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Original Article

Depressive symptoms and suicidal ideation in health professionals during the coronavirus pandemic*

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Objective: to analyze the predictors of depressive symptoms and suicidal ideation in health professionals exposed to the coronavirus in Brazil. **Methodology:** a quantitative and cross-sectional study to analyze predictors of depression and suicidal ideation in health professionals exposed to the coronavirus, derived from the matrix study entitled "Mental health diagnoses of health professionals assisting suspected or confirmed Coronavirus Disease 2019 (SARS-CoV-2) cases in Brazil: A longitudinal study". Through a multiple regression model, we investigated variables such as race, gender, COVID-19 exposure and behavioral activation score seeking predictors of depressive symptoms and suicidal ideation with 482 health professionals who participated in the online questionnaire by means of email and social media outreach. **Results:** we found the following predictors for depressive symptoms: coronavirus protection and prevention, behavioral activation score, quality of life, and alcohol use. For suicidal ideation, we found no predictors with an effect on the statistical model, given the low variability of suicidal ideation (26 participants). There was prevalence of female participants, from the Nursing staff and with a mean age of 38 years old. **Conclusion:** we need to invest in quality of life, social support and support networks to strengthen health professionals and manage psychopathological symptoms.

Descriptors: Coronaviruses; Health Personnel; Depression; Mental Health.

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Sintomas depressivos e ideação suicida em profissionais de saúde durante a pandemia por coronavírus

Objetivos analisar os preditores de sintomas depressivos e ideação suicida em profissionais da saúde expostos ao coronavírus no Brasil. **Metodologia:** estudo quantitativo, transversal de análise de preditores para depressão e ideação suicida em profissionais da saúde expostos ao coronavírus, derivado do estudo matricial "Diagnóstico da saúde mental de profissionais de saúde que cuidam de casos suspeitos ou confirmados de *Coronavirus Disease 2019* (SARS-CoV-2) no Brasil: Estudo longitudinal". Por meio do modelo de regressão múltipla, investigamos variáveis como raça, gênero, exposição ao COVID-19 e escore de ativação comportamental em busca de preditores de sintomas depressivos e ideação suicida com 482 profissionais da saúde que participaram do questionário *online* por meio de divulgação de *e-mails* e redes sociais. **Resultados:** para sintomas depressivos encontramos os preditores proteção e prevenção ao coronavírus, escore de ativação comportamental, qualidade de vida e uso de álcool. Para ideação suicida não encontramos preditores com efeito no modelo estatístico, dada a pouca variabilidade da ideação suicida (26 participantes). Nos participantes prevaleceram mulheres, da enfermagem, com idade média de 38 anos. **Conclusão:** precisamos investir em qualidade de vida, suporte social e rede de apoio para fortalecimento dos profissionais da saúde e manejo de sintomas psicopatológicos.

Descritores: Coronavírus; Profissionais de Saúde; Depressão; Saúde Mental.

Síntomas depresivos e ideación suicida en profesionales de la salud durante la pandemia de coronavirus

Objetivo: analizar los predictores de síntomas depresivos e ideación suicida en profesionales de la salud expuestos al coronavirus en Brasil. **Metodología:** estudio cuantitativo y transversal, para analizar predictores de depresión e ideación suicida en profesionales de la salud expuestos al coronavirus, derivado del estudio matriz "Diagnóstico de salud mental de profesionales de la salud que atienden casos sospechosos o confirmados de Enfermedad por Coronavirus 2019 (SARS-CoV-2) en Brasil: un estudio longitudinal". A través de un modelo de regresión múltiple, investigamos variables como raza, sexo, exposición al COVID-19 y puntuación de activación conductual en busca de predictores de síntomas depresivos e ideación suicida con 482 profesionales de la salud que respondieron el cuestionario *online* con difusión por correo electrónico y redes sociales. **Resultados:** encontramos los siguientes predictores para síntomas depresivos: protección y prevención de coronavirus, puntuación de activación conductual, calidad de vida, y consumo de alcohol. En el caso de ideación suicida, no encontramos predictores con efecto en el modelo estadístico, dada la baja variabilidad de la ideación suicida (26 participantes). La mayoría de los participantes eran mujeres, del personal de Enfermería y con una media de edad de 38 años. **Conclusión:** debemos invertir en calidad de vida, apoyo social y redes de apoyo para reforzar a los profesionales sanitarios y manejar los síntomas psicopatológicos.

