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Research articles

Stress in nursing professionals who work in the first line of care against covid – 19 in north lima

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ABSTRACT

Stress is one of the most recurrent problems in health professionals, but during the pandemic a high rate has been expected due to the high demand for COVID-19 infections, which has generated mental imbalance in health professionals and for this reason they cannot provide good care, so the research objective is to determine the Stress in Nursing Professionals who work in the First Line of Care against COVID-19 In North Lima. It is a study with quantitative - descriptive, non-experimental, and cross-sectional methodology, made up of a total of 255 study participants who responded to a survey of sociodemographic aspects and the Nursing Stress Scale. In their results, we observe that 55 (21.6%) of the nursing professionals present high stress, 139 (54.5%) medium stress and 61 (23.9%) low stress. In conclusion, it should be coordinated with professionals specialized in mental health to conduct an intervention program in the management of stress in the situation of the COVID-19 pandemic in nursing professionals.

Keywords: Stress, Nursing Professional, Pandemic, Coronavirus, Occupational Stress, Mental Health.

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INTRODUCTION

As the coronavirus (COVID-19) pandemic advances worldwide, it has triggered many infections and deaths, putting much of the world's population at risk ^[1], especially in workers who are directly in contact with people infected with it. disease and that they have high rates of being able to catch it quickly, ^{[2][3]}, has triggered main symptoms of stress, anxiety and even depression where mental health is compromised by interrupting their work activities in their workplace. ^[4].

Likewise, it has been predicted that the levels of transmission and the expansion of COVID - 19 in public and occupational health issues is considered as one of the highly risky diseases in health professionals at the work level, ^{[5][6]}, but that mainly affects doctors and nurses who are caring for patients with this disease. ^{[7][8]}.

For this reason, professionals in the first line of care experience acute stress and anxiety at the mental level because day by day they are in direct contact with COVID-19 patients, ^[9], where exhaustion, workload and high demand of patients negatively influence their care and their own well-being. ^{[10][11]}.

Therefore, in order for health professionals to be able to

counteract negative effects on their mental health by being in the first line of care for this disease, it is necessary that they have emotional and social support from their co-workers, job and family environment ^[12], since this allows the professional to carry out their care adequately during their work shift and not present any negative symptoms that affect their mental health. ^[13].

In China ^[14], a study was conducted with 107 nursing professionals, where they observed that 96.3% of nurses reported that nostalgia is a factor that contributes to high stress, and that younger participants tended to present more stress due to workload and exhaustion at work.

In China ^[15], in another study with 617 nursing professionals, they observed that 82% had normal stress, 18% abnormal stress, 6.8% mild stress, 7% moderate stress, 3% severe stress and 1% extremely severe stress , and that 40% of nursing professionals tended to present mental problems due to the high rate of patients to attend due to the pandemic.

In a study carried out in Nepal ^[16], with 152 nursing professionals, they observed that 74.3% presented normal stress, 9.9% tempered stress, 9.9% moderate stress, 2.6% severe stress and

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3.3 % extremely severe stress, where stress levels were more associated with age, work unit and the condition of their children. Therefore, its research objective is to determine the Stress in Nursing Professionals who work in the First Line of Care against COVID-19 in North Lima.

MATERIAL AND METHOD

Figure 1. Flowchart on the stressors that influence the nursing professional during COVID-19 care in their work environment



This flow chart describes the stressors that affect the nursing professional in their work environment, which is distributed as follows:

Factors that contribute to stress in your workplace:

- Concern about the risk of being exposed to COVID-19 at work
- High demand for patients infected by COVID 19
- Work overload
- Lack of biosafety and care equipment at work
- Conduct new methods of care in COVID-19 patients.

Finally, when identifying these factors in nursing professionals, they should have a specialized mental health consultation, to prevent stress and improve their mental health with the advice provided by the doctor who will perform the consultation.

Research Type

It is a study with a quantitative - descriptive, non-

experimental and cross-sectional methodology.^[17].

Population

The study is made up of 255 nursing professionals.

Inclusion criteria

- Nurses who have more than 1 year working in the Hospital
- Nurses who are working in hospitals
- Nurses who voluntarily agree to participate in the study.

