

Psychological distress of mental health workers in a pandemic context and associated factors: a cross-sectional study

Sofrimento psíquico de trabalhadores de saúde mental em contexto pandêmico e os fatores associados: estudo transversal

Ana Luisa Camachi Stander¹
ORCID: 0000-0002-5222-2209

Márcia Aparecida Ferreira de Oliveira²
ORCID: 0000-0002-1069-8700

Heloísa Garcia Claro³
ORCID: 0000-0003-1504-7074

Gabriella de Andrade Boska⁴
ORCID: 0000-0002-5827-6486

Júlia Carolina de Mattos Cerioni Silva²
ORCID: 0000-0001-5367-4197

Guilherme Correa Barbosa¹
ORCID: 0000-0002-7433-8237

¹Universidade Estadual Paulista "Júlio de Mesquita Filho", Botucatu, SP, Brazil

²Universidade de São Paulo, São Paulo, SP, Brazil

³Universidade Estadual de Campinas, Campinas, SP, Brazil

⁴Universidade Estadual do Centro-Oeste, Guarapuava, PR, Brazil

Editors:

Ana Carla Dantas Cavalcanti
Ana Carla Dantas Cavalcanti
ORCID: 0000-0003-3531-4694

Paula Vanessa Peclat Flores
ORCID: 0000-0002-9726-5229

Ana Carla Dantas Cavalcanti
ORCID: 0000-0003-3531-4694

Corresponding author:

Guilherme Correa Barbosa
E-mail: g.barbosa@unesp.br

Submission: 09/28/2022

Approved: 02/05/2024

ABSTRACT

Objective: To analyze the psychological distress of mental health workers in a pandemic context and identify associated factors. **Method:** A cross-sectional study was conducted with 108 workers from four mental health services in a municipality in the interior of São Paulo. Data was collected online between October and December 2020 through a sociodemographic questionnaire and the Self Report Questionnaire-20 (SRQ-20) scale. The data were analyzed using descriptive statistics and multiple linear regression of ordinary least squares to analyze the factors associated with the variation in the scale score. **Results:** The workers had a high average on the SRQ-20 scale (15.07), indicating significant psychological distress. Receiving psychological and/or psychiatric support during the COVID-19 pandemic was associated with reducing this distress, with an average reduction of three symptoms assessed by the scale. **Conclusion:** Mental health support for workers in the pandemic context can be an important coping strategy associated with reducing psychological distress. **Descriptors:** Pandemics; Mental Health; Health Personnel.

RESUMO

Objetivo: Analisar o sofrimento psíquico de trabalhadores dos serviços de saúde mental em contexto pandêmico e identificar os fatores associados. **Método:** Pesquisa transversal, com 108 trabalhadores de quatro serviços de saúde mental de um município do interior paulista. Coleta de dados realizada on-line entre outubro e dezembro de 2020 por meio de questionário sociodemográfico e Escala Self Report Questionnaire-20 (SRQ-20). Os dados foram analisados por estatística descritiva e por regressão linear múltipla de mínimos quadrados ordinários, na intenção de analisar os fatores associados para a variação no escore da escala. **Resultados:** Os trabalhadores apresentaram média elevada na escala SRQ-20 (15,07), o que indica grande sofrimento psíquico. Fazer acompanhamento psicológico e/ou psiquiátrico durante a pandemia de covid-19 esteve associado à minimização deste sofrimento, com redução de, em média, três dos sintomas avaliados pela escala. **Conclusão:** O acompanhamento em saúde mental para os trabalhadores no contexto pandêmico pode ser uma importante estratégia de enfrentamento associada à redução do sofrimento psíquico.

Descritores: Pandemias; Saúde Mental; Pessoal de Saúde.

INTRODUCTION

A pandemic of SARS-CoV-2 (COVID-19) was officially declared by the World Health Organization (WHO) in March 2020, creating demands for the adoption of emergency public health measures by all countries⁽¹⁾. In Brazil, until mid-August 2023, 704,000 deaths were attributed to COVID-19⁽¹⁻²⁾. In this context, social distancing measures and the spread of false information about the disease exacerbate feelings of insecurity, panic, and fear, adversely affecting the mental health of various population groups⁽¹⁾.

