e - ISSN – 2349-0683

Asian Pacific Journal of Nursing

Journal homepage: www.mcmed.us/journal/apjn

NURSE'S STRESS AND COPING STRATEGIES DURING THE COVID-19 PANDEMIC

Dr. Rajathisakthivel*, Dr. Hemamalini M, Jeevitha A

[1]Vice -Principal, Hindu Mission College of Nursing, West Tambaram, Chennai, Tamil Nadu, India.
[2]Principal, Hindu Mission College of Nursing, West Tambaram, Chennai, Tamil Nadu, India.
[3]Staff Nurse, Hindu Mission Hospital, Chennai, Tamil Nadu, India.

ABSTRACT

Worldwide, during the outbreak of COVID-19, nurses play a central role in the care of the public, and Covid 19 victims faced many challenges alike as insufficient personal protective equipment, family despair, and increased working hours. Subsequently, nurses had a greater decline in morale and decreased job satisfaction due to professional constraints and hospital policies. The aim of this study was, to assess the level of perceived stress and coping strategies among nurses. The quantitative approach, descriptive cross-sectional design was adopted. A hundred nurses in the age group of 20-60 years were selected through a convenient sampling technique in Hindu Mission Hospital, Chennai. The Perceived Stress Scale (PSS) and the Brief-Cope questionnaire were used. The data were collected through the online platform and analyzed by descriptive & inferential statistics. Among 100 samples, 72% had moderate stress, and 16% used minimum utilization of coping strategies. Regarding the association, the level of perceived stress and coping strategies with background variables among nurses found that there is a significant in regretting being a nurse and working hours with a level of $p < 0.50$ and there is no significance found in all other variables. The study findings revealed that nurses experienced considerable stress related to long working hours. Hence, the need to organize psychological support and formulate strategies aids to improve mental health, employee satisfaction, and retention of employees.

Key words: Nurse, Stress, Coping strategies, Covid 19, and pandemic**.**

Corresponding Author
Dr. Rajathi sakthivel

Email:- rajathisakthi80@gmail.com

Article Info
Received 27/02/2023; Revised 25/03/2023
Accepted 28/04/2023

INTRODUCTION

Worldwide, the front-line workers of all healthcare professionals (HCPs) are facing multiple challenges to care for COVID-19 victims [1]. Healthcare professionals, especially nurses involved in providing care made at high risk of developing mental health problems as they faced heavy workloads, life-and-death decisions, and the risk of infections are high. It makes nursing professionals exposed to many harmful, burdensome, and dangerous physical elements as well as emotional and interpersonal stressors while performing their tasks to the promotion of COVID-19 patients and prevention of COVID-19 to the general population [2]. The pandemic was connected with restrictions on normal life and work-related stress causing damage to a person's physical as well as mental status accompanied by insomnia and depression. It, directly and indirectly, affects the quality of work and makes a negative impact on mental health i.e., various degrees of mental crisis, and burnout of nurses around the world, and significantly affects well-being, quality of working life, and coping [3].

The coping strategies are associated with both quality of working life and well-being, health care workers demonstrated an increase in negative coping strategies to deal with the escalation of work pressures [4]. The prevalence of stress (9.1%) among healthcare workers in China is 9.1% but higher than in India 5.2% and in Singapore 6.6 % [5]. A recent review reported the psychological impact of COVID-19 on HCWs especially nurses had a high prevalence of stress, anxiety, depression, and insomnia explained by uncertainty around the future of the pandemic, increased workload, lack of social

support, and fear of familial transmission [6]. Nurses did not experience stress relief due to the non-availability of PPE and family concerns which corresponded to nurses feeling more stressed than other professionals including student nurses. The well-being of nurses was affected by high levels of stress and the need for emotionally based coping strategies [7].

Hamadi, et al., (2021) revealed that the stress and coping strategies were positive and significant for all the nursing students (covariance = 0.4; p <0.001). The overall average score of stress before COVID-19 was 1.32 (low stress) &1.95 (moderate stress) during COVID-19 [8]. A similar study conducted in Pakistan reported that mild to moderate depression and stress were reported in the current cohort of nurses (6.00 ± 5.30 and 8.01 ± 4.47) respectively [9]. Another study found that professionals can develop tailor-made strategies to deal with stress and remedies such as mindfulness, meditation, and psychotherapy have been found useful to deal with stress [10]. Andrew T. Gloster suggested that self-care like sleep, rest, regular breaks at work, physical activity, and healthy nutrition are vital to maintaining physical and mental health [11]. Another study identified that emotional regulation is vital, which can be treated by psychoeducational and cognitive-behavioral techniques in individual and Group interventions like mindfulness gives remedies for moderate to severe stress [12]. Therefore, the investigator aimed to assess the level of perceived stress and coping strategies among nurses who worked during the COVID-19 pandemic in Hindu Mission Hospital, Chennai.