Technique and instrument

A questionnaire was conducted, in which the data instrument The Nursing Stress Scale (NSS) is written. For this, it has been structured as follows:

In the first block are the sociodemographic data and in the second block is the NSS instrument that comprises 34 items divided into 3 dimensions (Physical Environment, Psychological Environment and Social Environment), in which it is valued with a Likert-type scale with 4 options of answer: "0 = Never", "1 = Sometimes", "2 = Frequently" and "3 = Very frequently", in which a total score of 0 to 102 points is obtained, distributed in 3 levels: low, medium and high, the higher the score, the higher the level of stress in nursing professionals ^{[18][19]}.

The validation of the instrument was determined based on the Kaiser-Mayer-Olkin sample adequacy measure, which obtained a coefficient of 0.949 (KMO> 0.5), while the Bartlett test of sphericity obtained significant results (X^2 approx. = 6241, 645; df = 561; p = 0.000).

The instrument's reliability test was found using Cronbach's Alpha statistical test, resulting in a coefficient of 0.964 (α > 0.8). The survey to calculate the level of stress in nursing professionals, in the first place, was coordinated with each of the nursing professionals so that they voluntarily agreed to be participants in the study and in turn they were provided with knowledge about what was is performing in the studio.

RESULT

Figure 2. Stress in Nursing Professionals who work in the first line of care COVID - 19 in North Lima

Stress in Nursing Professionals



In Figure 2, we observe that 55 (21.6%) of the nursing

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professionals present high stress, 139 (54.5%) medium stress and 61

(23.9%) low stress.

Figure 3. Dimension Physical Environment of stress in nursing professionals who work in the first line of care COVID - 19 in North Lima Physical environment



 Medium stress High stress Low stress

In Figure 3, we observe that in the physical environment dimension, 64 (25.1%) of the nursing professionals have high stress, 142 (55.7%) medium stress and 49 (19.2%) low stress.

Figure 4. Dimension Psychological Environment of stress in nursing professionals who work in the first line of care COVID - 19 in North Lima

Psychological Environment



In Figure 4, we observe that in the psychological environment dimension, 57 (22.4%) of nursing professionals have high stress, 125 (49%) have medium stress and 73 (28.6%) have low stress.

Figure 5. Social Environment Dimension of stress in nursing professionals who work in the first line of care COVID - 19 in North Lima

Social environment



97 (38.1%) have low stress.

Figure 6. Stress in Nursing Professionals in relation to sex who work in the first line of care COVID - 19 in North Lima

professionals have high stress, 134 (52.5%) have medium stress and

In Figure 5, we observe that 24 (9.4%) of the nursing



In Figure 6, we observe that male nursing professionals 10 (18.5%) have low stress, 38 (70.4%) have medium stress and 6 (11.1%) have high stress; Regarding the female sex, we can observe that 51 (25.4%) have low stress, 101 (50.2%) have medium stress and 49 (24.4%) have high stress.

Table 1. Stress in Nursing Professionals in relation to their labor	condition in
the first line of care COVID - 19 in North Lima	

				Stres	s in Nursing		
			essionals				
				Low	Medium	High	Total
Labor	Hired	Count		51	125	54	230
condition	I	% Within Labor	r	22,29	6 54,3%	23,5%	100,0%
		condition					
	Named	Count % Within Labor		10	14	1	25
				40,0%	6 56,0%	4,0%	100,0%
		condition					
Total		Count		61	139	55	255
		% Within Labor	r	23,9%	6 54,5%	21,6%	100,0%
		condition					
Chi-squa	re tests						
		Value	Ċ	lf	Asymptotic sig	nificanc	e (bilateral)
Pearson's	s Chi-	6,973ª		2		,031	
square							
Likelihoo	od ratio	8,347		2		,015	
Linear by	y linear	6,879		1		,009	
associatio	on						
N° of vali	id cases	255					
a. 0 cells	(.0%) hav	e expected a count	less th	nan 5.	The minimum ex	pected c	ount is 5.39.

