

**PERCEIVED OCCUPATIONAL RISK AMONG NURSES DURING COVID-19  
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**ABSTRACT**

An occupational risk is a risk experienced at workplace. Occupational stress among nurses cause emotional and physical exhaustion to nurses and it leads to negative feelings towards their work and this makes them negligent in their duties. The study was aimed to assess the perceived occupational risk among staff nurses working during COVID-19. A quantitative research approach, descriptive research design was used to conduct the study. 48 staff nurses were selected with non-probability convenience sampling technique. A self-structured likert scale was used to report the perception of occupational hazards among staff nurses. The study revealed mean occupational risk assessment score as 66.4898+/-16.62218. Further the results revealed that 27(55.1%) of staff nurses were on moderate risk, whereas 16(32.7%) were on high risk and only 6(12.2%) of staff nurses were on low occupational risk as per their perception. The chi-square test revealed no statistically significant association of occupational risk status with any of the demographical variables. The study concluded that the perception of occupational risk status among staff nurses depends upon their professional knowledge and practices used by them during their duty hours.

**Keywords***Perceived occupational risk, staff nurses, COVID-19.***INTRODUCTION**

Health is defined as state of complete physical, mental, social and intellectual well-being of a person and not merely an absence of disease by WHO (IAEA, 2010). It is necessary to timely analyze deviation that occurred in health of health care professionals (nurses) to ensure their mental, physical and social well-being (Ikademi 2011).<sup>1</sup>

Nursing staff constitute a crucial component of healthcare system and they give direct care to patients and spend more time with them as compared to other healthcare workers. Therefore the probability of exposure to occupational risks such as physical, biological, chemical, psychological and ergonomic threats is higher among nurses.<sup>3</sup>

Nursing considered as a uniquely hazardous occupation, makes the nurses to become increasingly involved with the curative and technical treatment of the clients.<sup>4</sup>

During COVID-19 pandemic as countries moved towards social distancing, isolation measures and lockdown situations to support the public health control measures advocated by the WHO, nurses could feel increasingly isolated. Their psychological well-being is just as important as their physical health. The stressed nurses need time to process the stressful work they are doing and opportunities to debrief from this extremely demanding situation.<sup>5</sup>

Stress among nurses related to workload, work shifts, overtime and covering for absent colleagues were the most common stressor. During COVID-19 duties nurses were not even allowed to go their homes to keep their families protected, so they had to stay in the hostels or separate arrangements. It additionally lead to more stress with highly stressful nursing environment like enclosed nursing environment, long duty time, pressure, excessive noise, sudden swings, unpleasant sites and long standing hours.<sup>9</sup>

As per GOI guidelines during COVID-19, frequent hand washing was essential to avoid transmission of infection. Hazards like excessive use of alcohol based sanitizers leading to loss of skin integrity were common. Formaldehyde is associated with irritant and allergic dermatitis, eye irritation and occupational asthma. It is also considered as possible human carcinogens.<sup>11</sup>

The study was conducted with the objective of to assess the perceived occupational risk among staff nurses working during COVID-19 pandemic in selected hospitals of Punjab.

## **MATERIAL AND METHODS:**

### **Research design**

A non-experimental descriptive survey research design was used to assess the perceived occupational risk among staff nurses working during COVID-19 pandemic in selected hospitals of Punjab.

### **Research setting**

The study was planned to be conducted in selected hospitals of Punjab. But, due to COVID-19 pandemic, the researcher could not had face to face interaction with research participants and collected the data by the online mode through google form.

### **Sample**

The target population comprise of staff nurses working in selected hospitals of Punjab.

49 staff nurses reported as study subjects working during COVID-19 in various hospitals of Punjab. The subjects were selected by nonprobability convenience sampling technique. The study subjects include the staff nurses working in different hospitals of Punjab and willing to participate in the study. The study excludes the staff nurses who were currently not working in hospitals due to COVID-19 pandemic and also excluded the google forms which were incompletely responded.

### **Instrumentation:**

The tool planned for data collection consists of two sections:

**Section A-** consist of questions related to demographic data (age, gender, marital status, number of children nurse have, place of residence, professional qualification, professional experience, present working hospital, present working department, exposure to COVID-19 patients, previous exposure to any occupational accident during practice).

**Section B-** Consist occupational risk assessment tool (Likert scale). The responses were in from of- does not possess any risk(1), low risk(2), no idea(3), moderate risk(4), high risk(5).

### **Plan for data collection-**

The pilot study was done among 7 staff nurses through google form, containing questionnaire of demographic data and occupational risk assessment tool. The retest was conducted after 3 days to find the reliability (test-retest). The reliability coefficient was found to be 0.895 which is high degree of reliability. The final study was conducted in the month of September and October (16 September to 10 October, 2020). The data was collected by online mode through preparation of google form as data collection tool. The researcher gathered data from 49 staff nurses who were working in various hospitals during COVID-19 pandemic. Data analysis was done using descriptive and inferential statistics.

## **RESULTS:**

Data analysis was done by descriptive and inferential statistics. The objectives of the study were-

1. To assess the perceived occupational risk among staff nurses.
2. To find out association of perceived occupational risk among staff nurses with selected demographic variables.

**Table 1:- Mean occupational risk assessment score among Staff Nurses.**

N=49

<b>Occupational Risk assessment score</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
	49	21.00	95.00	66.4898	16.62218

Table 1 depicts that mean occupational risk assessment score achieved by staff nurses was 66.4898 +/- 16.62218 (Mean+/-S.D.). The minimum score achieved was 21 and maximum score was 95.

**Table 2:- Occupational risk status among Staff Nurses**

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Occupational risk status	Frequency(f)	Percentage (%)
Low Risk	6	12.2
Moderate	27	55.1
High Risk	16	32.7
Total	49	100.0

Table 2 depicts that occupational risk status of staff nurses. The results revealed that 27(55.1%) of staff nurses were on moderate risk, whereas 16(32.7%) were on high risk and only 6(12.2%) of staff nurses were on low occupational risk.

While analyzing association between occupational risk status of staff nurses with their socio-demographic variables, Chi-square test was used. The Chi-square test revealed no statistically significance association of occupational risk status with any of the demographic variable. The calculated chi-square values were less than the table value at the 0.05 level of significance.

### DISCUSSION

The results of the findings of the present study were supported by Rajan Rethish(2015) revealing incidences of needle stick injury (72.9%), Musculoskeletal disorders (78.6%), Allergy (38.4%), Infections (39.3%), stress (33.1%) among nurses.

Another study conducted by Pawar (2014) among nurses working in intensive care units of the hospitals in Navi – Mumbai, revealed that 42% of nurses were severely stressed, 34% had moderate stress, 14% had mild stress and 10% had very severe stress. A significant relationship was found between the levels of stress and demographic variables such as age, years of experience and educational qualification.

### Recommendations

- The similar study can be replicated with a large sample size to generalize the result.
- A similar study can be conducted in different setting.
- A similar study can be conducted on multiple purpose health workers , i.e. , lab technicians , waste management department etc.

### Limitations

- Small sample size restricts the generalization of the study findings.

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