Given this situation, several social groups have been identified as more vulnerable to developing mental health issues in this global scenario: healthcare professionals, the elderly, individuals with psychiatric histories, young people, women, individuals infected with COVID-19, and their families⁽³⁾.

The reasons for such occurrences include concern about infecting family members, lack of support, absence of training and capacity-building with the care team, lack of promotion of psychological support, and lack of Personal Protective Equipment (PPE), in addition to professional overload⁽⁴⁻⁵⁾. Given the various spheres impacted by the pandemic on healthcare professionals, it is possible to perceive the reverberations on their health in general.

Research conducted with frontline healthcare professionals during the COVID-19 pandemic in 2020 showed an incidence of 23.1% to 39.4% for anxiety and 27.4% to 31.3% for depression, with a higher prevalence among women and nurses. Women have a risk of developing anxiety 16.6 times higher than that among men⁽⁶⁻⁷⁾.

A study conducted to assess the psychological and mental impact of the COVID-19 pandemic among the general population, healthcare workers, and individuals with a higher risk of COVID-19 infection found that the combined prevalence of anxiety and depression is 33% and 28%, respectively. Common risk factors identified include being female, being a nurse, having a lower socioeconomic status, being at high risk of contracting COVID-19, and social isolation. However, protective factors include access to updated and accurate information, sufficient medical resources, and the adoption of preventive measures⁽⁷⁾.

Mental illness in the general population and among healthcare professionals has been studied in countries such as China, Italy, Spain, India, Iraq, and Turkey, among others. However, there is a gap in publications when explicitly focusing on professionals working in mental health services.

Given the increase in demand for mental health services, facilities have become overwhelmed, with insufficient staff to meet the increased demand for care, compromising the quality of service and increasing the risk of creating a mentally unhealthy society⁽⁸⁾.

This scenario motivates reflection on how the mental health of mental health care professionals has been affected by the pandemic. This study aims to contribute to identifying the factors involved and to foster discussions that be-

nefit the health of these workers.

Therefore, this research aims to analyze the psychological distress of mental health service workers in a pandemic context and identify associated factors.

METHOD

This is a cross-sectional study with a quantitative approach, aiming to analyze the psychological distress of mental health service workers during the first year of the COVID-19 pandemic. As an observational study in epidemiology, the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) tool was used as a reference.

The study occurred in a municipality in the interior of São Paulo with approximately 130,000 inhabitants. Four mental health services comprised this setting: a Psychiatric Inpatient Unit, a Service for Care and Reference in Alcohol and Other Drugs, an Alcohol and Other Drugs Psychosocial Care Center II (CAPSad II), and a Psychosocial Care Center II (CAPS II).

The contact with the services was initially made by the researcher, who met with the coordinators to present the project and the research proposal. Subsequently, the author collected the workers' email addresses. The invitation was individually sent with a letter explaining the study's objective and the Informed Consent Form (ICF). Upon accepting participation, the worker digitally signed the ICF and returned it via email to the researcher, being instructed to keep a copy. Afterward, the researcher sent the data collection instrument via an online form (Google Forms), following ethical procedures.

The data collection took place between October and December 2020. All workers from the four mental health services were invited to participate, totaling a population of 141.

Individuals aged 18 or older who were part of the selected mental health services workforce, with at least six months of practical experience, and who were active at the time of the survey (i.e., not on vacation or on leave) were included. Those who did not complete the responses to the instruments after signing the informed consent form (ICF) were excluded.

Of the 141 workers, 33 did not meet the inclusion criteria; therefore, the final sample, defined by convenience, was 108.

