Revista de Enfermagem UFPE On Line
ISSN: 1981-8963

J Nurs UFPE on line.
2022;16:e253009
DOI: 10.5205/1981-8963.2022.253009
https://periodicos.ufpe.br/revistas/revistaenfermagem

PREDICTORS OF MENTAL HEALTH SUFFERING IN HOSPITAL CARE NURSES IN THE CONTEXT OF COVID-19

FATORES PREDITORES DO SOFRIMENTO MENTAL DE ENFERMEIROS DA ATENÇÃO HOSPITALAR NO CONTEXTO DA COVID-19

PREDICTORES DEL SUFRIMIENTO MENTAL EN ENFERMEROS DE ATENCIÓN HOSPITALARIA EN EL CONTEXTO DEL COVID-19

Tiago Silva Peixoto[1], Ana Paula Biazi Marras[2], Patrícia de Lima Lemos[3], Lorena Araújo Ribeiro[4], Ana Paula Grapiglia[5], Gilmar Jorge de Oliveira Júnior[6]

ABSTRACT

Objective: To analyze the association between predictors of mental suffering and characteristics of nurses working in tertiary health services in Rondonópolis-MT in the context of the COVID-19 pandemic. ***Method***: A cross-sectional, descriptive, and analytical study with a quantitative approach was carried out. The study sample consisted of 101 nurses through the application of online questionnaires using Google Forms. Associated predictors were verified using Poisson regression analysis with robust variance. ***Results***: The study revealed that of the 101 nurses, 57.4% presented predictive results of mental suffering. In the final model, not having a partner (p=0.048), belonging to the risk group for COVID-19 (p=0.038), and having a low level (p=0.047) and a low mean (p=0.015) of resilience were associated as predictors of mental distress, regardless of gender. ***Conclusion***: We suggest intensifying preventive practices to promote mental health in the occupational environment, considering the factors found such as not having a partner, being in the risk group for COVID-19, and having low or medium resilience.

***Descriptors*:** Mental Health; Nurses; COVID-19; Tertiary Healthcare; Patient Health Questionnaire; Psychological Resilience.

RESUMO

Objetivos: Analisar a associação entre fatores preditores de sofrimento mental e características de enfermeiros atuantes nos serviços de saúde em nível terciário de Rondonópolis-MT, Brasil, no contexto da pandemia da COVID-19. ***Método***: Estudo de corte transversal, descritivo e analítico, com abordagem quantitativa. A amostra do estudo foi constituída por 101 enfermeiros(as), por meio da aplicação de questionários on-line, utilizando-se da ferramenta *Google Forms*. Os fatores preditores associados foram verificados mediante análise de Regressão de Poisson com variância robusta. ***Resultados***: O estudo revelou que dos 101 enfermeiros, 57,4% apresentaram resultados preditivos de sofrimento mental. No modelo final, associou-se como preditores de sofrimento mental não possuir companheiro (p= 0,048), pertencer ao grupo de risco para COVID-19 (p= 0,038) e apresentar nível (p= 0,047) e média (p=0,015) de resiliência baixos, independentemente do sexo. ***Conclusão***: Sugere-se

a intensificação de práticas preventivas de promoção de saúde mental em ambiente ocupacional, considerando os fatores encontrados, como não possuir companheiro, ser do grupo de risco para COVID-19 e possuir baixa ou média resiliência.

***Descritores*:** Saúde Mental; Enfermeiros; COVID-19; Atenção Terciária à Saúde; Questionário de Saúde do Paciente; Resiliência Psicológica**.**

RESUMEN

Objetivo: Analizar la asociación entre predictores de sufrimiento psíquico y características de enfermeros que actúan en servicios de tercer nivel de salud de Rondonópolis-MT en el contexto de la pandemia de COVID-19. ***Método***: Se realizó un estudio transversal, descriptivo y analítico con enfoque cuantitativo. La muestra de estudio estuvo conformada por 101 enfermeras a través de la aplicación de cuestionarios en línea utilizando *Google Forms*. Los predictores asociados se verificaron mediante análisis de regresión de Poisson con varianza robusta. ***Resultados***: El estudio reveló que, de los 101 enfermeros, 57,4% presentaron resultados predictivos de sufrimiento psíquico. En el modelo final, no tener pareja (p=0,048), pertenecer al grupo de riesgo para COVID-19 (p=0,038) y tener un nivel bajo (p=0,047) y media baja (p=0,015) de resiliencia se asociaron como predictores de malestar mental, independientemente del género. ***Conclusión***: Sugerimos intensificar las prácticas preventivas para promover la salud mental en el ámbito laboral, considerando los factores encontrados como no tener pareja, estar en el grupo de riesgo para COVID-19 y tener baja o mediana resiliencia.

***Descriptores*:** Salud Mental; Enfermeros; COVID-19; Atención Terciaria de Salud; Cuestionario de Salud del Paciente; Resiliencia Psicológica.

