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Mental health of Brazilian physicians during the COVID-19 pandemic

Saúde mental dos médicos brasileiros durante o combate à pandemia da COVID-19

Salud mental de los médicos brasileros durante el combate de la pandemia COVID-19

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Abstract

Aim: To identify the profile of Brazilian doctors and the prevalence of mental suffering during the COVID-19 pandemic. Methods: This is a cross-sectional, exploratory quantitative study, performed between April and May 2020, using a sociodemographic questionnaire and a specific tool for tracking non-psychotic mental disorders: the Self Report Questionnaire. Results: Participant profile: women (68.1%), between 31 and 40 years old (39.9%), married or with partners (59.9%), without children (53.3%), with up to five years of graduation (30.9%), and working in public service (40.7%). The doctors (49.79%) show strong signs of mental suffering, with impaired sleep, headache, and psychotropic drug use. Many of them feel easily tired and have difficulty in satisfactorily carrying out daily activities. Many are

tense, nervous or worried (77.4%); feel sad and are crying more than usual. Among them, 34.8% are losing interest in things, 14.6% feel they are useless, and 4.3% have suicidal thoughts. Conclusions: Almost half of the Brazilian doctors (49.79%) show strong signs of mental suffering, with a level of tension, nervousness and worry that affects more than half of the professionals. Ongoing programs for the prevention of mental disorders and suicide during and after the COVID-19 pandemic are required.

Keywords: Mental health; Physicians; COVID-19; Mental suffering.

Resumo

Objetivo: Identificar a prevalência de sofrimento mental em médicos brasileiros durante a pandemia da COVID-19. Métodos: Estudo transversal, exploratório quantitativo, realizado entre abril e maio de 2020, usou um questionário sociodemográfico e um instrumento específico para rastreamento de transtornos mentais não-psicóticos, o Self Report Questionnaire. Resultados: O perfil dos participantes: mulheres (68.1%), entre 31 e 40 anos (39.9%), casadas ou com companheiros (59.9%), sem filhos (53.3%), com até cinco anos de graduação (30.9%), trabalhando no serviço público (40.7%). Os médicos (49.79%) têm fortes indícios de sofrimento mental, com o sono comprometido e cefaleia e usam psicofármacos. Sentem-se facilmente cansados e com dificuldades para realizar as atividades diárias com satisfação. Estão tensos, nervosos ou preocupados (77.4%), sentem-se tristes e estão chorando mais que o habitual. Entre eles, 34.8% estão perdendo o interesse pelas coisas, 14.6% sentem-se pessoas inúteis e 4.3% apresentam ideação suicida. Conclusões: Quase a metade dos médicos brasileiros (49.79%) apresentam fortes indícios de sofrimento mental, com um nível de tensão, nervosismo e preocupação que atinge mais da metade dos profissionais, o que requer que esforços devam ser empregados para programas contínuos de prevenção de transtornos mentais e suicídio durante e depois da pandemia da COVID-19.

Palavras-chave: Saúde Mental; Médicos; COVID-19; Sofrimento Mental.

Resumen

Objetivo: Identificar a prevalencia de sufrimiento mental en médicos brasileros durante la pandemia COVID-19. Métodos: Estudio transversal, exploratorio cuantitativo, realizado entre abril, mayo del 2020, se realizó un cuestionario socio demográfico y un instrumento específico para rastre amiento de trastornos mentales no-psicóticos, o Self Report Questionnacire. Resultados: Perfil de los participantes: mujeres (68.1%), entre 31 y 40 años (39.9%), casadas o con compañero (59.9%), sin hijos (53.3%), con hasta cinco años de

graduada (30.9%), trabajando en el servicio público (40.7%). Los médicos (49.79%) tienen fuertes indicios de sufrimiento mental, con Insomnio y dolor de cabeza, y usan psicofármacos. Se sienten fácilmente cansados y con dificultades para realizar las actividades diarias con satisfacción. Están tensos, nerviosos o preocupados (77.4%), se sienten tristes y están llorando más de lo habitual. Entre ellos, 34.8% están perdiendo o interés por las cosas, 14.6% se sienten personas inútiles e 4.3% tiene ideas suicidas. Conclusiones: Casi la mitad de los médicos brasileros (49.79%) presentan fuertes indicios de sufrimiento mental, con un nivel de estrés, nerviosismo y preocupación que sacude a más de la mitad de los profesionales, lo que requiere de esfuerzos para establecer programas continuos de prevención de trastornos mentales y suicidio durante y después de COVID-19.

Palabras clave: Salud mental; Médicos; COVID-19; Sufrimiento mental.