The instrument was developed by the researchers and comprised a sociodemographic questionnaire, data on the pandemic context, and the Self Report Questionnaire-20 (SRQ-20) scale. The

collected variables included: place of residence and with whom they live, age, sex, marital status, race/color, highest level of education, postgraduate degree status, profession, unit where they work, length of time working in this service, monthly income, whether there has been a decrease in family income due to the pandemic, years of service, working hours, whether they have another job, type of employment relationship, whether the respondent belongs to a high-risk group, whether there are high-risk individuals for covid-19 in the household, direct contact with suspected and/or confirmed cases of covid-19, past and/or current psychological counseling, and current activities status regarding leave, altered role, or maintaining the usual position.

The high-risk group was defined as individuals who answered "yes" to one or more of the following criteria: aged 60 years or older, heart disease, diabetes, hypertension, and/or respiratory problems.

The Self-Reporting Questionnaire-20 (SRQ-20) was used to assess the workers' psychological distress. Developed by the WHO as a screening instrument, it consists of 20 self-administered items that assess the manifestation of psychiatric symptoms. Each item can be scored as zero or one, where a score of zero indicates that the symptoms were absent in the last 30 days, and a score of one indicates the presence of the symptom. The validation of SRQ-20 for Brazil indicated a specificity of 0.80 and sensitivity of 0.83, with a seven-cut-off point. A score greater than seven indicates the presence of minor psychiatric symptoms⁽⁹⁾.

The data analysis was performed using the statistical software SAS, version 9.4. Measures such as mean, median, and standard deviation were adopted for the descriptive analysis and scale score, considering a 95% confidence interval. Relative and absolute frequencies were calculated for the categorical variables and individual descriptions.

The SRQ-20 scale score was calculated considering one point for "Yes" responses and zero points for "No" responses, with a maximum score of 20. Individuals scoring above seven (cut-off score) were considered to have psychological distress, following the guidelines of Mari & Willians (1986)⁽⁹⁾.

The inferential analysis was conducted using multiple linear regression with ordinary least squares, aiming to identify factors associated with changes in the scale's total score (SRQ-20). The analysis aimed to find a model, a set of variables that ex-

plain the variation in the dependent variable (total score of the SRQ-20 scale). A significance level of $p \leq 0.05$ was considered as the reference value for significance differences.

The present research was approved by the research ethics committee of the Botucatu Medical School at São Paulo State University "Júlio de Mesquita Filho," under number 4.296.005 of 2020, in accordance with Resolution CONEP n° 466/12.

RESULTS

Out of the 108 workers who participated in the study, 36.1% (39) were associated with the Psychiatric Inpatient Unit; 27.8% (30) with the Alcohol and Other Drugs Care and Referral Service; 23.1% (25) with CAPS II, and 13% (14) with CAPSad II. Regarding sociodemographic characteristics, 83.3% (90) of the participants were female; 33.3% (36) were aged between 38 and 47 years old; 81.5% (88) self-identified as white, and 52.8% (57) were in a stable relationship or married and lived with their spouse/partner (57.7% - 62). Concerning education, 30.6% (33) had postgraduate degrees; 23.4% (25) had completed higher education, and 24.3% (25) had technical training.

The majority, 52.3% (58), indicated having undergone psychological and/or psychiatric counseling before the study; however, at the time of the survey, only 21.6% (23) of the workers were still undergoing counseling.

The most prevalent professional category was the nursing team, accounting for 63% (68) of the participants, with 47.2% (51) being nursing technicians or assistants and 16.6% (18) being nurses. The other categories included health-care assistants, 11.1% (12); physicians, 6.5% (7); social workers, 5.6% (6); psychologists, 4.6% (5); occupational therapists, 3.7% (4); pharmacists, 0.9% (1); physical education professionals, 0.9% (1); physiotherapists, 0.9% (1); service coordinators, 0.9% (1); receptionists, 0.9% (1), and others 4.6%.

Thirty-nine-point six percent (42) of the workers had been working in the service for five to seven years, with a weekly workload of 30 hours reported by 78.4% (84) of them, and 74.8% (80) reported having no other employment bond.

Regarding the exposure of mental health workers to COVID-19, as shown in Table 1, 45% (48) lived with someone who was part of the risk group; 79.3% (85) worked in direct contact with suspected and/or confirmed COVID-19 cases, and 95.5% (103) continued to perform their duties during the pandemic.