Descriptores: Coronavirus; Personal de Salud; Depresión; Salud Mental.

Introduction

The SARS-CoV-2 virus, which causes the Coronavirus Disease 2019 (COVID-19) was identified for the first time in China in December 2019[1]. It was shortly after declared as a public health emergency of international importance by the World Health Organization (WHO). Thus, as events progressed, the disease was characterized as a pandemic in March 2020, as there were already 118,000 cases in 114 countries and 4,200 deaths[2]. In addition, 205,338,159 COVID-19 cases and 4,333,094 deaths had been confirmed in the world up to August 13th, 2021[1].

In Brazil, the first COVID-19 case was confirmed in February 2020[3] and, as in the rest of the world, there was significant virus spread in a brief period of time. 20,245,085 cases and 565,748 deaths were recorded in the country from March 2020 to early August 2021[4].

When facing the pandemic, health professionals were the individuals most exposed to the virus, as they were working on the front line in the fight against this disease. These professionals were more overloaded as the health crisis worsened, increasing the fear of contracting the disease and exposing their family members. In addition to that, lack of safety emerged due to insufficient Personal Protective Equipment (PPE)[5].

In view of this context, it is evident that these professionals are more likely to having their mental health affected, with a recurrent increase in anxiety symptoms, sleep quality loss and even development of psychopathologies such as depression, post-traumatic stress disorder and suicidal ideation[6-7].

According to the WHO, depression is a mental disorder characterized by constant sadness, loss of interest in activities that a person previously enjoyed doing and inability to perform activities of daily living, persisting for at least two weeks. In addition, depression can lead to suicide in the worst case possible[8].

A study conducted with 1,257 health professionals in China revealed a considerable proportion of subjects with depression, anxiety and insomnia symptoms, especially women, nurses, people in Wuhan and front-line health professionals directly involved in the diagnosis, treatment or care provision for suspected or confirmed COVID-19 patients[9].

From this perspective, the research is justified because there are few scientific studies that address epidemiological data with a focus on the mental health of health professionals involved in the assistance provided to COVID-19 patients. Thus, the objective of this study is to analyze the predictors of depressive symptoms and suicidal ideation in health professionals exposed to SARS-CoV-2 in Brazil.

The hypothesis of this study is that worker-related characteristics such as gender, age and race/skin color, as well as work-related ones, such as the number of employment contracts, protection and support received in the workplace during the COVID-19 pandemic, are associated with variations in the scores of depressive symptoms and suicidal ideation among health professionals.

Method

Study design

This is a quantitative and cross-sectional study with survey-type data collection[10]. It derives from the matrix study entitled "Mental health diagnoses of health professionals assisting suspected or confirmed Coronavirus Disease 2019 (SARS-CoV-2) cases in Brazil: A longitudinal study", which sought to carry out an epidemiological diagnosis of the mental health situation of health professionals who assist or assisted suspected or confirmed COVID-19 cases in Brazil. The matrix project is still ongoing.

Data collection locus and period

Data collection was conducted online through the Red-Cap platform with health professionals from all Brazilian states, between September 2020 and June 2021.

The individuals were recruited by means on an online survey, which was disclosed via hospitals' and universities' institutional email addresses throughout the country and through social media such as Facebook. The participants of this research were those individuals that gave their consent by signing the Informed Consent Form.

Selection criteria

The sample consisted of Brazilian health professionals, whether they were administrative professionals in health services or with technical or higher education, aged 18 or over, and who have treated suspected or confirmed COVID-19 cases.

Participants

A total of 482 Brazilian health professionals participated in this research: 346 nurses, 46 nursing technicians, 20 physicians, 13 psychologists, 9 nursing assistants, 8 community health agents, 6 administrative professionals and 6 physiotherapists.

Study variables

We investigated some variables seeking predictors of depressive symptoms and suicidal ideation.

Thus, for the assessment of race/skin color (white, black, brown, Asian, indigenous), gender (female, male), income (number of minimum wages), age and schooling, we used diverse information self-declared by the participants.

COVID-19 protection

In order to assess the protection against COVID-19 as perceived by the professionals, the authors prepared a scale comprised by 28 items. The first 10 items are questions on a Likert scale, with the following answer possibilities: 0, Very dissatisfied; 1, Dissatisfied; 2, Indifferent; 3, Satisfied; 4, Very satisfied; evaluating satisfaction with 10 items: safety in their workplace - in general - for COVID-19 prevention; access to PPE (Personal Protective Equipment); breaks during working hours (coffee, bathroom and rest breaks); how they manage to protect their family; number of patients treated; support from their colleagues; support from their supervisor/management; access to good quality health care if they need it; number of breaks they take for hand hygiene; and alcohol gel provision in the workplace.