Objectives

- ✓ To assess the level of perceived stress and coping strategies among nurses.
- ✓ To find the association between the level of perceived stress and coping strategies with their selected demographic and background variables.

Null Hypothesis

H01: There is no significant association between the levels of perceived stress with their selected demographic and background variables among nurses.

H02: There is no significant association between the levels of coping strategies with their selected demographic and background variables among nurses.

Materials and Methods

The descriptive cross-sectional survey design was used to engage active nurses in Hindu mission hospitals who worked from May 2020 to April 2021. Out of 225 samples,100 samples were selected through the Convenience sampling method and based on the inclusion criteria of those under the age group of 20-60 years and who are known English and Tamil language only enrolled in this study.

Description of the Tool

The standardized tools of perceived stress scale and Brief cope were adopted in the English language and congruency was maintained in the translation. It comprises the following sections.

Section – A: It consists of 10 items seeking information on the demographic and background data of the nurses.

Section- B: It includes 2 parts. The standardized questionnaires of,

Part -I Perceived Stress Scale has 10 items and rated as Never -0, Almost Never 1, Sometimes 2, Fairly Often 3 & very often 4. The total score of 0-40 was calculated by adding the individuals' scores. If a score above 36 is indicative of a high-stress level, above18 moderate stress level, and below 17 low-stress levels.

Part -II Brief-Cope has 28 items and rated as I haven't been doing well 1, A little bit 2, Medium amount 3 & I have been doing this a lot 4. The total score of 112 is calculated by adding the individuals' scores. If scored above 56 is indicative of maximum utilization of coping strategies and below 56 is indicative of minimum utilization of coping strategies.

The reliability was checked by Cronbach's alpha method and found that 0.70 & 0.75 respectively indicate sufficient reliability. The validity was checked with experts in various departments of nursing.

Ethical considerations

The study was approved by the Hindu Mission College of Nursing, Chennai. Informed consent was obtained. The objectives and aims of the study were clarified to the participants and informed consent was obtained via the same online link and confidentiality was maintained throughout the study period.

Data collection procedure

The study questionnaire was distributed electronically and anonymously in March 2021. The data was collected using an online Google form. A link to the questionnaire was sent to all nurses via email and WhatsApp. Participation in the study was voluntary. The collected data were analyzed by descriptive and inferential statistics.

Results and Analysis

Healthcare professionals continue to play a dynamic role in response to the COVID-19 pandemic. Especially nurses carried a heavy burden during the COVID-19 crisis, in terms of the challenge to control the virus and have directly faced its consequences. Table 1 shows the demographic information of nurses has participated in this study. Among the 100 nurses, 89% belong to the age group of 20-30 years, 7% belong to 31-40 years and 4% belong to 41-50 years. Regarding gender-wise, the majorityof nurses 74% were female and 26% in

male. In grade 78% belong to B.Sc.(N),10% belong to M.Sc., (N), 8% of them were, GNM, and 4% in Post B.Sc. (N). In the type of family, the majority of nurses 66% belong to the nuclear family and 34 % to the joint family. In considering marital status, the majority of 81% of them were unmarried and 19% were married.

Table 2 shows the background variables of nurses who participated in this study. 39 % of the nurse worked in other wards like surgical, general & CDU, 31% in ICU, 21% of nurses were medical and 9 % of were worked in Emergency. The majority 85% of nurses were known in both Tamil and English language. In the higher proportion, 45% of nurses worked for 6 hours of duration, 13% worked for 7 hours of duration, 26% worked for 8 hours and 16% of nurses worked for more than 8 hours. Next, 52% of nurses started to regret being a nurse and 48% of them were not regret being a nurse. Regarding individual and group counseling, 44% of nurses attended the counseling session and the remaining 56% of nurses have not attended the counseling session regarding COVID-19.

Table 1: shows the demographic variables of Nurses

S. No	Demographic Variables		N/%
1.	Age (years)	21-30	89
		31-40	7
		41-50	4
		51-60	-
2.	Gender	Female	74
		Male	26
3.	Educational Qualification	M.Sc. (N)	10
		Post B.Sc.(N)	4
		B. Sc. (N)	78
		GNM	8
4.	Marital status	Married	19
		Unmarried	81
		Widow	-
		Separated	-
5.	Type of family	Nuclear family	66
		Joint family	34
		Extended family	-

Table 2: Shows the Background Variables of Nurses.

