





# A COMPARATIVE STUDY IN AN ACADEMIC COMMUNITY: HEALTH, STRATEGIES, AND SUPPORT NETWORK DURING THE PANDEMIC PERIOD

# ESTUDO COMPARATIVO EM UMA COMUNIDADE ACADÊMICA: SAÚDE, ESTRATÉGIAS E REDES DE APOIO EM PERÍODO PANDÊMICO

ESTUDIO COMPARATIVO EN UNA COMUNIDAD ACADÉMICA: SALUD, ESTRATEGIAS Y RED DE APOYO EN PERIODO PANDÉMICO

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ABSTRACT: The COVID-19 pandemic has brought profound changes to Higher Education Institutions' work and educational routines. Therefore, an exploratory-descriptive and quantitative study was conducted, aiming to compare the impacts of this period on a private academic community regarding perceptions of health, strategies, and support networks. A total of 403 individuals participated, including 206 students, 115 faculty members, and 82 administrative staff. A questionnaire was administered via Google Forms and the Institution's digital platform. In the statistical analyses using ANOVA, the greater vulnerability of students was highlighted regarding the impacts on physical and emotional health, as well as a lower perception of support networks. These findings assist in planning institutional policy actions for different academic community members, not only to address the pandemic's effects but also with a focus on physical and emotional well-being amidst constant changes in the educational environment.

**KEYWORDS**: COVID-19. Higher education. Mental health. Strategies. Psychosocial support.

RESUMO: A pandemia ocasionada pela COVID-19 provocou profundas alterações na rotina laboral e educacional das Instituições de Ensino Superior. Assim, fez-se um estudo exploratório-descritivo e quantitativo, cujo objetivo foi comparar os impactos desse período em uma comunidade acadêmica privada quanto às percepções sobre saúde, estratégias e redes de apoio. Participaram 403 pessoas, sendo 206 discentes, 115 docentes e 82 técnicos-administrativos. Aplicou-se um questionário pelo Google Forms e na plataforma digital da Instituição. Nas análises estatísticas do ANOVA, destacaram-se maior vulnerabilidade dos discentes quanto aos impactos na saúde física e emocional, assim como menor percepção das redes de apoio. Considera-se que tais achados poderão auxiliar no planejamento de ações políticas institucionais para diferentes membros da comunidade acadêmica, não somente para reparar os danos da pandemia, mas também com foco no bem-estar físico e emocional diante de mudanças constantes no ambiente educacional.

**PALAVRAS-CHAVE:** COVID-19. Ensino superior. Saúde mental. Estratégias. Apoio psicossocial.

RESUMEN: La pandemia causada por la COVID-19 ha provocado profundas alteraciones en la rutina laboral y educativa de las Instituciones de Educación Superior. Por lo tanto, se realizó un estudio exploratorio-descriptivo y cuantitativo cuyo objetivo fue comparar los impactos de este período en una comunidad académica privada en cuanto a percepciones sobre salud, estrategias y redes de apoyo. Participaron 403 personas, incluyendo 206 estudiantes, 115 profesores y 82 personales técnico-administrativos. Se aplicó un cuestionario a través de Google Forms y en la plataforma digital de la Institución. En los análisis estadísticos de ANOVA, se destacó una mayor vulnerabilidad de los estudiantes en cuanto a los impactos en la salud física y emocional, así como una menor percepción de las redes de apoyo. Se considera que estos hallazgos podrían ayudar en la planificación de acciones políticas institucionales para diferentes miembros de la comunidad académica, no solo para reparar los daños de la pandemia, sino también con un enfoque en el bienestar físico y emocional ante los constantes cambios en el entorno educativo.

**PALABRAS CLAVE**: COVID-19. Educación superior. Salud mental. Estrategias. Apoyo psicosocial.

#### Introduction

The COVID-19 pandemic, experienced more intensely in the years 2020 and 2021, was recognized by the World Health Organization (WHO) as a respiratory disease with a high rate of spread and mortality caused by the SARS-CoV-2 coronavirus and considered a threat to public health with international scope, making it essential to adopt preventive measures such as social distancing, mask-wearing, hand sanitizing, among others (WHO, 2020).

