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Anxiety and depression in face-to-face and telehealth care during the Covid-19 pandemic: a comparative study

Ansiedade e depressão em atendimento presencial e telessaúde durante a pandemia de Covid-19: um estudo comparativo

Ansiedad y depresión en la atención presencial y de telesalud durante la pandemia de Covid-19: un estudio comparativo

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Abstract

This study aimed to compare anxiety and depression scores in health professionals in telehealth and/or face-to-face care at a Brazilian university hospital during the COVID-19 pandemic and to identify factors associated with anxiety and depression. For this, an observational and cross-sectional study was carried out. Participants responded to the "Patient Health Questionnaire-9" and "General Anxiety Disorder-7" and a sociodemographic questionnaire and divided into three groups: telehealth professionals (G1), face-to-face care (G2) and professionals who work in both ways (G3). 159 health professionals participated, 36 men, 123 women, the majority of whom were nurses and the average age was 42 years. G2 participants had higher anxiety and depression scores when compared to the others. However, there were no statistically significant differences and associations between these groups ($p > 0.05$). "Age", "profession" and "being diagnosed with COVID-19" had statistical associations with anxiety and depression. It was concluded that there was no significant difference between anxiety and depression between health professionals who work by telehealth and/or face-to-face, as well as there were no associations between protocols and groups. Age, profession and being diagnosed with COVID-19 can interfere with these scores.

Keywords: anxiety; depression; coronavirus infections; health personnel; telemedicine.

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Resumo

O estudo visou comparar escores de ansiedade e depressão em profissionais da saúde em atendimento remoto ou presencial em um hospital universitário brasileiro durante a pandemia de Covid-19 e identificar fatores associados à ansiedade e à depressão. Para tanto, realizou-se um estudo observacional e transversal. Os participantes responderam aos protocolos Patient Health Questionnaire-9 e General Anxiety Disorder-7, além de um questionário sociodemográfico, e foram divididos em três grupos: profissionais da tele saúde (G1), profissionais que exercem de maneira presencial (G2) e profissionais que exercem de ambas as formas (G3). Participaram 159 profissionais da saúde, sendo 36 homens e 123 mulheres, a maioria de enfermeiros, com a média de idade de 42 anos. Os participantes do G2 apresentaram maiores escores de ansiedade e depressão quando comparados aos demais. No entanto, não houve diferenças e associações estatísticas significantes entre esses grupos ($p>0,05$). 'Idade', 'tipo de profissão' e 'receber diagnóstico de Covid-19' tiveram associações estatísticas com ansiedade e depressão. Concluiu-se que não houve diferença significativa entre ansiedade e depressão em profissionais da saúde que trabalham de forma remota ou presencial, assim como não houve associações entre os protocolos e os grupos. 'Idade' 'profissão' e 'receber diagnóstico de Covid-19' podem interferir nesses escores.

Palavras-chave ansiedade; depressão; infecções por coronavírus; profissionais da saúde; telemedicina.

Resumen

Este estudio tuvo como objetivo comparar las puntuaciones de ansiedad y depresión en profesionales de la salud en tele salud y/o atención presencial en un hospital universitario brasileño durante la pandemia de COVID-19 y identificar los factores asociados con la ansiedad y la depresión. Para ello se realizó un estudio observacional y transversal. Los participantes respondieron el Patient Health Questionnaire-9 y General Anxiety Disorder-7 y un cuestionario sociodemográfico y se dividieron en tres grupos: profesionales de tele salud (G1), atención presencial (G2) y profesionales que trabajan en ambos sentidos (G3). Participaron 159 profesionales de la salud, 36 hombres, 123 mujeres, la mayoría enfermeras y la edad promedio fue de 42 años. Los participantes del G2 tenían puntuaciones más altas de ansiedad y depresión en comparación con los demás. Sin embargo, no hubo diferencias ni asociaciones estadísticamente significativas entre estos grupos ($p> 0,05$). "Edad", "profesión" y "ser diagnosticado con COVID-19" tenían asociaciones estadísticas con ansiedad y depresión. Se concluyó que no hubo diferencia significativa entre ansiedad y depresión entre los profesionales de la salud que trabajan por tele salud y / o cara a cara, así como tampoco hubo asociaciones entre protocolos y grupos. La edad, la profesión y el diagnóstico de COVID-19 pueden interferir con estos puntajes.

