ESTUDOS DE PSICOLOGIA
Psychological Studies

RESEARCH REPORT

Health Psychology

Editor
Raquel Souza Lobo Guzzo

Support
Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (Capes) (Finance Code 001); JBS S/A (Process nº 155/2020) and *Universidade Federal de Mato Grosso do Sul* (Ordinance nº 141/2020).

Conflict of interest
The authors declare they have no conflict of interests.

Received
January 13, 2022

Final version
December 16, 2022

Approved
July 27, 2023

Men's mental health in a university community during the COVID-19 pandemic

Saúde mental masculina em uma comunidade universitária durante a pandemia de COVID-19

Alberto Mesaque Martins[1], Guilherme Oliveira de Arruda[2], Ana Karla Silva Soares[3], Luís Eduardo Lazarin Nolasco[4], Cremildo João Baptista[5]

[1] Universidade Federal de Mato Grosso do Sul, Faculdade de Ciências Humanas, Programa de Pós-Graduação em Psicologia. Campo Grande, MS, Brasil. Correspondence to: A. M. MARTINS. E-mail: <alberto.mesaque@ufms.br>.
[2] Universidade Federal de Mato Grosso do Sul, Instituto Integrado de Saúde, Programa de Pós-Graduação em Enfermagem. Coxim, MS, Brasil.
[3] Universidade Federal de Mato Grosso do Sul, Faculdade de Ciências Humanas, Programa de Pós-Graduação em Psicologia. Campo Grande, MS, Brasil.
[4] Universidade Federal de Mato Grosso do Sul, Faculdade de Ciências Humanas, Curso de Psicologia. Campo Grande, MS, Brasil.
[5] Universidade Federal de Mato Grosso do Sul, Curso de Enfermagem, Campus de Coxim. Coxim, MS, Brasil.

How to cite this article: Martins, A. M., Arruda, G. O., Soares, A. K. S., Nolasco, L. E. L., & Baptista, C. J. (2024). Men's mental health in a university community during the COVID-19 pandemic. *Estudos de Psicologia* (Campinas), *41*, e210169. https://doi.org/10.1590/1982-0275202441e210169

Abstract

Objective
This study aims to identify associations between sociodemographic characteristics and mental health, behaviors, and perceptions among men in a Brazilian university community during the COVID-19 pandemic.

Method
A total of 862 subjects participated, responding to an online questionnaire with sociodemographic questions, the Depression, Anxiety, and Stress Scale, and the Psychological Well-Being scale.

Results
The results indicate that sociodemographic characteristics are associated with the mental health, behaviors, and perceptions of the participants. Variables such as age, race, occupation, marital status, and living arrangements during the period of social distancing relate in different ways to levels of anxiety, stress, and depression, as well as psychological well-being, in addition to behaviors and perceptions during the COVID-19 pandemic.

Conclusion
The results highlight the need to consider the specificities of the male population facing the COVID-19 pandemic and emphasize the importance of investing in health actions that consider the influence of the process of social construction of masculinities.

Keywords: COVID-19; Masculinity; Men's health; Mental health; Racial and ethnic differences.

Resumo

Objetivo

Esse estudo tem por objetivo identificar associações de características sociodemográficas com a saúde mental, comportamentos e percepções entre homens de uma comunidade universitária brasileira durante a pandemia de COVID-19.

Método

Participaram 862 sujeitos, os quais responderam a um formulário online com questões sociodemográficas e às escalas de Depressão Ansiedade e Estresse e a Escala de Bem-Estar Psicológico.

Resultados

Os resultados apontam que características sociodemográficas mostram-se associadas à saúde mental, comportamentos e percepções dos participantes. Variáveis como faixa etária, raça/cor, ocupação, estado civil e moradia, durante o período de distanciamento, estão relacionadas de maneiras diferentes a níveis de ansiedade, estresse e depressão, bem como, de bem-estar psicológico, além dos comportamentos e percepções durante a pandemia de COVID-19.

Conclusão

Os resultados apontam para a necessidade de se considerar as singularidades da população masculina diante da pandemia de COVID-19 e ressaltam a importância do investimento em ações em saúde que considerem a influência do processo de construção social das masculinidades.

Palavras-chave: *COVID-19; Masculinidade; Saúde do Homem; Saúde Mental; Diferenças Étnicas e Raciais.*

With the advent of the Coronavirus Disease 2019 (COVID-19) pandemic, various issues have been brought to the forefront of dicussion, including the effects on the population's mental health. This includes the concerns related to the emergence of a new disease, the continuous and uncontrolled increase in cases and deaths, as well as the anxieties arising from the abrupt and sudden changes imposed on people's lives during periods of social distancing (Chang et al., 2020; Ramírez-Ortíz et al., 2020). Worldwide, studies indicate that the recurring existential and material challenges of the health emergency contribute to the emergence of suffering and mental distress, with symptoms such as sadness, anxiety, and fear being prevalent in the population (Chang et al., 2020; Talevi et al., 2020; Yang et al., 2020).