[1]Federal University of Rondonópolis/UFR. Mato Grosso (MT), Brazil. 1https://orcid.org/0000-0001-6951-6679
[2]Federal University of Rondonópolis/UFR. Mato Grosso (MT), Brazil. 2https://orcid.org/0000-0003-0245-9678
[3]Federal University of Rondonópolis/UFR. Mato Grosso (MT), Brazil. 3https://orcid.org/0000-0002-5956-4471
[4]Federal University of Rondonópolis/UFR. Mato Grosso (MT), Brazil. 4https://orcid.org/0000-0003-0525-4758
[5]Federal University of Rondonópolis/UFR. Mato Grosso (MT), Brazil. 5https://orcid.org/0000-0002-1877-8051
[6]Federal University of Mato Grosso/UFMT. Mato Grosso (MT), Brazil. 6https://orcid.org/0000-0002-9189-9861

*Article extracted from the Term Paper of the Residency in Adult and Elderly Health program << Impact of mental health of MT nurses who provide health care in Rondonópolis: a mental health sample from Rondonópolis - MT >>. Federal University of Rondonópolis/UFR-MT, 2021.

How to cite this article
Peixoto TS, Marras APB, Lemos PL, Ribeiro LA, Grapligia AP, Júnior GJO. Predictors of mental suffering in hospital care nurses in the context of COVID-19. J Nurs UFPE online. 2022;16:e253009 DOI: https://doi.org/10.5205/1981-8963.2022.253009

INTRODUCTION

Through work, human beings socialize, build their own identity and acquire material goods. However, the precursor of financial stability can recover or promote people's health, depending on the organization and the work process[1].

Through work, the nursing process is essentially characterized as alive, produced in the interaction with the patient, which requires technical, scientific, and emotional skills and competencies from the professional. As it focuses on direct care for the human being, it promotes greater proximity to the patient and the respective conditions experienced[2,3]. Relationships within the scope of nursing work (patient/professional or family/professional), associated with long hours and precarious working conditions, generate stress, and physical and emotional exhaustion, pointed out by the literature as predictors of mental suffering, especially anxiety and depression[1,2].

A review study that analyzed publications aimed to track or identify work-related psychosocial factors favorable or unfavorable to workers' mental health identified higher prevalences of mental suffering in studies with professors and health professionals[3]. Studies dedicated to verifying the occurrence of mental suffering, specifically in nursing professionals in non-pandemic scenarios also identified a high prevalence, above 20%[4].

It is believed that such circumstances are aggravated in the face of epidemic scenarios of sudden onset of infectious diseases and high risk of dying due to increased psychological pressure, lack of personal protective equipment, increased workload, physical exhaustion, higher organizational turnover, high hospital transferability and the need for ethically complex decision-making on care rationing[5].

In the COVID-19 pandemic, scientific evidence shows that, in addition to organizational aspects, the following factors were associated with anxiety and depression in health workers: level of education[6], presence of comorbidities, female gender, and fear of contamination[7].

In this scenario, the strengthening of individual and organizational resilience in nurses represents a protective factor in the occurrence of anxiety, depression, and burnout[8]. Resilience is understood as the set of social and psychological processes that enable the healthy development of the individual, even in the face of negative experiences. From an individual perspective, it is characterized as a dynamic process of positive adaptation and increase of new skills to each adverse situation, forged from the complex interaction between adverse events and internal and external protective factors of the subject[6]. Resilience applied to work within organizations consists of the existence or creation of adaptive resources that aim to protect the healthy relationship between human beings and work, in an environment of constant transformation, permeated by numerous forms of rupture[9].

The literature describes resilience as essential in promoting health and psychological well-being, and reducing the risk of mental suffering[10]. This theme has been highlighted on the agenda of discussions on workers' health, especially nurses and professionals on the front line of the pandemic.

Despite the topic's relevance, few studies are dedicated to exploring the relationship between the occurrence of mental suffering and resilience. Added to this is the need to know the predictive characteristics of this condition among nurses, as it allows for the planning of more strategic actions to minimize the risk of illness and increase the well-being of these professionals within organizations.

OBJECTIVE

To analyze the association between predictors of mental suffering and characteristics of nurses working in tertiary health services in the context of the COVID-19 pandemic.

METHOD

This is a cross-sectional study, with a descriptive and analytical component, carried out in the city of Rondonópolis-Mato Grosso, Brazil.

The municipality of Rondonópolis-MT is considered the third-largest city in the state, with a total population of approximately 195,476 inhabitants. It makes up the South Mato-Grossense Region, being a health reference for 19 municipalities in the region, including the care of patients with Severe Acute Respiratory Syndrome/COVID-19.

The sample totaled 101 nurses inserted in tertiary care services in Rondonópolis-MT, regardless of the time of work or the hospital sector they worked, both in COVID-19 sectors or not, and who provided direct or indirect care to patients, which corresponded to 80% of the population studied based on the National Registry of Health Establishments (CNES in Portuguese) of employees registered in hospitals in the municipality.