In Table 1, stress in nursing professionals is related to their work condition, in which it was determined with Pearson's chi-square test (X^2) . The significance level of the test obtained a value of 5.39 (p>0.05) (X² = 6.973; d.f = 2). Therefore, an association hypothesis is not rejected, for which there are statistical data that verify the relationship between stress in nursing professionals and their work condition. Therefore, we can interpret that, nursing professionals with their employment status as Hired, 51 (22.2%) have low stress, 125 (54.3%) have medium stress and 54 (23.5%) have stress high, in the named work condition, 10 (40%) have low stress, 14 (56%) have medium stress and 1 (4%) have high stress.

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From 1 to 5 years	Count	Low	Medium	High	T- 4-1
From 1 to 5 years	Count			nigii	Total
vears	Count	24	47	36	107
J	% Within Years of	22,4%	43,9%	33,6%	100,0%
	Service				
From 6 to 10	Count	12	29	13	54
years	% Within Years of Service	22,2%	53,7%	24,1%	100,0%
From 11 to 15	Count	10	26	4	40
years	% Within Years of Service	25,0%	65,0%	10,0%	100,0%
From 16 to 20	Count	6	18	2	26
years	% Within Years of Service	23,1%	69,2%	7,7%	100,0%
More than 20	Count	9	19	0	28
years	% Within Years of Service	32,1%	67,9%	0,0%	100,0%
•	Count	61	139	55	255
	% Within Years of	23,9%	54,5%	21,6%	100,0%
are tests	Service				
			Asymptotic significance		
	Value	df	(bilateral)		
's Chi-square	24,179 ^a	8	,002		
ood ratio	30,429	8		,000	
ssociation	11,948	1	1	,001	
lid cases	255				
	From 6 to 10 years From 11 to 15 years From 16 to 20 years More than 20 years are tests is Chi-square ood ratio ssociation lid cases	From 6 to 10 years % Within Years of Service From 11 to 15 years % Within Years of Service From 16 to 20 years % Within Years of Service More than 20 years % Within Years of Service Count % Within Years of Service Count % Within Years of Service Count % Within Years of Service Count % Within Years of Service are tests Value 's Chi-square 24,179° od ratio 30,429 ssociation 11,948 lid cases 255 (0%) have expected a count less th	From 6 to 10 years Count 12 % Within Years of Service 22,2% From 11 to 15 years Count 10 % Within Years of Service 25,0% From 16 to 20 years Count 6 % Within Years of Service 23,1% More than 20 years Count 9 % Within Years of Service 32,1% Count 61 % Within Years of Service 23,9% are tests Value df 's Chi-square 24,179 ^a 8 ssociation 11,948 1 lid cases 255 1	From 6 to 10 years Count 12 29 % Within Years of Service 22,2% 53,7% From 11 to 15 years Count 10 26 % Within Years of Service 25,0% 65,0% From 16 to 20 years Count 6 18 % Within Years of Service 23,1% 69,2% More than 20 years Count 9 19 19 % Within Years of Service 32,1% 67,9% 67,9% Ecount 61 139 64,5% Service 23,9% 54,5% 54,5% Service 0 23,9% 54,5% Service 0 0 0 0 % Within Years of Service 23,9% 54,5% 54,5% are tests Value df 0 0 's Chi-square 24,179° 8 0 0 ood ratio 30,429 8 0 0 0 ssociation 11,948 1 0 0 0 0 0 0 0	From 6 to 10 years Count 12 29 13 % Within Years of Service 22,2% 53,7% 24,1% From 11 to 15 years Count 10 26 4 % Within Years of Service 25,0% 65,0% 10,0% From 16 to 20 years Count 6 18 2 % Within Years of Service 23,1% 69,2% 7,7% More than 20 years Count 9 19 0 % Within Years of Service 32,1% 67,9% 0,0% Ecount 61 139 55 % Within Years of Service 23,9% 54,5% 21,6% are tests Value df Asymptotic signif (bilateral) 's Chi-square 24,179° 8 ,002 ood ratio 30,429 8 ,000 ssociation 11,948 1 ,001 lid cases 255 255