In contexts marked by social inequalities, the pandemic exposes processes of marginalization and social exclusion, revealing that the groups most affected by this disease are those who were already facing precarious living conditions. This includes Indigenous populations, Black and traditional peoples, as well as the poorest and most destitute individuals, the homeless, informal workers, people working in essential services, among others (Farias & Leite Junior, 2021; Garcia et al., 2020). From this perspective, studies have highlighted the need to consider phenomena that go beyond the biomedical dimension, which was strongly emphasized in the early months of the pandemic. They highlight the importance of investigations that consider psychosocial aspects, especially social determinants such as gender, race, and social class, which have long been identified as significant factors in the process of health, illness, and care (Farias & Leite Junior, 2021; Garcia et al., 2020).

In recent decades, several authors have been drawing attention to the greater vulnerability of the male population, whether due to a shorter life expectancy compared to women, the distancing from healthcare services, especially preventive services, as well as the difficulties that men still face in adhering to caregiving and self-care practices (Cesaro et al., 2019; Lemos et al., 2017). Despite government incentives to transform this scenario, such as the implementation of the *Política Nacional de Atenção Integral à Saúde do Homem* (National Policy for Comprehensive Men's Health Care) in 2009, it is still common for men to seek healthcare services in cases of already manifest disease

and advanced and aggravated symptoms. This reduces therapeutic possibilities and hinders the establishment of care and resolution (Ministério da Saúde, 2009; Miranda et al., 2018). It is worth noting that these individuals often seek healthcare services only when "brought" to such services by emergency teams or by women occupying roles such as mothers, daughters, companions, among others (Lemos et al., 2017; Martins & Modena, 2017; Miranda et al., 2018).

Still within this perspective, the causes of male deaths and hospitalizations reveal men's greater vulnerability to certain health risks, particularly their high susceptibility to external causes (homicides, traffic accidents, suicides, drownings, falls, gunshot wounds, etc.) that still constitute the main causes of male mortality and morbidity today (Lemos et al., 2017; Ministério da Saúde, 2009). The high prevalence of mental and behavioral disorders among Brazilian men also stands out, which is strongly linked to their greater exposure to the abusive and unprotected use of psychoactive substances, both legal and illegal (Sehnem & Palosqui, 2014).

Given this scenario, what is the explanation for the male distancing from healthcare services and practices? Although it is a complex problem, several authors have emphasized the importance of considering the representations and meanings attributed to "being a man", as well as the role of male sociability in understanding this scenario (Betron et al., 2020). Historically, societies have been built around male domination (Bourdieu, 2011), through which men, more specifically heterosexual, white, and financially well-off, are represented as superior to women and to other men, such as Black men, homosexuals, individuals with disabilities, and the poor. This therefore legitimizes symbolic and institutional violence that ensures their position of power and centrality in society (Bourdieu, 2011).

Even today, despite various advances and sociocultural changes, values such as strength, courage, and bravery are still attributed to men, which must be proven through behaviors that expose them to risky situations, thus demonstrating their virility in comparison to other members of the social group (Bourdieu, 2011; Miranda et al., 2018). According to Connell and Messerschmidt (2013), these beliefs and behaviors are related to the model of hegemonic masculinity, which, according to the author, refers to an idealized pattern of practices developed and upheld by men daily, as well as a diversity of social expectations that determine what is expected of a "real man", to the detriment of other ways of experiencing masculinities (Connell & Messerschmidt, 2013). In each context, a variety of prescriptions, norms, and beliefs coexist that not only dominate but also shape ideas about what it truly means to be a masculine and virile man, reflecting in men's ways of thinking, feeling, and acting on their own masculinity in their daily lives (Alcadipani, 2020; Connell & Messerschmidt, 2013).

Other studies have been pointing out the need to understand the multiplicity of experiences of masculinities, highlighting the greater susceptibility of certain groups of men compared to others (Cesaro et al., 2019). In the Brazilian context, studies indicate a greater vulnerability among Black men, who have a lower life expectancy and face greater difficulties in accessing healthcare services (Cesaro et al., 2019; Ministério da Saúde, 2009; Oliveira et al., 2020). This scenario becomes even more worrisome when other variables are considered, such as social class and generation, making poor, Black, and young men even more vulnerable, particularly regarding intercurrences and deaths from external causes such as traffic accidents, suicides, and homicides (Araújo et al., 2010; Cesaro et al., 2019; Oliveira et al., 2020).

Regarding COVID-19, studies demonstrate that men worldwide have higher rates of infection and mortality from the new disease, highlighting the need to consider the influence of aspects related to the social construction of masculinities (Chen et al., 2020; Gebhard et al., 2020; Medrado et al., 2020; Soares et al., 2021). In Brazil, during the early months of the pandemic, Porto et al. (2021)

highlighted that, although men and women had similar rates of infection by the novel coronavirus, there was a higher proportion of deaths and hospitalizations among the male population. Analyzing Brazilian death records from January 2020 to February 2021, Sanchez et al. (2021) also identified a higher male mortality from COVID-19, indicating greater vulnerability of this population to the new disease.

