Perceived Stress and Coping Strategies Adopted by Nurses during Covid-19 Pandemic

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Abstract

During Covid-19, a global pandemic, over 30 million cases were found in India in 2020, with mortality of more than 4 lakh. Studies revealed that more than 3 lakh health workers had been infected in this outbreak with grave impact on their physical and psychological health. Nursing staff have been the pillar of healthcare system during this pandemic despite long working hours in PPE kit, fear of getting infected and staying away from near ones. The burden of mental distress revealed prevalence of depression (8.5%), anxiety (20.6%) and stress (6.3%).Hence it becomes essential to explore stress and coping among Nurses, for preparing strategic planning in future waves of Corona Virus. Following ethical clearance data was collected using perceived stress scale & COPE inventory from 50 participants selected using non-probability purposive sampling. Nurses who have worked in covid setup aged 25 years or above, and willing to participate were approached for the study. A non-experimental cross sectional descriptive research design was adopted for data collection. Results showed moderate level of stress in more than 86 percent of Nurses working in Covid set up and majority of them (86.7%) used coping strategies. The majority of the participants were in the age group 25 - 30 years (48.3%), married (75%), had no children (25%) and had family as support system. Around 38 percent had rendered 6 -10 years of service (38.3%) and had done Covid ICU duty (81.7%); 31.7 percent had worked on an average from 21 – 40 days in Covid set up and 58 percent of the participants felt that the provision of day offs was inadequate. Worldwide studies revealed that health care workers are positive for burnout, anxiety and depression which is alarming. Emotional and psychological support, incentives, appreciations and prompt identification of any psychiatric conditions may decrease the burden.

Key words: Stress, Coping strategies, Covid -19, PSS and COPE inventory

Covid-19 is a global pandemic with a high infectious rate. A recent study published in the International Journal of Diseases from 37 countries reveals that more than 3 lakh health workers had been infected with Covid 19. The Covid 19 outbreak has gravely impacted the physical and psychological health of people. Studies showed that nursing staff during pandemic exhibit higher than usual stress levels due to an increasingly overburdened health care system (Awoke et al, 2021). As the outbreak is ongoing it is also important to assess the level of significant intangible effects. There is little doubt that it is taking a lasting toll on the mental health of health care workers. Fear of getting sick and the loneliness that accompanies quarantine create complicated challenges to mental well-being.

Covid-19 is novel ongoing pandemic on which studies are still going on and each study contributes to the literature. It will help in designing interventions to help improve mental well-being of health care workers as no interventions were adopted by our institution for supporting mental wellbeing during crisis period. It will help inadequate monitoring of staff for issues such as PTSD, moral injuries and other associated mental illness and identifying these individuals to be provided with supportive measures. Data of a recent cross-sectional study to investigate the burden of mental distress among nurses working in referral hospital of Indonesia revealed that the prevalence of moderate to extremely severe depression, anxiety and stress was 8.5 percent, 20.6 percent and 6.3 percent respectively.

Significance in nursing profession

Nurses are the pillar of healthcare system across the world, long working hours and challenging clinical situations make them prone for stress

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and burnout syndrome hence studies like this will help to enlighten the need of mental support services and timely management of these issues an save Nursing manpower falling sick and getting into mental problems, it will also enhance quality of nursing care provided globally (Chatterjee et al, 2021).

Objectives

1. To assess the stress among nurses working in Covid setup.
2. To assess the coping strategies used by nurses working in Covid setup.
3. To find the association between stress and selected variables.
4. To find the association between coping strategies and selected variables.
5. To find the association between stress and coping strategies.

Review of Literature

Lorente et al (2021) conducted a quantitative cross-sectional study to examine the phenomenon of stress among Nurses managers (NMs) in 38 selected hospitals. This study proved that stress among NMs affects the general health as well as patient safety and quality of care. The main causes of stress among NMs are a shortage of staff (94.4%), poor working conditions (91.8%), inadequate management support (89.9%) and heavy workload (89.15%). The major stress coping mechanisms are time management (91.8%), effective communication (91%) and delegation of duties (89.5%) while excessive eating (18.4%) is the least strategy used. Socio-demographic characteristics together explained 6.4 percent of stress among NMs.

In a cross-sectional study to assess the determinants of burnout and other aspects of psychological wellbeing in healthcare workers of UK, Poland and Singapore Munawar, Choudhary (2021) revealed that 67 percent of health care workers were screened positive for burnout, 20 percent for anxiety and 11 percent for depression. The study showed a strong association between SARS CoV-2 testing, safety attitudes, gender, job role, redeployment and psychological state.

