

Anxiety, Stress and Burnout among Nurses Involved in Covid 19 Duties in Cochin City, India

Dr. Pritpal Singh¹, Jithin Gangadharan K²

¹ Associate Professor, Mittal School of Business, Lovely Professional University, Punjab

² PhD Candidate, Mittal School of Business, Lovely Professional University, Punjab

¹ Email: pritpal16741@lpu.co.in

¹ Address: Associate professor, Mittal school of business, lovely professional university, Jalandhar - Delhi, Grand Trunk Rd, Phagwara, Punjab 144001, India

² Email: jithingangan3@gmail.com

² Research Scholar, Mittal school of business, lovely professional university, Jalandhar - Delhi, Grand Trunk Rd, Phagwara, Punjab 144001, India

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Abstract

Aim: To conclude the level of anxiety, stress, and burnout amid the Nurses tangled in COVID 19 duties. **Design:** A cross-sectional revision was accompanied from Feb 15, 2021, to March 15, 2021. **Methods:** Google forms were distributed to all the Nurses involved in COVID 19 duties of Central, State, and Private hospitals of Cochin City. A simple random sampling method was used. 150 samples were selected and administered, The Corona Disease Anxiety Scale, The COVID stress scale, and Copenhagen Burnout Inventory. The reliability of the tool was found to be high, as it is a highly standardized internationally accepted tool. The data was analyzed using Z test and ANOVA and SPSS software. **Results:** 20.7% of Nurses have Very Low Stress, 20.7% have High Stress. 21.3% have Low Stress, 18.7% have Moderate Stress and 18.7% have Very High Stress. 52.7% of Nurses possess moderate anxiety levels. 25.3% have mild and 22% have severe anxiety. 56.7% nurses possess a moderate level of burnout. 24.7% have mild burnout and 18.7% have severe burnout. **Conclusion:** There lies a major level of stress, anxiety, and burnout among Nurses that have to be addressed. Anxiety, stress, and burnout are positively correlated with each other.

Keywords: Anxiety, Stress, Burnout, Nurses, COVID 19

1. Introduction

A number of instances of the disease pneumonia of unidentified reasons were recorded in the main capital of Hubei region in The People's Republic of China, the Wuhan city, in the month of December 2019. In January 2020, the culprit virus was isolated and identified ^[14] (Zhou, et al., 2020). The "World Health Organization" (WHO) provisionally designated the infection in 2019 as new coronavirus on 12th January, 2020. (2019-nCoV). WHO declared a community healthiness crisis of worldwide apprehension (PHEIC) on January 30, 2020, and on 11th February 2020, the sickness triggered by the new coronavirus was formally designated "coronavirus" infection 2019. (COVID-19). "The International Committee on Taxonomy of Viruses" categorized and retitled "2019-nCoV" as "severe acute respiratory syndrome coronavirus 2" at this time, based on its genetic relatedness to existing coronaviruses and established categorization system ("SARS-CoV-2")., The "World Health Organization", on 11th March, 2020 formally acknowledged "COVID-19 a pandemic", the first caused by a coronavirus ^[1] (Agarwal & Prasad, 2020).

This is not the first time that Nurses are involved in a pandemic situation. History has marked the Circa, the prehistoric epidemic that has wiped a village in China in 3000 B.C. The epidemic followed by the Plague of Athens in 430 B.C, The Black Death between 1346-1353 to name a few. But the latest pandemic has shown its wrath upon the entire global healthcare sector and had devastated the world health economy. As primary health care providers Nurses are the professionals who work round the clock to uphold the health of their patients. There is no doubt that these angels will be working under stress since they have to focus on a large group of people with limited supplies and high risk. To implement any better policy for the upliftment of the Nurses it's important to measure the anxiety, stress, and burnout among them.

The main significance of the study is that the world is going through a pandemic it's most relevant to study it in all aspects since any of the studies may enlighten the knowledge for the eradication of the disease. Here the study to assess the anxiety, stress and burnout related to COVID amongst health care workers is itself an important topic because they are the primary warriors who fight against the COVID. If their stress and anxiety levels are not addressed properly they might get exhausted and will lead to malfunctioning of the healthcare system. Now onwards the history will mark a pre and post COVID era. No other pandemic in history has such a widespread disease in such a short span of time. Researchers around the globe are working hard for the solution. Meanwhile, the health workers are risking their lives to preclude and extent of the sickness as well as to cure the affected. In a country like India where the population is a big concern, delivering quality care is a major challenge. The Nurses, doctors, and other paramedics are working hard to meet this goal. They too are having a family, them which they leave at home. The medics are not able to see their loved ones even for months due to hectic working hours and quarantine protocols. So it's obvious that the healthcare workers may feel stress and anxiety. That's why the study to assess the stress, anxiety, and burnout level in this scenario justifies itself.

