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ENGAGEMENT AND EMPATHY OF HEALTH PROFESSIONALS WORKING TO COMBAT COVID-19 IN PERNAMBUCO

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ABSTRACT

This study aimed to evaluate the level of empathic feelings of health professionals in the care of patients with COVID-19 in health services in Pernambuco. This is a descriptive cut with exploratory quantitative approach, WebSurvey type, in which the sampling was Snowball. Data collection took place from July to August 2021, conducted with professionals active in COVID-19 in the state of Pernambuco. It was approved by the ethics committee under the number CAAE 46373221.2.0000.5569. 69 individuals completed the survey, of the total 82.6% were women, with a mean age between 30 and 39 years (40.4%), being nurse (63.7%), Nursing Technician (a) (20.3%) and Physicians (15.9%), who worked at hospitals in the metropolitan region of Recife (79.70%). The professionals evaluated in this study are empathic and engaged in the work. The presence of cognitive empathy becomes a protective factor since we can say that this feeling is an important predictor for compassion fatigue and consequently for burnout, because it is an accumulative and intense process. The findings of the research reinforce that health professionals are empathic and engage in work. However, these excess factors may be a cause of mental health illness.

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INTRODUCTION

In the Chinese city of Whuan, at the end of December 2019, it registered a new pneumonia caused by the new coronavirus, called SARS-COV-2. This coronavirus produces the disease classified as COVID-19, whose main symptoms are fever, fatigue and dry cough, and may progress to dyspnea or, in more severe cases, Severe Acute Respiratory Syndrome (SARS) (Li et al., 2020). The disease showed rapid spread throughout the Chinese territories and later, patients infected with SARS-COV-2 were identified in other countries, mainly in Europe (having as epicenters Italy and Spain), in the United States, Canada and Brazil. On March 11, 2020, the World Health Organization (WHO) declared the pandemic scenario (WHO, 2021).

In Brazil, the first case of COVID-19 was confirmed on February 26, 2020. The first two confirmed cases were of male individuals living in the city of São Paulo (SP), who had returned from a trip to Italy. About 9 million cases of COVID-19 were confirmed in Brazil, of this total, about 234 thousand died and about 8 million have already recovered from the disease. Thus, occupying the 3rd in number of confirmed cases and the 2nd in number of deaths in the Ranking of confirmed cases worldwide, according to the WHO (Croda; Garcia, 2020; WHO, 2020). However, it is estimated that these numbers are even higher, since they do not take into account delays in notifications or positive cases not tested. In this sense, statistics suggest that the number of COVID-19 breeding (i.e., average number of new cases generated from a case) varies from 1.4 to 3.9 in different locations. Thus, the duration and consequences of the pandemic still remain unpredictable (Schmidt et al., 2020).

The State Health Department of Pernambuco (SES/PE) has been carrying out surveillance actions for COVID-19 recommended by the Ministry of Health since February, and the first case is confirmed on March 5 (Brazil, 2020a). However, the 19th case, which was confirmed March 17, 2020, resides in Recife and has no travel history to the area of sustained transmission of the disease in contact with a suspected or positive patient. Therefore, community transmission of COVID-19 was identified in Pernambuco, because the origin of the contamination of this case was not identified. Thus, following the guidance of the Ministry of Health, in Epidemiological Bulletin 05, the State enters the phase of mitigation, which aims to avoid severe cases and deaths (Brazil, 2020b). Regarding the impact of SARS-COV-2 on the mental health of health teams, previous studies on SARS and Ebola reveal the severity of emotional distress during these epidemic outbreaks. Several health professionals faced post-traumatic stress, depression, anxiety and Obsessive Compulsive Disorder (OCD) after the end of infections. The results are consistent with the studies conducted on SARS that show that between 8% - 57% of health professionals experienced emotional distress before, during and after the outbreak. On the other hand, empathic feelings emerge in the professionals who are fighting the COVID-19 pandemic (Liu et al., 2020). Empathy is characterized in three moments, cognitive is the understanding of the feelings and thoughts of the other, but without the need to feel them, that is, a neutral empathic feeling. The affective is when there is a sharing of feelings, that is, an emotional connection. Compassionate comes from the perception of needs to offer support, that is, an empathic concern (Bermudez; Carreño; Rojas, 2018). Strengthening mental health care at this time is critical. Most of the time the pandemic passes, or reorganizes itself in some way, and the aspects that mark mental health remain. There are already experiences in other countries suggesting that it is providential to couple general health measures, which are fundamental, to mental health issues to deal with insecurities, doubts and uncertainties. In this context, health professionals who are at the forefront of fighting COVID-19 suffer great impact on their mental health. Fear, worry and excessive care can end up affecting the emotional state of these professionals, because in addition to being a stressful moment in which one cannot have physical contact with each other, there is still another concern as an irrational fear of contamination or dirt. It can be observed that this contagion of panic causes social effects (Liu et al., 2020; Bermudez; Carreño; Rojas, 2018). Thus, the study aims to evaluate the level of empathic feelings of health professionals in the care of patients with COVID-19 in health services in Pernambuco.