Jayadeva et al (2020) in a cross sectional study on psychological impact of Covid-19 on healthcare workers in a tertiary care hospital of Pakistan revealed that 47.3 percent had symptoms of depression, 35.8 percent had anxiety and 60.7 percent had stress. Emotional and psychological support, incentives to appreciate the work and prompt identification of any psychiatric conditions may decrease the burden on the health care workers.

Moore et al (2021) conducted a cross-sectional survey to investigate the major stressors and coping strategies reported by nurses working directly with potentially infectious patients. The questionnaire was completed by 109 nurses working in May 2020 at Alabama. Around 71 percent of the nursing staff were concerned about receiving more Covid-19 patients and exhibited heightened workload-related stress resulting from taking care of infected patients. Findings suggest that many nurses fail to perceive protective measures as an effective coping strategy, with only 75 percent reporting problem-solving strategies such as hand washing and wearing a face mask, and only 60 percent avoiding public transportation and crowded spaces.

Research Methodology

Design and approach: A descriptive research approach was selected for the present study considering it as the most appropriate approach to assess the stress and coping strategies by Nurses working in Covid setup in a tertiary care hospital in Lucknow. Survey design was selected since it appeared as a suitable design to accomplish the objectives of the study in the given frame and data was collected from the Nurses.

Sample, sample size and setting: The target population identified was the Nurses working in Covid setup in a tertiary care centre that fulfilled the inclusive criteria. Accessible population included the Nurses working in Covid setup in a tertiary care centre in Lucknow during the Covid pandemic crisis. Sample size of hundred was selected as thumb rule for a descriptive study.

Sampling technique: Non-probability purposive sampling was used in the study. Nurses working in Covid set up ICU triage, Covid ICU, general Covid ward. Nurses working in clinical areas other than Covid setup were excluded. Ethical clearance was taken from IEC and all principles were followed while doing the study.

Research Tool

Section A: Demographic data and baseline variables. This section included 8 items to collect information regarding selected variables like age, marital status, number of children, family support system, years of service, area of Covid duty, number of days worked in Covid ward and the provision of day offs.

Section B: Perceived Stress Scale. Perceived stress scale standardised questionnaire tool - This section consisted of 10 close-ended questions with 4 options each to assess the perceived stress among the nursing officers working in Covid

Table 1: Socio-demographic data of patients (n=60)

	Parameters	No of cases	Percentage
Age (years)	25 – 30	29	48.3
	31 – 35	14	23.3
	36 – 40	12	20.0
	41 – 45	5	8.3
Marital status	Married	45	75.0
	Unmarried	15	25.0
No. of children	None	33	55.0
	One	15	25.0
	Two	12	20.0
Family support system	Yes	44	73.3
	No	16	26.7
Years of service	0 – 5	15	25.0
	6 – 10	23	38.3
	11 – 15	16	26.7
	16 & above	6	10.0
Area of COVID duty	ICU	49	81.7
	Veteran ward	7	11.7
	Ward	4	6.7
No. of days worked in COVID ward	≤20	7	11.7
	21 – 40	19	31.7
	41 – 60	18	30.0
	61 & above	16	26.7
Provision of day offs	Adequate	25	41.7
	Inadequate	35	58.3

set up. The questions are related to the working environment and the stress encountered by the nursing officers while working in Covid setup.

Section C: Cope Inventory. Cope inventory, standardised tool consisting of 60 questions to assess the coping strategies of nursing officers working in Covid setup.

Data collection: Data was collected from all 100 participants after working hours keeping in mind ethical principles of privacy, beneficence etc. Each sample took around 15-20 min to complete the questionnaire after giving informed consent. Briefing and debriefing of the study was also done.

Results

Figure 3 shows that 86.7 percent caretakers had used coping in form of religious turning, physical and emotional coping, however 8.37 percent only used physical coping and 5 only used emotional coping strategies.

Table 3 reveals that an overall analysis of only those strategies which have been clearly categorised as either problem-oriented or emotion oriented in the COPE Inventory; 22 did not reveal any significant difference. This shows that the caregivers used both types of strategies equally. The mean scores were highest for turning to religion and seeking social support for instrumental reasons with 11.6 ± 3.2SD and 11.1 ± 4.2SD respectively.

There is significant association between stress score and coping strategies score among Nurses working in Covid setup as $p<0.05$ i.e., severe stress score had significantly more moderate and severe coping strategies score.