2. Materials and Methods

2.1 Review of Literature

“The researchers studied the risk causes for depression and anxiety in healthcare workforces positioned during the COVID 19 outbreak in China. The purpose of the revision was to appraise the grade of misery and anxiety of health sector employees and to search the hazard causes during the outburst of COVID 19 in China. A cross-sectional revision was conducted using convenience sampling to attain a tester of 902 health sector employees. An organized questionnaire was completed by the participants from Feb 9, 2020, to Feb 11, 2020. The study showed the percentage of health sector employees with indications of moderate/severe depression and moderate/severe anxiety were 16.63% and 18.29% respectively. There were 24.5% of hospital associated employees facing depression and moderate/severe anxiety at the similar period”^[3] (Chen, et al., 2020). “The group of researchers conducted a study to assess the instant psychological effect on the Nurses employed at forty two government-own sanatoriums during COVID 19 breakdown in The People's Republic of China. A multi-center, cross-sectional investigation of forefront Nurses was steered through an online questionnaire. Signs of somatic disorders, depression, anxiety and suicidal ideation were calculated. 4692 Nurses were selected by using the convenience sampling method and the results revealed global psychological wellbeing of forefront Nurses was mostly deprived throughout the COVID 19 outburst”^[5] (Hong, et al., 2021). “The investigators conducted an extensive cross-sectional revision on forefront nurse's depression, burnout, anxiety, and fear status and their connected causes throughout the COVID 19 outburst in the Wuhan, a city in China. 2014 samples were selected by convenience sampling method and a valid tool was used to collect data. The study was conducted from Jan 13 to Feb 13, 2020. The study revealed that the applicants had a great level of fear and reasonable level of burnout. About partial of the Nurses informed high and moderate work burnout. The mental healthiness effects were graphically positively associated with the skin lesions and inversely associated with self-efficacy, flexibility, social livelihood, and forefront work preparedness”^[6] (Hu, et al., 2020). “The researchers conducted COVID 19 anxiety amongst front line Nurses: prognostic role of administrative support, personal flexibility and societal support. The study aimed to observe the comparative influences of personal flexibility, social support, and administrative support in reducing COVID 19 anxiety among front-line Nurses. A cross-sectional revision was conducted among 325 enumerated Nurses from the Country of Philippines using four homogenous scales. Samples were selected randomly. The results showed that 37.8% have dysfunctional levels of anxiety. Robust Nurses and those who professed higher structural and social support were more probable to report lower anxiety associated to COVID 19”^[8] (Labrague & Santos, 2020)

AIM

The foremost perseverance of this revision is to evaluate the stress, anxiety and burnout among nurses who are involved in COVID 19 duties.

2.2 DESIGN

A cross sectional investigation design was selected to assess the anxiety, stress and burnout among nurses involved in COVID 19 duties. These designs are used often in nursing, medical, and social science investigation to collect

data on the predominance of disease, conducts, intentions, information, attitudes, and respondent views (Polit & Beck, 2014). “Cross-sectional studies are often used to assess the predominance of a certain outcome in a given population, which is useful for public health planning. Individual characteristics, such as risk factor exposure, can also be gathered, as well as information on the result. In this approach, cross-sectional studies give a ‘snapshot’ of the result and its related features at a single point in time”^[9] (Levin, 2006).

2.3 SAMPLE

The sample consisted of 150 Nurses who fulfilled the following inclusion criteria: the nurses must be having either a diploma or a degree or masters or a doctoral degree in nursing. They must be currently working in State government or Central government or in a Private hospital where COVID patients are treated. Nurses must also be registered with Kerala Nursing and Midwifery Council. The exclusion criteria is those are not willing to participate.