Data collection took place from 10/15/2020 to 12/15/2020, through an online questionnaire, using the Google Forms® application. For this purpose, a form was created with three topics: 1) Sociodemographic information, professional training, and working and health conditions variables; 2) Resilience scale; and 3) Self-Reporting Questionnaire (SRQ-20).

The authors created the questions to obtain data from Topic 1 of the form. The data contained in Topic 2, which deals with the Resilience Scale, were created by Wagnild & Young in 1993 and validated in Brazil by Pesce et al. (2005), based on a cross-cultural adaptation to Portuguese, with internal agreement and reliability testing. The instrument contains 25 items evaluated through 7-point Likert scales. The score on this reduced scale ranges from 25 to 175, which corresponds to a greater or lesser degree of resilience if the subject achieves a higher or lower score, respectively, with scores up to 125 representing low resilience; between 125 and 145, medium resilience; and above 145, high resilience.

This instrument was developed through a qualitative study with 24 women who were selected to adapt to life's adversities. Pioneering studies signaled indicators of reliability and validity of the instrument. In Brazil, the scale was adapted in a study with public elementary school students in São Gonçalo-RJ, totaling 977 students. The results showed good application, understanding, item equivalence, and test reliability[11].

The above also happened in Topic 3, referring to the SRQ-20 instrument, validated by Santos et al. (2010). The SRQ-20 measures common mental disorders, especially in workers, being self-applied and composed of a scale with dichotomous answers (YES/NO) for each of the 20 questions. The instrument's total score ranges from zero to 20, in which the higher the score, the greater the indication of psychological morbidity, with the cut-off point corresponding to 7[12].

For the evaluation and adequacy of the form, a pilot test was carried out with 20 nurses who worked outside the city of Rondonópolis-MT. The data were excluded from the final analysis due to the modifications to the final instrument and because it was applied to nurses from other municipalities.

The dissemination of the study took place through social networks, Instagram@, Facebook@, Telegram@, and Whatsapp@ during the period from October to December 2020. The tertiary health services of the municipality were contacted and acted as collaborators to propagate the research, aiming at a greater adherence.

For information analysis, the data were tabulated and double-entered into Microsoft 365 Excel spreadsheets to check for possible inconsistencies and analyzed using the Stata statistical program version 12.0 (StataCorp LP, College Station, United States).

Descriptive analysis was carried out through absolute and relative frequencies calculations, with crude and adjusted prevalence ratios. The association between variables was verified using the chi-square test, and, in the multiple analysis, Poisson regression was used with a robust variance, considering a 95% confidence interval (95% CI) and a significance level of 5% ($p \leq 0.05$).

This research was conducted under Resolution 466/2012 of the Brazilian National Health Council and was carried out after approval by the Research Ethics Committee (CEP) of the Federal University of Rondonópolis (UFR), under opinion No. 4,270,481. The participants signed a free and informed consent form.

RESULTS

Of the 101 nurses included, the prevalence of predictors for mental distress was 57.4% (n=58). Concerning the sociodemographic and economic characteristics, 75.3% were female, 52.5% were younger than 35 years old, 74.3% had a partner, 59.4% had one child or more, 62.4% claimed to be heads of family, 74.3% had an income equal to or greater than R$4,000.00, 64.4% affirmed not having been negatively affected on income during the pandemic, 44.5% of households were owned and paid off (Table 1), and 47.5% claimed that their religious practices/experiences were reduced during the pandemic.

Table 1. Socioeconomic and demographic characteristics of nurses, according to predictors of mental distress in the city of Rondonópolis - MT, 2020.

Variables	Total n=101(%)	Predictors of mental distress		p-value¥
		No n=43(%)	Yes n=58(%)	
Gender				
Male	25(24.7)	14(56.0)	11(44.0)	0.118
Female	76(75.3)	29(38.2)	47(61.8)	
Age (years)				
< 35	53(52.5)	19(35.8)	34(64.2)	0.151
≥ 35	48(47.5)	24(50.0)	24(50.0)	
Marital status				
Without a partner	26(25.7)	8(30.7)	18(69.2)	0.158
With a partner	75(74.3)	35(46.7)	40(53.3)	
Children				
No	41(40.6)	15(36.6)	26(63.4)	0.314
Yes	60(59.4)	28(46.7)	32(53.3)	
Average income (in BRL)*				
≥ R$4,000.00	75(74.3)	35(46.7)	40(53.3)	0.158
< R$4,000.00	26(25.7)	8(30.8)	18(69.2)	
Head of the family				
No	38(37.6)	15(39.5)	23(60.5)	0.625
Yes	63(62.4)	28(44.4)	35(55.6)	
Religion				
None	9(9.0)	3(33.3)	6(66.7)	0.763
Catholic	54(54.0)	22(40.7)	32(59.3)	
Protestant	24(24.0)	11(45.8)	13(54.2)	
Other	13(13.0)	7(53.8)	6(46.2)	
Health insurance				
No	41(40.6)	14(34.2)	27(65.8)	0.157
Yes	60(59.4)	29(48.3)	31(51.7)	

*Current minimum wage is R$1,087.84.

