseminated by the media, the significant increase in the number of Covid-19 deaths and positive cases, and the interruption of university activities were some of the elements that, according to the students interviewed, contributed to the uncertainty in their professio-

nal development. A study conducted in Greece among 1,000 university students on the impact on their mental health during the lockdown considered the pandemic as an unexpected phenomenon that caused global uncertainty. It also noted that people's behavior in this situation is closely related to their environment and that this uncertainty represents a complex system of adaptation to new lifestyles<sup>(16)</sup>.

However, the students' period of adjustment to new lifestyles was complicated by the fact that the pandemic scenario caused an even greater economic crisis in Brazil, resulting in numerous job losses and significant financial instability<sup>(14)</sup>. This circumstance of economic hardship generates stress and affects the mental well-being of the population, as highlighted by some study participants as a factor affecting the psycho-emotional dimension, leading to anxiety, stress and pressure, a recurring situation in published studies<sup>(14-17)</sup>.

Strategies used by respondents to manage emotional distress and promote psychological well-being included engaging in physical activity, diverting excessive attention away from pandemic-related news and information to other focuses such as books, movies, casual conversations within supportive social networks such as family and friends, and the use of alcohol and tobacco. Although effective in reducing levels of psycho-emotional manifestations, some of the strategies adopted by students are considered negative from the standpoint of maintaining overall health and well-being<sup>(17-18)</sup>.

The impact of the pandemic has been expressed by students through increased use of over-the-counter medications such as anxiolytics and antidepressants. A study of 305 health science students had already shown that the prevalence of self-medication was higher in this group than in the general population, which was associated with the pharmacological training these students received during their undergraduate studies<sup>(18)</sup>. The pandemic has exacerbated the factors associated with self-medication in the population, as noted in a study showing an increase in self-medication, especially among young people, with analgesics being the most sought-after over-the-counter medicines. This is closely related to the fear of illness or somatic symptoms. Other factors associated with self-medication among health students include family pressure and a society dominated by academic and work obligations. This reinforces the view that the

psychosocial impact on a population exposed to the pandemic can be multifaceted<sup>(2,6,10,17-19)</sup>.

In addition, negative strategies, alcohol, and tobacco use among university students have been identified in other studies<sup>(10-15)</sup> and appear to be common due to their legality, social acceptance, promotion of sociability and relaxation. One study found that alcohol and tobacco use was higher among older students, with physical activity serving as a protective factor against such use. It was also found that after entering university, tobacco use and physical activity increased<sup>(18)</sup>. Another finding in the literature is the influence of gender on alcohol consumption, which tends to be higher among males. This is confirmed in this study, as alcohol and tobacco use were only mentioned by one male student as a coping strategy for the pandemic. Thus, alcohol consumption seems to be part of the academic culture, especially when students do not live with their parents, as other studies have shown<sup>(10)</sup>. However, it should be noted that alcohol consumption can negatively affect academic performance<sup>(18)</sup>. Strategies of avoidance or escapism were mentioned by students, but they are not very effective in solving problems. In these situations, participants showed passive behavior and resignation to the problem - the pandemic and the interruption of personal activities. One study showed that avoidance is not a common coping strategy among nursing students, but when it is used, it negatively affects their quality of life and academic performance<sup>(19)</sup>.

Therefore, this study highlights the vulnerability of young people's mental health and the importance of addressing it. The findings provide an important guideline for focusing attention on the mental well-being of young people. Recognizing that good mental health facilitates the functioning of individuals, families, communities, and societies, it becomes critical in countries' responses to Covid-19 and pandemic recovery.

### **Limitations of the study**

The sample covered a significant proportion of the final year nursing students at the selected institution. However, the research could be applied in other institutions, which would contribute to a more comprehensive view of the topic under study.

### **CONCLUSION**

The results of this study suggest that nursing students underwent experiences that triggered

psychosocial effects as they were confronted with emotions that affected their mental health. However, their resilience in adapting to the changes in their lifestyle and their motivation to continue their academic journey enabled them to develop and implement strategies to cope with the challenges posed by the Covid-19 pandemic.

In light of these findings, the importance of conducting qualitative studies that delve deeply into phenomena and explore the impact of events on human subjectivity is reaffirmed.