1. Introduction

Human history is marked by epidemics and pandemics. At the end of 2019 and the beginning of 2020, the world was encountered a new threat: a novel coronavirus (now known as COVID-19), whose rapid spread directly affected politics, the economy, the internet, social relations and, above all, the physical and mental health of the world population and health professionals across the planet. The mental suffering of doctors has alarmed health authorities worldwide (Cohen, Crespo, & White, 2020; Lai et al., 2020). The imminence of COVID-19 in Brazil sparked the race to build field hospitals, purchase respirators, increase the number of ICU beds, and facilitate distribution of personal protective equipment (PPE) for health professionals, in a previously environment marked by scenarios of hospital overcrowding, scarcity of equipment, corruption, and interference from private interests for decades in the Brazilian health system. Thus, there are many variables that directly affect the mental health of doctors, leading them to experience psychological distress.

On February 25, 2020, the first case of COVID-19 was registered by the Ministry of Health in Brazil(Lima et al., 2020). In the Epidemiological Bulletin of the Health Surveillance Secretariat of the Ministry of Health released on June 23, 2020, the World Health Organization (WHO) reported 9,273,773 cases of COVID-19 and 477,807 deaths (Bastos, 2020) from this disease worldwide. Epidemiological data reveal that, until this date, June 23, 2020, Brazil had the highest daily fatality rate and ranked second internationally for the highest total number of victims. June 23, 2020, we have 1,145,906 cases of COVID-19 and 56,645 deaths, with a lethality rate of 4,6% (Saúde, 2020).

In countries where the effects of the pandemic are noticeable, doctors need to manage the high risk of infection due to the absence or inadequate supply of PPE. Frustrated, exhausted, and sometimes isolated from their families in an attempt to avoid possible contagion in their homes (due to the very evolution of the disease, where some cases are asymptomatic), medical personnel are increasingly vulnerable to physical and mental illness (Kang, Ma, et al., 2020; Lee, Kang, Cho, Kim, & Park, 2018).

The purpose of this article, from a broader study on the mental health of Brazilian doctors who are working during the fight against the pandemic, was to indicate the profile of these workers and the signs of mental suffering.

2. Methods

The presented study is transversal, exploratory and quantitative. There are no official figures on how many doctors are treating patients infected with the coronavirus. Thus, the worst statistical scenario, one that maximizes the error in estimating the number of doctors dealing directly with coronavirus, would be 50%. Therefore, assuming a finite population of 485 thousand doctors with a 5% margin of error and a confidence interval of 95%, at least 384 doctors were needed (Miot, 2011).

A total of 486 doctors from all regions of Brazil were contacted and requested to respond to this survey through an online form from April 19 to May 3, 2020. Before data collection, they all electronically agreed to the terms of a Free and Informed Consent form. This study was approved by the National Research Ethics Commission under record no. 3.979.226.

This study used two collection instruments. The first, constructed by the researchers, outlined the profile of the participants, identifying sociodemographic data including: sex, age, religion, marital status, children, who you live with, if you are isolated from your family, time since graduation, specialty, workplace type, use of PPE, psychotherapeutic and psychiatric follow-ups, use of psychotropic drugs, contagion with COVID-19, family or friends who have been contaminated or died, and presence of emotional and family conflicts.

The second questionnaire was specifically for tracking non-psychotic mental disorders. The Self Report Questionnaire (SRQ-20) is an international instrument (Harding et al., 1980) that has been validated in Brazil (De Jesus Mari & Williams, 1986; Fernandes & Almeida Filho, 1997; Palácios, Jardim, Ramos, & Silva Filho, 1998; Santos, De Araújo, & De Oliveira, 2009). SRQ-20 showed good internal consistency (Cronbach's alpha = 0.8) and

invariant factorial structure (Paraventi, Cogo-Moreira, Paula, & de Jesus Mari, 2015; Santos, Carvalho, & Araújo, 2016; Santos et al., 2009).

This test favors a screening for mental illness, suggesting but without attributing a specific diagnosis. It is a 20-question instrument, self-administered with yes and no answers. Each answer generates a point in the final score that states the probability of a non-psychotic disorder in a range from zero (no probability) to 20 (extreme probability). In this test, eight or more positive responses are taken as a cutoff point in indicating psychological distress because this cutoff point showed good diagnostic accuracy (86.3% of sensitivity and 89.3% of specificity) (Moraes, Silva, Oliveira, & Peres, 2017).

For data analysis, categorical variables were described by absolute and relative frequency. Associations between categorical variables were subjected to Fisher's Exact, Pearson's Chi-Square, and Pearson's Chi-Square with Monte-Carlo simulation tests. A significance level of 5% was adopted and the R Core Team 2020 software was used.

3. Results

The profile of the participants was as follows: women (68.1%), between 31 and 40 years old (39.9%), Catholic (47.9%), married or with partners (59.9%), without children (53.3%) (Table 1). We observe significant dependence between psychological distress and sex, gender, age, having children and living with spouse and children.

Table 1. Sociodemographic characterization of doctors by SRQ levels, Brazil, 2020.