¥Chi-square test, with variables with p-value < 0.05 being significant.

As for college and work training, 86.1% of nurses had graduate degrees, 65.3% were hired according to the Brazilian Labor Code (CLT in Portuguese), and 55.4% worked during the day (Table 2).

Table 2. College and work training characteristics of nurses, according to the predictors of mental distress in the city of Rondonópolis - MT, 2020.

Variables	Total N(%)	Predictors of mental distress		p-value¥
		No n(%)	Yes n(%)	
Graduate degree holder				
No	14(13.9)	7(50.0)	7(50.0)	0.545
Yes	87(86.1)	36(41.4)	51(58.6)	
Employment relationship				
CLT	66(65.3)	30(45.5)	36(54.5)	
Contract	22(21.8)	9(40.9)	13(59.1)	0.610
Other	13(12.9)	4(30.8)	9(69.2)	
Work shift				
Daytime shifts	56(55.4)	20(35.7)	36(64.3)	
Night shifts	14(13.9)	8(57.1)	6(42.9)	0.256
Both	31(30.7)	15(48.4)	16(51.6)	
Weekend shifts				
No	17(16.8)	5(29.4)	12(70.6)	0.229
Yes	84(83.2)	38(45.2)	46(54.8)	
Weekly workload				
More than 44 hours	44(43.6)	14(31.8)	30(78.2)	
Up to 44 hours	57(56.4)	29(50.9)	28(49.1)	0.055
Position				
Direct patient care	37(36.6)	18(48.6)	19(51.4)	
Indirect patient care	6(5.9)	2(33.3)	4(66.7)	0.680
Indirect and direct patient care	45(44.5)	19(42.2)	26(57.8)	
Management/administration	13(12.9)	4(30.8)	9(69.2)	

**CLT= Brazilian Labor Code.
¥Chi-square test, with variables with p-value < 0.05 being significant.

Concerning the health conditions related to the COVID-19 pandemic, 46.5% of nurses showed average resilience, 83.2% were not part of the risk group, 81.2% provided direct care to patients infected by the disease, 61.5% claimed not to feel protected when providing care, and 34.6% were removed from work due to confirmation of infection caused by the new coronavirus (Table 3).

Table 3. Health conditions of nurses related to the context of the COVID-19 pandemic with predictors for mental distress in the city of Rondonópolis - MT, 2020

Variables	Total n(%)	Predictors of mental distress		p-value¥
		No n(%)	Yes n(%)	
Resilience				
Low	32(31.7)	19(59.4)	13(40.6)	
Average	47(46.5)	18(38.3)	29(61.7)	0.046
High	22(21.8)	6(27.3)	16(72.7)	
Being at the risk group for COVID-19				
Yes	17(16.8)	4(23.5)	13(76.5)	
No	84(83.2)	39(46.4)	45(53.6)	0.082
Living with people at risk for COVID-19				
No	68(67.3)	30(44.1)	38(55.9)	0.652
Yes	33(32.7)	13(39.4)	20(60.6)	

Providing direct care to patients infected with the new coronavirus				
No	18(17.2)	7(38.9)	11(61.1)	0.697
Yes	82(81.2)	36(43.9)	46(56.1)	
Having been relocated from the service/sector in the context of the COVID pandemic				
No	62(61.4)	27(43.5)	35(56.5)	
Yes, between sectors of the same institution	35(34.7)	14(40.0)	21(60.0)	0.901
Other	4(3.9)	2(50.0)	2(50.0)	
Do you feel protected from the transmission of the new coronavirus during the execution of professional activities?				
No	59(61.5)	24(40.7)	35(59.3)	0.804
Yes	37(38.5)	16(43.2)	21(56.8)	
Having been removed from work activities in the context of the COVID-19 pandemic				
No	35(34.6)	16(45.7)	19(54.3)	
Yes, due to suspected COVID-19 infection	27(26.7)	11(40.7)	16(59.3)	
Yes, due to confirmed COVID-19 infection	35(34.6)	14(40.0)	21(60.0)	0.948
Yes, for other reasons	4(3.9)	2(50.0)	2(50.0)	
If you have taken a work leave due to respiratory symptoms, have you performed social distancing at home				
Alone	31(54.4)	15(48.4)	16(51.6)	0.646
Accompanied	26(45.6)	11(42.3)	15(57.7)	
Smoker				
No	96(95.0)	41(42.7)	55(57.3)	0.905
Yes	5(4.9)	2(40.0)	3(60.0)	
How do you qualify the volume of information about COVID-19 that you access daily				
Very large	25(24.7)	9(36.0)	16(4.0)	
Large	37(36.6)	20(54.1)	17(45.9)	0.158
Moderate	36(35.6)	12(33.3)	24(66.7)	

¥Chi-square test, with variables with p-value < 0.05 being significant.

Regarding health changes that occurred before and in the context of the pandemic, there was a positive variation of the increase in the use of complementary therapies (24.8%) and drugs for mental health treatment (11.1%) (Table 4).

