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SIGNS AND SYMPTOMS OF STRESS IN NURSING PROFESSIONALS WHO WORKED IN THE FIGHT AGAINST COVID-19

Sinais e sintomas do estresse em profissionais da enfermagem que atuaram no combate a Covid-19

Signos y síntomas de estrés en profesionales de enfermería que trabajaron en la lucha contra el Covid-19

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ABSTRACT

Objective: identify the signs and symptoms of stress prevalent in nursing professionals who worked in the fight against COVID-19. **Method:** cross-sectional quantitative study, conducted in a university hospital in northeastern Brazil, during the first half of 2021. **Results:** 47% of professionals presented occupational stress. And, among the prevalent symptoms in nursing professionals it was observed that among the physical ones, the most accentuated were 43 (10.1%) muscle tension, 37 (8.7%) feeling of physical weariness, 33 (7.7%) problems with memory, 27 (6.3%) constant tiredness and insomnia 27 (6.3%) and the psychological ones stood out 28 (11.3%) excessive tiredness, 20 (8.1%) daily anguish or anxiety, 20 (8.1%) excessive emotional sensitivity and irritability without apparent cause 17 (6.9%). **Conclusion:** it was evidenced that stress was present in nursing professionals, a large amount inserted in the resistance phase and then exhaustion, consequently the emergence of various symptoms of physical and psychological character.

DESCRIPTORS: Nursing; Covid-19; Occupational stress; Mental health.

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RESUMO

Objetivo: identificar os sinais e sintomas do estresse prevalentes em profissionais da enfermagem que atuaram no combate a COVID-19. Método: estudo quantitativo transversal, realizado em um hospital universitário do nordeste do Brasil, durante o primeiro semestre de 2021. **Resultados**: 47% dos profissionais apresentaram estresse ocupacional com predominância das fases de resistência e exaustão. Dentre os sintomas prevalentes em profissionais da enfermagem observou-se 43 (10,1%) tensão muscular, 37 (8,7%) sensação de desgaste físico, 33 (7,7%) problemas com a memória, 27 (6,3%) cansaço constante e insônia 27 (6,3%) e os psicológicos se destacaram 28 (11,3%) cansaço excessivo, 20 (8,1%) angústia ou ansiedade diária, 20 (8,1%) sensibilidade emotiva excessiva e Irritabilidade sem causa aparente 17 (6,9%). **Conclusão:** evidenciou-se que o estresse esteve presente nos profissionais da enfermagem e consequentemente o surgimento de diversos sintomas de caráter físicos e psicológicos.

DESCRITORES: Enfermagem; Covid-19; Estresse ocupacional; Saúde mental.

RESUMEN

Objetivo: identificar los signos y síntomas de estrés prevalentes en los profesionales de enfermería que trabajaron en la lucha contra el COVID-19. **Método:** estudio cuantitativo transversal, realizado en un hospital universitario del noroeste de Brasil, durante el primer semestre de 2021. **Resultados:** el 47% de los profesionales presentaban estrés laboral. Y, entre los síntomas prevalentes en los profesionales de enfermería se observó que entre los físicos, los más acentuados fueron 43 (10,1%) tensión muscular, 37 (8,7%) sensación de desgaste físico, 33 (7,7%) problemas de memoria, 27 (6,3%) cansancio constante e insomnio 27 (6,3%) y los psicológicos destacan 28 (11,3%) cansancio excesivo, 20 (8,1%) angustia o ansiedad diaria, 20 (8,1%) sensibilidad emocional excesiva e irritabilidad sin causa aparente 17 (6,9%). **Conclusión:** se evidenció que el estrés está presente en los profesionales de la enfermería, en gran cantidad insertados en la fase de resistencia y en la de seguimiento de la exacerbación, con el consiguiente surgimiento de diversos síntomas de carácter físico y psicológico.

DESCRIPTORES: Enfermería; Covid-19; Estrés laboral; Salud mental.