Table 1 - Data on the exposure of mental health workers to COVID-19. Botucatu, SP, Brazil, 2020 (n=108)

Variables		N	%
Who do you live with?	Spouse/partner	62	57,7
	Sons	61	56,8
	Alone	16	15,3
	Father/mother	14	13,5
	Grandchildren	5	5,4
	Friends	1	1,8
Are there people at risk for COVID-19 in the household?	No	59	55
Are you part of the at-risk group?	No	73	68,5
Do you work in direct contact with suspected and/or confirmed cases of COVID-19?	Yes	85	79,3
Current activities	Works in the professional training field	104	95,5
	Absent due to being at risk group.	3	2,7
	Role altered to meet pandemic demands.	1	1,8

When analyzing the SRQ-20 scale, as shown in Table 2, participants' responses had a mean of 15 points and a median of 16, both considerably above the cut-off point of seven on the scale, indicating psychological distress in 98.1% of the participants.

The lowest score found was six, which was only one point below the cut-off score, and the highest score was the maximum possible to achieve in the questionnaire application, 20 points.

Due to the wide numerical range found, the mean value may not accurately reflect the researched scenario. In this case, the median value supports the interpretation, as it is consistent with the information suggested by the mean value. The credibility of the data is indicated by the standard deviation of approximately four points and by the close proximity of the upper and lower values of the 95% confidence interval.

Table 2 - Descriptive measures of SRQ-20 scores. Botucatu, SP, Brazil, 2020 (n=108)

	Medium	Median	IC95% lower limit	IC95% upper limit	Standad Deviation	Minimum	Maximum
Escore SRQ-20	15,07	16,00	14,26	15,87	4,21	6,00	20,00
Frequencies							
	N	%					
De 0 to 6	2	1,9					
De 7 to 10	21	19,4					
De 11 to 15	26	24,1					
De 16 to 20	59	54,6					
Total	108	100					

CI - Confidence Interval.

Table 3 presents the descriptive measures of all items in the SRQ-20 scale and the proportions of responses for "Yes" and "No". Except for the question: "Do you feel nervous, tense, or wor-

ried?", all responses showed a higher percentage of "Yes" responses, contributing to explaining the high average score found. Only one worker did not report suicidal thoughts.

Table 3 - Descriptive measures of the items in the SRQ-20 scale. Botucatu, SP, Brazil, 2020 (n=108)

Items of the SRQ-20 scale	S	N	%
1- Do you have frequent headaches?	Yes	67	62,0
2- Do you have a loss of appetite?	Yes	101	93,5
3- Do you sleep poorly?	Yes	66	61,1
4- Do you startle easily?	Yes	86	79,6
5- Do you have tremors in your hands?	Yes	98	90,7
6- Do you feel nervous, tense, or worried?	Não	58	53,7
7- Do you have indigestion?	Yes	76	70,4
8- Do you have difficulty thinking clearly?	Yes	82	75,9
9- Have you been feeling sad lately?	Yes	66	61,1
10- Have you been crying more than usual?	Yes	88	81,5
11- Do you have difficulty carrying out your daily activities with satisfaction?	Yes	76	70,4
12- Do you have difficulty making decisions?	Yes	78	72,2
13- Do you have difficulties at work (your job is burdensome, causing you distress)?	Yes	91	84,3
14- Are you unable to perform a useful role in your life?	Yes	102	94,4
15- Have you lost interest in things?	Yes	79	73,1
16- Do you feel like a worthless person?	Yes	103	95,4
17- Have you had thoughts of suicide?	Yes	107	99,1
18- Do you feel tired all the time?	Yes	71	65,7
19- Do you get tired easily?	Yes	62	57,4
20- Do you have unpleasant sensations in your stomach?	Yes	79	73,1

In the inferential analysis presented in Table 4, an inversely proportional relationship was found with the variable current psychological and/or psychiatric counseling, associated with lower scores of psychological distress (negative coefficient and $p < 0.05$).