It is also necessary to consider that since the emergence of patriarchy in antiquity, especially from Greek and Roman societies, the public space has been a space of male sociability, which seems to contribute to a lower adherence to social distancing measures and self-care practices that could potentially question the virility of these individuals (Betron et al., 2020; Medrado et al., 2020; Soares et al., 2021). Other studies draw attention to the strong representation of men as material providers for their families, which seems to represent an additional burden in terms of maintaining their jobs, as well as greater mobility in search of income sources that ensure survival, even amid social distancing measures (Medrado et al., 2020; Santabárbara et al., 2021; Sousa, Santana et al., 2021). From this perspective, the loneliness and isolation promoted by the hegemonic masculinity model negatively impact men's mental health, which is further aggravated by the historical association with the patriarchal-capitalist ideology that reflects the prevailing political and economic organization (Connel & Messerschmidt, 2013; Medrado et al., 2020).

Therefore, this study aims to identify associations between sociodemographic characteristics and mental health, behaviors, and perceptions among men in a university community during the COVID-19 pandemic.

Method

This is an exploratory and cross-sectional research conducted with a convenience sample at a federal public university in the Brazilian Midwest region. The university was chosen as it is one of the largest higher education institutions in the Midwest and was one of the five Brazilian institutions that did not interrupt academic activities in the early months of the pandemic, transitioning to remote learning.

Participants

The sample consisted of 862 male members of the teaching staff, students, and technicians from the same federal public university in the Brazilian Midwest region. Included in the research were members of the university community aged 18 years or older who accepted the invitation and provided their consent to participate. Respondents who did not provide informed consent to participate in the research were excluded.

Instruments

A self-administered online questionnaire, directed at the university community, was created using the Google Forms platform. It comprised closed-ended questions organized into the following axes: respondents' sociodemographic profile (e.g., age, sex, race, type of affiliation with the university – teaching staff, student, technician, etc.), behaviors and attitudes during the early months of social distancing (e.g., adherence to social distancing recommendations, perception of pandemic duration, etc.), and assessment of mental health status using the Depression, Anxiety, and Stress Scale (DASS-21) and the Psychological Well-being Scale (PWBS).

The Depression, Anxiety and Stress Scale (DASS-21) (Lovibond & Lovibond; 1995; Vignola & Tucci, 2013) was developed by Lovibond and Lovibond (1995) and later translated and validated in the Brazilian context by Vignola and Tucci (2013). It consists of 21 questions answerable on a scale of 0 - did not apply to me at all, 1) applied to me to some degree, or some of the time, 2) applied to me to a considerable degree, or a good part of the time, and 3) applied to me very much, or most of the time. The validity and reliability indicators were adequate (reliability for anxiety = 0.85, stress = 0.90, and depression = 0.92).

The Psychological Well-being Scale (PWBS) (Machado et al., 2013; Ryff & Essex, 1992) was developed by Ryff and Essex (1992) and was translated and validated for the Brazilian context by Machado et al. (2013). It consists of 36 items divided into six sub-scales, with six items each, that assess different dimensions of Psychological Well-being (PWB). The items are answered on a six-point Likert scale, ranging from "strongly disagree" to "strongly agree". The measures showed satisfactory indicators of validity and reliability (composite reliability - positive relations with others = 0.82; autonomy = 0.70; environmental mastery = 0.76; personal growth = 0.84; purpose in life = 0.83; self-acceptance = 0.83).

Procedures

The data were collected online, posted on the pages of the university's academic management systems between March and April 2020, the first two months of the implementation of social distancing measures in the institution and throughout the national territory. Upon accessing the virtual platform, participants were required to complete the Informed Consent Form before proceeding with the data collection. Participants were given the option to refuse participation in the study. The research project received approval from the Brazilian National Research Ethics Committee under opinion nº 3.971.653.

Data Analysis

The Statistical Package for the IBM® SPSS® (version 24) software was used for data tabulation and analysis, including descriptive statistics (dispersion and centrality measures), Pearson's correlation coefficient (r), chi-square tests, and Multivariate Analysis of Variance (MANOVA).

The chi-square test of independence was used to assess the association between men's behavior during the COVID-19 pandemic and the categorical variables such as 'race' (Brown, White, Black, Yellow, and Indigenous), age, occupation, marital status, 'who they lived with during social distancing' (alone/accompanied), and the following variables: 'adherence to social distancing recommendations' (yes/no); 'distancing due to suspicion or confirmation of new coronavirus infection' (yes/no); 'fear of being infected by the new coronavirus' (no fear/little fear/some fear/much fear); 'perception of the duration of the pandemic' (short/medium/long); 'financial difficulties or lack of food, water, electricity, or other basic necessities during social distancing' (yes/no); 'consumption of alcoholic beverages and/or other licit and illicit drugs during the pandemic' (yes/no); 'use of medications' (yes/no); 'perception of emotional state' (same/better/worse); 'feeling of social isolation during social distancing' (yes/no); and 'perception that work helps reduce the feeling of social isolation' (yes/no).

For the analysis of the PWBS results, MANOVA was performed to assess the existence of statistically significant differences between the PWBS factors according to the categories of race, categorized age (18 to 29 years, 30 to 45 years, and 46 years or older), occupation, marital status, and living arrangements.

Results

Characterization of the Participants

Most of the 862 men surveyed in this study were between the ages of 18 and 29 (52.1%), identified as white (55.2%), single (60.8%), living with family/spouse (77.7%), and studying and working (51.4%).