## REFERENCES

1. Hillesheim D, Tomasi YT, Figueiró TH, Paiva KM. Severe Acute Respiratory Syndrome due to COVID-19 among children and adolescents in Brazil: profile of deaths and hospital lethality as at Epidemiological Week. *Epidemiol Serv Saúde*. 2020;29(5):e2020644. <https://doi.org/10.1590/S1679-49742020000500021>
2. Jantara RD, Abreu DPG, Santana LL, Piexak DR, Ribeiro JP, Barlem JGT. Social isolation and loneliness in nursing students in the context of the COVID-19 pandemic. *Ver Enfer UERJ*. 2022;30:20-2. <https://doi.org/10.12957/reuerj.2022.63609>
3. Araújo ARL, Souza LMC, Carvalho RBS, Oliveira ADS, Amorim FCM, Souza KHJF, et al. Remote work of nurse-professors in pandemic times. *Esc Anna Nery*. 2021;25(spe):e20210198. <https://doi.org/10.1590/2177-9465-EAN-2021-0198>
4. Lei L, Huang X, Zhang S, Yang J, Yang L, Xu M. Comparison of prevalence and associated factors of anxiety and depression among people affected by versus people unaffected by quarantine during the COVID-19 Epidemic in Southwestern China. *Med Sci Monit*. 2020;26:1-12. <https://doi.org/10.12659/MSM.924609>
5. Pereira-Ávila FMV, Lam SC, Goulart MCL, Góes FGB, Pereira-Caldeira NMV, Gir E. Factors associated with symptoms of depression among older adults during the COVID-19 pandemic. *Texto Contexto Enferm*. 2021;30:e20200380. <https://doi.org/10.1590/1980-265X-TCE-2020-0380>
6. Gama LMP, Souza VS, Lopes SGR, Arruda GO, Lima HP, Baptista CJ. Social distancing and emotional state of university students in the COVID-19 pandemic: a descriptive-exploratory study. *Online Braz J Nurs*. 2022;21:e20226577. <https://doi.org/10.17665/1676-4285.20226577>
7. Rafael RMR, Correia LM, Mello AS, Prata JA, Depret DG, Espírito-Santo TB, et al. Psychological distress in the COVID-19 pandemic: prevalence and associated factors at a nursing college. *Rev Bras Enferm*. 2021;74:e20210023. <https://doi.org/10.1590/0034-7167-2021-0023>
8. Oliveira DC. Análise de conteúdo temático-categorial: uma proposta de sistematização. *Rev Enferm UERJ*. 2018 [citado 22 Ago 21];16(4):569-76. Disponível em: <http://files.bvs.br/upload/S/0104-3552/2008/v16n4/a569-576.pdf>
9. Karaca A, Yildirima N, Cangur S, Acikgoz F, Akkus D. Relationship between mental health of nursing students and coping, self-esteem and social support. *Nurse Educ Today*. 2019;76:44-50. <https://doi.org/10.1016/j.nedt.2019.01.029>
10. Modena CF, Kogien M, Marcon SR, Demenech LM, Nascimento FCS, Carrijo MVN. Factors associated with the perception of fear of COVID-19 in university students. *Rev Bras Enferm*. 2022;75:e20210448. <https://doi.org/10.1590/0034-7167-2021-0448>

It is essential to develop interdisciplinary health promotion and mental health prevention strategies in collaboration with educational institutions. This could include the expansion of psychological support by specialized professionals and the implementation of initiatives aimed at promoting the integration of teachers and students to share experiences.

## CONFLICT OF INTERESTS

The authors have declared that there is no conflict of interests.

11. Einhardt KG, Bordignon SS, Tomaszewski-Barlem JG, Castanheira JS, Rocha LP, Carvalho DP. Nursing students: the use of digital social network to profile nurses. *Rev Bras Enferm.* 2022;75(4):e20200865. <https://doi.org/10.1590/0034-7167-2020-0865>
12. Aguiar KLA, Vieira MA, Domenico EBL. Analysis of evaluations performed by undergraduate nursing alumni: a Brazilian multicenter study. *Rev Esc Enferm USP.* 2021;55:e20200084. <https://doi.org/10.1590/1980-220X-REEUSP-2020-0084>
13. Chang J, Yuan Y, Wang D. Mental health status and its influencing factors among college students during the epidemic of COVID-19. *J South Med Univ.* 2020;40(2):171-176. <https://doi.org/10.12122%2Fj.issn.1673-4254.2020.02.06>
14. Lima LD, Pereira AMM, Machado CV. Crisis, conditioning factors, and challenges in the coordination of Brazil's federative State in the context of COVID-19. *Cad Saúde Pública.* 2020;36(7):e00185220. <https://doi.org/10.1590/0102-311X00185220>
15. Maia BR, Dias PC. Ansiedade, depressão e estresse em estudantes universitários: o impacto da COVID-19. *Estud Psicol.* 2020;37:e200067. <https://doi.org/10.1590/1982-0275202037e200067>
16. Kaparounaki CK, Patsali ME, Mousa DV, Papadopoulou EVK, Papadopoulou KKK, Fountoulakis KN. University students' mental health amidst the COVID-19 quarantine in Greece. *Psychiatry Res.* 2020;290:113111. <https://doi.org/10.1016/j.psychres.2020.113111>
17. Duarte MQ, Santos MAS, Lima CP, Giordani JP, Trentini CM. Covid-19 and the impacts on mental health: a sample from Rio Grande do Sul, Brazil. *Cien Saúde Colet.* 2020;25(9):3401-34011. <https://doi.org/10.1590/1413-81232020259.16472020>
18. Pires CS, Bezerra MAL, Amorim AT. Consumption of psychotropic drugs among adolescents during the COVID-19 pandemic. *Res Soc Dev.* 2022;11(7):e54011730527. <http://dx.doi.org/10.33448/rsd-v11i7.30527>
19. Cestari VRF, Barbosa IV, Florêncio RF, Pessoa VLMP, Moreira TMM. Stress in nursing students: study on sociodemographic and academic vulnerabilities. *Acta Paul Enferm.* 2017;30(2):190-6. <https://doi.org/10.1590/1982-0194201700029>

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