INTRODUCTION

In mid-December 2019, some cases of a new pathology, previously unknown in humans, were found to be affecting workers and seafood market goers located in Wuhan City, Hubei Province, China.[1]

This new pneumonia-like illness was named COVID-19 (Coronavirus Disease-2019), and the causative virus was named SARS-COV-2, a highly transmissible virus that spread rapidly around the world, characterizing a pandemic of global proportions.[2]

Consequently, with the declaration by the World Health Organization (WHO) of the pandemic state, the health systems have been affected by a very disturbed scenario, with frequent crowded hospitals, insufficient amount of equipment and/or supplies for the maintenance of patients, and shortage of Personal Protective Equipment (PPE), as well as lack of preparation of professionals to face these adverse conditions.[3]

And in this context, all healthcare professionals are inserted, being them: doctors, nurses, physical therapists, nutritionists, pharmacists, nursing technicians, stretcher bearers, hygienists, and receptionists who suffer consequences due to the collapse caused by the pandemic.[4]

Considering that nursing professionals had to work in a context of lack of materials, precarious working conditions, overload, shortage of employees, and technical unpreparedness, it soon led to physical and psychological illness.[5]

Among the pathologies of psychological origin, occupational stress stands out, as it is a state where there is wear and tear on the body, allowing for a decrease in the ability to work, which can lead to total absence from work and bring with it great losses to the institutions.[6]

The appearance of critical circumstances caused by COVID-19, added to the working conditions that nursing professionals face, can provide a confrontation with their psychological resources and cause a high level of stress.[7]

Since work stress is associated with the work environment, it can generate direct stressors in the daily activities of these professionals, which can be related to an ergonomically improper environment for performing activities, functions that generate work overload causing physical and emotional exhaustion, disagreements among professionals that make up the staff of a certain company, salary deficit and some organizational factors, since these aspects are pointed out by some studies as the most harmful to the health of the mind and body of the worker.[7]

Professionals such as nurses and nursing technicians are inserted in this work environment and still deal with the circumstances that disseminate apprehension, added to living with pain, insecurity, intense pace of work, constant noise, faintheartedness, anguish, and grief, thus making this a complex environment with many responsibilities.[8]

Researchers report that the low predictability of COVID-19 intimidates not only physical health, but also people's mental health, especially in terms of cognition and emotion. Nurses and nursing technicians have been shown to suffer some type of physical and/or psychological illness.[1] However, nursing professionals are the most affected psychologically, since they are a group that is inserted into highly stressful situations.[9]

Given the above, the guiding question of this study was: Do nursing professionals have stress? If yes, what are the signs and symptoms of stress in nursing professionals who worked in the fight against COVID-19?

The objective of the research was to identify the signs and symptoms of stress prevalent in nursing professionals who worked in the fight against COVID-19.

METHOD

This was a quantitative cross-sectional study, carried out in a hospital in the Northeast of Brazil. This hospital had 30 beds available for the care of patients with COVID-19, 15 of which were infirmary beds and 15 were Intensive Care Unit (ICU) beds.

The sample of this study was composed of nursing professionals working in the direct care of patients diagnosed with COVID-19, with a total of 29 nurses and 80 nursing technicians, totaling 109 professionals.

Nursing professionals who worked directly with patients diagnosed with COVID-19 were included in the study, and nursing professionals away from work for any reason were excluded.

Data collection occurred through the application of a questionnaire to characterize the subjects, which was composed of questions that characterized gender, age and marital status that aimed to identify the study participants and the Lipp's Inventory of Signs and Symptoms (ISSL), an instrument built by psychologist Marilda Lipp and nationally validated.[10]

The ISSL is an instrument that identifies the presence or not of stress in professionals, characterizing the phases, composed of 56 self-completed items, 37 of a somatic-physical nature and 19 of a psychological nature, presenting symptoms that are often repeated, differing only in their intensity and seriousness.