Race

There was a significant association between race and 'financial difficulties' during the pandemic [χ^2 (4) = 20.28, p = 0.001]. Adjusted standardized residual analyses showed an association with Brown, White, and Indigenous races. Regarding the dimensions of the PWBS, the results of the MANOVA showed a main effect for race, but with a small effect size [F (24, 3420) = 1.55, p < 0.05; η^2 = 0.011]. Post-hoc tests (Bonferroni) demonstrated that, concerning race, only the personal growth dimension showed a statistically significant difference, with Indigenous individuals having the lowest mean (M = 4.29, SD = 1.37) compared to Yellow (M = 5.39, SD = 0.59), Brown (M = 5.20, SD = 0.76), White (M = 5.18, SD = 0.76), and Black (M = 5.10, SD = 0.59).

For the DASS-21, MANOVA did not show a main effect of race [F (12, 2571) = 1.91, p > 0.05; η^2 = 0.009] for the dimensions of anxiety [F (4) = 1.09, p = 0.36; η^2 = 0.005], stress [F (4) = 0.74, p = 0.56; η^2 = 0.003], and depression [F (4) = 1.36, p = 0.24; η^2 = 0.006].

Age

There was a significant association between age ('18 to 29 years', '30 to 45 years', '46 years or older') and 'feeling of social isolation' [χ^2 (4) = 25.36, p = 0.001)] and 'lack of social contact' [χ^2 (2) = 9.98, p = 0.007)]. The analysis of adjusted standardized residuals showed an association between the age groups '18 to 29 years' and '30 to 45 years', which were associated with the categories of those who indicated not feeling a lack of social contact. Furthermore, all age groups were associated with participants who indicated having the 'perception that work helps reduce the feeling of social isolation'. On the other hand, the age groups '18 to 29 years' and '46 years or older' were associated with having the 'perception that work did not help reduce the feeling of social isolation'. Finally, only participants in the age group '18 to 29 years' had an 'indifferent perception' on the subject.

There was also a significant association between age and 'feeling of social isolation' [χ^2 (4) = 16.86, p = 0.002)]. The analysis of adjusted standardized residuals showed that respondents in the age groups '18 to 29 years' and '30 to 45 years' were associated with indifference regarding 'feeling of social isolation'.

As for the PWBS, the results of the MANOVA demonstrated a main effect for age [F (12, 1646) = 11.30, p < 0.001; η^2 = 0.076]. Post-hoc tests (Bonferroni) showed that all dimensions of the PWBS had statistically significant differences for age. The same applies to the DASS-21, where the

MANOVA showed a main effect of age [F (6, 1652) = 16.42, p < 0.001; η^2 = 0.009], anxiety [F (4) = 1.09, p = 0.36; η^2 = 0.005], stress [F (4) = 0.74, p = 0.56; η^2 = 0.003], and depression [F (4) = 1.36, p = 0.24; η^2 = 0.056]. The Bonferroni test showed statistically significant differences for all dimensions of DASS-21.

Occupation

Significant association was found between occupation and the feeling of social isolation [χ^2 (4) = 16.55, p = 0.002)]. The analyses of the adjusted standardized residuals showed that respondents who only work and only study were associated with the perception that remote work or study both helps and does not help decrease feelings of social isolation. There was also a significant association between occupation and being isolated due to suspicion or confirmation of infection [χ^2 (2) = 7.05, p = 0.03)]. The analysis of adjusted standardized residuals demonstrated that participants who only studied and those who worked and studied were associated with the response categories of being isolated due to suspicion or confirmation of infection.

A significant association was observed between occupation and experiencing financial difficulties [χ^2 (2) = 31.83, p < 0.001), such that respondents who only worked and those who studied and worked were associated with the categories of financial difficulty. Furthermore, a significant association was found between occupation and missing social contact [χ^2 (2) = 25.92, p < 0.001)], with respondents who only studied and those who studied and worked being associated with the categories of feeling a lack of social contact. A significant association was found between occupation and perception of emotional state [χ^2 (4) = 21.90, p < 0.001)]. The analysis of adjusted standardized residuals demonstrated that all occupations were associated with indicating that social distancing did not affect their mental state (same) or made it worse (worse).

Regarding the PWBS, the results of the MANOVA showed a main effect for occupation, but with a small effect size [F (12, 1710) = 8.03, p < 0.05; η^2 = 0.036]. Post-hoc tests (Bonferroni) demonstrated that, in relation to occupation, all factors of the PWBS showed statistically significant differences. Regarding the DASS-21, the results of the MANOVA showed a main effect for occupation [F (6, 1716) = 10.73, p < 0.05; η^2 = 0.036]. Post-hoc tests (Bonferroni) demonstrated that, regarding occupation, all three factors showed statistically significant differences.

Marital Status

A significant association was found between marital status and missing social contact [χ^2 (2) = 11.26, p < 0.05)], such that the marital status groups were associated with those who indicated that either remote work or study both helps and does not help decrease feelings of social isolation. A significant association was also found between marital status and emotional state [χ^2 (2) = 18.49, p < 0.001). The categories of marital status were associated with indicating whether social distancing did not affect their mental state (same) or worsened their mental state (worse).