Given the scenario of rapid virus proliferation worldwide, there was a need to close business establishments, commercial enterprises, social institutions, as well as public and private schools and universities, which had to migrate their face-to-face activities to remote teaching and/or work mediated by digital technologies and communication (TDIC).

The methodological and pedagogical adaptations resulting from emergency remote teaching and the increased visibility of the work modality known as home office, telecommuting, or remote work encouraged several Brazilian and foreign researchers to study the impacts of the pandemic on physical health (SOARES, 2021; LIMA, 2022) and emotional health in the workplace and academic settings. The main scientific findings pointed to increased levels of stress, depression, anxiety, fear of illness, insecurity about professional future, anguish, mourning, and frustration both in teachers and university students (RIBEIRO *et al.*, 2021; SANTOS; SILVA; BELMONTE, 2022; ZIERE *et al.*, 2021). Such symptoms were also experienced by professionals who needed to adapt their routine to remote work (VEBBER; BORGES, 2022).

Moreover, the academic community faced intense challenges in balancing work, family, and study demands, including remote classes, increased work pace or study workload, difficulty managing time, and lack of adequate resources for carrying out activities, such as computers, furniture, and internet connection. In some cases, challenges included a lack of training in using communication and information technologies, such as Zoom, Google Meet, Teams, Kahoot, and Trello, among other platforms that allow for virtual meetings and remote classes, application of active methodologies, and organization of work methods (FRANCISCO *et al.*, 2021; SANTOS; SILVA; BELMONTE, 2021).

Still, within the pandemic context, studies by Clemence and Stoppa (2020) and Lima (2022) generally pointed out the main coping strategies, such as increased activities involving internet access, reading, listening to music, and engaging in physical activity. In this sense, it is

worth adding the importance of the social, family, and institutional support network in reducing risks to emotional health during the pandemic period (JANTARA *et al.*, 2021).

Despite the studies presented, recent searches in scientific journals using descriptors related to the COVID-19 pandemic, the academic community, higher education, university, mental health, and physical health revealed that there are few studies that encompass all members of the university community. However, the empirical research by Ribeiro *et al.* (2021) conducted with 586 individuals from the Federal University of Health Sciences of Porto Alegre was found, as well as the integrative review study by Ribeiro *et al.* (2023). Both studies addressed the psychological effects of the COVID-19 pandemic on the academic community, however, no comparative analyses were conducted among the members involved in university education.

Given these gaps in the literature and the thematic relevance, it is necessary to analyze HEIs as a whole, giving visibility to their members and seeking to answer some questions: which group of the academic community was most affected in their emotional and physical health? What strategies did they adopt to mitigate such losses? Were they able to reconcile their demands? Did they have support networks? Did they feel the desire to abandon their studies or work?

Therefore, the aim of this study was to analyze and compare the impacts on emotional and physical health, considering the technical-administrative staff, faculty, and students belonging to a private Higher Education Institution (HEI). Additionally, it sought to identify the habits and strategies adopted during the pandemic period, along with family and institutional support networks, and whether there were differences in perceptions of the studied variables among the three groups involved. It was hypothesized that due to the shorter period of social distancing, the group of technical-administrative staff would possibly have less impact on their physical and emotional health. At the same time, students would have greater impairments to their health condition, consequently, a smaller repertoire of strategies and habits adopted, as well as family and institutional support networks.

This study hoped to contribute to universities by raising awareness of the importance of establishing institutional policies aimed at implementing programs focused on emotional health and developing assertive coping strategies for members of the academic community. In addition, it aimed to broaden the theme and understanding of the pandemic context in the educational and scientific spheres.

## **Methodological Procedures**

This was a mixed-method study, with an exploratory-descriptive, comparative, cross-sectional design, employing documentary analyses, convenience sampling, and a quantitative approach (COZBY, 2003).