Palabras clave: ansiedad; depresión; infecciones por coronavirus; personal de salud; telemedicina.

Introduction

Since May 2020, South America has become the new epicenter of the disease caused by the coronavirus (Sars-CoV-2), COVID-19, with the main problems in Brazil. To date (January 28th, 2021), more than 218,000 people died from the disease all over the country (Brazil, 2021). The southeastern region of Brazil is the one that concentrates the largest number of cases and in the State of Espírito Santo, it exceeds 289,000 and more than 5,770 deaths (Brazil, 2021).

Specifically, in the metropolitan region, represented by the four largest cities in Espírito Santo, more than 20 thousand health professionals were infected with the new coronavirus (SESA, 2020). In the early stages of the pandemic, hospitals were overcrowded, with a small number of mechanical respirators and Intensive Care Unit (ICU) beds, as well as throughout the country (COVID MAP, 2020), transforming the routine of health professionals. As an example, there are those professionals who increased the workload in hospitals or those who work remotely, or reconcile the two forms of work, when appropriate.

The challenges faced by these professionals can trigger or intensify symptoms of anxiety, depression and stress (Bao et al., 2020). In recent months, systematic reviews have shown that, during the

pandemic, health professionals have suffered these negative impacts on their mental health, which can have long-term consequences (Sanghera et al., 2020; Silva and Neto, 2020).

In addition, research conducted with the Patient Health Questionnaire (PHQ-9) and General Anxiety Disorder (GAD-7) instruments, in frontline healthcare professionals demonstrated that these professionals had high levels of anxiety, depression and stress (Tian et al., 2020; Kang et al., 2020; Zhang et al., 2020; Wańkowicz, Szylińska and Rotter, 2020; Passos et al., 2020), and dissatisfaction due to the limitation of interacting with people, the feeling of isolation, different service protocols, and the preparation with personal protective equipment (PPE), which generally requires significant time of the day, increasing work-related exhaustion (Zhang et al., 2020; Schmidt et al., 2020).

Furthermore, studies has demonstrated the importance of physical activity (Ferreira Junior et al., 2020; Silveira, 2020) and the need of assessing and monitoring the psychological states of these professionals and the risk factors for the development of anxiety and depression at work (Prigol and Santos, 2020; Sanghera et al., 2020), as well as the importance of welcoming and the multidisciplinary meeting to discuss these cases, along with activities that reduce stress during the COVID-19 pandemic (Prigol and Santos, 2020).

Therefore, it is hypothesized that the reality of hospitals and the number of cases of the disease may be impacting the levels of anxiety and depression of health professionals, both those who work remotely and those who practice the profession in face-to-face way, or both, in one of the main hospitals in the state.

This study aims to compare the anxiety and depression scores of health professionals in remote and/or face-to-face care at a Brazilian university hospital in the midst of the new coronavirus pandemic and to identify factors that may interfere with these conditions.

The use of protocols to identify anxiety and depression in the participants

This is a cross-sectional, observational and analytical study. Health professionals who worked remotely, remotely/face-to-face and only face-to-face in any sector of a university hospital located in the metropolitan region of Vitória, capital of Espírito Santo, located in southeastern Brazil, participated in this research. The contact with health professionals and data collection was accomplished throughout August 2020.

This contact with health professionals was online, through an institutional email authorized by the hospital management. When clicking on the link provided by e-mail, participants were directed to the survey page, made available through the Google Forms platform, in which the first part contained the Free and Informed Consent Form (ICF). All participants were asked to read the informed consent form, if they agreed to participate, they should sign the acceptance through the platform. Participants only proceeded to the next stages of the research if they accepted to participate in the study voluntarily.

After the application of the ICF, the participants filled out a sociodemographic questionnaire previously prepared by the researchers, in order to collect data such as age, sex, education level, profession, specialization, workload in the hospital, and other data, such as: medical diagnostic of COVID-19 at the professional or someone close to the family, and if routine physical activities are performed. From this instrument, participants were divided into three groups: professionals who were exercising the profession remotely (G1), professionals who were exercising in person (G2) and professionals who were acting in both ways (G3).