Regarding the PWBS, the results of the MANOVA showed a main effect for marital status, but with a small effect size [F (6, 855) = 12.69, p < 0.05; η^2 = 0.082]. Post-hoc tests (Bonferroni) demonstrated that, in relation to marital status, all factors of the PWBS, except for the personal growth factor, showed statistically significant differences. Regarding the DASS-21, the results of the MANOVA showed a main effect for marital status [F (3, 858) = 25.74, p < 0.05; η^2 = 0.083]. Post-hoc tests (Bonferroni) demonstrated that, in relation to marital status, all three factors showed statistically significant differences.

Living Arrangements During Social Distancing

A significant association was found only between living arrangements and the feeling of social isolation [χ^2 (2) = 7.57, p = 0.02)]. The different types of living arrangements were associated with participants who indicated that work either helps reduce the feeling of social isolation or has no effect. A significant association was also found between living arrangements and medication use [χ^2 (1) = 3.91, p < 0.001).

Regarding the PWBS, the results of the MANOVA showed that there was no main effect for the living arrangements variable [F (6, 854) = 1.79, p = 0.09; η^2 = 0.012], nor for the factors of the PWBS. As for the DASS-21, the results of the MANOVA also showed that there was no main effect for the living arrangements variable [F (3, 857) = 0.42, p = 0.74; η^2 = 0.001], nor for the factors of the DASS-21.

Discussion

This study indicates that sociodemographic characteristics were associated with mental health, behaviors, and perceptions related to the pandemic among men in a university community. Variables such as age group, race, occupation, marital status, and living arrangements during the period of social distancing are related in different ways to levels of anxiety, stress, and depression, as well as psychological well-being, besides behaviors and perceptions during the COVID-19 pandemic. In general, it is worth noting that associations of these variables with mental health during a pandemic have been documented in the literature, but studies exclusively focused on the male population are rarely found. A meta-analysis showed that age, marital status, living arrangements, and occupational status were factors related to anxiety during the pandemic (Santabárbara et al., 2021). However, associations with race are scarce, which differs from what this study observed regarding this variable.

The relation found between age group and mental health indicators during the COVID-19 pandemic aligns with what the literature suggests. A study conducted with 45,161 Brazilians (46.4% males) showed that age group was a variable associated with feelings of sadness and depression, anxiety and nervousness, and sleep problems. A higher frequency of these outcomes was observed among those aged 18 to 29 years compared to those aged 30 to 59 years and 60 years or older (G. M. M. Barros et al., 2021).

Age group was also associated with the feeling of social isolation, which may indicate the relation between the habits of individuals in the university community according to their age group, influenced by the frequency of social interaction. Among university students, the vulnerability to the occurrence of mental disorders during the COVID-19 pandemic is considerable and is mainly related to a lack of social interaction (G. M. M. Barros et al., 2021).

As for marital status, in the present study, there was an association between the influence of work/education on feelings of social isolation, emotional state, psychological well-being, and depression, anxiety, and stress. The relationship between marital status and mental health outcomes seems to vary depending on the location and culture. There are studies, for example, that show higher levels of anxiety among married individuals compared to people who are single, which may be related to one's responsibility towards their family, family size, and the impact of social distancing on relationships (Fullana et al., 2020; Islam et al., 2020; Palgi et al., 2020). On the other hand, aspects such as loneliness or lack of social support, which may be present among unmarried, widowed, or

divorced individuals, can impact and increase levels of anxiety and depression (Horesh et al., 2020; Lei et al., 2020; Newby et al., 2020).

Regarding occupation, it is observed that being a student puts the individual in a vulnerable situation for the occurrence of mental disorders due to various uncertainties and concerns that arose during the pandemic, particularly related to academic activities (Rodriguez-Rey et al., 2020). Aspects related to work routine and schedules, once destabilized, could have repercussions on mental health and habits during the pandemic for individuals who work or work and study (Kazmi et al., 2020). The relation found between occupation and financial difficulties may be related to the economic impacts of the pandemic on the population (Rodriguez-Rey et al., 2020).

Thus, it can be inferred that aspects of masculinity were mobilized during the COVID-19 pandemic and had repercussions on men's mental health. In a study conducted with 400 Brazilian men through virtual means, it was found that participants recognized psycho-emotional vulnerabilities and weaknesses, leading them to express fears, pain, discomfort, and suffering related to the arrival of the virus in Brazil, to the risks associated with the disease, changes in daily life, and statistics indicating the worsening of the pandemic (Sousa, Queiroz et al., 2021). The accounts of the men from this study also allow for the identification of aspects such as their place of residence, work and financial condition, social distancing behaviors, and the fear of being infected, which interfered with their emotional state and the occurrence of mental disorders characterized by symptoms of anxiety, insomnia, panic, stress, and depression (Sousa, Alves et al., 2021). It can be observed that the results of the present study, especially the associations identified with occupation and financial difficulties, align with the literature (Sousa, Santana et al., 2021).