### **Participants**

The study included a non-probabilistic sample of 403 participants, composed of 82 individuals from the technical-administrative staff, 115 faculty, and 206 students, belonging to a private Higher Education Institution located in the state of São Paulo, which offers 38 undergraduate courses in various areas including Exact Sciences, Social Sciences, Health, and Humanities, with a total population of 4,686 individuals. The only inclusion criterion was having an affiliation with the institution, while exclusion criteria included responding incompletely, being on maternity leave, on leave, or vacation, as well as being under 18 years of age.

#### Instruments

Participants completed an online questionnaire comprised of three thematic axes, containing objective questions distributed as follows: a) Personal aspects: physical and emotional health, adopted strategies and/or habits; b) Family Demands and Support; and c) Institutional Aspects. All questions presented six Likert-type response options, ranging from "strongly disagree" (1) to "strongly agree" (6).

#### **Data Collection Procedures**

With the approval of the Higher Education Institution (HEI), the research proposal was submitted and approved by the Research Ethics Committee (REC) with human subjects (Opinion No. 5,065,691 and CAAE 52667921.5.0000.5502). This procedure followed the guidelines of the National Health Council, Resolution No. 466/2012, for research involving human subjects.

The first part of the study consisted of the documentary analysis of data concerning faculty and staff, which the HEI collected through its own digital platform. The researcher participated in the questionnaire development, which a group of professors and interns from the Psychology course validated.

Continuing with the second part, which involved the application of the same instrument to students during the pandemic period, the Institution sent it to students' emails, following the provisions of the Data Protection Law. It was also distributed via WhatsApp to course coordinators with the intention of being forwarded to course representatives, thus reaching all students of the higher education institution (HEI). This method is also known as the virtual snowball technique.

The Informed Consent Form (ICF) was made available to students through a *Google Forms link* containing information about the research objectives, application conditions, and ethical considerations. After digitally accepting the ICF, access to the online questionnaire was granted. If a student did not agree to participate, they had to close the page in the browser. The response time was approximately 8 to 10 minutes. After filling out the questionnaire, the student had to click "submit questionnaire" to finalize the survey.

#### **Data Analysis Procedures**

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The collected data were consolidated and organized using Microsoft Excel software. A descriptive statistical analysis was also performed, including the percentage analysis of the variables studied, which encompassed emotional and physical health, strategies, and support networks. Subsequently, an analysis of variance (ANOVA) was conducted, and a statistical test was used to compare variations between the means or medians of different groups (technical-administrative staff, faculty, and students). All analyses were conducted at a significance level of 5% (CALLEGARI-JACQUES, 2004).

#### **Results and Discussion**

Table 1 presents the percentages of the means (ANOVA) in the three groups regarding aspects related to physical and emotional health, as well as the adoption of habits and coping strategies during the pandemic period. The data indicated that the impact of the COVID-19 pandemic on physical and emotional health occurred most frequently in the group of students, followed by faculty, and with the least impact on the group of technical-administrative staff.

**Table 1** – Comparative percentages of group means regarding health, adoption of habits, and strategies during the pandemic (ANOVA)

EVALUATIVE FACTORS	PARTICIPANTS	AVERAGE	ANOVA (F)	P
Physical health/symptoms	Technical-administrative	2,64		
	Faculty	4,64	37,150	*,021
	Students	6,01		
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Emotional health/symptoms	Technical-administrative	2,74		
	Faculty	4,08	74,813	*,000
	Students	7,58		
Strategies / Habits adopted to	Technical-administrative	4,86		
reduce physical and emotional	Faculty	5,39	3,898	*,000
symptoms	Students	5,78		

Note: \* p<0.05

Source: Developed by the authors.

Among the main physical symptoms, it was noted that physical fatigue and muscular tension were the most frequent in all three groups, students (78.10%), faculty (60%), and staff (43.90%). Body pain symptoms such as back, neck, shoulder, and arm pain, headaches, and changes in sleep patterns and eating habits were most prominent in the administrative staff group, but with percentages below 30%. In the faculty group, there was a predominance of the same symptoms as the staff, but with frequencies below 50%, in addition to eye fatigue (53.20%). Meanwhile, students showed higher percentages than the other groups, ranging from 56.70% to 65.20% for body and headaches, changes in sleep patterns (71.10%), eating habits (56.20%), eye fatigue (49.56%), and, unlike the other groups, 72.60% reported difficulty concentrating and memorizing, a symptom that can even impair academic performance.