Another 11 items assess whether the respondent has some risk factor for COVID-19 (Yes/No), and are reversed items (not having the risk factor contributes to protection) for the following personal risk factors: diabetes, hypertension, asthma, pregnant woman, puerperal woman, or family members or people from the same household for the same risk factors plus being over 60 years old. We used the "professional's age" variable as control in the model. The 7 additional items assess whether the professional has access in sufficient numbers and frequency to a mask, alcohol gel, sinks for hand hygiene, soap, disposable paper towels to dry their hands, gloves, goggles or face shield. The score varies from 0 to 58, where 0 is the Lowest protection and 58 is the Highest protection against COVID-19.

Instruments used to collect the information

We used the Patient Health Questionnaire (PHQ-9) to assess the depressive symptoms; this instrument classifies a patient's depression severity as mild, moderate, moderately severe and severe. It is a 9-item validated tool derived from PRIME-MD[11].

In turn, we used the European Quality of Life-5 Dimensions (EQ-5D) scale to assess quality of life. This scale measures 5 health domains: mobility, self-care, usual activities, pain/discomfort and anxiety/depression, with three levels each (no problems, some problems and extreme problems)[12].

Alcohol consumption was assessed by means of the Alcohol Use Disorders Identification Test (AUDIT-C). This is a quick test with three questions, which assists in identifying the alcohol consumption pattern as abuse or dependence. It is a modified and simpler version of AUDIT[13].

In order to assess suicidal ideation, we resorted to the Suicide Risk Assessment Protocol (S-RAP). This protocol was developed for clinical studies in Brazil and assesses suicidal ideation according to its complexity. If the participant answers "yes" to the last item of PHQ-9, which indicates some degree of suicidal ideation, S-RAP assesses whether there is a structured idea, with planning, means, access to these means and whether the participant is planning to carry out this plan soon. Each participant is assessed as follows: no risk; mild risk (A1); moderate risk (A2), average risk (B1), high risk (B2); or emergency (C)[14-15].

Data collection

The data were collected by means of an online questionnaire. The participants were those who referred to themselves as health professionals, throughout the national territory, invited through posts on social networks, and disclosing by universities, councils and class associations.

To reduce the chance of bias in the study and to certify the quality of data collection, we used collection forms with data validation rules, such as automatic checking of field adequacy (only numbers, text, mandatory items), as well as step-by-step verification of the inclusion criteria (Are you a health professional? Were you working in health services from March 2020 to the data collection period?).

In addition to that, the platform is protected by means of a username and password and the data is encrypted and stored on the university's server, which is located in a secure place at the Medical Sciences School of the State University of Campinas.

Data treatment and analysis

Data analysis was performed using the ordinary least squares multiple regression model[16], seeking to estimate a set of predictive variables for the variation corresponding to each of the dependent variables (depressive symptoms and suicidal ideation). We resorted to robust standard errors regarding heteroscedasticity and reported the standardized regression coefficients in our tables[16].

The professionals that had full data for the variables of interest in the "Complete Case Analysis"[17] model were included in the statistical model.

For the income variable and better measurement of the effect size, we used the value as a logarithmic function, as the effect of one real on income would correspond to a variation that is difficult to interpret in the dependent variable.

We analyzed the data in the STATA 15[18] for Windows software.

Ethical aspects

This study was approved by UNICAMP's Ethics Committee. CEP Opinion No.: 4,399,084. CAAE: 31960220.5.0000.5404, issued on 11/14/2020.

Results

The study participants were 482 health professionals: 346 nurses (71%); 46 nursing technicians (9%); 20 physicians (4%); and 13 psychologists (2%). Among the participants, 57 referred to themselves as others (11.7%), as follows: social worker, speech therapist, physiotherapist, biomedicine professional, dental surgeon, pharmacist, oral health assistant, midwife, nutritionist, occupational therapist, cleaning professional, radiology technician, endemic combat agent, veterinary medical professional, community health agent, administrative assistant and nursing assistant.

In relation to age, the mean was around 38 years old.