	SRQ			
	<=7	**>7**	**Total**	
	n (%)	**n (%)**	**n (%)**	**p-valor**
What is your biological sex?				
Feminine.	145 (59.4)	186 (76.9)	331 (68.1)	**<0,001** †
Masculine.	99 (40.6)	56 (23.1)	155 (31.9)	
Which gender do you identify with?				
Feminine.	146 (59.8)	182 (75.2)	328 (67.5)	**<0.001** †
Masculine.	98 (40.2)	60 (24.8)	158 (32.5)	
What is your age?				
Less than 30 years.	39 (16)	78 (32.2)	117 (24.1)	**<0.001** ‡
Between 31 and 40 years.	91 (37.3)	103 (42.6)	194 (39.9)	
Between 41 and 50 years.	59 (24.2)	42 (17.4)	101 (20.8)	
Between 51 and 60 years.	34 (13.9)	16 (6.6)	50 (10.3)	
Between 61 and 70 years.	18 (7.4)	3 (1.2)	21 (4.3)	
Less than 70 years.	3 (1.2)	0 (0)	3 (0.6)	
Do you identify with any of these religions?				

Catholic.	120 (49.2)	113 (46.7)	233 (47.9)	0.924 ‡
Evangelical.	15 (6.1)	21 (8.7)	36 (7.4)	
Spiritist.	40 (16.4)	44 (18.2)	84 (17.3)	
Jehovah's Witness.	1 (0.4)	1 (0.4)	2 (0.4)	
Jewish.	2 (0.8)	1 (0.4)	3 (0.6)	
African descent.	3 (1.2)	4 (1.7)	7 (1.4)	
Buddhist.	7 (2.9)	3 (1.2)	10 (2.1)	
Other Christian religion.	3 (1.2)	5 (2.1)	8 (1.6)	
Other non-Christian religion.	1 (0.4)	1 (0.4)	2 (0.4)	
No religion, but I believe in God.	35 (14.3)	30 (12.4)	65 (13.4)	
I am an atheist.	17 (7)	19 (7.9)	36 (7.4)	
How often do you participate in religious rites or pray and meditate?				
Daily.	68 (27.9)	47 (19.4)	115 (23.7)	0.066 ‡
Two or more times per week.	32 (13.1)	38 (15.7)	70 (14.4)	
Weekly.	36 (14.8)	41 (16.9)	77 (15.8)	
Monthly.	2 (0.8)	7 (2.9)	9 (1.9)	
Occasionally.	51 (20.9)	65 (26.9)	116 (23.9)	
Rarely or never.	55 (22.5)	44 (18.2)	99 (20.4)	
What is your marital status?				
Single but dating.	32 (13.1)	43 (17.8)	75 (15.4)	0,094 ‡
Single and alone.	34 (13.9)	48 (19.8)	82 (16.9)	
Married, stable union, cohabiting.	157 (64.3)	134 (55.4)	291 (59.9)	
Separated, divorced.	19 (7.8)	17 (7)	36 (7.4)	
Widowed.	2 (0.8)	0 (0)	2 (0.4)	
Do you have children?				
Yes.	139 (57)	88 (36.4)	227 (46,7)	**<0.001** †
No.	105 (43)	154 (63.6)	259 (53.3)	
Who do you live with?				
Parents and/or siblings.	20 (8.2)	43 (17.8)	63 (13)	**0.009** ‡
Partner/fiancé/spouse.	53 (21.7)	58 (24)	111 (22.8)	
Spouse and children.	100 (41)	75 (31)	175 (36)	
Parents or in-laws, spouse, and children.	9 (3.7)	8 (3.3)	17 (3.5)	
Only with children.	17 (7)	7 (2.9)	24 (4.9)	
Friends.	5 (2)	4 (1.7)	9 (1.9)	
Alone.	40 (16.4)	47 (19.4)	87 (17.9)	

Legend SRQ – Self Report Questionnaire. n – absolute frequency. % – relative frequency percentage. † – Pearson's Chi-Square Test. ‡ – Pearson's Chi-square test with Monte-Carlo simulations. In bold, significant results ($p < 0.05$).
Source: Author research.

Beyond that, the physicians have up to five years of graduation (30.9%), specialists (52.3), and working in public service (40.7%) (Table 2). We observe significant dependence between psychological distress and working in public service, up to five years of graduation and specialist.

Table 2. Sociodemographic characterization of doctors by SRQ levels, Brazil, 2020.