No other variable presented a p-value more significant than 5%, and these variables were kept in the model as controls. Therefore, we understand that psychological and/or psychiatric counseling has a protective association in a pandemic context, independent of age, gender,

race/ethnicity, marital status, education, income, weekly workload, employment status, family members at risk, belonging to a risk group, direct contact with COVID-19 patients, and current work status.

The beta value (regression coefficient) for this variable was almost three points, which means that undergoing psychological and/or psychiatric treatment at that time was associated with a three-point reduction in the mean of the SRQ-20 scale compared to those not undergoing treatment. Considering that each point on the

SRQ-20 corresponds to experienced distress, this result is significant in terms of the symptomatology of this sample. The R-squared coefficient was 25.4%, indicating

that the chosen set of independent variables explains approximately 25% of the variation in the psychological distress score measured by the SRQ-20.

Table 4 - Multiple regression analysis of socioeconomic variables about the SRQ-20 scale of mental health workers. Botucatu, SP, Brazil, 2020 (n=108)

Variables	β	T	p-value
Age 48 or older	0,11	1,15	0,25
Male gender	-0,08	-0,84	0,40
Black ethnicity	0,10	1,06	0,29
With a partner	0,16	1,66	0,09
Education level	-0,09	-0,92	0,35
What is your weekly workload?	0,14	1,42	0,15
Has the income decreased?	-0,13	-1,42	0,15
Do you have another job?	-0,01	-0,13	0,89
In your household, are there people at risk for COVID-19?	-0,07	-0,74	0,45
Risk group	-0,09	-0,96	0,33
Currently, are you undergoing any psychiatric and/or psychological treatment?	-0,27	-2,66	0,00*
At your workplace, do you work in direct contact with suspected and/or confirmed cases of COVID-19?	-0,06	-0,66	0,51
Currently, how are your activities?	-0,03	-0,40	0,68

R square: coefficient of determination- 0,254; *p<0,05.

DISCUSSION

The results of the SRQ-20 scale expose alarmingly high levels of psychological distress among mental health workers in the interior of São Paulo in the pandemic context. It was possible to establish a relationship of this study with recent publications on mental health during the pandemic, especially those conducted with the nursing team⁽¹⁰⁻¹³⁾.

The emotional exhaustion and psychological distress of this professional category have already been observed during the pandemic period at national and international levels in different scenarios^(4,11-13). However, few studies have used the SRQ-20 scale as a data collection instrument, and most have been conducted in only one healthcare facility, which differs from the present study carried out in a network of mental health services.

A study conducted with healthcare professionals providing care to COVID-19 patients in a public

hospital, using the SRQ-10 scale, indicated that 40% of the respondents showed scores consistent with psychological distress⁽¹⁴⁾, compared to 98.1% found in this research.

A study conducted with Portuguese nurses during the pandemic, although also finding levels of mental distress, found that the mental health specialty was less associated with the onset of anxious, depressive, and stress symptoms⁽¹⁵⁾.

Despite the protective factor associated with being a mental health professional compared to other categories described in the literature, the high level of occupational pressure these workers face is visible, mainly due to the increased appointments and limited resources of professionals in this area^(8,13). In our data, we observed that the intense psychological distress of this category is described in the literature as related to feeling powerless to meet the new and growing demand for support and follow-up^(8,13-14).

In the current study, feelings of worthlessness were reported by over 90% of the workers and thoughts of suicide by nearly 100%, indicating that the specificity of mental health care demands attention. We evidenced that mental health professionals who, at the time of data collection, reported undergoing psychological and/or psychiatric treatment showed lower levels of psychological distress, with an average reduction of 2.78 points in the SRQ-20 score. This result indicates a significant statistical effect, and it can be affirmed that mental health care for the professionals interviewed should be encouraged, protected, and facilitated by managers, municipalities, etc.

At the same time, another study conducted with workers from the same mental health network identified that undergoing psychological/psychiatric treatment during the pandemic was a predictor of increased work overload, probably related to pre-existing care needs. We highlight the difference in the object of analysis between the two studies, but it is worth emphasizing the importance of further studies that delve into this variable⁽¹⁶⁾.