Regarding the states where the professionals developed their duties, 368 (76.35%) were from São Paulo, 18 (3.73%) from Rio Grande do Sul, 14 (2.9%) from Rio de Janeiro, 13 (2.70%) from Paraná, 15 (3.11%) from Minas Gerais and 12 (2.49%) from Bahia. In addition, Amapá, Amazonas, Ceará, *Distrito Federal*, Espírito Santo, Goiás, Mato Grosso do Sul, Pará, Paraíba, Pernambuco, Rio Grande do Norte and Santa Catarina had the participation of 10 or fewer professionals (less than 2% per state).

Of them, 465 (96.5%) worked in direct assistance to suspected or confirmed COVID-19 cases. Table 1 presents other sociodemographic variables.

Table 1 - Description of the study sample. Campinas, SP, Brazil, 2021

Variables		Number	%
Gender	Female	308	63.9%
	Male	53	11%
Race/Skin color	White	230	47.7%
	Brown	90	25.1%
	Black	31	6.4%
	Asian	8	1.7%
	Indigenous	1	0.2%
Income (minimum wages)	Up to 4*	90	18.7%
	Between 4 and 6	88	18.2%
	Between 6 and 9	69	14.3%
	More than 9	115	23.9%
Did you provide care and/or worked in direct assistance in health services during the pandemic?	No	15	3.1%
	Yes	465	96.5%
AUDIT-C†	Low risk	123	25.5%
	Moderate risk	117	24.2%
	High risk	19	3.9%
	Severe risk	27	5.6%
PHQ-9‡	Minimum	88	18.2%
	Mild	167	34.7%
	Moderate	107	22.2%
	Moderately severe	65	13.4%
	Severe	55	11.4%
Suicidal ideation	Yes	26	5.3%
	Yes, although not in the last two weeks	33	6.9%
	Never	423	87.8%

*Minimum wage in 2020, Brazil = R$ 1,045.00; †AUDIT-C = Alcohol Use Disorder Identification Test ; ‡PHQ-9 = Patient Health Questionnaire-9

For the inferential analysis of the predictors we used a set of independent variables in an ordinary least squares multiple model. As predictors of depressive symptoms, we found an association through the regression model with the following variables: COVID-19 protection and prevention, Behavioral Activation for Depression Scale-Short Form (BADS-SF) score, quality of life and alcohol consumption.

The higher the values of these variables, the lower the depressive symptoms among the research participants. Higher scores related to alcohol use in AUDIT-C are associated with higher scores in terms of depressive symptoms. The results of this analysis can be seen in Table 2.

The set of independent variables explained 52.10% of the PHQ-9 score variation (R^2).

Of all 482 study participants, only 247 answered the full instrument and were suitable to be used as the basis to analyze the variables of interest.

As can be seen in Table 3, we did not find any predictors with effect on the statistical model for suicidal ideation.

Table 2 - Set of variables of interest in relation to the PHQ-9* score variation. Campinas, SP, Brazil, 2021

PHQ-9 total	Coef.	*Std. Err.*	p-value
Black	-0.83	0.71	0.25
Female gender	1.11	0.71	0.12
Homosexual	0.96	1.13	0.40
Bisexual	1.39	1.14	0.22
No answer	0.24	3.95	0.95
Graduate studies	0.01	0.76	0.99
Age	-0.02	0.04	0.67
Income	-0.32	0.23	0.17
Employment contract	0.38	0.60	0.52
With a partner	-1.06	0.63	0.09
Exposure to COVID-19† (score)	-0.13	0.04	<0.001‡
BADS-SF§	-0.30	0.04	<0.001‡
AUDIT-C‖	0.26	0.12	0.03‡
EQ-5D¶ total	-12.37	2.99	<0.001‡

*PHQ-9 = Patient Health Questionnaire-9; †COVID-19 = Coronavirus Disease; ‡p-value equal to or lower than 0.05; §BADS-SF = Behavioral Activation for Depression Scale-Short Form; ‖AUDIT-C = Alcohol Use Disorder Identification Test; ¶EQ-5D = European Quality of Life-5D

Table 3 - Set of variables of interest in relation to the suicidal ideation variation. Campinas, SP, Brazil, 2021

Suicidal ideation	Coef.	Std. Err.	p-value
Black	-0.018	0.034	0.591
Female gender	-0.006	0.031	0.849
Homosexual	-0.055	0.030	0.067
Bisexual	-0.025	0.066	0.704
No answer	0.233	0.261	0.373
Graduate studies	-0.081	0.052	0.124
Age	0.001	0.002	0.547
Income	0.000	0.000	0.896
Employment contract	-0.001	0.028	0.961
With a partner	0.060	0.037	0.111
Exposure to COVID-19* (score)	-0.001	0.002	0.581
BADS-SF†	-0.004	0.003	0.155
AUDIT-C‡	0.008	0.009	0.345
EQ-5D§ total	-0.096	0.113	0.398