It has three tables with characteristic signs and symptoms of the four phases of stress, and it is a self-completion instrument that takes about 10 minutes to be completely filled out, consisting of three tables: the first refers to symptoms presented in the last 24 hours – alert phase; the second frames the symptoms experienced in the last week – resistance and near exhaustion phases; and the third identifies symptoms presented in the last month – exhaustion phase.[10]

The application was based on online forms via Google Forms® and sent to the phones of the research participants via a group of instant messaging application (Whatswap) referring to their work sector and on their private number in accordance with the established by the ethics committee and data analysis was based on simple descriptive statistics.

This article followed the ethical and legal principles that govern scientific research on human beings, recommended in Resolution No. 466/2012 of the National Health Council, preserving the voluntary nature of the participants and the anonymity of the interlocutors, and was approved by the ethics and research committee of the Federal University of Rio Grande do Norte, according to CAAE No. 45575221.7.0000.5537, opinion number 4.761.032, on June 8, 2021.

RESULTS

Sixty-six nursing professionals participated in the study, 19 nurses and 47 nursing technicians.

In the analysis of socio-demographic characteristics, I obtained as a response from the research population: 53 (80.3%) were female and 13 (19.7%) were male, with a mean age of 42.6 years (SD: 8.325), with a minimum age of 27 and a maximum of 57 years.

About the marital status of the sample 32 (48.5%) were married, 22 (33.3%) single, 10 (15.2%) in a stable union, and two (3.0%) divorced. When asked if they had children, 49 (74.2%) said yes and 17 (25.8%) no.

About the labor data of the sample population, in relation to the time of work in health services, the minimum was 7 years and the maximum 35 years with a mean of 15 years (SD: 7.082), if they had more than one employment relationship, it was answered that most had dual jobs, 46 (69.7%), and that they worked a mean of 43.76 hours per week (SD: 13.430).

The professionals surveyed were divided into three sectors for the care of patients diagnosed with COVID-19, as shown in Table 1.

Table 1 – Sectors in which the nursing professionals work. Natal, RN, Brazil, 2021

Sector	Quantity	%
COVID ICU	39	59,1
COVID Nursing Home	15	22,7
Sector to serve the COVID Infirmary	12	18,2
Total	**66**	**100**

As far as the practice of physical activity is concerned, 35 (53%) responded that they have already been infected by SARS-COV-2 and 31 (47%) have not had the disease up to the time when the survey was conducted.

From the ISSL results, it was identified that 31 (47%) professionals presented some level of stress.

According to the phases that the nursing professionals were in, it was seen that the resistance phase was predominant 19 (28.8%), 11 (16.7%) were in the exhaustion phase, and one (1.5%) presented the alarm phase.

It was observed that 35 (53%) professionals did not present stress, as presented in Table 2 below:

Table 2 – Phases of stress presented by nursing professionals. Natal, RN, Brazil, 2021

Fases	Quantity	%
Does not present stress	35	53
Resistance	19	28,8
Exhaustion	11	16,7
Alarm	1	1,5
Near exhaustion	0	0
Total	**66**	**100**

Based on the answers given regarding the symptoms presented in the time periods according to the ISSL, it was possible to identify which physical and psychological symptoms were the most referred to by the professionals.

Among the physical symptoms of stress, the most frequent were: muscle tension 43 (10.1%); feeling of constant physical exhaustion 37 (8.7%); memory problems 33 (7.7%), constant tiredness 27 (6.3%), and insomnia 27 (6.3%) (Table 3).

Among the psychological symptoms, 28 (11.3%) were excessive fatigue; daily anguish or anxiety (20; 8.1%); excessive emotional sensitivity 20 (8.1%), excessive irritability (17, 6.9%), and irritability without apparent cause 17 (6.9%) (Table 4).