2.4 DATA COLLECTION

The questionnaires were incorporated into Google forms and were sent to all the nurses who are working in State, Central and Private Hospitals of Cochin City. First 150 entries were taken. The study was conducted from Feb 15, 2021, to March 15, 2021. The tools used were 1. The Corona Disease Anxiety Scale. It contains 18 items of self-report questionnaires designed specially to measure corona disease anxiety with Cronbach’s alpha score of 0.919. It has a five-point Likert scale. 2. The COVID stress scale. It contains 36 items designed specially to measure the COVID stress scale. It has a five-point Likert scale. 3. Copenhagen Burnout Inventory It contains 19 items which are divided into three portions. It has a five-point Likert scale. Along with the demographic scale, the questionnaire sent to the samples via Google form.

2.5 DATA ANALYSIS

The data were analyzed via SPSS 20.0 for windows latest version. Descriptive data were used to define and recapitulate the assets of the quantity of facts gathered from the respondents. Parametric data like Z test and one way ANOVA were utilized for the assessment of the features measured between unlike stages of the demographic variables. In this study the researcher computed the score of each participant to identify the level of stress, anxiety and burnout. The socio demographic details and tools score were entered to excel spread sheet and analysis was done using licensed SPSS version 20. Demographic details and prevalence were calculated using percentages and represented by appropriate diagrams

3. Results.

- The stress level of Nurses tangled in COVID 19 duties

The Stress of Nurses tangled in COVID 19 duties in Ernakulam can be categorized into five categories as Very High Stress, High Stress, Moderate Stress, Low Stress, Very Low Stress based on the values of percentiles. The Nurses whose value of Stress is less than 28 were characterized as the Very Low-Stress cluster. The Nurses whose scores are between 28 and 45 are categorized into the Low-Stress Group, the scores between 45 and 53 are categorized into the Moderate Stress group, in between 53 and 65 are categorized into the High-Stress group. The remaining Nurses whose values of Stress are greater than 65 were categorized into the Very High-Stress group. It is expressed in Table 1

Category of Stress	Condition	N	Percentage
Very Low Stress	< = 28	31	20.7
Low Stress	28 – 45	32	21.3
Moderate Stress	45 – 53	28	18.7
High Stress	53 – 65	31	20.7
Very High Stress	> = 65	28	18.7

Table 1: Percentage of Nurses tangled in COVID 19 obligations in Ernakulam based on the scores of Stress

- The anxiety level of Nurses tangled in COVID 19 duties

The Anxiety of Nurses tangled in COVID 19 duties in Ernakulam can be categorized into three categories such as mild, moderate, and severe based on the value of quartiles. The Nurses whose value of Anxiety less than 29 were categorized as Mild Anxiety group and those scores greater than 42 is categorized as Severe Anxiety group. The Nurses who have anxiety scores between 29 and 42 are categorized as Moderate Anxiety group. It is expressed in Table 2

Category of Anxiety	Condition	N	Percentage
Mild Anxiety	< = 29	38	25.3
Moderate Anxiety	29 – 42	79	52.7
Severe Anxiety	> = 42	22	22

Table 2: Percentage of Nurses tangled in COVID – 19 responsibilities in Ernakulam based on the scores of Anxiety

- Burnout among Nurses tangled in COVID 19 responsibilities

The Burnout of Nurses tangled in COVID 19 responsibilities in Ernakulam can be categorized into three categories such as mild, moderate, and severe based on the value of quartiles. The Nurses whose value of burnout less than 843 were categorized as Mild Burnout group and those scores greater than 1075 are categorized as Severe Burnout group. The Nurses whose burnout scores are between 843 and 1075 are categorized as Moderate Burnout group. It is expressed in Table 3

Category of Burnout	Condition	N	Percentage
Mild Burnout	< = 843	37	24.7
Moderate Burnout	843 – 1075	85	56.7
Severe Burnout	> = 1075	28	18.7

Table 3: Percentage of Nurses involved in COVID 19 duties in Ernakulam based on the scores of Burnout

- Relationship between Stress, Anxiety, and Burnout of Nurses involved in COVID 19 duties

The relationship between Stress and its components with Anxiety can be calculated by using the Pearson Product Moment Coefficient of Correlation and summarized as Stress of Nurses who are involved in COVID 19 duties in Cochin City as the obtained value of r of Anxiety with Stress ($r = 0.78, p < .01$) and its components such as Stress due to hazard ($r = 0.63, p < .01$), the Socio-Economic Significances ($r = 0.64, p < .01$), the Xenophobia ($r = 0.64, p < .01$), Adulteration ($r = 0.58, p < .01$), the Traumatic Stress ($r = 0.69, p < .01$) and Compulsive Examination ($r = 0.47, p < .01$) are significant at .01 level of significance. It indicates that whenever the value of Anxiety increases, the value of Stress and its components increases. It is expressed in Table 4