At times, for men, work and the culturally-attributed role of family provider generate psychosocial tensions that have a negative impact on mental health during the pandemic (Sousa, Alves et al., 2021). Another aspect that caused concerns for men and, at the same time, triggered efforts of self-protection and promotion of mental health, was the worsening of the pandemic situation and the fear of being infected or infecting others (Sousa, Alves et al., 2021). In this scenario, it is considered that sociodemographic characteristics establish a strong relationship with the sociocultural construction of men and, as a result, impact how they care for themselves, behave, and deal with their own well-being and emotional state (Miranda et al., 2018).

Conclusion

The present study highlights the need to consider the singularities and specificities of the male population facing the COVID-19 pandemic, especially regarding the impacts of the changes imposed by social distancing measures on the daily lives of these individuals and their repercussions on mental health and psychological well-being. Furthermore, the data points to the need to consider the male population as a heterogeneous group, which carries social and cultural markers that delineate scenarios where some men are more susceptible to the effects of the pandemic, as well as impact health behaviors, such as those related to compliance with social distancing measures.

The results indicate that sociodemographic characteristics are associated with mental health and behaviors and perceptions related to the pandemic among men within the investigated university community. In this sense, an association was observed between variables such as age, race, occupation, marital status, and living arragements during the period of social distancing, with different levels of anxiety, stress, depression, as well as psychological well-being, and behaviors and perceptions during the COVID-19 pandemic. These findings emphasize the importance of investing

in health actions within the context of the COVID-19 pandemic that consider the specificities of this population, considering the influence of the social construction of masculinities.

Among the limitations of this study, it is worth noting that the sample was not selected in a probabilistic manner, as controlling selection bias through random sampling became more challenging with the online questionnaire administration, and it would considerably extend the data collection time. It is also important to highlight that the results are not generalizable to other university communities, especially those that were not engaged in remote activities during the data collection period.

Furthermore, some factors not analyzed in this study may have acted as intermediaries in the relationship between sociodemographic characteristics and mental health, behaviors, and perceptions. However, it should be noted that aspects such as the sample size, the similarity of the sample to the target population, and the use of validated scales confer greater validity to the findings. Moreover, the findings resonate with the literature on men's mental health during the pandemic. The fact that data collection was conducted at a highly opportune time, namely, in the early months of the COVID-19 pandemic, contributes to the literature in terms of associations that need to be considered in mental health care of men in university communities during public health emergencies.

References

Alcadipani, R. (2020). Pandemic and Macho Organizations: Wakeup Call or Business as Usual? *Gender, Work and Organization*, *27*(5), 734-746. https://doi.org/10.1111/gwao.12466

Araújo, E., Costa, M., Oliveira, N., Santana, F., Barreto, M., Hogan, V., & Araújo, T. (2010). Spatial distribution of mortality by homicide and social inequalities according to race in an intra-urban Brazilian space. *Revista Brasileira de Epidemiologia, 13*(4), 549-560. https://doi.org/10.1590/S1415-790X2010000400001

Barros, G. M. M., Valério, F. C. E. P., Silva, M. H. F. D., Pecorelli, D. G., Porto, V. U. N., & Silva, L. A. (2021). Os impactos da Pandemia do COVID-19 na saúde mental dos estudantes. *Research, Society and Development*, *10*(9), e47210918307. http://dx.doi.org/10.33448/rsd-v10i9.18307

Betron, M., Gottert, A., Pulerwitz, J., Shattuck, D., & Stevanovic-Fenn, N. (2020). Men and COVID-19: Adding a gender lens. *Global Public Health*, *15*(7), 1090-1092. https://doi.org/10.1080/17441692.2020.1769702

Bourdieu, P. (2011). *Dominação Masculina* (10nd ed.). Bertrand editor.

Cesaro, B. C., Santos, H. B., & Silva, F. N. M. (2019). Masculinidades Inerentes à Política Brasileira de Saúde do Homem. *Pan American Journal of Public Health*, *42*, e119. https://doi.org/10.26633/RPSP.2018.119

Chang, J., Yuan, Y., & Wang, D. (2020). Nan fang yi ke da xue xue bao. *Journal of Southern Medical University*, *40*(2), 159-163. https://doi.org/10.12122/j.issn.1673-4254.2020.02.06

Chen, N., Zhou, M., Dong, X., Qu, J., Gong, F., Yang, H., Qiu, Y., Wang, J., Liu, Y., Xia, J., Yu, T., Zhang, X., & Zhang, L. (2020). Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *Lancet, 359*(10223), 507-513. https://doi.org/10.1016/S0140-6736(20)30211-7

Connel, R. W., & Messerschmidt, J. W. (2013). Masculinidade hegemônica: repensando o conceito. *Estudos Feministas*, *21*(1), 214-282. https://doi.org/10.1590/S0104-026X2013000100014

Farias, M. N., & Leite Junior, J. D. (2021). Vulnerabilidade social e Covid-19: considerações com base na terapia ocupacional social. *Cadernos Brasileiros de Terapia Ocupacional*, *29*, e2099. https://doi.org/10.1590/2526-8910.ctoEN2099

Fullana, M. A., Hidalgo-Mazzei D., Vieta E., & Radua, J. (2020). Coping behaviors associated with decreased anxiety and depressive symptoms during the COVID-19 pandemic and lockdown. *Journal of Affective Disorders*, 275, 80-81. https://doi.org/10.1016/j.jad.2020.06.027