S.No	Background Variables		N / %
1.	Working department	ICU	31
		Emergency	9
		Medical ward	21
		Other wards	39
2.	Languages known	English	9
		Tamil	6
		Both E&T	85
		Others	-
3.	Working period	6 hours	45
		7 hours	13
		8 hours	26
		More than 8 hours	16
4.	Regretting being a nurse	Yes	52
		No	48
5.	Whether attending counseling sessions regarding COVID-19	Yes	44
		No	56

Table 3: Association between demographic variables and the Level of Conflict management among nursing faculty N=30

Demographic variables	50 – 75%		>75 %		Chi-Square and p value
	No.	%	No.	%	
1. Duration of work					$\chi 2 = 2.047$
a. 0 – 9 months	4	66.7	2	33.3	d.f =4
b. 1 – 3 years	6	46.2	7	53.8	p= 0.727 (NS)
c. 4– 5 years	2	50.0	2	50.0	
d. 6 – 10 years	4	80.0	1	20.0	
e. > 10 years	1	50.0	1	50.0	
2. Age (years)					$\chi 2 =7.182$
a. 21-30	2	22.2	7	77.8	d.f =3
b. 31-40	9	64.3	5	35.7	p= 0.066 (NS)
c. 41-50	5	83.3	1	16.7	
d. 51-60	1	100.0	0	0.0	
3. Gender					$\chi 2 = 2.802$
a. Male	0	0.0	2	100.0	d.f = 1
b. Female	17	60.7	11	39.3	p= 0.094 (NS)
4. Educational status					$\chi 2 = 3.493$
a. Ph.D. (N)	4	57.1	3	42.9	d.f =2
b. M.Sc. (N)	7	43.7	9	56.3	p= 0.174 (NS)
c. B.Sc. (N)	6	85.7	1	14.3	
5. Designation					$\chi 2 = 11.342$
a. Professor / Principal	1	100.0	0	0.0	d.f = 6
b. Professor / Vice Principal	1	100.0	0	0.0	p=0.078 (NS)
c. Professor	3	75.0	1	25.0	
d. Asso Professor	1	100.0	0	0.0	
e. Asst Professor	2	66.7	1	33.3	
f. Nursing Tutor	3	23.1	10	76.9	
g. Clinical Instructor	6	85.7	1	14.3	
6. Experience (Years)					$\chi 2 =5.843$
a. 0 – 5	1	16.7	5	83.3	d.f =4
b. 6 – 10	8	72.7	3	27.3	p= 0.211 (NS)
c. 11 – 15	3	75.0	1	25.0	
d. 16 – 20	3	50.0	3	50.0	
e. 21 – 30	2	66.7	1	33.3	
7. Organization upliftment					Not applicable
a. Yes	17	56.7	13	43.3	
b. No	0	0.0	0	0.0	

Note: * - p<0.01 Level of Significant, N.S. – Not Significant

Figure 1 shows the Level of Stress and Coping Strategies of Nurses

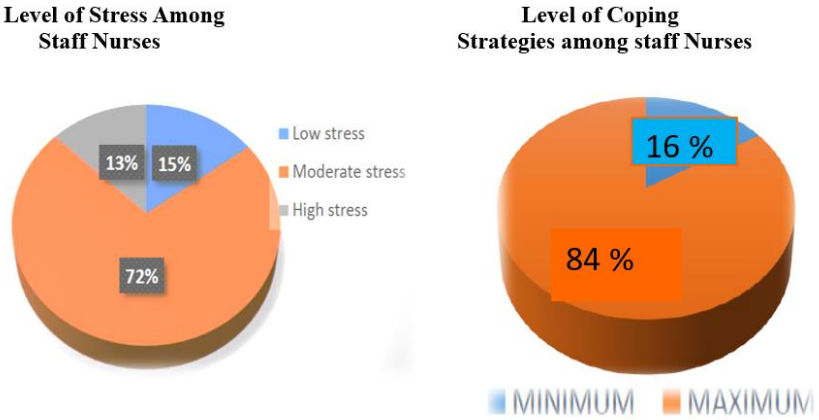

Figure 1 depicts that, level of stress and coping strategies of nurses. Among 100 nurse's majority, 72% attained moderate stress, 15% had low stress and 13% had high stress. In coping strategies, the majority of nurses i.e., 84% attained maximum utilization of coping strategies and 16% had minimum utilization only. Regarding association, the levels of stress with selected background variables of regretting being a nurse had a significant p-value of 0.50 with a Chi-square value of 1.102. In that, the majority of 73.7% had moderate stress and 15% had high-stress levels whereas the nurses not regretting being a nurse 18% in low-stress levels. Hence the null hypothesis H01 was rejected for this variable of regretting being a nurse and accepted for other variables. In the association between nurses' level of coping strategies with their selected background variables the nurses working minimum hours (less than 8 hours) 77.8% had maximum strategies to reduce stress compared with more than 8 hours working period. The chi-square 2.814 was significant at p=0.50. in considering regretting being a nurse 81.3% had maximum strategies of not regretting being a nurse when compared with regretting being a nurse 86.5 %. the chi-square of 0.517 was significant at p=0.50. Hence the null hypothesis H02 was rejected for this variable of regretting being a nurse and working period and accepted for other variables.