MATERIALS AND METHODS

This is a descriptive study with an exploratory quantitative approach, presented as an epidemiological survey type WebSurvey. The sampling method used was Snowball, in which each individual invited to the study could invite new participants from their network of acquaintances (Biernarcki; Waldorf, 1981). This study was approved by the Research Ethics Committee (REC) of the *FaculdadePernambucana de Saúde* (FPS) under the number of CAAE: 46373221.2.0000.5569. The study sample consisted of 379 health professionals (nurses, nursing technicians, doctors and physiotherapists) who worked in direct and/or indirect assistance in combating COVID-19 in health units in the state of Pernambuco. Health professionals were invited to participate in the research, receiving information about the objectives of the research, the Informed Consent Form (ICF) and answering the questionnaire. Later, the research instrument, through social media (Facebook, Instagram and WhatsApp). To compose this article, a sample of 69 individuals from the following areas of health: nursing (Bachelors and Technicians), medicine and physiotherapy. The development period of the research project began in May 2021, and its completion was scheduled for January 2022. This period was extended due to the difficulties of data collection caused by the critical epidemiological scenario that occurred in the period studied. In the data analysis phase, the triangulation method was used, which can approach different theoretical and methodological perspectives for data collection and analysis involving the combination of empirical materials and elaborated techniques, which can be seen as "a strategy to add greater rigor, breadth, complexity, richness, and depth to any investigation" (Nierotka; Monteiro; Silva, 2019).

The data collected were analyzed from two perspectives: the first was the survey of the frequency of terms more repeated in the data collection instrument, which were grouped in the form of word clouds, with the use of Iramuteq® software version 0.7 and analyzed by a semantic evaluation of qualitative-quantitative aspect (Silva, 2017). The second perspective disposed of tabulations, data crossings and quantitative analysis of the sociodemographic variables, professionals and those referring to the scales used in this study, which are: Factor 1 of the Emotional Intelligence Measure - EIM (Empathy Factor) and Utrecht Work Engagement Scale – UWES, which evaluates Health and Well-being at work. For this, in this quantitative analysis, the T Student tests were used for evaluation of variables composed of 2 categories, the Fisher test for variables above 2 categories and for evaluation of interclass correlation, the Pearson correlation coefficient (Pearson's chi-square test) was used. These quantitative analyses were performed using the software Stata version 17 (Dancey; Reidy; Rowe, 2017).

RESULTS

Characterization of the research participants – sociodemographic profile: The following participants were evaluated: nurse (63.7%), nursing technician (20.3%), and physicians (15.9%). There was a higher prevalence of female gender 82.6% (57), being only 17.4% (12) male, with a mean age between 30 and 39 years (40.4%) in which he shares housing with child/husband/wife/partner (39%), in which the period of service was 1 to 5 years (42.0%). As for family income, the average was five wages and there was no reduction during the Covid-19 pandemic as shown in Table 1. In addition, these professionals reside in the municipalities of Recife (49.2%), Jaboatão dos Guararapes (15.9%) and Olinda (10.1%), here represented graphically through image 1.

Intrinsic and extrinsic factors of health professionals: Regarding the labor characteristics of health professionals, 79.70% maintained institutional ties in hospitals in the metropolitan region of Recife.