	SRQ			
	<=7 n (%)	>7 n (%)	Total n (%)	p-valor
Which Brazilian region did you graduate from?				
Northeast	50 (30.3)	52 (28.1)	102 (29.1)	0.965 ‡
North	6 (3.6)	6 (3.2)	12 (3.4)	
Midwest.	7 (4.2)	9 (4.9)	16 (4.6)	
South	38 (23)	40 (21.6)	78 (22.3)	
Southeast	64 (38.8)	78 (42.2)	142 (40.6)	
In which Brazilian region do you work?				
Northeast	125 (51.2)	121 (50)	246 (50.6)	0.951 ‡
North	5 (2)	4 (1.7)	9 (1.9)	
Midwest.	10 (4.1)	9 (3.7)	19 (3.9)	
South	41 (16.8)	38 (15.7)	79 (16.3)	
Southeast	63 (25.8)	70 (28.9)	133 (27.4)	
Where do you work during the pandemic directly with patients on site?				
Public.	88 (36.1)	110 (45.5)	198 (40.7)	**0.048** †
Private.	56 (23)	38 (15.7)	94 (19.3)	
Both.	100 (41)	94 (38.8)	194 (39.9)	
Do you work in outpatient clinics or hospitals during the pandemic?				
Hospitals.	88 (36.1)	90 (37.2)	178 (36.6)	0.551 ‡
Clinics.	73 (29.9)	62 (25.6)	135 (27.8)	
Both.	83 (34)	90 (37.2)	173 (35.6)	
How long has it been since you graduated?				
Less than 5 years.	56 (23)	94 (38.8)	150 (30.9)	**<0.001** ‡
Between 5 and 10 years.	55 (22.5)	69 (28.5)	124 (25.5)	
Between 11 and 20 years.	55 (22.5)	44 (18.2)	99 (20.4)	
Between 21 and 30 years.	43 (17.6)	28 (11.6)	71 (14.6)	
More than 31 years.	35 (14.3)	7 (2.9)	42 (8.6)	
Are you a specialist or a clinician?				
A specialist.	146 (59.8)	108 (44.6)	254 (52.3)	**0.003** ‡
A clinician.	67 (27.5)	87 (36)	154 (31.7)	
Both.	31 (12.7)	47 (19.4)	78 (16)	
Are you on call during the pandemic?				
Yes, in public hospital.	66 (27)	82 (33.9)	148 (30.5)	0.058 ‡
Yes, in private hospital.	34 (13.9)	27 (11.2)	61 (12.6)	
Yes, in both.	39 (16)	52 (21.5)	91 (18.7)	
No.	105 (43)	81 (33.5)	186 (38.3)	

Legend SRQ – Self Report Questionnaire. n – absolute frequency. % – relative frequency percentage. † – Pearson's Chi-Square Test. ‡ – Pearson's Chi-square test with Monte-Carlo simulations. In bold, significant results (p <0.05).
Source: Author research.

During the pandemic, the majority of the doctors sleep at home with their families at the end of their work shift (96.5%) (Table 3). They stated that they have colleagues (55.8%), family members (8.6%), friends and acquaintances (53.31%) who had fallen ill with coronavirus and have already recovered; they have lost patients to COVID-19 (10.1%), and they themselves have gotten sick (3.7%). In addition, 74.7% said they had not been infected, but reported a fear of getting sick. We observe significant dependence between psychological distress and physicians who hadn't treated any patient with coronavirus, nor suspected cases and who answered "No, I don't think about it. / I'm not afraid".

Table 3. Habits of doctors' work routine by SRQ levels, Brazil, 2020.

	SRQ			
	<=7 n (%)	>7 n (%)	Total	p-valor
Are you sleeping at home during the pandemic?				
Yes, I'm going to my house.	237 (97.1)	232 (95.9)	469 (96.5)	0.156 ‡
No, I am isolated in the hospital itself.	2 (0.8)	0 (0)	2 (0.4)	
No, I am isolated sharing a room / apartment. with a fellow healthcare professional also isolated.	5 (2)	10 (4.1)	15 (3.1)	
Have any medical colleagues fallen ill from the coronavirus?				
Yes, but they have recovered or are recovering.	128 (52.5)	143 (59.1)	271 (55.8)	0.238 ‡
Yes, they are seriously ill or have died.	9 (3.7)	11 (4.5)	20 (4.1)	
No medical colleague has fallen ill.	107 (43.9)	88 (36.4)	195 (40.1)	
Have any relatives fallen ill from the coronavirus?				
Yes, but they have recovered or are recovering.	20 (8.2)	22 (9.1)	42 (8.6)	0.218 ‡
Yes, they are seriously ill or have died.	2 (0.8)	7 (2.9)	9 (1.9)	
No relative has fallen ill.	222 (91)	213 (88)	435 (89.5)	
Has any acquaintance / friend fallen ill from the coronavirus?				
Yes, but they have recovered or are recovering.	124 (50.8)	134 (55.4)	258 (53.1)	0.599 ‡
Yes, they are seriously ill or have died.	23 (9.4)	20 (8.3)	43 (8.8)	
No acquaintance or friend has fallen ill.	97 (39.8)	88 (36.4)	185 (38.1)	
Have you treated / are you treating any patient with coronavirus?				
Yes, but they have recovered or are recovering.	39 (16)	44 (18.2)	83 (17.1)	**<0.001** ‡
Yes, they are seriously ill or have died.	24 (9.8)	25 (10.3)	49 (10.1)	
I have not treated any patient with coronavirus, but I have treated suspected cases.	85 (34.8)	119 (49.2)	204 (42)	
I have not treated any patient with coronavirus, nor suspected cases.	96 (39.3)	54 (22.3)	150 (30.9)	
Did you contract the coronavirus?				
Yes, but I am already recovered.	7 (2.9)	5 (2.1)	12 (2.5)	**<0.001** ‡
Yes, I'm still being treated.	2 (0.8)	4 (1.7)	6 (1.2)	
No, but I'm afraid.	157 (64.3)	206 (85.1)	363 (74.7)	
No, I don't think about it. / I'm not afraid.	78 (32)	27 (11.2)	105 (21.6)	