In the same line of analysis, such data were also found in the studies by Soares (2021) and Lima (2022), who conducted research with faculty and administrative staff. The authors pointed out possible relationships of pain with body posture, longer periods in front of computer

and cell phone screens, inadequate furniture, workload, abrupt adaptations in work routines, and reduced physical activity. Regarding university students, it was noted that there are few studies involving reports of symptoms or physical illnesses in university students during the pandemic. Among the studies found, it was perceived that the objectives are more focused on physical activity in university students and indications that there was a reduction in this practice during the pandemic, which they consider an essential factor in regulating the physical and emotional health of undergraduates (DUMITH *et al.*, 2022).

Regarding emotional symptoms, in the administrative staff group, anxiety prevailed (50%), followed by mental fatigue (39.02%) and stress (34.15%). In the faculty team, a higher incidence of mental fatigue was observed (70.43%), followed by anxiety (60%), workload (55.65%), and stress (42.61%). As for students, percentages between 73.60% and 82.10% were recorded for symptoms of anxiety, stress, mental fatigue, and academic burnout. Regarding other symptoms such as mood swings, distress, workload, sadness, and low self-esteem, percentages ranged from 54.70% to 67.20%. These data corroborate the study by Ribeiro *et al.* (2021), which identified impairments in the emotional health of the academic community during the COVID-19 pandemic. Additionally, a survey conducted by Maia and Dias (2020), involving 619 Portuguese students, also confirmed that these adverse effects were exacerbated by the experience of the pandemic, possibly associated with social distancing and its ramifications.

Due to the pandemic context and the impacts on physical and emotional health, the investigated population was questioned about the adoption of strategies and habits during the pandemic to mitigate such effects. It was noted that, in the three groups surveyed, there was a greater predominance of responses in watching series or movies, listening to music, and engaging in physical activity, but with a higher occurrence in the student group, supplemented by outdoor walks, contact with nature, and use of social networks. These data are congruent with the study by Montenegro, Queiroz, and Dias (2020) on the increase in practices related to internet use, such as online gaming, watching live streams and movies, access to social networks, and the use of cell phones and computers, which identified severe impacts on the leisure activities experienced by 456 university students in the city of Macapá (AP), which they termed "residentialization" and "virtualization" of the students' leisure activities.

Another interesting finding in this study concerns the comparison between physical and emotional health with strategies and habits adopted during the pandemic. University students experienced greater compromise in their physical and emotional health; however, it is inferred

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that, as a result, they may need to employ a higher frequency of coping strategies and adopt healthy habits to mitigate the effects or symptoms caused by the impact of COVID-19. The opposite occurred with the staff, which showed lower indicators for health compromise as well as a lower frequency of adoption of strategies and habits, which may also be related to prolonged social distancing and more abrupt changes in the daily lives of university faculty and students.

Thus, the pandemic and its consequences alone can represent a risk factor, causing damage or threats to health and human integrity. The presence of such adverse conditions can activate protective factors through positive coping strategies, such as engaging in physical activity, listening to music, watching series or movies, seeking social support, caring for health, assertiveness, and optimism, among others.

Protective factors contribute to reducing the expected negative effects or consequences for the majority of individuals, thus leading to the resilience process, resulting in positive adaptation, overcoming, psychophysiological well-being, maturation, and learning (Zanelato, Calais, 2010). However, if risk factors prevail and the lack of management with them persists, damages and impairments to emotional, physical, and social health may arise.

Returning to the data found about the students in this study, it is questioned whether, in the initial phase of the resilience process, that is, when facing factors involving risks to emotional health, more protective resources are adopted or activated at this moment. At which stage of the resilience process do protective factors consolidate, thus developing skills to deal with and respond assertively? Could age be a significant factor for resilience, considering that it evolves over time? Perhaps this is why the students showed greater compromise in their health, as they are younger.