	Stress and its Components						
	Stress due to danger	Socio Economic Consequences	Xenophobia	Contamination	Traumatic Stress	Compulsive Checking	Stress
Anxiety	0.63**	0.64**	0.64**	0.58**	0.69**	0.47**	0.78*

Table 4: Relationship between Stress and its components with Anxiety of Nurses

The relationship between Anxiety with Burnout and its components were found out by using the Pearson Product Moment Coefficient of Correlation and summarized as there exists significant positive relationship between Anxiety with Burnout and its components of Nurses involved in COVID 19 duties in Cochin City as the obtained value of r of Anxiety with Burnout ($r = 0.43, p < .01$) and its components such as Individual Burnout ($r = 0.53, p < .01$), Job-related Burnout ($r = 0.27, p < .01$), and Client Linked Burnout ($r = 0.22, p < .01$) are significant at .01

level of significance. It indicates that whenever the value of Anxiety increases, the value of Burnout and its components increases. It is expressed in Table 5

	Burnout and its apparatuses			
	Individual Burnout	Work associated Burnout	Client linked Burnout	Burnout
Anxiety	0.53**	0.27**	0.22**	0.43**

Table 5: Relationship between Burnout and its components with Anxiety of Nurses

The investigators tried to found out the relationship between Stress and its Components with Burnout and its Components by using the Pearson Product Moment Coefficient of Correlation and summarized as that there exists significant positive relationship between Personal Burnout with Stress and its components as the obtained values of $r = 0.53$, $p < .01$ with Stress due to danger; $r = 0.38$, $p < .01$ with Socio Economic Costs; $r = 0.31$, $p < .01$ with Xenophobia; $r = 0.43$, $p < .01$ with Adulteration; $r = 0.52$, $p < .01$ with Traumatic Stress; $r = 0.49$, $p < .01$ with Compulsive Examination; $r = 0.56$, $p < .01$ with Stress) are significant at .01 level of significance. It is also clear that there exists significant positive relationship between Work Related Burnout and Stress due to danger ($r = 0.26$, $p < .01$), Traumatic Stress ($r = 0.30$, $p < .01$) and Stress ($r = 0.22$, $p < .01$) of Nurses involved in COVID – 19 duties in Cochin City. But the affiliation between Work Associated Burnout and Socio Economic Consequences ($r = 0.15$, $p > .05$), Xenophobia ($r = 0.12$, $p > .05$), Adulteration ($r = 0.12$, $p > .05$) and Compulsive Checking ($r = 0.07$, $p > .05$) are not significant at .05 level of significance. Similarly, the relationship between Client Related Burnout and Stress due to danger ($r = 0.20$, $p < .05$), Traumatic Stress ($r = 0.34$, $p < .01$) and Stress ($r = 0.20$, $p < .05$) are significant and positive. It also shows that there exists no significant relationship between Client Related Burnout and Socio Economic Penalties ($r = 0.15$, $p > .05$), Xenophobia ($r = 0.10$, $p > .05$), Contamination ($r = 0.005$, $p > .05$) and Compulsive Checking ($r = 0.16$, $p > .05$). Since the obtained r values of Burnout with Stress due to danger ($r = 0.41$, $p < .01$), Socio Economic Consequences ($r = 0.28$, $p < .01$), Xenophobia ($r = 0.22$, $p < .01$), Contamination ($r = 0.23$, $p < .01$), Traumatic Stress ($r = 0.49$, $p < .01$), Compulsive Checking ($r = 0.30$, $p < .01$) and Stress ($r = 0.41$, $p < .01$) are significant at .01 level of significance, it can be concluded that there exists significant positive relationship between Burnout with Stress and its components. Since all the significant relationships are positive, whenever the value of Burnout increases, the scores of Stress also increases. Illustrated in Table 6