Legend SRQ – Self Report Questionnaire. n – absolute frequency. % – relative frequency percentage. † – Pearson's Chi-Square Test. ‡ – Pearson's Chi-square test with Monte-Carlo simulations. In bold, significant results (p <0.05).
Source: Author research.

Among the participants, 62.8% stated that they receive sufficient PPE, and some (14.4%) admitted incorrect use of the equipment. When the institution where they work does not have PPE, 67.9% buy it, 4.7% do not use it, 13.4% refuse to work, and others improvise or borrow (Table 4).

Some doctors (23.7%) have had their workload increased and for others it has been reduced or remained constant. Some (15%) of them are working over 60 hours a week (Table 4).

We observe significant dependence between psychological distress and self-report of correct use of PEE.

Table 4. Doctors use habits of PPE by SRQ levels, Brazil, 2020.

	SRQ			
	<=7 n (%)	>7 n (%)	Total	p-valor
Are the places where you work offering PPE?				
Yes, they all offer it.	166 (68)	139 (57.4)	305 (62.8)	0.053 ‡
Only some offer it.	69 (28.3)	90 (37.2)	159 (32.7)	
None offer it.	9 (3.7)	13 (5.4)	22 (4.5)	
Are you using PPE correctly?				
Yes.	220 (90.2)	196 (81)	416 (85.6)	**0.004** †
No.	24 (9.8)	46 (19)	70 (14.4)	
In the absence of PPE at your institution, what do you do?				
I buy it.	167 (68.4)	163 (67.4)	330 (67.9)	0.711 ‡
I borrow it.	3 (1.2)	7 (2.9)	10 (2.1)	
I improvise.	28 (11.5)	30 (12.4)	58 (11.9)	
I go without.	11 (4.5)	12 (5)	23 (4.7)	
I complain and do not work.	35 (14.3)	30 (12.4)	65 (13.4)	
How is your workload during the pandemic?				
It has been reduced.	127 (52)	104 (43)	231 (47.5)	0.188 ‡
It is the same.	63 (25.8)	77 (31.8)	140 (28.8)	
It has increased a little.	37 (15.2)	46 (19)	83 (17.1)	
It has increased a lot.	17 (7)	15 (6.2)	32 (6.6)	
How many hours of work do you have per week during the pandemic?				
Between 20 and 44 hours per week.	149 (61.1)	138 (57)	287 (59.1)	0.663 ‡
Between 45 and 60 hours per week.	60 (24.6)	66 (27.3)	126 (25.9)	
More than 61 hours per week.	35 (14.3)	38 (15.7)	73 (15)	

Legend SRQ – Self Report Questionnaire. n – absolute frequency. % – relative frequency percentage. † – Pearson's Chi-Square Test. ‡ – Pearson's Chi-square test with Monte-Carlo simulations. In bold, significant results (p <0.05).
Source: Author research.

Among the participants, 27% reported having family conflicts before the pandemic and 30.7% indicated new conflicts (Table 5). They were followed up in psychotherapy (37.1%) and psychiatry (23%) before the pandemic and 35.6% use psychiatric drugs. A considerable portion (21.4%) asked the researchers for psycho-emotional support. We observe significant dependence between psychological distress and no psychotherapeutic and/or

psychiatric follow-up, less use of such as Hypnotics and Antidepressants, who did not experienced any emotional or family conflict before or after pandemic outbreak and did not ask for assistance or referral for mental health treatment.

Table 5. Characterization regarding mental status, use of psychotropic drugs and treatment of doctors by SRQ levels, Brazil, 2020.