Table 4. Characteristics about health status of nurses before and in the context of the COVID-19 pandemic in the city of Rondonópolis - MT, 2020.

Variables	Before the pandemic n(%)	Increased/started in the context of the pandemic n(%)	Variation (%)
Consumption of alcoholic beverages			
No	53(52.5)	58(57.4)	-
Yes	48(47.5)	43(42.6)	-10.3
Use of complementary therapies			
No	77(77.0)	72(71.3)	-
Yes	23(23.0)	29(28.7)	24.8
Follow-up with a psychologist or psychiatrist			
No	74(73.3)	87(87.0)	-
Yes	27(26.7)	13(13.0)	-51.3
Use of medication for mental health treatment			
No	90(89.1)	88(88.0)	-
Yes	11(10.8)	12(12.0)	11.11

The univariate analysis showed a statistical association with predictors of mental distress at medium and low resilience. In the multiple analysis, nurses who did not have a partner (p=0.048), and those belonging to the risk group for COVID-19 (p=0.038) presented low (p=0.047) and medium (p=0.047) resilience associated with predictors of mental distress (p=0.015), regardless of gender (Table 5).

Table 5. Crude and adjusted prevalence ratios between socioeconomic and demographic variables, health status and predictors of mental distress in nurses, Rondonópolis-MT, 2020

Variables	Predictors of mental distress		
	Crude RP (95%CI)	Adjusted PR (95%CI)	p-value¥
Age (years)			
< 35	0.77(0.54;1.10)		
≥ 35	1		
Gender			
Female	1.40(0.87;2.26)	1.51(0.91;2.49)	0.104
Male	1	1	
Marital status			
Without a partner	1.29(0.92;1.81)	1.34(1.01;1.81)	**0.048**
With a partner	1	1	
Income			
< R$4,000.00	1.29(0.92;1.81)		
≥ R$4,000.00	1		
Health insurance			
No	0.78(0.56;1.09)		
Yes	1		
Weekly workload			
More than 44 hours	0.72(0.51;1.00)		
Up to 44 hours	1		
Being at the risk group for COVID-19			
Yes	1.42(1.02;1.98)	1.46(1.02;2.09)	**0.038**
No	1	1	
Resilience			
Low	1.79(1.09;2.93)	1.54(1.00;2.37)	**0.047**
Average	1.51(0.94;2.44)	1.73(1.11;2.70)	**0.015**
High	1	1	

[a]Crude prevalence ratio.
[b]Adjusted prevalence ratio.
[c]Final model adjusted for gender.
¥Z test for the final model variables, significant with p-value < 0.05.

DISCUSSION

During the pandemic period, research was developed addressing mental health assessments, encompassing various health professionals such as doctors, nurses, and other health workers, and showed that the category with the highest risk for the development of mental suffering was nurses, which confirms the relevance of the present research[13]. The increased risk among nursing professionals may be caused by the direct and permanent contact with the patients. Added to this are the strenuous working hours and the scarcity of personal protective equipment (PPE)[14].

The high prevalence of predictors of mental distress found among nurses was similar to the study by Dal-Bosco et al. (2020), in which prevalences of 48% of anxiety and 25% of depression were found in nursing professionals during the COVID-19 pandemic in Brazil[1]. A Spanish study carried out by Moreno et al. (2020) with 1,422 health professionals also corroborates the data presented above, in which more than half (58.6%) of the investigated nurses were diagnosed with anxiety and 46% with

depression[15]. It should be noted that Spain was one of the countries most affected at the beginning of the pandemic, a level similar to Brazil a few months later.

The health sector is characterized as one of the most stressful and intense among the areas of employment. Even before the pandemic, studies pointed out that nurses had risks for mental suffering associated with exposure to stressful situations, such as pain, death, sadness, and conflicts[16], factors in greater evidence during the pandemic.

Regarding the socioeconomic and demographic profile of the participants who presented possible mental suffering, there was a predominance of professionals who did not have a partner. This factor was also pointed out in studies that revealed a higher risk for the single population of health professionals to develop symptoms of anxiety, and post-traumatic stress during the COVID-19 pandemic since being alone potentially increases loneliness, potentiating problems in the mental health state[15]. Data from an American study performed by MCGinty et al. (2020) with 1,468 Americans aged over 18 show that the population had an increase of 13.8% in the feeling of always or often feeling lonely during the pandemic[17].

Social distancing is an effective measure to prevent COVID-19. However, loneliness and isolation from family and friends caused by this measure can result in mental illness, negative lifestyle changes, and negative changes in healthy habits, especially among those who experience this period alone[18,19]. From this perspective, there is an imminent need to adopt measures that, in addition to containing the pandemic, reduce mental suffering throughout this period of crisis, particularly among health professionals and workers directly exposed to the risks and stressors typical of this reality[20].

Concerning aspects related to the health condition, there was a higher prevalence of predictive signs of mental suffering among nurses belonging to the risk group for the new coronavirus. This finding is similar to those found in a study carried out with 441 nurses in Turkey, during the pandemic, in 2020, which showed statistical relevance for depressive symptoms among health professionals who had chronic diseases (risk group)[21], possibly, according to the authors, associated with greater risk or fear of getting ill.

