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## A Study to Assess the Threat Perception and Coping Strategies Among Nurses During the Outbreak of Covid-19 in A Tertiary Care Hospital Kolkata

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### ABSTRACT

A descriptive study was conducted with the objectives to identify the threat perception and coping strategies among nursing personnel attached to R.G Kar medical college & hospital during the outbreak of corona virus disease 2019 based on Lazarus and Folkman's stress and coping model. Data were gathered from 100 nursing staffs using standardized threat perception scale and Brief COPE of Carver et, al. in the month of July to August of 2020 using convenience sampling technique. Demographic findings of the present study revealed that out of 100 respondent 48% belongs to age group ranges between 23-30 years., 77% were married women and 23% were unmarried, 7.79 % pregnant. Their working experience range between 2-20 years. Forty-five (45%) percentage of them had 5-<10 years of working experiences. majority 64% of the respondents perceived moderate threat perception. Mean threat perception of the respondents were 11.45 with a standard deviation of 1.2. Maximum (73%) respondents coped with the situation moderately. The mean value of coping strategies was 61.79 with a standard deviation of 6.6. Active coping, planning and acceptance were used respectively whereas substance abuse used least. There was no statistically significant correlation between coping score and ageof the nursing personnel ( $r = 0.014$ ). There was statistically significant association between threat perception and coping strategies ( $p<0.05$ ). A longitudinal survey can be conducted with a greater number of samples in different settings.

**Keywords:** Threat perception, Coping strategies, Pandemic

### INTRODUCTION

The current outbreak of COVID-19 caused by novel corona virus known as severe acute respiratory syndrome. Corona virus 2(SARS-COV-2) was located for the first time in Wuhan (China) in December 2019. The symptoms associated with COVID- 19 include pneumonia, acute severe respiratory distress syndrome, renal insufficiency or even death in certain cases. The rapid spread of the disease, which was already observed during the month of December 2019 and January 2020, led the world health organization to define COVID-19 as a global public emergency on January 30,2020 [1]. This pandemic situation threatens the health care delivery system all over the World. Being a front-line health care provider, the nurses experienced a variety of mental health challenges especially burnout and fear. The situation also creates a perceived threat among everyone; health care providers are not in exception. Perceived threat means a perceived harmfulness of the consequences of being infected by Corona Virus. This also consider how individual appraised the situation and able to handle in day-to-day life. Result of a study that was conducted at Wuhan China revealed that participant had a moderate level burnout and high-level fear, about half of the nurses showed in emotional

exhaustion (n=1218,60.5%), depersonalization (n=853,42.3%), personal accomplishments (n=1219,60. 6%) [2]. In addition, a cross sectional study to assess the level of anxiety among nursing students revealed that 42.8% (30.8% among males and 44.7 % among females; p value=0.21) of moderate and 13.1% (0% male and 14.9% females; p value= 0.03) of them has severe anxiety respectively. Lack of PPE and fear of infection were associated with a higher anxiety score [3]. Result of a study by Milena Adina Man et al. showed that problem focus coping strategies were rated higher ( $M=3.1$ ,  $SD=0.57$ ,  $n=1242$ ) than emotional focus strategies, ( $M=2.6$ ,  $SD=0.63$ ,  $n=1242$ ). Emotional focus coping significant different between women and man is