Table 2. Stress in Nursing Professionals in relation to their years of service who work in the First Line of Care COVID - 19 in North Lima

In Table 2, stress in nursing professionals is related to their years of service, in which it was determined with Pearson's chi-square test (X^2) . The level of significance of the test obtained a value of 5.61 (p>0.05) (X² = 24.179; d.f = 8). Therefore, an association hypothesis is not rejected, for which there are statistical data that verify the relationship between stress in nursing professionals and their work condition. Therefore, we can interpret that nursing professionals with 1 to 5 years of service, 24 (22.4%) have low stress, 47 (43.9%) have medium stress and 36 (33.6%) have high stress, from 6 to 10 years of service, 12 (22.2%) have low stress, 29 (53.7%) have medium stress and 13 (24.1%) have high stress, from 11 to 15 years, 10 (25%) have low stress, 26 (65%) have medium stress and 4 (10%) have high stress, from 16 to 20 years old, 6 (23.1%) have low stress, 18 (69.2%) have medium stress and 2 (7.7%) have high stress and more than 20 years, 9 (32.1%) have low stress and 19 (67.9%) have medium stress. DISCUSSION

In the study, it was focused from the perspective of prevention in the mental health of the nurse (a) who are in the first line of attention COVID - 19, where the conditioning factors to present stress are increasing every time, therefore the Development resources that allow the reduction of stress, will be of great support for nursing professionals at work and social level.

Stress in nursing professionals is becoming more and more recurrent, affecting mental health, this we can interpret that nursing professionals are increasingly being affected at a mental level by the increase in COVID-19 cases, and that Factors such as workload, the condition of their environment, the demand for

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patients and the overtime they work, causes them to present stress conditions with high indices and that this can generate risks to their health. In ^[14], the authors argue that factors such as excessive patient demand, the work environment, lack of communication between staff, deficient protective equipment, makes nursing professionals have a mental overload, compromising their health and becoming vulnerable to any disease.

Regarding its dimensions, we can observe that in its physical, psychological and social dimensions, nursing professionals highlight factors such as, such as physical and mental well-being, lack of communication with the staff and the lack of concentration to carry out the care, are factors that increase the stress indexes in nursing professionals, since the mental pressure exerted on themselves and also from their head of service, brings serious consequences, where the ability to adapt is hampered, and therefore stress levels tend to increase. In ^[16], the authors mention that conditioning factors such as work exhaustion, emotional overload and inadequate work environment, are factors for the nursing professional to have a high level of stress and in addition to not only indicating stress levels, but also in addition to presenting symptoms of anxiety and depression, compromising the quality of care exercised during their work shift.

Likewise in the female gender we see that they develop different capacities to be able to face situations that compromise their health, in the female gender where it implies being emotional and wearing out more when there is emotional stress, and that depending on its work environment is the one that presents the highest levels of stress because it is more emotional with its patients, but due to the high demand of patients, it cannot handle it adequately presenting levels of stress. In ^[15], they argue that females are the most vulnerable to stress, because they relate more to their patients and that in the mental health aspect they are more emotional and sentimental in the care of their patients

In the years of the contract we can observe that professionals who have experience no more than 5 years present a medium stress, this is due to the fact that the incoming professionals, being hired with little experience in the care of patients infected by COVID - 19, makes them more susceptible to presenting symptoms of stress, because the use of advanced equipment and care in patients with COVID-19 is a challenge and because of the high demand of patients they cannot perform it correctly, making them more susceptible to stress. In ^[11], the authors argue that the newly admitted staff are young people with lack of experience in the management of COVID-19 patients, therefore the stress levels in them are higher, because for them it is something new that perform and in addition to feeling miserable at being able

CONCLUSION

We can conclude that the psycho-emotional environment of nurses should be strengthened, since this will allow them to improve their mental resilience and thus be able to maintain their mental health in addition, we conclude that mental problems should be detected and thus allow the development of prevention strategies that protect the mental well-being of health professionals.

It is concluded that it should be coordinated with professionals specialized in mental health to conduct an intervention program in stress management in the face of the situation due to the COVID-19 pandemic.

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