*COVID-19 = Coronavirus Disease; †BADS-SF = Behavioral Activation for Depression Scale-Short Form; ‡AUDIT-C = Alcohol Use Disorder Identification Test; §EQ-5D = European Quality of Life-5D

Discussion

According to the results, the female gender stood out among the participants, reinforcing the findings of other studies that frequently report greater adherence and participation of the female population[19-21].

In addition to that, women are a majority in this performance area in Brazil, representing nearly 80% of all health professionals. Likewise, 85% are women in Nursing, the class with the highest number of health professionals[21].

As a result, some studies have shown that women in the health area are more affected by mental disorders since, in addition to being a majority in the profession, they are oftentimes primarily responsible for housework and child care, increasing the chances of having their mental health affected, when associated with other conditions to which they are subjected[9,22-23].

Social issues such as gender-based discrimination, wage inequalities, domestic violence and sexual abuse can exert negative effects on women's mental health. Social pressures and gender stereotypes can also contribute to psychological distress. Other problems that are also more prevalent among women, such as abuse and violence, can increase the psychological distress risk[9,22-23]. In general, social vulnerabilities and inequalities were even more intensified due to COVID-19 and its consequences.

Another point that we noticed in the current study is that the more people reporting alcohol use, the greater the association with high scores in developing depressive symptoms, with depression as the pathology most associated with alcoholism and alcohol abuse[24-26].

Thus, alcohol consumption by people with depressive symptoms can be considered a coping strategy, mainly because they believe that it relieves

negative emotions (fear, anger, sadness, etc.), stress, also being oftentimes used with the objective of fleeing from problems[25-26].

In recent years, alcohol consumption has been increasing in the world and in Brazil, especially in the current scenario where we stand due to the COVID-19 pandemic, in which consumption has increased even more, being a concern mainly in relation to health professionals, who are already subjected to stressors, with the possibility of alcohol contributing negatively to this issue[27-29].

Thus, with increased stress at work, excessive hour loads, constant day-to-day contact with suffering, pain and death, health professionals are more vulnerable to using psychoactive substances such as alcohol, as it acts on the nervous system, generating a momentary sensation of well-being[29]. However, there are consequences in the short-, medium- and long-term that may affect work capacity, attention and memory and decision-making, as well as chronic diseases or mental disorders and generating dependence[29].

A study conducted with health professionals in southern Brazil evidenced that the substance they most consumed was alcohol. This consumption can be explained by the fact that alcohol is a legal and socially accepted substance and due to the fact that health professionals are also people who belong to a society that encourages alcohol consumption[29].

Regarding behavioral activation, an aspect that is related to coping with depressive symptoms, in this study it was analyzed by means of the Behavioral Activation for Depression Scale (BADS) in its short version, which has 9 items and has been validated[30]. The scale was developed to assess the frequency of activation (positive aspect, which contributes to coping with the symptoms) and avoidance (negative aspect, which makes it difficult to cope with the symptoms) behaviors.

According to studies, people who are more active in what makes sense in their lives, involved in healthy activities and tasks such as reading books, practicing physical exercises or affective exchanges with friends and family members, have fewer depressive symptoms[30], which was observed in the sample herein studied.

The Behavioral Activation theory argues that action comes before motivation and recommends that people practice healthy activities that they find pleasurable or that they remember as pleasurable in the past, as well as carry them out even if they are not in the mood at the time of the activity. In addition to people becoming more active and engaging in activities they find pleasurable, the behavioral activation model works on reducing the avoidance behaviors[31].

Some studies point to the relationship between burnout, stress and professional overload in the health area with increased avoidance and reduced behavioral activation, which, according to the literature, can be an explanation for the association with higher depression rates in this population[32-34].

A specific study conducted with nurses with high burnout and depression burdens presented an important statistical relationship between overload, professional stress and avoidance scores, addressing the importance of investing in coping strategies in these professionals' routines to manage the prevalent psychological ailment[34]. Another study mentions the importance of reviewing health professionals' work overload in a general sense, also related to greater avoidance and higher prevalence of depressive symptoms[35].