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revealed ( $P<0.001$ ). It is found that they used emotion focused coping strategies ( $r= 0.14$ ,  $P<0.01$ ) [4]. Report of a study by Suryavanshi revealed that moderate to severe depression and anxiety were independently associated with increased risk of low QoL [OR: 3.19 (95% CI: 1.30-7.84), OR: 2.84 (95% CI: 1.29-6.29)] and work environment stressors were associated with 46% increased risk of combined depression and anxiety (95% CI: 1.15-1.85) [5]. Dursun conducted a cross-sectional study from June 10-18, 2020 among 251 Health Care Workers (general practitioners, specialists, and nurses working at the forefront of the pandemic). Their knowledge, preventive behaviors, and risk perceptions concerning COVID-19 were evaluated using an online questionnaire created by medical specialists. The questionnaire consisted of 29, 5, and 4 items about COVID-19 knowledge, preventive behaviors, and risk perceptions, respectively. The scores for knowledge-based questions were higher for medical specialists, whereas nurses scored higher on preventive behavior questions. Government hospital staff showed a significant difference in preventive behaviors compared to that of university hospitals ( $p<0.05$ ). The knowledge level of health care workers concerning COVID-19 was above 90%, but the level of competence in terms of preventive behaviors was found to be low, especially in males [6]. Alsalam conducted a descriptive cross-sectional study. Aim of the study was to identify significant factors correlated with RNs' perceived level of fear and stress. They conducted among 314 RNs working with patients with the COVID-19 in KSA during the outbreak. All participants completed an anonymous questionnaire, which included items about their sociodemographic details, job stress related to the COVID-19, and fear of infection. The results showed that the RNs had high levels of anxiety and stress during the COVID-19 outbreak. RNs were fearful about their safety and the well-being of their families. However, RNs felt more responsible for providing care to the COVID-19 patients. results highlighted some predictive factors that increased RNs' level of fear, such as social media ( $\beta = 0.76$ ,  $p = 0.03$ ), exposure to trauma prior to the outbreak ( $\beta = -0.95$ ,  $p = 0.003$ ), and readiness to care for infected patients ( $\beta = -0.21$ ,  $p = 0.001$ ) [7]. All of this evidence would indicate the necessity of identifying the threat perception and the ways to handle this threat by the health care workers. As the situation is new to the nursing personnel it is very essential to explore the condition in West Bengal to aid in policy making and keeping a balanced among the front-line nurses. So, the present study was conducted to explore the threat perception and uses of coping strategies among the nursing personnel in a tertiary care hospital.

## OBJECTIVES

To assess the threat perception of nurses during the outbreak of COVID-19 along with coping strategies.

## MATERIALS AND METHODS

The researcher adopted descriptive survey design in this study. The inclusion criteria included subjects who are available during the study period, willing to participate, attending several departments, having a minimum of 6 months experiences and not included in this type of study. Lazarus and Folkman's stress and coping model were used as a conceptual framework. Trauma care unit (male and female), neurology ward, critical care unit, medicine ward (male & female), surgical wards, ENT ward (2<sup>nd</sup> floor), psychiatric ward, pediatric ward and departments of Gynecology and Obstetrics and emergency services of R.G. Kar MCH were considered. After obtaining ethical permission and consent from the participants the modified threat perception scale namely Brief Infection perception Questionnaire (BIP-Q5) and Brief COPE scale of Carver et al along with demographic proforma were applied among 115 nursing personnel using convenience sampling technique in the month of July -August 2020 considering online and offline mode. The scale on threat perception explained

1. how people perceive a threat to their health
2. how they generate a mental representation
3. how they start up different plan.

Brief illness perception questionnaire, version BIP-Q5 consist of five items on perception of threat from illness, the Likert type scale score from 0-10. The higher the score is, the greater the perception of illness as a threat. Examples of the items are 'how much are you worried about being infected by the corona virus or how much corona virus affects you emotionally. The Brief Cope [8-15] is composed of 14 sub scales with two items in each sub scales for a total of 28 items. Each item of the tool was rated by the four-point Likert scales ranging from "I have not been doing this at all" (score 1) to "I have been doing this lot" (score four). The fourteen sub scales are; Self-destruction, Active coping, Denial, Substance use of emotional support, Use of instrumental support, Behavioral disengagement, Venting, Positive reframing, Planning, Humor, Acceptance, Religion and Self-blame. The scoring of the tool for each item of the subscale ranges from 2-8. Among all participants 15 did not responded, response from 100 participants collected through mail as well as personnel. The collected data were analyzed by using both descriptive and inferential statistics, Chi-square test and co-relation co-efficient r.