The risk group comprises the elderly population, pregnant women, postpartum women, children, and people with one or more comorbidities. It is noteworthy that the factors of age and comorbidity were responsible for the highest level of hospitalization and death from COVID-19[22,23], so the risk or fear of getting ill may be more present in this population. In addition to the risk of death, previous research has shown that the fear of getting ill potentially predicts negative mental health outcomes, being associated with symptoms of stress, anxiety, and depression[15].

In a context characterized by increased occupational risks, constant feelings of fear, and exposure to stressful and tensional events, emotional support and mental health follow-up are essential[24]. However, a significant decrease in the search for psychological or psychiatric assistance during the pandemic was observed in this study compared to periods prior to this event. This result may reflect the unavailability of time due to the increased workload of professionals and social distancing measures. It is important to emphasize that, in pandemics, it is common for the number of people with some type of mental health condition to be greater than the number of people affected by the infection and these implications are more lasting and prevalent than the traumatic event itself[14].

Despite the promotion of mental health being a priority agenda of the global health care agenda, few initiatives are observed in the adoption of strategies to identify psychosocial needs and situations of emotional vulnerability of health professionals[24,25]. In this perspective, it is essential that institutions redirect investments and efforts in the planning and execution of interventions that transcend the focus on the physical health of professionals, but implement actions for monitoring mental health, training,

protection and safety, treatment, support, and psychosocial support in the short, medium and long term[25].

Another predictor found in the results was the association of mental suffering with low and moderate levels of resilience, a factor found in another study that negatively correlated burnout and anxiety of frontline nurses with low levels of resilience, becoming a criterion risk[26]. Therefore, low levels of resilience prevent an individual from dealing with adversities in traumatic impacts or stressors[27], thus increasing the probability of developing mild disorders.

Recent research during the pandemic has shown that resilience can be a protective factor against mental suffering[15], given that protective factors are those responsible for reducing or eliminating negative influences from risk, minimizing the deleterious effects and consequences of adversity[28]. In this way, it is necessary to promote resilience to support the protection of nurses' mental health during the pandemic.

Thus, from the experience of adverse and stressful situations, resilience is configured as a positive psychosocial adaptation. However, responding to adversities with resilience does not mean returning to the original situation after the problem, as resilience does not connote the idea of returning to the starting point but of evolution and learning after the problem faced[29].

The fact is that resilience does not preserve an individual from adversity, making him invulnerable, but makes him capable of facing, transforming, and learning. In addition, recognizing resilience as a predictor for the personal development of the worker[28] encourages institutional initiatives during the pandemic that must be implemented to ensure the appreciation of the worker's potential and autonomy, promoting protective factors and minimizing the suffering and stress experienced in coping with COVID-19.

Strategies for strengthening professional resilience listed in the literature and recommended in this study include the adoption of motivational approaches to ensure a safe and flexible work environment; holding meetings that favor positive communication in the organizational space; sharing knowledge and experiences in facing the challenges of daily work; and self-care, self-knowledge, and self-motivation. Furthermore, organizations must plan and value actions dedicated to the psychological support of workers and favor the learning of skills that help them solve problems in the corporate sphere[6,28,29].

The findings of this study, concerning the predictive factors found, allow reflections and strategic planning of interventions that favor well-being and the strengthening of resilience in the organizational context of health, given that resilience is a mutual commitment between the person and the organization.

CONCLUSION

Given the relevance and scarcity of research dealing with this recent subject, it is believed that the evidenced data will contribute to increasing the Brazilian literature on the mental health of nursing professionals in the face of COVID-19, as well as to intensify preventive practices with a focus on promoting mental health in an occupational environment, considering the factors found in this study, such as not having a partner, being in the risk group for COVID-19 and having low or medium resilience.

The COVID-19 pandemic is likely to have short- and long-term impacts on nurses' mental health, which will require institutions to routinely identify personal characteristics that are predictive of

the development of mental distress and adopt evidence-based practices that favor minimizing the risk of illness and strengthening resilience.

It is recommended that organizations develop strategies that foster nurses' resilience, such as promoting positivity, facilitating healthy social connections, identifying individual professional potential, providing benefits based on merit and productivity, investing in professional growth, encouraging self-care, organizing spaces and providing moments of meditation, physical or recreational activities.

The sample size was evidenced as a limitation of this study, given the difficulties in accessing study participants remotely using digital tools. In addition, questions are mentioned regarding the lack of time to participate and the attempts to establish contact without answers or feedback.

CONTRIBUTIONS

The authors contributed equally to the design of the research project, data collection, analysis, and discussion, as well as writing and critical review for approval of the final version of the article.

CONFLICT OF INTERESTS

On behalf of the authors responsible for this article, we certify that we have no conflicts of interest related to the article.

FUNDING

None.