Garcia, P. J., Alarcón, A., Bayer, A., Buss, P., Guerra, G., Ribeiro, H., Rojas, K., Saenz, R., Salgado de Snyder, N., Solimano, G., Torres, R., Tobar, S., Tuesca, R., Vargas, G., & Atun, R. (2020). Covid-19 Response in Latin America. *American Journal of Tropical Medicine and Hygiene*, *103*(5), 1765-1772. https://dx.doi.org/10.42692Fajtmh.20-0765

Gebhard, C., Regitz-Zagrosek, V., Neuhauser, H. K., Morgan, R., & Klein, S. L. (2020). Impact of sex and gender on COVID-19 outcomes in Europe. *Biology of Sex Differences*, *11*(1), 1-13. https://doi.org/10.1186/s13293-020-00304-9

Horesh D., Kapel Lev-Ari R., & Hasson-Ohayon I. (2020). Risk factors for psychological distress during the COVID-19 pandemic in Israel: Loneliness, age, gender, and health status play an important role. *British Journal of Health Psychology, 25,* 925-933. https://doi.org/10.1111/bjhp.12455

Islam M., Ferdous M., & Potenza M. (2020). Panic and generalized anxiety during the COVID-19 pandemic among Bangladeshi people: An online pilot survey early in the outbreak. *Journal of Affective Disorders, 276*, 30-37. https://doi.org/10.1016/j.jad.2020.06.049

Kazmi, S. S. H., Hasan, K., Talib, S., & Saxena, S. (2020). COVID-19 and Lockdwon: a study on the impact on mental health. *Mukt Shabd Journal, 9*(4), 1477-1489. https://dx.doi.org/09.0014.MSJ.2020.V9I4.0086781.550

Lei, L., Huang, X., Zhang, S., Yang, J., Yang, L., & Xu M. (2020). 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. *Medicine Science Monitor, 26,* 1-12. https://dx.doi.org/10.12659%2FMSM.924609

Lemos, A. P., Ribeiro, C., Fernandes, J., Bernardes, K., & Fernandes, R. (2017). Saúde do Homem: os motivos da procura dos homens pelos serviços de saúde. *Revista de Enfermagem*, *11*(11), 4546-4553. https://dx.doi.org/10.5205/reuol.11138-99362-1-SM.1111sup201714

Lovibond, S., & Lovibond, P. (1995). *Manual for the Depression, Anxiety, Stress Scales.* Psychology Foundation of Australia. http://www2.psy.unsw.edu.au/dass/

Machado, W. D. L., Bandeira, D. R., & Pawlowski, J. (2013). Validation of the Psychological Well-being Scale in an undergraduate student's sample. *Avaliação Psicológica*, *12*, 263-272.

Martins, A. M., & Modena, C. M. (2017). Acesso da população masculina e utilização dos serviços de atenção primária à saúde em Belo Horizonte-MG. *Revista de Atenção Primária à Saúde, 20*(4), 482-492. https://doi.org/10.34019/1809-8363.2017.v20.15424

Medrado, B., Lyra, J., Nascimento, M., Beiras, A., Côrrea, A., Alvarenga, E., & Lima, M. (2020). Homens e masculinidades e o novo coronavírus: compartilhando questões de gênero na primeira fase da pandemia. *Ciência & Saúde Coletiva*, *26*(1), 79-183. https://doi.org/10.1590/1413-81232020261.35122020

Ministério da Saúde (Brasil). (2009). *Política Nacional de Atenção Integral à Saúde do Homem.* www.unfpa.org.br/Arquivos/saude_do_homem.pdf

Miranda, J., Rodrigues, T., Martins, A., Faria, M., Paula, D., Silva, P., & Modena, C. (2018). Discursos de gênero e saúde: debatendo a PNAISH com seus usuários. *Psicologia: Teoria e Pesquisa*, *34*, e3444. https://doi.org/10.1590/0102.3772e3444

Newby, J. M., O'Moore, K., Tang, S., Christensen, H., & Faasse K. (2020). Acute mental health responses during the COVID-19 pandemic in Australia. *Plos One, 15*, e0236562. https://doi.org/10.1371/journal.pone.0236562

Oliveira, E., Couto, M. T., Separavich, M. A. A., & Luiz, O. C. (2020). Contribuição da interseccionalidade na compreensão da saúde-doença-cuidado de homens jovens em contextos de pobreza urbana. *Interface - Comunicação, Saúde, Educação*, *24*, e180736. https://doi.org/10.1590/Interface.180736

Palgi, Y., Shrira A., Ring, L., Bodner, E., Avidor, S., Bergman, Y., Cohen-Fridel, S., Keisari, S., & Hoffman, Y. (2020). The loneliness pandemic: loneliness and other concomitants of depression, anxiety and their comorbidity during the COVID-19 outbreak. *Journal of Affective Disorders, 275*, 109-111. https://dx.doi.org/10.1016%2Fj.jad.2020.06.036