After this stage, the participants answered the Patient Health Questionnaire-9 (PHQ-9) protocol (Spitzer, Kroenke and Williams, 1999). This instrument has nine items that assess the presence of depressive symptoms described by the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) in the last two weeks. Among these symptoms, include sleep problems, depressed mood, loss of

interest or pleasure in doing things, tiredness or lack of energy, change in appetite or weight, feelings of guilt or worthlessness, problems with concentration, feeling slow or restless and suicidal thoughts. The frequency of each symptom is obtained by a Likert scale from 0 to 3, which corresponds to the answers “not once” (0), “several days” (1), “more than half the days” (2) and “almost all the days” (3). The scores obtained by the questions are added to obtain a total score. Researchers have recommended a cutoff score of 10 or more points (Kroenke, Spitzer and Williams, 2001). There is also a tenth question, which assesses the interference of these symptoms in the performance of daily activities, such as working and studying. In addition, scores of 5, 10, 15 and 20 represent classifications such as mild, moderate depression, moderately severe and severe, respectively (<www.phqscreeners.com>).

The last protocol used was General Anxiety Disorder-7 (GAD-7) (Spitzer, et al, 2006). It is a protocol composed of seven items, which assess signs and symptoms of anxiety in the last two weeks. Each item has four answer options: “Not at all”, “Many days”, “More than half the days”, “Almost every day”, which correspond to the scores of 0, 1, 2 and 3, respectively. Its total score is based on the simple sum of all questions. Researchers suggest an 8-point cutoff to identify symptoms of anxiety (Spitzer et al., 2006). Scores of 5, 10 and 15 represent cutoff points for mild, moderate and severe anxiety, respectively.

The program used for the analyses was IBM SPSS Statistics version 24. The data description was presented in the form of observed frequency, percentage, minimum and maximum values, median, mean and standard deviation. The test to verify the probability distribution used was that of Shapiro & Wilk. The comparison of the PHQ-9 and GAD-7 scores between the areas and the form of performance were carried out using the Kruskal & Wallis test. Multiple multinomial regressions associated the PHQ-9 and GAD-7 scores with the areas and the way of acting. Multiple linear regressions with robust standard error and Forward variable selection method associated the identification variables with the PHQ-9 and GAD-7 scores. The alpha level of significance used was 5%.

This study was approved by Universidade Federal do Espírito Santo Research Ethics Committee, under number 4.161.875.

Female prevalence and high levels of anxiety and depression in health professionals

A total of 174 responses were obtained. However, 15 were discarded because they did not meet the sample inclusion criteria. Therefore, the number of participants eligible for this research was 159 workers, 123 (77.3%) of whom were female and 36 (22.7%) of whom were male. The age varied between 28 and 71 years, with an mean of 42 years (SD 8.9) (Table 1).

Table 1 – Characterization of participants (n = 159).

		n	%
Schooling	High school	19	11.95
	Complete higher education	26	16.35
	Specialization	68	42.77
	Master	35	22.01
	Doctorate	10	6.29
	Postdoctoral	1	0.63
Profession	Other technical courses	5	3.14
	Nursing technicians	37	23.27
	Nurses	65	40.88
	Doctors	27	16.98
	Speech therapists	4	2.52
	Social assistants	3	1.89
	Biomedics	3	1.89
	Physiotherapists	5	3.14
	Nutritionist	1	0.63
	Pharmacist	1	0.63
	Psychologists	4	2.52
	Occupational therapist	1	0.63
	Biologists	2	1.26
	Physical educator	1	0.63
Acting time	Less than 1 year	11	6.92
	Between 1 and less than 5 years	54	33.96
	Between 5 and less than 10 years	69	43.40
	Between 10 and 15 years	9	5.66
	More than 15 years	16	10.06
Medical diagnosis of COVID-19 of the professional or someone in the family	No	87	54.72
	Yes	72	45.28
Routine physical activity	No	90	56.60
	Yes	69	43.40
	Minimum - maximum	Median	Mean (SD)
Weekly workload	2.0-60.0	36.0	33.8 (7.4)

Caption: n= number; SD= standard deviation.

Source: Prepared by the authors.

Table 2 shows the mean scores of the protocols used to measure the participants' anxiety and depression and the number of participants according to the protocols' anxiety and depression classifications. A total of 81 (50.1%) participants obtained a score ≥ 10 on the PHQ-9 and 64 (40.3%) obtained a score ≥ 8 points for the GAD-7.

Table 2 – Mean scores of the PHQ-9 and GAD-7 protocols on the health professionals assessed (n = 159).