REFERENCES

1. Dal'Basco EB, Floriano LSM, Skupien SV, Arcaro G, Martins AR, Anselmo ACR. A saúde mental da enfermagem no enfrentamento da pandemia COVID-19 em um hospital universitário regional. Rev. bras. enferm. (Online) 2020; 73(Suplemento 2): S1-7. https://doi.org/10.1590/0034-7167-2020-0434.

2. Zheng R, Zhou Y, Fu Y, Xiang Q, Cheng F, Chen H, et al. Prevalence and associated factors of depression and anxiety among nurses during the outbreak of COVID-19 in China: A cross-sectional study. Int J Of Nurs Stud. Fevereiro 2021;114: 1-8. Epub 17 outubro 2020. https://doi.org/: 10.1016/j.ijnurstu.2020.103809.

3. Jacinto A, Tolfo SR. Fatores psicossociais de risco no trabalho e Transtorno Mental Comum: uma revisão sistemática de estudos que utilizaram os instrumentos JCQ, JSS e SRQ-20. Rer. psicol. IMED, 2017, vol. 9, n. 2, p. 107-124. https://doi.org/10.18256/2175-5027.2017.v9i2.1432.

4 Moura RCD, Chavaglia SRR, Coimbra MAR, Araújo APA, Scárdua AS, Ferreira LA, et al. Transtornos mentais comuns em profissionais de enfermagem de serviços de emergência. Acta Paul. Enferm. (Online), 2022. vol. 35, eAPE03032. https://doi.org/10.37689/acta-ape/2022AO03032.

5 Santos KMR, Galvão MHR, Gomes SM, Souza TA, Medeiros AA, Barbosa IR. Depressão e ansiedade em profissionais de enfermagem durante a pandemia da covid-19. Esc. Anna Nery (Online). 2021, v. 25, n. spe, e20200370. https://doi.org/10.1590/2177-9465-EAN-2020-0370.

6 Dahka SM, Maroufizadeh S, Pouralizadeh M, Zahedsefat T, Ganjari MG, Elaheh Parsasalkisari E, et al. Mental Health and Resilience among Nurses in the COVID-19 Pandemic: A Web-Based Cross-Sectional Study. Iran J Psychiatry 2022; 17: 1: 35-43. https://doi.org/10.18502/ijps.v17i1.8047.

7 Kock HD, Latham HA, Leslie SJ, Grindle M, Munoz SA, Ellis L, et al. A rapid review of the impact of COVID-19 on the mental health of healthcare workers: implications for supporting psychological well-being. BMC Public Health, 2021. 21:104 https://doi.org/10.1186/s12889-020-10070-3.

8 Baskin RG, Bartlett R. Healthcare worker resilience during the COVID-19 pandemic: An integrative review. J Nurs Manag. 2021;1–14. https://doi.org/10.1111/jonm.13395.

9 Bottini FF, Paiva KCM, Gomes RC. Resiliência individual, prazer e sofrimento no trabalho e vínculos organizacionais: reflexões e perspectivas de pesquisas para o setor público. Cad. EBAPE.BR (online). 2021, v. 19, n. 1, pp. 45-57. https://doi.org/10.1590/1679-395120200091.

10 Hartmann-Junior JAS, Medeiros AGAP. Escalas de Resiliência: uma revisão narrativa. Meta: Avaliação, 2017. v. 9, n. 27, p. 561-578. http://dx.doi.org/10.22347/2175-2753v9i27.1322.

11 Pesce RP, Assis SG, Avanci JQ, Santos NC, Malaquias JC, Carvalhaes R. Adaptação transcultural, confiabilidade e validade da escala de resiliência. Cad. Saúde Pública (Online). 2005; 21 (2): 436-48. https://doi.org/10.1590/S0102-311X2005000200010.

12 Santos KOB, Araújo TM, Pinho PS, Silva ACC. Avaliação de um Instrumento de Mensuração de Morbidade Psíquica: Estudo de Validação do Self-Reporting Questionnaire (SRQ-20). Rev. baiana saúde pública. 2010; 34 (3): 544-560. https://doi.org/10.22278/2318-2660.2010.v34.n3.a54.

13 Awano N, Oyama N, Akiyama K, Inomata M, Kuse N, Tone M, et al. Anxiety, Depression, and Resilience of Healthcare Workers in Japan During the Coronavirus Disease 2019 Outbreak. Intern Med. 2020; 59: 2693-9. https://doi.org/10.2169/internalmedicine.5694-20.