Table 3 – Physical symptoms self-reported by nursing professionals. Natal, RN, Brazil, 2021

Symptoms	Quantity	%*
Muscle tension	43	10,1
Feeling of constant physical exhaustion	37	8,7
Problems with memory	33	7,7
Constant fatigue	27	6,3
Insomnia	27	6,3
Difficulty sleeping	22	5,2
Change in appetite	18	4,2
Tachycardia (rapid heartbeat)	17	4
Change in appetite (too much or too little)	16	3,7
Stomach knot or pain	13	3
Dry mouth	13	3
Extreme appetite change	12	2,8
Tachycardia	12	2,8
Dermatological (skin) problem	11	2,6
Sexual Difficulties	10	2,3
Jaw clenching/teeth-gnashing	9	2,1
Tingling in the extremities	8	1,9
Generalized malaise without cause	7	1,6
Appearance of prolonged gastritis (burning, heartburn)	7	1,6
Dizziness – feeling of floating	7	1,6
Tingling	6	1,4
Hypertension (high blood pressure)	6	1,4
Prolonged dermatological problems	6	1,4
Confirmed hypertension	5	1,2
Frequent dizziness	5	1,2
Gasping for breath	5	1,2
Cold hands and/or feet	5	1,2
Nervous tics	5	1,2
Temporary diarrhea	5	1,2
Frequent diarrhea	3	0,7
Increased sweating	3	0,7
Sudden and transient hypertension	2	0,5
Inability to work	0	0
Ulcer	0	0

Table 4 – Psychological symptoms self-reported by nursing professionals. Natal, RN, Brazil, 2021

Symptoms	Quantity	%*
Excessive fatigue	28	11,3
Daily distress or anxiety	20	8,1
Excessive emotional sensitivity	20	8,1
Excessive irritability	17	6,9
Irritability without apparent cause	17	6,9
Decreased libido (sexual desire)	16	6,5
Sudden urge to start new projects	15	6
Constant thinking about a single subject	15	6
Willingness to run away from everything	15	6
Loss of sense of humor	13	5,2
Constant thinking about a single subject	11	4,4
Emotional hypersensitivity	10	4
Sudden increase in motivation	10	4
Nightmares	10	4
Feeling of incompetence in all areas	9	3,6
Apathy	9	3,6
Self-doubt	8	3,2
Sudden enthusiasm	5	2

It was possible to verify that the physical and psychological symptoms manifested themselves in the nursing professionals, and through this, the occurrence of absenteeism and an increase in the number of certificates and leaves of absence from the sectors destined to COVID-19 of the hospital could have repercussions in the institution.

DISCUSSION

The data obtained through analysis of the results allowed us to state that the sample was composed primarily of women, with an average age of 43 years, married, and with children.

Studies historically classify nursing as a traditionally feminine area, in which care is seen more as a vocation than a profession, being related to a supposed "feminine essence", being quite observed nowadays the great predominance of women in health care acting as nurses and nursing technicians.[11]

It was identified that the professional staff, divided by sectors for patients diagnosed with COVID-19, was composed of young adults between 27 and 57 years of age, with an average of 15 years of experience in the health services.

Thus, it can be said that these workers have technical skills focused on assistance, considering that care comes from action and commitment related to caring with affectionate, human, instrumental, and technological aspects.[12]

Most of the individuals in the survey reported having more than one employment relationship, with an average of 43 hours worked per week. This is the reality of many nursing professionals, being associated with the factor of low financial remuneration received by the category, causing the search for another source of income to complement the monthly income, being possible due to the fact that it is a profession divided into shifts, making a double shift possible.[13]

Since nursing workers do not choose the double shift for pleasure, they feel coerced to adopt it, due to low salaries, precariousness of work, devaluation of the category and employment instability associated with their field of work.[13]

When analyzing the distribution of professionals by sectors, the COVID ICU presented the highest number of respondents, this place of performance is where high complexity support is offered to patients who present a greater dependence on the team for the maintenance of their health through intensive care provided according to the needs of each individual.[14]

Since, to be admitted to an intensive care unit (ICU), criteria are followed in which patients are compromised in their general condition and with some degree of severity, where they show clinical signs of respiratory failure, need for mechanical ventilation, instability among others, making necessary total care by the nursing team and other health professionals.[15]

With the pandemic scenario of COVID-19, more than fifty percent of the individuals surveyed revealed that they were contaminated by the SAR-COV-2 virus. This data reflects the fact that the disease is new and still being studied, bringing with it many questions regarding its origin, transmissibility, lethality, more vulnerable groups, among other questions, considering that nursing professionals, being on the front line in caring for patients diagnosed with the disease, have become susceptible targets to contact with the virus and its infection.