Porto, E. F., Domingues, A. L., Souza, A. C., Miranda, M. K. V., Froes, M. B. C., & Pasqualinoto, S. R. V. (2021). Mortalidade por Covid-19 no Brasil: perfil sociodemográfico das primeiras semanas. *Research, Society and Development, 10*, e34210111588. http://dx.doi.org/10.33448/rsd-v10i1.11588

Ramírez-Ortiz, J., Castro-Quintero, D., Lerma-Córdoba, C., Yela-Ceballos, F., & Escobar-Córdoba, F. (2020). Mental health consequences of the COVID-19 pandemic associated with social isolation. *Colombian Journal of Anesthesiology*, *48*(4), e930. https://doi.org/10.5554/22562087.e930

Rodríguez-Rey, R., Garrido-Hernansaiz, H., & Collado, S. (2020). Psychological impact and associated factors during the initial stage of the coronavirus (COVID-19) pandemic among the general population in Spain. *Frontiers in Psychology, 11,* 1-23. https://doi.org/10.3389/fpsyg.2020.01540

Ryff, C., & Essex, M. (1992). The interpretation of life experience and well-being: the sample case of relocation. *Psychology and Aging, 7*(4), 507-517. https://doi.org/10.1037//0882-7974.7.4.507

Sanchez, M., Moura, E., Moreira, J., Lima, R., Barreto, R., Pereira, C., & Santos, L. (2021). *Mortalidade por COVID-19 no Brasil: uma análise do Registro Civil de óbitos de janeiro de 2020 a fevereiro de 2021*. SciELO Preprints. https://doi.org/10.1590/SciELOPreprints.2012

Santabárbara, J., Lasheras, I., Lipnicki, D., Bueno-Novitol, J., Pérez-Moreno, M., López-Antón, R., Cámara, C., Lobo, A., & Gracia-García, P. (2021). Prevalence of axiety in the COVID-19 pandemic: An updated meta-analysis of community-based studies. *Progress in Neuro-Psychopharmacology & Biological Psychiatry*, *109*, 110207. https://doi.org/10.1016/j.pnpbp.2020.110207

Sehnem, S. B., & Palosqui, V. (2014). Características epidemiológicas do suicídio no estado de Santa Catarina. *Fractal Revista de Psicologia, 26*(2), 365-378. http://dx.doi.org/10.1590/1984-0292/624

Soares, A. J., Soares, C. F. S., Silva, F. C. S., Silva, A. F., Estrela, F. M., Magalhães, J. R. F., Oliveira, M. A. S., & Lima, A. M. (2021). Elementos da masculinidade que vulnerabilizam à morbimortalidade pela COVID-19: revisão integrativa. *Saúde Coletiva*, *11*(65), 5926-5939. https://doi.org/10.36489/saudecoletiva.2021v11i65p5926-5939

Sousa, A. R., Queiroz, A. M., Florêncio, R. M. S., Alves, G. V., Pedreira, L. C., & Teixeira, E. (2021). Sentidos e significados atribuídos por homens ao vivido na pandemia da Covid-19. *Revista da Escola de Enfermagem da USP*, *55*, e03763. https://doi.org/10.1590/S1980-220X2020046403763

Sousa, A. R., Santana, T. S., Carvalho, E. S., Mendes, I. A., Santos, M. B., Reis, J. L., Silva, A. D. V., & Sousa, A. F. L. (2021). Vulnerabilidades percebidas por homens no enquadramento da pandemia da Covid-19. *Revista Rene*, *22*, e60296. https://doi.org/10.15253/2175-6783.20212260296

Sousa, A. R., Alves, G. V., Queiroz, A. M., Florêncio, R. M. S., Moreira, W. C., Nóbrega, M. P. S. S., Teixeira, E., & Rezende, M. F. (2021). Men's mental health in the COVID-19 pandemic: is there a mobilization of masculinities? *Revista Brasileira de Enfermagem, 74*(1), e20200915. https://doi.org/10.1590/0034-7167-2020-0915

Talevi, D., Socci, V., Carai, M., Carnaghi, G., Faleri, S., Trebbi, E., di Bernardo A., Capelli F., & Pacitti F. (2020). Mental Health outcomes of the CoViD-19 pandemic. *Pensiero Scientifico Editore*, *55*(3), 137-144, https://doi.org/10.1708/3382.33569

Vignola, R. C. B., & Tucci, A. M. (2013). Adaptation and validation of the depression, anxiety and stress scale (DASS) to Brazilian Portuguese. *Journal of Affective Disorders, 155*, 104-109. https://pubmed.ncbi.nlm.nih.gov/24238871/

Yang, D., Tu, C.-C., & Dai, X. (2020). The Effect of the 2019 Novel Coronavirus Pandemic on College Students in Wuhan. *Psychological Trauma: Theory, Research, Pratice and Policy*, *12*(1), 6-14. http://dx.doi.org/10.1037/tra0000930

Contributors

A. M. MARTINS and C. J. Baptista participated in the conception and design of the study, analysis and interpretation of the data, discussion of results, and revision and approval of the final version of the article. G. O. ARRUDA, A. K. SOARES, and L. E. L. NOLASCO participated in the analysis and interpretation of the data, discussion of results, and revision and approval of the final version of the article.