Table 1. Socioeconomic and demographic aspects of health professionals. Recife, Pernambuco (PE). Brazil, Jan/2022

Variables	n	%
Professional Category		
Nurse	44	63.7
Doctor	11	15.9
Nursing Technician	14	20.3
Sex		
Female	57	82.6
Male	12	17.4
Age		
20 - 29 years.	25	36
30 - 39 years.	28	40.4
40 - 49 years.	10	14.4
>50 years	6	8.6
Living with		
Child/husband/wife/partner	39	56.5
Mother/father/grandparents	23	33.3
Alone	5	7.2
Others	2	2.9
Working Time		
Less than 3 months	4	5.8
3 - 6 months	1	1.4
1 - 5 years	29	42.0
6 - 10 years	19	27.5
11 - 15 years	4	5.8
16 years or more	12	17.4
Family Income		
Up to 1,045 BRL	6	8.7
1,045 -4,180 BRL	35	50.7
Over 5,225 BRL	28	40.6

Source: Created by the authors, 2022.

Image 1. Graphic representation of the municipality of residency of health professionals. Recife, Pernambuco (PE). Brazil

When assessing the risk for COVID-19, 84.1% of professionals are not part of the coronavirus risk group. Although 52.2% live with people at risk, being Child/husband/wife/partner (56.5%). In this study, 82.6% of professionals were afraid of becoming infected with the coronavirus and finding themselves in the same situation as patients assisted (94.2%). Moreover, 66.7% reported having imminent fear of death from COVID-19. Among the interviewed professionals, 56.5% tested positive for COVID-19, most returned to work after the isolation period (91.3%), whose motivation was professional (56.5%) and financial (30.4%). When it comes to substance use 76.8% deny use of any substances, and only 23.2% reported use of such substance as: Analgesic (11.6%), Benzodiazepines (Clonazepam, Diazepam...) (4.3%) and licit drugs (cigarette, alcohol) (4.3%) Table 2. When asking what area the professionals worked in, the most prevalent sectors were, respectively, ICU (34.8%), SPA (27.5%), Medical Clinic (13.0%), identified in image 2.

Translation: Outpatient (*Ambulatório*); Urgency (*Urgência*); Audit (*Auditoria*); Coordinator (*Coordenador*); Surgical Ward (*Bloco Cirúrgico*); Milk Bank (*Banco de Leite*); Surgical Clinic (*ClínicaCirúrgica*); Preceptorship (*Preceptoria*); Emergency (*Emergência*); Emergency SARS - Severe Acute Respiratory Syndrome (*Emergência SRAG – Síndrome Respiratória Aguda Grave*); Medical Clinic (*ClínicaMédica*); Caregiver (*Cuidadora*); SPA - Emergency Service (*SPA - Serviço de Pronto Atendimento);* UPA - Emergency Care Unit (*UPA - Unidade de Pronto Atendimento*); PNI - National Immunization Program (*PNI - Programa Nacional de Imunização);* ICU - Intensive Care Unit (*UTI - Unidade de TerapiaIntensiva*); UTIPed- Pediatric Intensive Care Unit (*UTIPed- Unidade de TerapiaIntensiva Pediátrica*); and FHU - Family Health Unit (*USF - Unidade de Saúde da Família*).

Table 2. Intrinsic and extrinsic factors of health professionals. Recife, Pernambuco (PE). Brazil, Jan/2022