Instrument	Minimum - maximum	Median	Mean (SD)
PHQ-9	0 – 27	10	10.92 (7.52)
GAD-7	0 – 21	6	7.16 (\pm 5.92)
PHQ-9			
<5		42 (26.4%)	
Light		36 (16.3%)	
Moderate		25 (15.7)	
Moderately severe		28 (17.6%)	
Severe		28 (17.6%)	
	GAD-7		
< 5		63 (39.6%)	
Light		50 (31.4%)	
Moderate		22 (13.9%)	
Serious		24 (15.1%)	

Source: Prepared by the authors.

Regarding the type of work, 17 (10.6%) professionals were working remotely, 135 (84.9%) face-to-face and 7 (4.4%) in both ways. In G1, 13 participants, (76.4%) had scores ≥ 5 , that is, they had mild signs of depression. In G2 and G3, 73.3% and 71.4%, respectively, had scores ≥ 5 points.

The PHQ-9 and GAD-7 scores for the areas or forms of performance had the hypothesis of normal probability distribution rejected by the Shapiro-Wilk test, so the technique used was the nonparametric one. There was no median difference in the PHQ-9 and GAD-7 scores between the remote or in-person forms by the hospital (Table 3).

Table 3 – PHQ-9 and GAD-7 score comparison among groups.

PHQ-9 Score								Classification (%)				p-value*
	M _d	M	SD	Light	Moderate	Mod. Sev.	Severe					
G1	7.00	10.12	8.51	7 (11.9%)	1 (5.8%)	2 (11.7%)	3 (17,6%)	0.687				
G2	11.00	11.10	7.43	27 (20%)	22 (16.9%)	26 (19.2%)	24 (17,7%)					
G3	9.00	9.29	7.74	2 (28.5%)	2 (28.5%)	0	1 (14,2%)					
GAD-7 Score				Light	Moderate	Severe			0.654			
G1	4.00	6.59	6.08	4 (23.5%)	2(11.7%)	2(11.7%)						
G2	6.00	7.33	5.97	44 (32.5%)	19(14.1%)	22(16.2%)						
G3	3.00	5.29	4.75	2(11.7%)	19(14.1%)	0						

Caption: Md: Median; M: mean; SD: Standard Deviation; Mod. Sev.: Moderately severe; G1: health professionals remotely; G2: health professionals face-to-face; G3: health professionals remotely/face-to-face; *: Kruskal-Wallis test; Significant if $p < 0.05$.

Source: Prepared by the authors.

Table 4 shows the associations between the protocols and the “remote” and “face-to-face” variables, considered outcomes in this work. There is no presence of the remote-face-to-face (hybrid) variable in this table, since the dependent (dichotomous) variables are already mentioned by “remote” and “face-to-face”. As can be seen, there was no association in the PHQ-9 and GAD-7 scores between the remote or in-person forms by the hospital.

Table 4 – Association of PHQ-9 and GAD-7 scores between forms of remote or face-to-face work.

Work modality		p-value*	OR	95% Confidence interval to OR	
				Lower limit	Upper limit
Remote	PHQ-9 Score	0.765	0.969	0.788	1.191
	GAD-7 Score	0.585	1.083	0.814	1.440
Face-to-face	PHQ-9 Score	0.829	0.980	0.820	1.172
	GAD-7 Score	0.490	1.093	0.849	1.407

Caption: * Multiple multinomial regression; OR: Odds Ratio; Significant if $p < 0.050$; Pseudo- $R^2 = 1.1\%$.

Source: Prepared by the authors.

“Age”, “profession” and “medical diagnosis of COVID-19” were significantly associated with the PHQ-9 and GAD-7 scores. Thus, according to the aging, there is a downward trend in the average of the PHQ-9 and GAD-7 scores. The professions nutritionist, pharmacist, psychologist and physical educator showed an average reduction in the score compared to other technicians. In addition, those who had a confirmed medical diagnosis of COVID-19 had an influence on the increase in the score compared to those who did not have a diagnosis (Table 5).

Table 5 – Association of the PHQ-9 score with the participants features.