	SRQ			
	<=7 n (%)	>7 n (%)	Total	p-valor
Did you have or do you have any psychotherapeutic follow-up?				
Yes.	72 (29.6)	108 (44.6)	180 (37.1)	**0.001** ‡
No.	171 (70.4)	134 (55.4)	305 (62.9)	
Did you have or do you have any psychiatric follow-up?				
Yes.	40 (16.4)	72 (29.8)	112 (23)	**<0.001** ‡
No.	204 (83.6)	170 (70.2)	374 (77)	
Psychiatry / Psychotherapy				
Both.	29 (11.9)	57 (23,6)	86 (17.7)	**0.001** §
Psychiatry.	11 (4.5)	15 (6.2)	26 (5.3)	
Psychotherapy.	43 (17.6)	51 (21.1)	94 (19.3)	
None.	161 (66)	119 (49.2)	280 (57.6)	
Do you use psychotropic drugs?	60 (24.6)	113 (46.7)	173 (35.6)	**<0.001** ‡
Hypnotics.	12 (4.9)	25 (10.3)	37 (7.6)	**0.024** †
Mood stabilizers.	5 (2)	13 (5.4)	18 (3.7)	0.052 †
Antidepressants.	34 (13.9)	80 (33.1)	114 (23.5)	**<0.001** ‡
Antipsychotics.	1 (0.4)	1 (0.4)	2 (0.4)	0.995 †
Anxiolytics.	17 (7)	58 (24)	75 (15.4)	<0.001 §
Were you in any emotional or family conflict before the pandemic broke out?				
Yes.	44 (18)	87 (36)	131 (27)	**<0.001** ‡
No.	200 (82)	155 (64)	355 (73)	
Did new emotional and / or family conflicts arise after the pandemic broke out?				
Yes.	39 (16)	110 (45.5)	149 (30,7)	**<0.001** ‡
No.	205 (84)	132 (54.5)	337 (69.3)	
Do you want any assistance or referral for mental health treatment?				
Yes.	19 (7.8)	85 (35.1)	104 (21.4)	**<0.001** ‡
No.	225 (92.2)	157 (64.9)	382 (78.6)	

Legend SRQ – Self Report Questionnaire. n – absolute frequency. % – relative frequency percentage. † – Fisher's Exact Test. ‡ – Pearson's Chi-Square Test. § – Pearson's Chi-square test with Monte-Carlo simulations. In bold, significant results (p<0.05).
Source: Author research.

SRQ-20 results revealed that 49.79% of doctors have strong signs of mental suffering, the most frequent psychosomatic symptoms being impaired sleep (56.6%) and headache (45.5%) (Table 6).

Regarding the energy and vitality of these doctors, 58.6% feel easily tired and have difficulty satisfactorily performing daily activities (45.3%).

Regarding mood, many doctors are tense, nervous or worried (77.4%), 52.5% feel sad and 30.9% are crying more than usual.

As for depressive thoughts, 34.8% of doctors report losing interest in things, 14.6% feel they are useless, and 4.3% have suicidal ideation.

Table 6. SRQ items by SRQ levels, Brazil, 2020.

	SRQ			
	<=7	>7		
	n (%)	n (%)	Total	p-valor
Psychosomatic Symptoms				
Do you have frequent headaches?	65 (26.6)	156 (64.5)	221 (45.5)	**<0,001** ‡
Do you have upset stomach?	40 (16.4)	131 (54.1)	171 (35.2)	**<0.001** ‡
Do you have a lack of appetite?	16 (6.6)	58 (24)	74 (15.2)	**<0.001**†
Do you have difficulty sleeping?	87 (35.7)	188 (77.7)	275 (56.6)	**<0.001** ‡
Do you have tremors in your hands?	11 (4.5)	47 (19.4)	58 (11.9)	**<0.001** †
Do you have poor digestion?	29 (11.9)	103 (42.6)	132 (27.2)	**<0.001** ‡
Mood				
Are you scared easily?	19 (7.8)	102 (42.1)	121 (24.9)	**<0.001** †
Have you been feeling sad lately?	54 (22.1)	201 (83.1)	255 (52.5)	**<0.001** ‡
Have you been crying more than usual?	28 (11.5)	122 (50.4)	150 (30.9)	**<0.001** ‡
Do you feel nervous, tense, or worried?	142 (58.2)	234 (96.7)	376 (77.4)	**<0.001** †
Energy And Vitality				
Do you get tired easily?	80 (32.8)	205 (84.7)	285 (58.6)	**<0.001** ‡
Do you have difficulty thinking clearly?	22 (9)	148 (61.2)	170 (35)	**<0.001** †
Do you find it difficult to carry out? your daily activities with satisfaction?	34 (13.9)	186 (76.9)	220 (45.3)	**<0.001** ‡
Do you have difficulty making decisions?	23 (9.4)	135 (55.8)	158 (32.5)	**<0.001** †
Do you have difficulty during service? (Is your work painful, does it cause you suffering)?	17 (7)	134 (55.4)	151 (31.1)	**<0.001** †

Do you feel tired all the time?	47 (19.3)	188 (77.7)	235 (48.4)	**<0.001** ‡
Depressive Thoughts				
Have you lost interest in things?	24 (9.8)	145 (59.9)	169 (34.8)	**<0.001** †
Do you feel useless?	5 (2)	66 (27.3)	71 (14.6)	**<0.001** †
Have you thought about ending your life?	1 (0.4)	20 (8.3)	21 (4.3)	**<0.001** †
Are you unable to play a useful role in your life?	2 (0.8)	23 (9.5)	25 (5.1)	**<0.001** †

Legend SRQ – Self Report Questionnaire. n – absolute frequency. % – relative frequency percentage. † – Fisher's Exact Test. ‡ – Pearson's Chi-Square Test. In bold, significant results ($p<0.05$).
Source: Author research.