Variables	n	%
Linked Institution		
Faculdade Pernambucana de Saúde (FPS)	1	1.4
Home Care	1	1.4
Hospital da Região Metropolitana do Recife	55	79.70
Hospital da região do Agreste	2	2.9
Hospital da região da Zona da mata	4	5.8
Secretaria Estadual de Saúde (SES)	3	4.3
Unidade de Pronto Atendimento (UPA)	2	2.9
Unidade de Saúde da Família (USF)	1	1.4
Part of the COVID-19 risk group		
Yes	11	15.9
No	58	84.1
Living with people from COVID-19 risk group		
No	33	47.8
Yes	36	52.2
Fear of contamination		
No	11	15.9
Yes	57	82.6
Maybe	1	1.4
Fear of being in the same situation as COVID-19 patients		
No	3	4.3
Yes	65	94.2
Maybe	1	1.4
Imminent fear of dying from COVID-19		
No	14	20.3
Yes	46	66.7
Maybe	9	13.0
COVID-19 Positive Result		
No	30	43.5
Yes	39	56.5
Going back to work after the isolation period		
No	6	8.7
Yes	63	91.3
Motivation to return to work		
Financial	21	30.4
I kept working	1	1.4
None	1	1.4
None	2	2.9
Others	2	2.9
Personal	3	4.3
Professional	39	56.5
Offer of support to mental health by the institution where you work		
No	41	59.4
Yes	28	40.6
Use of the service of psychological support		
No	31	44.9
Not applicable	36	52.2
Yes	2	2.9
Current sleep disorder		
No	36	52.2
Yes	24	34.8
Maybe	9	13.0
Use of some substance		
No	53	76.8
Yes	16	23.2
Which substance		
Analgesic	8	11.6
Benzodiazepines (Clonazepam, Diazepam, etc.)	3	4.3
Illicit drugs	1	1.4
Legal drugs (cigarettes, alcohol, etc.)	3	4.3
Not applicable	53	76.8
None of the Answers	1	1.4

Source: Created by the authors, 2022.

Image 2. Graphic representation of the areas/sectors in which the professionals work. Recife, Pernambuco (PE). Brazil

Regarding the institutional support to the mental health of the worker, 59.4% of the institutions that have employment relationship did not offer support to mental health, where 40.6% of the institution that offers psychological support, about 44.9% did not use this service, among them the most verbalized reason for not using the service was "Lack of Time". (Image 3)

Image 3. Graphic representation of the main reasons given by professionals for not using the institutional psychological support service. Recife, Pernambuco (PE). Brazil

Translation: Private Therapy (*Terapia Particular*); I didn't need to (*Nãonecessitei*); Lack of time (*Falta de tempo*); Not available (*Nãodisponibiliza*).

through the situation. Thus, understanding the feelings and emotions, objectively and rationally what the other feels. Therefore, the association between Work Engagement and empathy levels are efficient to analyze the effects of work on the mental health of health professionals who are working to combat COVID-19 (BEM RAF, 2020; Schaufeli; Bakker, 2003). Some factors can affect work engagement and one of them is the average travel time between the worker's residence and their workplace, once this time is greater, the higher the stress index. According to *Fundação Instituto de PesquisasEconômicas* (FIPE), the travel time within the cities that make up RMR is one of the largest in the country, especially the capital of the state of Pernambuco, the city of Recife. Therefore, with high average time between place of residence and work, generating a stressful factor, which influences the quality of life and care provided to the patient, and can be considered a predictor for the development of the emotional exhaustion process (FIPE, 2021). The importance of an adequate work environment provides the health professional a greater engagement, because as the institutional climate offers better resources, equipment, better work environment and flexible workload, professionals are more engaged. It is worth noting that public policies and political, institutional and class support are necessary to support the need for a decent and adequate workload for professionals according to a study by Schaefer et al., (2021).

Table 3. Analysis of the level of empathy and Engagement at Work according to the degree of significance of the variables Recife, Pernambuco (PE) Brazil, Jan/2022

Variables	Factor 1 of the Measure of Emotional Intelligence (MEI)		Utrecht Work Engagement Scale	
	Chi2	*P-value*	Chi2	*P-value*
Training area	6.18	0.045***	32.25	0.006*
Operating time	12.7	0.013***	17.99	0.588*
Linked institution	4.66	0.198*	96.15	0.00*
Imminent fear of death	1.01	0.603*	11.7	0.30
Fear of being in the same situation as patients	3.07	0.080*	5.91	0.822
Absence of sleep disorder	6.06	0.048***	6.49	0.772
Average family income	8.67	0.013***	9.09	0.523
Income status	0	0.010**	5.52	0.355
With whom do you reside	1.55	0.66*	24.3	0.059

* Pearson's chi-square, **Student's T test, ***Fisher's exact Source: Created by the authors, 2022.