PHQ-9 Score		B	RSE	t	Value p*	95% confidence interval to B		Tendency
						Lower Limit	Upper Limit	
Profession	Age	-0.211	0.059	-3.570	< 0.001	-0.327	-0.094	Decrease
	Other technicians	0.000	-	-	-	-	-	-
	Nursing Technicians	-2.351	3.534	-0.670	0.507	-9.336	4.635	Stable
	Nurses	-3.620	3.437	-1.050	0.294	-10.414	3.175	Stable
	Doctors	-6.222	3.536	-1.760	0.081	-13.213	0.768	Stable
	Speech Therapists	-4.156	4.267	-0.970	0.332	-12.592	4.280	Stable
	Social Assistants	-7.038	5.156	-1.360	0.174	-17.232	3.156	Stable
	Bio medics	-4.125	3.990	-1.030	0.303	-12.013	3.763	Stable
	Physiotherapists	-8.941	5.067	-1.760	0.080	-18.959	1.077	Stable
	Nutritionists	-15.417	3.618	-4.260	< 0.001	-22.570	-8.265	Decrease
	Pharmacists	-7.552	3.654	-2.070	0.041	-14.777	-0.327	Decrease
	Psychologists	-10.247	3.665	-2.800	0.006	-17.493	-3.002	Decrease
	OT	-0.938	3.412	-0.270	0.784	-7.683	5.808	Stable
	Biologists	0.403	3.651	0.110	0.912	-6.815	7.622	Stable
Specialty	Physical Educators	-11.288	3.578	-3.160	0.002	-18.361	-4.215	Decrease
	No	0.000	-	-	-	-	-	-
	Yes	-1.409	1.661	-0.850	0.398	-4.693	1.874	Stable
Weekly WL in the hospital		0.157	0.103	1.520	0.130	-0.047	0.360	Stable
Was there a medical diagnosis?	No	0.000	-	-	-	-	-	-
	Yes	3.015	1.158	2.600	0.010	0.725	5.305	Increase
Routine physical activity	No	0.000	-	-	-	-	-	-
	Yes	-1.850	1.201	-1.540	0.126	-4.225	0.524	Stable

Caption: RSE = robust standard error; Tec. = Technician; OT: Occupational Therapist; B - Coefficient; t - Test statistics; *. Multiple linear regression with Forward selection method; 0 - Reference category; Significant if p < 0.050; R² = 26.1%.

Source: Prepared by the authors.

The same happens with the variables and the protocols GAD-7 (Table 6).

Table 6 – Association of the GAD-7 score with the participants features.

GAD-7 Score	B	RSE	t	Value p*	Confidence interval of de 95% to B		Tendency
					Inferior limit	Superior limit	
Age	-0.219	0.059	-3.740	< 0.001	-0.335	-0.103	Decrease
Other technicians	0.000	-	-	-	-	-	-
Nursing technician	-2.305	3.967	-0.580	0.562	-10.147	5.536	Stable
Nurse	-4.338	3.825	-1.130	0.259	-11.900	3.224	Stable
Doctors	-7.030	3.894	-1.810	0.073	-14.727	0.667	Stable
Speech Therapist	-5.425	4.647	-1.170	0.245	-14.610	3.761	Stable
Social assistant	-7.886	5.611	-1.410	0.162	-18.979	3.206	Stable
Biomedics	-4.510	4.082	-1.100	0.271	-12.580	3.559	Stable
Physiotherapists	-9.380	5.456	-1.720	0.088	-20.165	1.405	Stable
Nutritionists	-15.604	3.894	-4.010	< 0.001	-23.302	-7.906	Decrease
Pharmacists	-9.761	3.875	-2.520	0.013	-17.420	-2.102	Decrease
Psychologists	-11.415	4.046	-2.820	0.005	-19.413	-3.417	Decrease
OT	-1.011	3.740	-0.270	0.787	-8.404	6.382	Stable
Biologists	-0.411	4.235	-0.100	0.923	-8.783	7.961	Stable
Physical educator	-13.445	3.836	-3.500	0.001	-21.029	-5.862	Decrease
Weekly workload in the hospital	0.178	0.105	1.680	0.094	-0.031	0.386	Stable
Medical diagnosis?	0.000	-	-	-	-	-	-
Yes	2.843	1.138	2.500	0.014	0.594	5.092	Increase

Caption: RSE = Robust standard error; Tech. = Technician; OT = Occupational Therapist; B - Coefficient; t - Test statistics; *. Multiple linear regression with Forward selection method; 0 - Reference category; Significant if $p < 0.050$; $R^2 = 23.8\%$.

Source: Prepared by the authors.