The Table shows that significant difference of stress score according to family support system as $P<0.05$ i.e., family support system had significantly less stress score than no family support system.

Discussion

Nurses and physicians are affected by a variety of stressors in their workplaces because of their responsibility to provide treatment to patients. The National Institutes of Health (NIH) said after studying the relative prevalence of health disorders in high-stress occupations that research on the effects of the pandemic on Nurses' health and

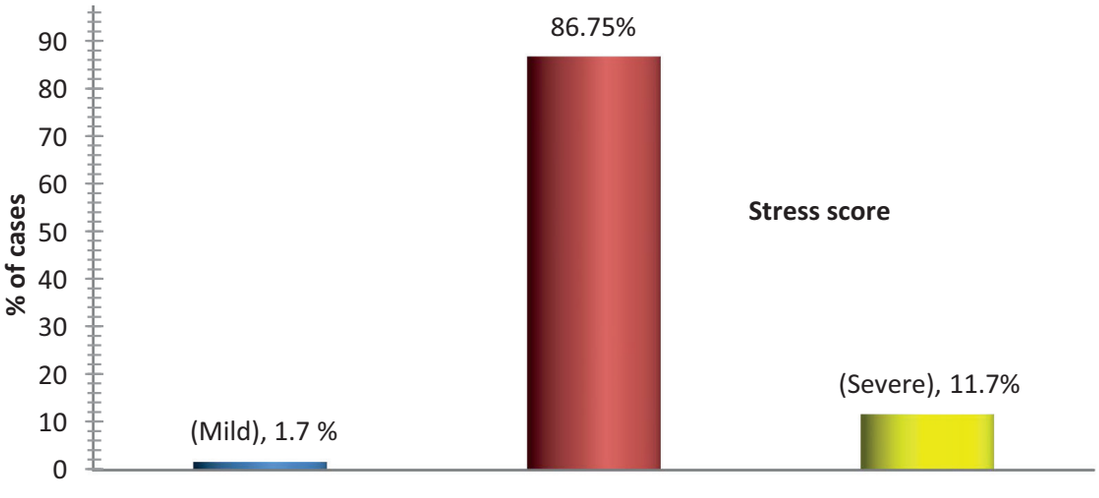

Fig 2: Assess the stress level among Nurses working in Covid set-up.

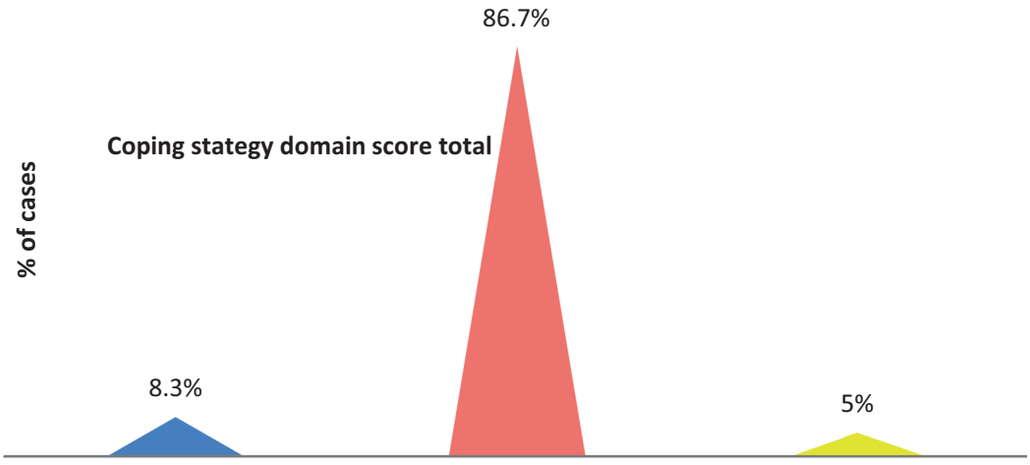

Fig 3: Assessment of coping score among Nurses working in Covid set-up.

well-being is still sparse; several recent editorials highlight a number of stressful factors that could potentially contribute to mental health problems (Nghibe et al, 2013).

Out of 130 jobs surveyed, nursing is ranked 27th due to mental health problems. Other studies report that 7.47 percent of Nurses are absent from work each week due to burnout or disability arising from stress, which is 807 percent more than other occupational groups. Covid 19 has not only had an impact on people emotions, but their coping strategies too have undergone a change. Stress, anxiety, and depression are some of the key challenges for psychologists, psychiatrists, and behavioural scientists globally (Gupta et al, 2020).