# **Demands and Family Support during the Pandemic Period**

Table 2 presents data on the academic community's perception regarding demands and family support. It is observed that the results indicated that the group of technical administrators obtained higher averages in the ability to balance family demands with those of the university/work, in addition to being able to rely on family support. Following them were the group of teachers, while the group of undergraduates showed the lowest average in this aspect.

**Table 2** – Comparative percentages of group averages regarding family demand and support during the pandemic (ANOVA)

EVALUATED FACTORS	PARTICIPANTS	AVERAGE	ANOVA (F)	P
Can manage family demands	Technical-administrative	4,94	19,105	_
along with university/work	staff	4,14		*,00
demands	Faculty	3,78		0
	Students			
Can rely on family support	Technical-administrative	5,53	13,083	*,00
	staff	5,46		
	Faculty	4,91		0
	Students			

Note: \* p<0,05

Source: Prepared by the authors.

It is important to highlight that the group of students demonstrated a more significant impact on both emotional and physical health, along with a lower perception of their ability to balance family demands with those of university/work (3.78) and to receive family support (4.91) compared to the other groups. These data are in line with the study conducted by Silva and Ximenes (2022), which investigated undergraduate students and concluded that lower social support is associated with a higher likelihood of developing psychological disorders. In other words, the more support the student perceives in their social relationships, including family, friends, peers, faculty, and institutions, the greater their life satisfaction, emotional well-being, and improvements in mental health may be.

Furthermore, in a similar study conducted by Jantara *et al.* (2021), which investigated the perception of social support during the pandemic period in 147 Nursing undergraduates, it was noted that variables such as depression, anxiety, stress, and suicidal ideation were associated with fragility in social networks, i.e., low perception of social support by the participants. However, the results indicated that with the pandemic context, there were changes in the dynamics of support networks, as many students returned to live with their families, while others distanced themselves from peers and professors, requiring some form of reorganization of these social support networks.

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## Perceptions of support and institutional aspects during the pandemic period

The data presented in Table 3 indicated perceptions regarding institutional aspects. Administrative staff expressed less interest in leaving their jobs during the pandemic period, with a mean of 2.07. Following them, professors (2.32) and students (3.80) indicated an interest in discontinuing their studies. In all other factors assessed in Table 3, the group of university faculty showed a higher mean compared to the others, while students reported lower percentages.

**Table 3** - Comparative percentages of group means regarding perception of institutional aspects (ANOVA)

EVALUATIVE FACTORS	PARTICIPANTS	AVERAGE	ANOVA (F)	P
Felt like abandoning the course or job during the pandemic period.	Technical-administrative staff Faculty Students	2,07 2,32 3,80	36,636	*,0 00
Are you familiar with the mission, vision, and values of the Educational Institution.	Technical-administrative staff Faculty Students	5,47 5,61 4,32	58,084	*,0 00
Feel proud to study or work at this Institution.	Technical-administrative staff Faculty Students	5,46 5,76 4,85	34,521	*,0 00
The information and institutional policies for containing the Coronavirus within the Institution are clear, objective, and efficient.	Technical-administrative staff Faculty Students	5,51 5,66 4,78	34,099	*,0 00
I can count on the support and assistance of the Institution.	Technical-administrative staff Faculty Students	4,84 5,25 4,38	17,278	*,0 00

Note: \* p<0,05

Source: Prepared by the authors.

Regarding the desire of university students to drop out of their studies, Pimentel et al. (2023) conducted a study with 124 Peruvian students and identified a moderate risk of university dropout in 58.9% of the sample. Additionally, Rodrigues (2022) adds to the discussion about the academic engagement of university students, which is related to future career prospects, personal aspirations, emotional involvement, and positive educational experiences, such as achieving learning goals and objectives that provide a sense of satisfaction

and well-being. This includes the commitment of the Institution to promoting means to facilitate engagement across different dimensions, including pedagogical, academic, and social aspects.