The impact of coronavirus on the mental health of healthcare workers

The new coronavirus pandemic has become one of the central health crises of a generation (Shanafelt, Ripp and Trockel, 2020). Even with the supply of respirators and beds mainly in ICU, there must be an adequate workforce with the capacity to care for a high volume of patients. As a result, health professionals from different areas are working extensively on the front lines and remotely in coping. While they must deal with social and emotional changes that are faced by all people, they also face a greater risk of exposure to the virus, extreme workloads, doubts about the evolution of the disease and a rapidly changing environment, Different from what they are used to (Chen et al., 2013). Therefore, this study aimed to verify and compare anxiety and depression scores in health professionals who were working remotely and/or in person at a Brazilian hospital and to analyze factors that may be associated with anxiety and depression.

Most participants were female, corroborating other research (Wańkowicz, Szylińska and Rotter, 2020; Que et al., 2020). The explanation for this is because, in Brazil, women are the majority in this field, comprising almost 80% of health professionals (Hernades and Vieira, 2020). Nurses, for example, make up one of the largest classes with numbers of health professionals, and 85% of the profession is made up of women (Hernades and Vieira, 2020). It is suggested that these factors have influenced the sociodemographic data in this study.

Regarding the professionals who were diagnosed with COVID-19 or who had someone close to the family in contact with the disease, almost 12% of those infected in the state were health professionals (SESA, 2020). This can have a negative impact on the emotional status of these individuals, which can be demonstrated by the factor “you or a close family member was diagnosed with COVID-19”, in which there were statistical associations with a tendency to increase the depression and anxiety scores. In addition, studies corroborate the idea that health professionals feel concerned about the idea of being infected or someone in the family getting sick from COVID-19 (Naser et al., 2020; COVID-19..., 2020), which was observed in up to 75% of a study participants (Naser, et al, 2020). The challenges faced by health professionals can certainly trigger or intensify the symptoms of anxiety, depression and stress (Bao et al., 2020), especially those who work in the so-called “front line”, that is, in contact directly with people who have been infected by the virus (Li et al., 2020). In general, these professionals have been discouraged from interacting closely with other people, which increases the feeling of isolation (Schmidt et al., 2020).

The practice of physical activity, which although it is considered an alternative to raise levels of well-being and improve the quality of life, is not performed by most of the participants in this study. It is known that physically active people, at any age, have better mental health than sedentary ones (Oliveira et al., 2011). The researches show that the practice of regular exercise, in addition to the physiological benefits, brings psychological benefits, such as superior feeling of well-being, mood and self-esteem, as well as reduced anxiety, tension and depression. (Costa, Soares and Teixeira, 2007). Recently, the literature discloses evidence that it is not only the regular practice of physical activity that is related to health, but also the decrease in sedentary attitude, that is, the time we are sitting, lying down or reclining during the day, except for hours of sleep (Tremblay et al. 2017). We emphasize that in the city of Wuhan, China, the initial epicenter of the disease, people were advised to continue the practice of physical activity in their homes (Chen et al. 2013). For this reason, hospital managements should motivate their professionals to practice physical activities as a way of preventing mental health and other diseases.

Regarding the medians for PHQ-9 and GAD-7 among all professionals, only the median of the protocol that measures symptoms of depression exceeded the cutoff point. However, the scores found in this study are higher than those found by a study conducted with Chinese health professionals between

the months of January and February, in which they found the medians of 5 and 4 for depression and anxiety, respectively (Lai et al., 2020). They are also higher than the values found in a study conducted with North American health professionals, in which the medians were 3 points for both depression and anxiety. The averages obtained by the professionals in this study were higher than the scores of Spanish professionals, in which the average obtained for depression and anxiety, were 8.6 and 8.7 (Cunill Olivas et al., 2020). The percentage of professionals classified with scores classified as mild, moderate, moderately severe and severe for depression was lower than health professionals in Jordan (Naser et al., 2020) and Saudi Arabia (Alateeq et al., 2020). It is believed that there are several factors that could explain the high score of anxiety and depression in the participants of this study, such as geographic location, individual and social factors, as well as the state and country situation during data collection.

The data collection for this study took place in August 2020. At that time, the numbers of infected and deaths by COVID-19 were over 90 thousand cases and 2600 deaths, respectively (SESA, 2020). It is suggested that these numbers may have an emotional impact on the lives of these professionals, in addition to facing the pandemic since March, the period in which the first case was registered in the state and, therefore, the care provided. However, these are hypotheses. For this reason, the need for studies that investigate these relationships is emphasized in order to understand the aggravating factors in the investigated sample.