Stress and its components	Burnout and its Apparatuses			
	Individual Burnout	Work Associated Burnout	Client Related Burnout	Burnout
Stress due to danger	0.53**	0.26**	0.20*	0.41**
Socio Economic Consequences	0.38**	0.15	0.15	0.28**
Xenophobia	0.31**	0.12	0.10	0.22**
Contamination	0.43**	0.12	0.005	0.23**
Traumatic Stress	0.52**	0.30**	0.34**	0.49**
Compulsive Checking	0.49**	0.07	0.16	0.30**
Stress	0.56**	0.22**	0.20*	0.41**

Table 6: Relationship between Burnout and its components with Stress and its components of Nurses involved in COVID 19 duties

4. Discussion

Findings 1: 52.7% of Nurses involved in COVID 19 duties in Cochin City based on the scores of Anxiety possess moderate ranks of anxiety associated to their COVID 19 duties. Male and female Nurses possess similar anxiety levels due to COVID 19. Nurses from rural areas possess comparatively higher Anxiety than Nurses from urban areas. Nurses with an age greater than or equal to 40 have the highest anxiety among other age groups. Nurses with working experience of less than 1 year have the highest anxiety among the Nurses with experience in between 1 to 5 years and more than 5 years. The anxiety of Nurses involved in COVID 19 duties in Cochin City with monthly salary in between 25000 to 50000 is the highest than other groups of Nurses. The anxiety of Nurses who are divorced, separated and widows possess comparatively highest anxiety than single and married. Nurses from Private Sector possess comparatively the highest Anxiety among the Nurses from Central and State Government Hospitals. Qualification of Nurses does not affect the Anxiety of Nurses.

Findings 2: 20.7% of Nurses involved in COVID 19 duties in Cochin City based on the scores of Stress have Very Low Stress and another 20.7% have High Stress. 21.3% of them have Low Stress. 18.7% of Nurses involved in COVID 19 duties in Cochin City have Moderate Stress and the remaining 18.7% of them have Very High Stress related to their COVID 19 duties. Nurses with an age greater than or equal to 40 possess comparatively the highest Stress compared to other age groups. Male and female Nurses possess similar Stress due to COVID 19 diseases. Nurses have similar Stress in each component based on their working experience and qualification. The stress of Nurses tangled in COVID 19 responsibilities with a Monthly Salary between 25000 and 50000 is significantly the highest among other Salary groups. Married Nurses tangled in COVID 19 responsibilities have the least Stress due to COVID 19 diseases. Nurses from Private Sector tangled in COVID 19 responsibilities have the most Stress due to COVID 19 diseases among the Nurses from Central and State Government Hospitals. Nurses from rural as well as urban areas possess equal stress due to their COVID 19 duty.

Findings 3: The majority of Nurses (56.7%) involved in COVID 19 duties in Cochin City possess a moderate level of burnout when doing their COVID 19 duties in hospitals. Nurses with age less than 30 possess comparatively the highest Burnout among other age groups. Male and female Nurses possess comparatively the same Burnout due to COVID 19 diseases. Burnout of Nurses tangled in COVID 19 duties are the same for all the Nurses irrespective of their qualification and place of residence. Burnout of Nurses involved in COVID 19 duties with working experience less than 1 year is comparatively the highest among other groups of Nurses. Burnout of Nurses involved in COVID 19 duties with monthly salary less than 25000 is comparatively the highest among other groups of Nurses. Burnout of married Nurses is significantly the least among single Nurses and others. Burnout of Nurses from Private Sector is the highest among the Nurses from Central Government and State Government.

LIMITATIONS OF THE STUDY

The limitations of the revision is that it focuses only on the three psychological components. There are more psychological constraints to be addressed. More over this study was limited to a particular city in India. This study can be recreated in a different population in a different country.

5. Conclusion

The conclusions drawn from the studies are, there lies a major level of stress, anxiety, and burnout among Nurses that have to be addressed. Anxiety, stress, and burnout are positively correlated with each other. When anxiety increases stress also increases. So do the burnout. When compared with the demographic variables it was found that the Nurses working in Private hospitals and who are earning less than 25000 per month are experiencing more anxiety, stress, and burnout. Nurses who are below the age of 30 are experiencing higher levels of burnout. It is also evident that the age group below 40 is experiencing more anxiety and stress when compared to another age group. Qualification of Nurses seldom matters in anxiety level and stress level. Whereas experienced Nurses possess a lower level of anxiety and stress when compared to other Nurses. It can be generalized that the Nurses working around the globe are suffering from COVID related crisis.

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