The research has in common, corroborating the findings of the present study, that the profile of professionals primarily composed of individuals identifying as female^(10,17), typically associated with the fact that the majority of the interviewees comprise the nursing team⁽¹⁸⁾.

Regarding marital status and family composition, slightly more than the majority of the interviewees are married or have a partner, which contradicts a study conducted in the United States, which found a lower tendency towards stable relationships during the pandemic⁽¹⁹⁻²⁰⁾. A large portion also stated that they do not live alone, a factor that reduces the likelihood of experiencing symptoms associated with stress, anxiety, insomnia, panic, and other characteristics associated with mental disorders^(18,20).

It was also observed that most interviewees had completed technical, undergraduate, or postgraduate education. As healthcare professionals, a large portion of the interviewees have scientific knowledge about COVID-19, a factor that, in one study, was associated with a decrease in feelings of fear and anxiety caused by the pandemic⁽²¹⁾. However, this factor did not show any difference in the present analysis.

We noticed a significant discrepancy between the professionals who declared themselves as at-risk and those who were absent from their regular work for this reason, besides the majority reporting direct contact with suspected and/or

confirmed cases of COVID-19. These pieces of information suggest that the functioning of the mental health services included in this research failed to comply with the recommendations of Joint Ordinance No. 20/2020, which prioritizes staying at home and remote work for workers who are at risk⁽²²⁾. Additionally, another study identified that being at risk and maintaining direct contact with positive COVID-19 cases can predict work overload⁽¹⁶⁾.

According to a literature review that sought to analyze resilience mechanisms for these workers, other strategies to preserve the mental health of healthcare professionals during pandemics or health crises are still scarce. However, mutual support groups during working hours and technical supervision for case discussion, where the emotional and technical burden imposed by cases is shared, can improve mental health⁽²³⁻²⁴⁾.

In services where peer support is encouraged and when professionals are trained to detect psychological distress among each other and support their colleagues, there is a positive impact on workers' mental health, as evidenced by reduced absenteeism, fewer admissions to health services, and other outcomes⁽²⁴⁾.

CONCLUSION

When analyzing the psychological distress of mental health workers in a municipality in the interior of São Paulo using the SRQ-20, we found that those who were undergoing psychological and/or psychiatric treatment had lower scores of distress.

The finding reinforces the need for a closer look at healthcare workers seeking effective measures for promoting and preventing health issues. Mental health support during the pandemic can be an important coping strategy associated with reducing psychological distress.

Studies that analyze workers' psychological distress are good indicators for tracking professionals' health, helping to identify protective factors and reflect on coping strategies.

The study has limitations, such as focusing on only one municipality and not developing strategies to address the identified problem. Therefore, it is essential to conduct further research that addresses the same concept of psychological distress among mental health workers for comparison in other contexts. We hope that the study serves as a premise for identifying coping mechanisms to prioritize healthcare professionals' mental and emotional health.

CONFLICT OF INTERESTS

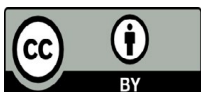
The authors have declared that there is no conflict of interests.

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AUTHORSHIP CONTRIBUTIONS
Project design: Stander ALC, Oliveira MAF de, Claro HG, Boska G de A, Silva JC de MC, Barbosa GC
Data collection: Stander ALC, Oliveira MAF de, Claro HG, Boska G de A, Silva JC de MC, Barbosa GC
Data analysis and interpretation: Stander ALC, Oliveira MAF de, Claro HG, Boska G de A, Silva JC de MC, Barbosa GC
Writing and/or critical review of the intellectual content: Stander ALC, Oliveira MAF de, Claro HG, Boska G de A, Silva JC de MC, Barbosa GC
Final approval of the version to be published: Stander ALC, Oliveira MAF de, Claro HG, Boska G de A, Silva JC de MC, Barbosa GC
Responsibility for the text in ensuring the accuracy and completeness of any part of the paper: Stander ALC, Oliveira MAF de, Claro HG, Boska G de A, Silva JC de MC, Barbosa GC



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