Among physical and mental illnesses, depression is the most common mental disorder in the world. Six main themes about the strategies used by are nurses to cope with job stress include: situational control of conditions, seeking help, preventive monitoring of situation, self-controlling, avoidance and escape and spiritual coping.

Table 3: Mean scores of COPE Inventory coping strategy

Coping strategy	Mean score	SD
Active coping	9.5	3.6
Planning	10.2	4.4
Suppression of competing activities	10.3	3.8
Restraint coping	9.9	4.3
Seeking social support for instrumental reasons	11.1	4.2
Seeking social support for emotional reasons	11.0	4.1
Positive reinterpretation and growth	8.4	4.2
Acceptance	10.1	4.3
Turning to religion	11.6	3.2
Focus on and venting of emotions	10.6	3.7
Denial	4.9	1.9
Behavioural disengagement	7.4	4.2
Mental disengagement	6.9	2.5
Alcohol-drug disengagement	1.1	0.5

The majority of the participants 48.3% were in the age group 25 – 30 years; 75 percent were married 25 percent were unmarried. 55 percent had no children is similar to a study done by Bobnad Harley (2020) in UK where 73.3 percent had family support system. The majority of the participants 38.3 percent had 6 – 10 years of service, 16 had 11 – 15 years of service, 25 percent had 0 – 5 years of service and 10 percent had 16 & above years of service which is in concurrence to many other studies done worldwide(Vsrghese et al, 2021; Khasawneh et l, 2020).

The majority of the participants (81.7%) had ICU Covid duty followed by 11.7 percent Covid ward duty. 31.7 percent participants had 21 – 40 days working days in Covid ward, 30 percent had 41 – 60 days 26.7% had 61 & above days working in Covid ward . The majority of the participants had inadequate provision of day offs i.e. 35 (58.3%) and remaining 25 (41.7%) had adequate provision of day offs.

Implication of the Study

Nursing practice: Nursing personnel render care at different settings in the hospital. An efficient and knowledgeable nurse can provide care to Covid patients and their families during hospital admission, clearing the doubts and after care at home. Nurses can impart incidental health teaching during their work shifts.

Nursing education: Nurses act as educator both to her subordinates and clientele. Nursing education should take into consideration the need for giving rise to educator who are possessing vivid knowledge and information on Covid patients. Continuing education programme should also be to be conducted for the Nurses on this topic. Various teaching modules can be prepared for imparting knowledge among the Nurses working in Covid areas of hospital and community.

Nursing administration: The findings of this study are relevant to nursing administration. The nurse administrator can revise policies to improve the current practices pertaining to care

Table 4: Association between stress level and coping strategies among Nurses working in Covid setup

Stress level	Coping strategies score			Total
	60 - 20 (Low)	121 - 180 (Moderate)	180 - 240 (Significant)	
0 -13 (Mild)	0	1	0	1
14 - 27 (Moderate)	5	46	1	52
28 - 40 (Severe)	0	5	2	7
Total	5	52	3	60

Chi-square = 9.81, p=0.044

Table 5: Association between stress levels with family support system in study group

Family support system		Stress score		MW test Z value	P value
	N	Mean	SD		
Yes	44	22.36	4.001	2.16	0.031
No	16	25.31	4.423		

of the patient presenting with Covid. The nurse administrator also has a responsibility to provide the Nurses with continuing education opportunities which will enable the Nurses in updating their knowledge on caring of the patient presented with Covid. The administrator may also encourage the staff to incorporate evidence-based practices based on newer research studies in their clinical setting, wherever applicable.

Nursing research: The nursing research uplifts the profession and helps to acquire new body of knowledge to fill the gap between old and new trends. Nurses should broaden their boundaries and involve themselves in evidence-based practices. The present study will provide a baseline data to educate Nurses dealing with care of the Covid patients.

On the basis of present research following recommendations are drawn for future research:

- A similar study can be conducted on a large population for better generalisation of result.
- A similar study can be conducted in a community setting.
- A study can be conducted to assess the knowledge and attitude of the Nurses working with COVID patients.
- A comparative research can be conducted on the pre and post-test knowledge of the Nurses by using teaching modules

Conclusion

Nurses plays an important role in providing knowledge to the patients, family members and community to improve the health status of the patients suffering from Covid. The present study was a descriptive one, to assess stress and coping strategies used by Nurses working in Covid setup in a tertiary care hospital in Lucknow. The conclusion drawn from the study is that Nurses possess good knowledge, coping strategies and positive attitude.

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