DISCUSSION

The COVID-19 pandemic is a huge challenge for active nurses facing multiple mental catastrophes [13]. This study aimed to assess the level of stress and coping strategies of nurses. This information may provide evidence for hospitals to offer suitable support to frontline nurses. The findings of the study are discussed based on objectives. The first objective of the study was to assess the level of perceived stress and utilization of coping strategies among nurses showed that only 15% of the participants had low-stress levels towards working during COVID-19 and the remaining 85% had moderate to severe levels of stress and majority 84% of them were accomplished maximum utilization of coping strategies. The results of the present study are supported by a similar study Ali H (2019) conducted a cross-sectional study to assess the level of perceived stress among nurses in Alabama and concluded that most nurses (82%) are stressed about getting their friends and family infected. Younger and less experienced nurses reported more stress levels compared to older and more experienced nurses [14]. Another descriptive study conducted with 221 nurses from Western Rajasthan concluded that nearly 82.4% of nurses reported a moderate level of stress, interface worries (mean score 7.88 + or _ 4.9) and practice-related concerns emerged as the major sources of stress [15].

The second objective of the study was to find the association between the level ofperceived stress and coping strategies toward nurses with selected demographic and background variables. The present study found an association between the levels of stress with selected background variables of regretting being a nurse at the p-value of 0.50. i.e., the majority of 73.07% were moderate stress and 15% had high-stress levels whereas the nurses did not regret being nurses 18% in low-stress levels. The nurses working in minimum hours (less than 8 hours) 77.8% had maximum strategies to reduce stress compared with more than 8 hours working period 93.8%. In considering regretting being a nurse 81.3% had maximum strategies of not regretting being a nurse when compared with regretting being a nurse 86.5%. These findings were supported by a similar study by Subas et al. included 337 nurses, 39 midwives, 16 doctors, and 50 other medical professionals. The authors of the study showed that seeking social support was the most common method of coping with stress by healthcare workers during the COVID-19 pandemic [16]. Another narrative analysis reported that the successful use of effective coping strategies during the COVID-19 pandemic will help nurses to manage stressful conditions. The use of COVID-19 protective measures, avoidance strategies, social support, faith-based practices, psychological support, and management support are used by nurses as coping strategies during the COVID-19 pandemic [17]. Hence the null hypothesis H01 and H02 was rejected for the variables of regretting being a nurse and working period and accepted for other variables like age, gender, marital status, educational qualification, type of family, and working department.

CONCLUSION

The COVID-19 pandemic has caused tremendous strain on the healthcare system, especially the nurses in their professional and personal life. The study concluded that psychological reactions to stress are common in caring for patients during highly infectious epidemics /pandemics. The uncertainty of knowing if a future epidemic or pandemic makes nurses live with the same stress creates a negative impact on their life. Therefore, it is of utmost importance for healthcare institutions to prepare to focus on comprehensive psychological assistance to support the mental well-being of nurses. It creates a healthy work environment contributes to a workforce functioning at a high level, improves satisfaction, enhances the quality of nursing care, retention of employees, and increased patient satisfaction**.**

Recommendations

The assessment of stress levels in nurses and the analysis of coping strategies during the COVID-19 pandemic is an interesting issue. The results provided baseline data to carry out similar studies with interventions based on the future for novice researchers,

- ✓ A similar study can be done with a larger sample, of nurses in different departments.
- ✓ A Comparative study on the perceived stress and coping strategies among nurses in other areas like private & government / urban & rural can be conducted.
- ✓ Mixed method approach can be conducted to assess the potential effect of anxiety and stress of the COVID-19 pandemic.
- ✓ A qualitative aspect study can be conducted on how the emotions of nurses working in high-risk environments and high-level stress adapted by individual and group strategies.
- ✓ Further research is needed to study specific interventions to support the mental health and well-being of nurses.

Limitations

The study was conducted electronically as the participants of the study were unable to recruit as in-person due to the COVID-19 pandemic. The feeling of tiredness, restricted time, and the nature of the pandemic situation are the main cause for not enrolled for more participants. The responses provided were self-reported and may be subject to recall bias.

Author Contributions

RS – Conceptualization & original draft preparation, **HM** - Review and editing, **AJ** - Data collection

Funding: This research received no external funding.

Acknowledgment

The authors wish to thank all nurses who participated in this study.

Conflicts of Interest

The authors declared that there is no conflict between authors.

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