4. Discussion

The COVID-19 pandemic triggered a high mortality rate and brought consequences in the form of mental suffering (Xiao, 2020). Results indicated signs of psychological distress among the research participants (between 8 and 20 points on the SRQ test). Individuals with signs of mental suffering are those with less than 10 years since graduation (67.3%). It is noted that even though they are working as specialists, they probably also feel more insecure due to the absence of protocols for the treatment of an unknown disease and its unpredictable effects.

The study reveals a higher prevalence of women (76.9%) and those in the age group between 31 and 40 years (42.6%), similar to results found in previous outbreak situations and during the COVID-19 pandemic in Wuhan, Singapore, and Beijing (Kang, Li, et al., 2020; Lee et al., 2018; Tan et al., 2020; Zhang et al., 2020).

Among the medical professionals, 35.6% use psychotropic drugs and 65.3% revealed signs of psychological distress.

The research reveals that among the 23% of doctors who were already under psychiatric follow-up, 80.4% of them use psychotropic drugs. Among the 19.6% of physicians who do not use medications, even though psychiatrically monitored, 54.5% of them have evidence of psychological distress, indicating a probable neglect of their mental health and failure to follow recommendations of their psychiatrists.

Social isolation prevents people from physically embracing, separates family and friends, and affects people's mental states, including doctors, who are at risk, frightened, experiencing feelings of structural and emotional helplessness. When they do not present or aggravate preexisting emotional disorders that justify the use of psychotropic drugs, these professionals are often pointed out and stigmatized as possible vectors of contamination

(Kang, Li, et al., 2020; Shigemura, Ursano, Morganstein, Kurosawa, & Benedek, 2020; Torales, O'Higgins, Castaldelli-Maia, & Ventriglio, 2020).

Physicians who show the greatest signs of psychological distress use antidepressants (33.1%) and anxiolytics (24%). It was revealed that 83 doctors use psychotropic drugs, without simultaneous psychiatric monitoring, that is, 22.2% of these professionals are self-medicating. Those who are self-medicating are using antidepressants (49.4%), anxiolytics (44.6%), hypnotics (25.3%), and mood stabilizers (7%).

Medical staff involved in fighting the pandemic have a high prevalence of severe insomnia, anxiety, and depression (Zhang et al., 2020). Given the critical circumstances experienced by doctors, who do not even know how to best decide on a course of treatment for patients due to the lack of material resources and therapeutic protocols, it is not surprising that they have conflicts, tension and anxiety, lose sleep and somatize (Chen et al., 2013; Cohen et al., 2020).

Our work corroborates a previous study in Beijing (Zhang et al., 2020), which showed evidence of doctors' psychological distress in combating the COVID-19 pandemic due to fear, feelings of hopelessness, little desire to do things, as well as feeling weak and without energy.

Among the doctors (21.4%) who asked for help with psychotherapeutic referral, 6,7% were monitored by psychiatrists, 21,2% already undergo psychotherapy, and 23,1% already receive both forms of assistance. This new request for help can be inferred as a result of their abandonment by the institutions that are not realizing the level of fatigue of their auxiliaries. Among these doctors, 49% were unassisted when asking for help.

The following protective factors are presented in the current research for psychological suffering in this group (those scoring less than or equal to 7 on the SRQ test): male, over 40 years old, married or in a stable relationship, with children; more than 20 years since graduation; not having fallen ill and no relatives with the disease or not having treated patients with coronavirus, correct use of PPE, and without a history of emotional distress and/or previous treatment. Similar to these results, the research conducted in Beijing indicated factors that increased the risks for psychological suffering: female gender, lack of social support, and interpersonal conflicts (Mowbray, 2020).

Among the 242 physicians who showed signs of psychological distress, 143 (59.1%) had emotional or family conflicts, either before or after the pandemic, and 87 (36%) reported previous conflicts. It should be noted that 67 of these doctors (37.2%) who had conflicts were undergoing psychotherapeutic treatment and 44 (39.3%) were undergoing psychiatric treatment.

Of the total participants, 40.7% displayed depressive thoughts on the SRQ-20 test. Among the 112 participants who underwent psychiatric follow-up, 61 of them (54.5%) have depressive thoughts. Research conducted in Singapore and Beijing found similar results in terms of depressive symptoms and with values close to those of the general population (Mowbray, 2020; Tan et al., 2020; Zhang et al., 2020).