Over time, protocols were created to be followed for dressing and disrobing, internal routines of each health service, continuing education, correct use of PPE, proper hand washing, availability of private clothes, and care in the management of patients in an attempt to reduce the growing number of cases confirmed in nursing professionals.[16]

The devastating scenario provided by the pandemic that suggested the rapid spread of the virus, lack of clinical treatment, fear of the unknown, fear of contracting the disease and taking it to family members, lack of beds, large number of deaths, lack of supplies and/or equipment, lack of PPE contributed to the emotional excitement and the lack of control of the internal homeostasis, thus producing several systemic manifestations that resulted in the emergence of stress in nursing professionals.[7]

In relation to the professionals who presented stress, a higher percentage were in the resistance phase, a stage in which the individual automatically tries to deal with situations that cause stress, in an attempt to keep the organism in balance.

The second phase with the highest incidence was the exhaustion phase, considered "critical and dangerous", in which all attempts to regenerate homeostasis are already exhausted, making the organism susceptible to the appearance of physical and emotional diseases.[18]

Among the signs and symptoms present in the sample, among the physical ones, muscle tension, sensation of physical exhaustion, memory problems, constant tiredness, and insomnia stood out, and among the psychological ones, excessive tiredness, daily anguish or anxiety, and excessive emotional sensitivity, since their presence already evidences the professionals' illness, which can cause great damage to both the workers and the institution.[19]

Based on the damage that the illness of professionals can bring to the institution, absenteeism, prolonged absence from their duties, compromised staffing levels, decreased productivity, readaptations, overload for the team, and other damages associated with patient care, such as: difficulty in concentration, irritability, impact on the ability to make decisions, decreased reflexes and serenity thresholds, stand out.[20]

Since the scenario brought about by the dissemination of COVID-19 contributed to the physical and psychological illness of society, with emphasis on nursing professionals, social isolation, separation from their loved ones, fear of contracting the disease and its evolution, and shock at the unknown favored the evolution of stress levels among them.[21]

The manager must be aware of everything that happens to his collaborators, observing factors that are causing stressors or that can cause something in the future, and based on the situations seen, he can plan a stress management in an attempt to minimize the damage from the problems presented in this research.[19]

Thus, it is necessary to establish and make available adequate conditions for work, creating programs with the theme of prevention and management of illness, adaptation of the work shift according to the needs of the professional, psychological support, avoid constant changes, offer of integrative and complementary practices and continuing education with the intention of enabling the restoration of the balance of the worker's body.

CONCLUSION

It was evidenced that a good part of the nursing professionals of a university hospital in the northeast of Brazil working in the sectors destined for patients diagnosed with COVID-19 presented stress and a large number were inserted in the resistance phase and then exhaustion.

This may be a reflection of the professionals' routine and the reality experienced before the pandemic that provided the excitement of the organism of the individuals, causing the appearance of stress, consequently the emergence of several physical and psychological symptoms.

In view of this, hospital management has a unique character through stress management aimed at caring for the physical and mental health of nursing professionals, from a look of attention and empathy for the needs of each one of them, since without them there is no quality care that is expected at all levels of health care.

The study had some limitations, because it was an online data collection, not all nursing professionals who worked in the sectors for patients diagnosed with COVID-19 responded as expected, of 109 professionals only 66 sent their answers, and during the collection there was the closing of beds causing some employees to be displaced to sectors for other pathologies making it impossible for them to receive the questionnaires.

THANKS

It does not have one.

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