Our scale to assess satisfaction with COVID-19 prevention has items that evaluate whether each health professional is included in one of the risk groups (diabetes, high blood pressure, puerperal women, pregnant women), whether they are satisfied with the protocols and PPE provision at the institution or with the breaks, among other protective measures.

In this way, feeling protected in relation to COVID-19, being satisfied with the PPE provision, not living with someone belonging to the risk groups and not being part of the risk group, are associated with lower rates of depressive symptoms. These results are also found in other studies[36-37].

As detected in this study, others point out that work dynamics is a factor that triggers mental distress related to unhealthy environments, precarious conditions, work overload and institutional requirements[38].

These conditions were amplified with the health crisis, as the professionals had to deal with activities at risk situations, inadequate physical structure of the institutions, lack of PPE, overload of functions, excessive hour load and lack of professional training[39-40].

We also found diverse evidence that the rates corresponding to depression and anxiety symptoms are related to the extent to which each person feels exposed to the virus in their workplace. On average, people with fewer symptoms had less contact with potentially infected people and, consequently, those who felt more exposed had more mental distress symptoms[41].

Thus, the relationship between feeling unprotected and having anxiety and depression symptoms shows the potential association between fear and/or risk of not knowing who is infected or not, which affects psychological well-being[42].

In the current study, quality of life was characterized as a protection factor against depressive symptoms. And when we think about quality of life, in the literature we find issues related to well-being, self-esteem, self-appreciation and practice of pleasurable activities, among others. An encompassing definition is that a

good-quality life is the one that a person assesses as "worth living it"[43].

In view of this, one of the activities that contributes to well-being is practicing physical activity. At any age, physically active people present better mental health indices than sedentary individuals[43]. The literature has recently shown diverse evidence that a decrease in sedentary attitudes, that is, the time we spend sitting, lying down or leaning throughout the day, with the exception of hours of sleep, also contributes to health[44-45].

Other studies also indicate that health professionals who reported having practiced physical activity every day during the COVID-19 pandemic had lower mental distress rates[46].

In contrast, those who performed little physical activity had higher stress, anxiety and depression levels than those who practiced from average to moderate levels of physical exercise[46]. Therefore, it is suggested that, by encouraging their professionals to practice physical activities, health services act directly in the prevention of mental health and related diseases.

We also found data indicating that well-being can be related to pleasurable activities, as already mentioned. However, some studies indicate that even though health services made an effort to offer their employees the possibility of participating in pro-social activities during the health crisis, lack of professionals, exhaustion and overloaded schedules prevented health workers from participating in such activities during the COVID-19 pandemic[47].

In relation to suicidal ideation, we did not find any predictors with effect on the statistical model. This result can be attributed to the little variability in suicidal ideation (26 participants). This fact corroborates other studies conducted with health professionals, where low suicidal ideation rates were obtained[48-49].

It is worth noting that, according to the WHO, suicidal ideation continues to be one of the main causes of death in the world, accounting for one out of 100 deaths. In addition, having a mental disorder increases the suicide risk. Thus, the main proven measures for suicide prevention include limiting access to means (such as pesticides and firearms), early identification, assessment, management and follow-up of people affected by suicidal thoughts and behaviors[50].

Thus, the current challenge for health services and systems is to find strategies to reduce work overload so that the professionals seek activities that enhance their well-being and, consequently, their quality of life. It is worth adding that, in addition to the benefit for the professionals, this shall reflect in the quality of the services provided.

As a study limitation, we report regional disproportionality among the participants. There was greater adherence among health professionals from the Southeast region. We used online data collection methods and announced the research in professional councils and social networks to reach a national sample of health professionals; however, we still observed greater participation in the Southeast region of the country. Therefore, we recommend caution when interpreting the results, as well as carrying out studies that closely monitor the COVID-19 repercussions in health professionals from the South, North, Northeast and Midwest regions.

Conclusion

According to the analysis of the predictors of depressive symptoms and suicidal ideation in health professionals exposed to SARS-CoV-2 in Brazil, we conclude that it is necessary to invest in quality of life, social support and support networks to strengthen these professionals and manage the psychopathological symptoms.

It is also necessary that workloads are not so exhausting, so that these professionals can seek help to deal with the mental distress caused precisely by the work dynamics inherent to health services. Such aid includes practicing pleasurable and physical activities, as well as psychological monitoring.

With that, given the importance of these professionals in health, we would be valuing them and providing due physical and psychological conditions for them to be able to provide good quality care.

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