According to the results of the operating modalities, most are face-to-face (G2). This may have happened due to the hospital's work format and the need to maintain professionals to care for other diseases. In addition, few participants exercised the profession in both ways (G3). However, this group had the highest percentage of participants with mild and moderate depression. G2 had a higher percentage of participants classified as moderately severe and severe depression. The G2 also had the highest proportions regarding the anxiety classifications. That is, in a descriptive way, the participants who worked in person obtained higher scores of anxiety and depression when compared to the others.

There was no statistically significant difference between groups ($p > 0.05$). In addition, there was no significant association in these cases. Participating in any of the groups studied, therefore, was not a differential factor for anxiety or depression and there is no association between anxiety or depression and exercising the profession in these ways.

The hospital can be considered a place that favors stress. When the psychological impacts are frequent about working, it generates degradation in the worker, leading to several damages to his health and this is because the worker feels more pressure to achieve the results that, many times, are out of his reach (Borine et al., 2012). However, it is suggested that exercising the profession remotely has complications and that they deserve to be discussed in future studies to collaborate in clarifying these results.

In search of this understanding and in what may have influenced the anxiety and depression scores of the participants, a statistical analysis was carried out between the protocols and the identification factors surveyed (see Tables 5 and 6). We found that only the factors "age", "profession" and the "medical diagnosis of COVID-19 in the participant or in someone close to the family" showed a significant association with the PHQ-9 and GAD-7 scores. The "age" of the participants was a factor that showed a decreasing tendency in the average of these scores, which means that increasing age may show a decreasing tendency in the average of the scores of the instruments used. Age has been discussed by other studies in order to verify whether or not there is an association with these scales. For example, a Korean study has shown that there is no association between them (Ahn et al., 2020), but a Sudanese study supports the idea that age influences these factors, and that older professionals have more cases of anxiety and depression (Elamin et al., 2020). We point again the importance of investigating individual factors. In view of that researchers from all over the world investigate these factors and their influences during the COVID-19 pandemic, one must understand the particularities of each sample, as in the case of this study, which found an association between the factors "age" and "anxiety and depression".

Another factor that obtained statistical association by the tests applied was the “profession”. Of all the professions analyzed, nutrition, pharmacy, psychology and physical education showed an average reduction in the score compared to the others. Despite offering maintenance of quality of life, some of these workers were not directly linked to the treatment of patients with COVID-19, with that, they do not have daily contact with these patients, which may have a lower burden than the other professional classes mentioned in the present study, which could reduce the chances of developing anxiety and depression.

In addition, receiving a medical diagnosis of COVID-19 or someone close to the family may be associated with differences in anxiety and depression scores, see the statistical association between this factor and the protocols used, demonstrating an increased influence on the scores in comparison who has not been diagnosed. Therefore, it is important that hospitals and health agencies evaluate and monitor the psychological aspects of these professionals, especially during the new coronavirus pandemic. This importance has already been mentioned in the literature, in view of other studies that have demonstrated the high levels of anxiety and depression in health professionals from different regions of the world (Prigol and Santos, 2020; Sanghera et al., 2020). Although little is available in the literature on effective intervention measures in times of pandemic (Pollock et al., 2020), authors suggest uni or multiprofessional care, stress reduction activities (Prigol and Santos, 2020) and attention to organizational factors, social, personal and psychological aspects of the professionals (Pollock et al., 2020), as well as the evaluation of the interventions employed (Saidel et al., 2020; Pollock et al., 2020).

However, we suggest that these results cannot be generalized to all Brazilian hospitals or abroad, as this research has limitations, such as having its data collected in only one Brazilian hospital. Nevertheless, these are important and initial data to understand the differences between the formats of exercising the profession; a change evidenced even more during the pandemic of the new coronavirus. In addition, we sought to understand this type of working during COVID-19, which is increasingly common worldwide.

Conclusion

There is no difference in anxiety and depression scores between health professionals who work remotely, face-to-face or both. Age, profession and being diagnosed with COVID-19 can interfere with anxiety and depression scores. These results also point to the importance and the need for psychological interventions for health professionals during the new coronavirus pandemic. Therefore, it is possible to prevent the psychological illness of these professionals, an important factor for their personal and work development.

Article information

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Conception of the study: GTD, CB-N.

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