Antidepressants are the most widely used medication (23.5% of the sample), regardless of whether the SRQ-20 test revealed higher or lower rates of psychological distress, and they probably protect 13.9% of the doctors who use them and do not show signs of mental suffering. The same can be inferred about the use of anxiolytics (7%) and hypnotics (4.9%) by doctors who had a score equal to or below 7 on the test.

On the SRQ-20 test, among the doctors who showed signs of psychological distress, 84.7% revealed that they get tired easily; 71.2% said they had difficulty thinking clearly, and 55.5% were having difficulty making decisions. Similar results were noted in previous research with doctors in Wuhan, China (Kang, Li, et al., 2020) who felt paralyzed in their initiatives and in Beijing, where some people developed a sense of victimization and self-pity for feeling oppressed and placed themselves in a defensive position (Mowbray, 2020).

The most frequent complaint (169 participants) about depressive thoughts is having lost interest in things (34.8%) and the most worrying is the suicidal ideation present in 21 of the participants (4.3%). Among these doctors with suicidal ideation, 17 (81%) of them have sleep disorders. Suicide for some authors is a growing problem during the pandemic and is usually associated with sleep disorders, as well as signs of depression, stress, and anxiety (Lai et al., 2020; Ornell, Schuch, Sordi, & Kessler, 2020; L. Sher, 2019; Leo Sher, 2020).

According to the World Health Organization, one suicide has the ability to create a cascade of 20 new attempts (World Health Organization, 2020b). As a result, the number of people with mental disorders who require help with specialized care services tends to grow in the context of the COVID-19 pandemic (Brooks et al., 2020; Leo Sher, 2020).

Analyzing the data related to the 21 participants who present the desire to die, we found that 52.4% are undergoing psychiatric treatment, 57.1% are undergoing psychotherapy, 42.9% are undergoing both treatments, 33.3% are without any follow-up, 76.2% use psychotropic drugs, namely, antidepressants (52.4%), hypnotics (23.8%), mood stabilizers (14.3%), anxiolytics (14.3%) and antipsychotics (4.8%), and 47.6% asked for help with emotional support referrals.

The pandemic poses a challenge for any individual (World Health Organization, 2020a), but much more for doctors who face death on a daily basis. When this professional

has a history of depression, the risk of suicidal ideation increases and mental health professionals must be prepared to deal with these doctors and provide proposals for preventative measures. It is clear that issues involving mental health are no longer taboo in Brazil and people today talk about anxiety, depression, and suicidal ideation. The more these negative emotional experiences are shared, the more we remove stigmas and psychophobia, and the more people seek specialized care (Klomek, 2020; Stanley & Brown, 2012). All participants who made requests for help to the researchers were referred to online consultations with volunteer psychologists and psychoanalysts who provide a lifesaving service.

The unpreparedness of health services to cope with COVID-19, both from the point of view of hospital facilities, absence of vital support equipment such as respirators, absence of PPE, and a total lack of scientific knowledge about the new coronavirus were elements that favored a higher prevalence of mental suffering among the population and health workers who are at the forefront of fighting the virus (Xiang et al., 2020; Xiao, 2020; Zhang et al., 2020; Zheng, 2020).

We have 416 doctors (85.6%) who declared that they are using PPE correctly, but 9 of them admitted that in the absence of PPE, they work without protection.

Among the 70 doctors (14.4%) who stated that they do not always use PPE properly, 20% of them worked without using PPE when it was not provided by the institution. It should be noted that among these 70 doctors, 65.7% showed signs of mental suffering and 19.6% do not use any protection if the institution does not offer it. It appears that these people have a negligent, aggressive, and parasuicidal attitude. Educational interventions are needed to ensure the effective use of PPE. Those who no longer use PPE correctly are 9.2 times more at risk of not using it if they are not offered protective material, and therefore become more vulnerable to coronavirus infection. Moreover, they themselves become potential vectors to their colleagues, patients, and family members.

Our work has limitations due to the early date of data collection and the fact that our SRQ-20 instrument is not able to make diagnoses even though it indicates signs of psychological distress. However, new research can fill these gaps and new data can now be collected, as Brazil is currently considered the epicenter of the pandemic in the world.

5. Conclusions

Almost half of Brazilian doctors (49.79%) present strong signs of mental suffering with a level of tension, nervousness and preoccupation reaching 77.4% of these professionals. A large percentage (80.4%) use psychotropic drugs and 4.3% have suicidal ideation, supporting the conclusion that efforts must be made to provide programs to prevent mental disorders and suicide during and after the COVID-19 pandemic. It is desirable that these doctors are monitored and have both material and human support so that they remain physically and emotionally healthy due to their vulnerable position. Recognition of the problems mentioned here can help health services seek alternatives and create special care programs for doctors, the essential protagonists combatting the pandemic.

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