Regarding the other institutional factors assessed, it is noted that the faculty had a higher percentage compared to other groups. However, overall, in all groups, there was a positive perception, with a percentage of responses above 70% obtained through descriptive analysis regarding the support received from the Institution during the pandemic period. Additionally, participants reported that the information provided about COVID-19 was clear and objective, they feel proud to belong to the Institution, and the majority also indicated familiarity with the institutional mission, vision, and values.

It is essential to highlight that the positive perceptions regarding the Higher Education Institution (HEI) may be related to the fact that, even before the pandemic, the institution in question had already implemented the use of the *Moodle* platform for lesson planning. Additionally, it offered frequent training sessions for adopting active methodologies and flipped classroom approaches and had departments that provided psycho-pedagogical support and inclusion services to students. Faced with the pandemic scenario, the institution invested in training for the use of the Microsoft Teams platform and other digital information and communication tools. Additionally, it conducted various live broadcasts covering topics such as emotional health, ergonomics, and study strategies and held regular follow-up meetings. In summary, the HEI demonstrated a remarkable commitment to supporting its academic community.

In most studies addressing emotional health in the academic context, there is unanimous discourse on the role of HEIs as promoters of social support, and numerous recommendations are made for universities to provide special attention to preventive, evaluative, and monitoring care strategies for psychological distress, aimed at promoting quality of life, well-being, and resilient behaviors (ROSENDO *et al.*, 2022; SUNDE, 2022).

#### **Final considerations**

In the present study, it was observed that university students experienced greater adversities in their physical and emotional well-being, as well as the other factors assessed here, when compared with the group of faculty and staff. This may justify the students' need to adopt more coping habits and strategies, possibly aiming to mitigate the effects caused by pandemic stressors. Additionally, a higher frequency of responses from undergraduates indicating intentions to drop out of studies, balancing family demands with those of work/university, as well as familial and institutional support, was evident, signaling their psychological vulnerability.

Thus, this research provided relevant data for understanding and investigating aspects related to physical and emotional health, demonstrating that despite coping strategies and familial and institutional support offered to the academic community, the pandemic context is a potent trigger of emotional distress due to its surreal and globally impactful experience. It is worth mentioning that in the academic context, both before and after the pandemic, impacts on emotional health have been and are present due to constant educational challenges.

Furthermore, the transition from high school to higher education requires students to make various pedagogical and socialization adaptations and face academic workload overload, anxiety about exams, and academic performance. Additionally, completing a degree often leads to insecurity regarding integration into the job market and acquired competencies, which will require further adaptations.

Furthermore, it is essential to consider that the pandemic has imposed new challenges related to technological innovation on Higher Education Institutions (HEIs), impacting pedagogical and labor issues. For example, there has been greater visibility of Distance Education (DE), adoption of hybrid teaching, faster dissemination of knowledge, and development of more interactive digital platforms. These changes were implemented with the aim of meeting the new profile of students, who are increasingly connected to the virtual world.

It is concluded that this study has provided a deeper understanding of the theme and the impacts of the pandemic experienced by academic community members. In this sense, it becomes indispensable to implement more precise institutional and interdisciplinary policies and programs aimed at promoting physical and emotional health, as well as organizing events and sessions on academic and work well-being. This includes discussions on ergonomics, encouragement of physical activities, and establishment of psycho-pedagogical support centers,

aiming at developing more effective strategies for the well-being and quality of life of those involved.

Despite the valuable conclusions of this study, further research in the area is still necessary to deepen the theme in question. It is important to seek data that allow discussion about the various stress factors generated by the academic environment in different audiences, as well as to relate them to sociodemographic data such as age, education level, gender, course, physical activity, eating habits, sleep quality, spirituality, among others.

Comparative studies between public and private universities are also suggested, as well as longitudinal studies to assess the post-pandemic effect on the academic community. Furthermore, research is needed on structuring evaluative, preventive, and intervention programs, as well as their effectiveness in reducing psychological harm and promoting emotional health in the face of constant changes in the educational sphere.

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