When relating the measure of emotional intelligence in the empathy factor with the variables, the area of training presented a significant association (p-value = 0.045). As for the time of training of professionals and health was characterized its significance (p = 0.013). In relation to the sleep disorder presented significance (p=0.04). The average family income and income situation during the pandemic were significant (p <0.05). However, with those who live there was no significance (p=0.66). The linked institution showed no significant association (p=0.198), imminent fear of death did not show significance (p=0.60) and being in the same situation did not show relevance (p=0.08). (Table 3)

DISCUSSION

For more than a year working in the care of COVID-19, it is clear that health professionals feel exhausted. This sense of exhaustion does not come from the proximity to the high number of cases and deaths of patients, colleagues and relatives, but from significant changes that have been caused by the pandemic in personal and professional well-being levels, according to the results of the survey conducted by Fiocruz throughout the national territory. These data revealed that the pandemic significantly changed the lives of 95% of these workers, and almost 50% reported an increase in the workload during the pandemic. It is worth mentioning that about 45% of health workers exercised beyond 40 hours per week, generating serious changes in mental and emotional state (FIOCRUZ, 2021). In this context, it is important to discuss the scenario of Engagement at work, which consists of the feeling of motivational and social achievement. In view of the characteristic for vitality, it is a high level of energy and resilience in fulfilling their demands, thus being opposite to Burnout. Empathy is the psychological ability to feel in the other's place

However, corroborating the study by Orfão et al., (2020), the present study verified the negative effects on mental health are present when there is an increase in the workload, generating insecurity and stress in professionals who work in the care of COVID-19. In view of this, it is worth emphasizing the importance of institutional psychological support as a tool for preventing psychological changes and opening up a qualified listening, bringing an emotional safety environment for the worker, since in the study if most health institutions, in which these professionals worked, offered psychological support. However, a significant number of professionals reported not using the service due to lack of time. Studies highlight the insecurity of professionals in using institutional psychological support ranging from fear of being branded as an unbalanced person, to fear of being fired. It is worth noting that there is a relationship of self-sufficiency in particular of health professionals in not prioritizing a time to take care of their mental health thus reaching situations of severe psychological wear (Schaefer; Jenkins; North, 2021; Orfão et al., 2020). An interesting data obtained in the study was the sample of performance within the range of 1 to 5 years, many in their first job, which generated a high level of empathy and greater engagement in both sexes and nursing was the most empathetic profession. This scenario is due to the formation based on a humanistic philosophy. Regarding curricular training, it allows greater student engagement and stimulates the practice of person-centered care (White; Tait; Scammell, 2021). Professionals reported absence of sleep disorder, which is a positive factor to identify the presence of empathy and engagement in the population studied. According to Chan et al., (2020), adequate sleep is a predictor of greater engagement at work. Consequently, this professional, for being more engaged in work, will be more willing to listen to and understand others' need, keeping more empathetic, making the development of Burnout more difficult.

In this study, to the authors' surprise, the imminent fear of death from COVID-19 and the fear of being in the same situation of the patients did not influence the levels of empathy and engagement of the studied sample. According to the study conducted by Cunha, Rondon and Neto (2020), even if the interviewed professionals deny this information, it generates a worrying factor in relation to empathy and possibly classifies them as carriers of cognitive empathy. Thus, we can say that the professionals evaluated in this study are empathic and engaged in the work. The presence of cognitive empathy becomes a protective factor since we can say that this feeling is an important predictor for compassion fatigue and consequently for Burnout, because it is an accumulative and intense process, being directly linked to the connection that the professional has with the patient's suffering (Cunha; Rondon; Neto, 2020; Ruiz Fernández et al., 2021). This study has some limitations, because it is still ongoing, and the sample was still a small part in relation to the total population planned for research, because the current scenario of the COVID-19 pandemic. Thus, having influence on the difficulties generated during data collection in relation to communication with professionals, thus the difficulty in adhering to the form due to some resistance to participate as a result of the theme, making the authors extend the end collection period to January 2022.

CONCLUSION

This study aimed to analyze the association between the Work Engagement Scale and the empathy levels of health professionals during the care of patients with COVID-19. Thus, the results of this study show that health professionals are empathic and have a good engagement in the work. However, these excess factors may be predictors of mental illness, such as compassion fatigue and burnout, as well as other psychopathologies.

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