14 Duarte MLC, Silva DG, Bagatini MMC. Enfermagem e saúde mental: uma reflexão em meio à pandemia de coronavírus. Rev. gaúch. enferm. 2021; 42(esp): e20200140. https://doi.org/10.1590/1983-1447.2021.20200140

15 Moreno LL, Valesco BT, Albuerne YG, García JM. Symptoms of Posttraumatic Stress, Anxiety, Depression, Levels of Resilience and Burnout in Spanish Health Personnel during the COVID-19 Pandemic. Int J Environ Res Public Health. 2020;17(15):5514. Published 2020 Jul 30. doi:10.3390/ijerph17155514

16Huang CLC, Wu MP, Ho CH, Wang JJ. Risks of treated anxiety, depression, and insomnia among nurses: A nationwide longitudinal cohort study. PLOS ONE, 2018, 13(9), e0204224. https://doi.org/10.1371/journal.pone.0204224

17 MCGinty EE, Presskreischer R, Han H, Barry CL. Psychological Distress and Loneliness Reported by US Adults in 2018 and April 2020. JAMA. Epub 3 junho 2020 https://doi.org/10.1001/jama.2020.9740

18 Barros MBZ, Lima MG, Malta DC, Szwarcwal CL, Azevedo RCS, Romero D, et al. Relato de tristeza/depressão, nervosismo/ansiedade e problemas de sono na população adulta brasileira durante a pandemia de COVID-19. Epidemiol. Serv. Saúde. (Online) 2020; 29(4): 1-12. https://doi.org/10.1590/S1679-49742020000400018

19 Almeida WS, Szwarcwal CL, Malta DC, Barros MBA, Júnior PRBS, Azevedo LO, et al. Mudanças nas condições socioeconômicas e de saúde dos brasileiros durante a pandemia de COVID-19. Rev. bras. epidemiol. 2020; 23:1-14. https://doi.org/10.1590/1980-549720200105

20 Malta DC, Gomes CS, Szwarcwald CL, Barros MBA, Silva AG, Prates EJS, et al. Distanciamento social, sentimento de tristeza e estilos de vida da população brasileira durante a pandemia de COVID-19. Scielo Preprints [Internet]. 2020; versão 1:1-22. https://doi.org/10.1590/SciELOPreprints.1371

21 Pouralizadeh M, Bostani Z, Maroufizadeh S, Ghanbari A, Khoshbakht M, Alavi SA, et al. Anxiety and depression and the related factors in nurses of Guilan University of Medical Sciences hospitals

during COVID-19: A web-based cross-sectional study. Int J Afr Nurs Sci. 2020; 13: 1-6. https://doi.org/10.1016/j.ijans.2020.100233

22 Niquini RP, Lana RQ, Pacheco AG, Cruz OG, Coelho FC, Carvalho LM, et al. Description and comparison of demographic characteristics and comorbidities in SARI from COVID-19, SARI from influenza, and the Brazilian general population. Cad. Saúde Pública. (Online) 2020; 37(6):1-12. https://doi.org/10.1590/0102-311X00149420

23 Maciel EL, Jabor P, Júnior EG, Sá RT, Lima RCD, Santos BR, et al. Fatores associados ao óbito hospitalar por COVID-19 no Espírito Santo, 2020. Epidemiol. Serv. Saúde. 2020; 29(4): 1-11. https://doi.org/10.5123/S1679-49742020000400022

24 Oliveira WA, Oliveira-Cardoso EA, Silva JL, Santos MA. Impactos psicológicos e ocupacionais das sucessivas ondas recentes de pandemias em profissionais da saúde: revisão integrativa e lições aprendidas. Estud Psicol. 2020;37:e200066. http://dx.doi.org/10.1590/1982- 0275202037e200066

25 Miranda FBG, Yamamura M, Pereira SS, Pereira CS, Protti-Zanatta ST, Costa MK et al. Sofrimento psíquico entre os profissionais de enfermagem durante a pandemia da COVID-19: Scoping Review. Esc. Anna Nery (Online). 2021; 25 (spe): e20200363. https://doi.org/10.1590/2177-9465-ean-2020-0363

26 Hu D, Kong Y, Li W, Han Q, Zhang X, Zhu Lx, et al. Frontline nurses' burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China: A large-scale cross-sectional study. EClinicalMedicine. 2020; 24:1-11. doi: 10.1016/j.eclinm.2020.100424.

27 Abreu HD. Influência das Variáveis Sociodemográficas no Bem-estar no Trabalho e na Resiliência: Um estudo com profissionais de enfermagem 2017. Rev. Int. Investig. Cienc. Soc. 2017; 13(2) 167-86. https://doi.org/10.18004/riics.2017.diciembre.167-186

28 Silva SM, Baptista PCP, Silva FJ, Almeida MCS, Soares RAQ. Fatores relacionados à resiliência em trabalhadores de enfermagem no contexto hospitalar. Rev. Esc. Enferm USP. 2020; 54: 1-7. http://dx.doi.org/10.1590/S1980-220X2018041003550.

29 Monteiro AC, Mourão L. Resiliência e Justiça Organizacional como Antecedentes da Percepção de Desenvolvimento Profissional. Psicol. teor. pesqui. (Online). 2016; 32(1) 111-121 https://doi.org/10.1590/0102-37722016012402111121

Correspondence

Tiago Silva Peixoto

Email: tiagosilpe1@gmail.com

Submission: 03/21/2022
Accepted: 06/20/2022
Published:09/30/2022

Section Editor: Jackeline Cristiane Santos
Scientific Editor: Tatiane Gomes Guedes
Manage Editor: Maria Wanderleya de Lavor Coriolano Marinus