## RESULTS

**Table 1** show the findings of the present study showed that participants aged 30 years -50 years possess maximum number (66%) and 34% of them belong to the age group 23-<30 years. All most 94% had GNM and 4% had B.Sc. Nursing degree. Forty-five (45%) women have 5-< 10 years working experiences, 29% women have less than 5 years of work experience, 6% women have 15-20 years of working experience and 20% women have 10-<15 years working

experiences, 23% were unmarried and 77% were married women and among married nursing personnel 6 were pregnant. The majority 64% of the respondents perceived moderate threat perception and high threat Perception was 15 %. Among all 14 subscales of coping strategies, Active coping ranked one indicating that it was the most frequently used coping strategy by the nursing personnel followed by planning and acceptance. On the other hand, substances use was utilized as the least frequently used coping strategy. Mean threat perception of the respondents were 11.45 with a standard deviation of 1.2. There was no statistically significant correlation between coping score and age of the nursing personnel ( $r = 0.014$ ). There was statistically significant association between threat perception and coping strategies ( $p<0.05$ ). It may be concluded that higher the coping score lesser the threat perception.

**Table 1.** frequency and percentage distribution of respondents by their sample characteristics n=100.

Sample characteristics	Frequency	Percentage (%)
Age in Year		
23-<30 years	34	34
30-50 years	66	66
Professional qualification		
GNM	94	94
B.Sc. Nursing	06	06
Years of experiences		
<5 Years	29	29
5-<10 Years	45	45
10-<15 Years	20	20
15-20 Years	06	06
Marital status		
Married	77	77
Unmarried	23	23
Pregnancy status		
Pregnant	06	7.79
Non-Pregnant	71	92.20

## DISCUSSION

The present study result revealed that maximum nursing staff were using active coping only few were negative and have low coping strategies. The study finding was complied

with previous investigations by Milena Adina Man et.al (July 20) among 115 health care workers. The study tool was used illness perception questionnaire (IPQ), perceived stress scale (PSS), cognitive emotional coping questionnaire (CECQ) with 36 self-assessment questionnaire that measure 9 strategies of coping. The study finding revealed that focus coping strategies were rated higher ( $M = 3.1$ ,  $SD=0.57$ ,  $n=1242$ ) than emotional focus strategies ( $M=2.6$ ,  $SD=0.63$ ,  $n=1242$ ) [4]. Tufan A et al, revealed that among 251 health care workers mean age of the participants was  $33.88\pm8.72$  years. Most of the participants (69.32%) thought the COVID-19 infection to be hazardous, but the vast majority (84.06%) believed that this pandemic would be contained. Despite this, 58.17% of them did not think that it could be controlled within 6 months. In this study, the participants were not as optimistic [6]. Ametz conducted a cross sectional survey among nurses in May 2020 in USA and revealed that more than half of all nurses' comments concerned stress related to problems in workplace response to the pandemic [8]. Women showed significantly higher scores in threat perception than men, overall 56.4% of participants were engaged in danger control behavior while others are not [16]. Threat perception and coping strategies among nurses during COVID 19 pandemic causes various impacts on physical health and mental health, behavior, and creates family problems. It is important to develop a counseling cell, application of participatory leadership and develop policy to maintain the mental hygiene of the nursing personnel. The need of the hour is to develop awareness regarding Do's and Don'ts of COVID 19 Pandemic. The study was limited to small sample, in a single hospital and use of convenience sampling technique, restricted the generalization of the study findings. The study can be replicated on larger samples, a comparison between nursing personnel working in Covid and non-Covid ward and burden of caring.

## CONCLUSION

This study presented a thorough and in depth understanding of how the nursing staff are dealing with COVID 19 pandemic, their threat perception and stress coping strategies. It was found that during the pandemic the threat perception among nurses was very high and their coping strategies were very low but later on considering this pandemic just an emergency, as well as positive opinions and views regarding their roles during the pandemic boosted their resilience and coping mechanisms. Health systems strengthening should be promoted by providing staff nurses with essential information about available mental health services to improve their self-esteem, resilience, and capability of staff nurses to respond to the pandemic.

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