



A STUDY TO ASSESS KNOWLEDGE AND PRACTICE REGARDING OCCUPATIONAL HEALTH HAZARDS AMONG NURSING PERSONNEL WORKING IN SELECTED GOVERNMENT HOSPITAL OF NEW DELHI

Nursing

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ABSTRACT

A non-experimental approach was adopted and descriptive survey design was used for the purpose of study. The study was conducted at Vardhman Mahavir Medical College and Safdarjung Hospital, New Delhi from 15th – 30th Jan 2017 by using convenient sampling. The framework of this study is based on the prevention of occupational hazards among nurses. Rosenstock's Health belief model was found to be suitable for this study. The sample size comprised of 70 nursing officers from critical and non-critical care areas. Separate code number was used for each participant. Based on the objectives, a structured knowledge questionnaire and practice questionnaire was developed to assess knowledge and practice of the nursing personnel on occupational health hazards and occupational safety measures. Structured Performa for prevalence of hazards in workplace was developed to collect information regarding the risk they regularly exposed to in their work place. Analysis was done by using descriptive and inferential statistics.

The findings revealed that knowledge and practice scores of nursing personnel in critical care area is more than that of non critical care area but statistically not significant. But co-efficient of correlation between knowledge and practice Scores was significant, indicates that the practices of nursing personnel on occupational safety measures were influenced by their knowledge level.

KEYWORDS

Occupational Health Hazards, Occupational Safety Measures, Critical Care Area, Nursing personnel

INTRODUCTION

India has a health care work force of over 4.3 million serving a population of over 1.2 billion. Health and safety of the workers within the work place is the major concern of the millennium that has emerged with the rapid technological advancement in the every field of the practice. The hazards in HCWs are classified by *WHO (2002)* into physical, biological, mechanical, ergonomic, chemical and psychosocial. Studies have shown that occupational injuries and illnesses among HCWs ranked among the highest of any industry though could be reduced or eliminated.

Nurses confront potential exposure to infectious diseases and deadly viruses like Nipha Viruses and Swine Flu. Recently Nipah virus has claimed 17 lives in Kerala, including a nurse who took care of patients infected by Nipah virus & succumbed to same. Occupational health and safety is an important issue because of high rates of associated morbidity and mortality of exposed workers. (NIOSH) National institute of occupational safety and health estimates, each year about 100,000 people die from occupational illnesses, while about 400,000 new cases of occupational diseases are diagnosed every year. *The National Safety Council* (NSC) has stated that hospital employees are 41% more likely to lose time from work because of injury or illness than employees in other fields.

Successful prevention requires scientific knowledge of the sources, mechanisms of generation, transmission and magnitude of problems together with technical knowledge and practical skills for the prevention and control. Knowledge and preventive practice is a necessity in prevention and control of occupational hazards. Hence it is imperative to study the knowledge and practice of nursing personnel regarding occupational hazards and prevalence of occupational hazards among nurses.

OBJECTIVES

1. To assess and compare the knowledge of Nursing Personnel regarding Occupational Health Hazards in critical and non critical care area.
2. To assess and compare the practice scores on occupational safety measures among nursing personnel in critical and non critical care area.
3. To seek the relationship between knowledge and practice of nursing personnel regarding occupational health hazards.
4. To seek the prevalence of occupational health hazards among nursing personnel

METHODOLOGY

The research design selected for this study was "Descriptive Survey Approach". Convenient sampling technique was used from the accessible population. The sample size for the study comprised of 70 nursing officers from critical and non critical care areas. The attribute variable selected for the present study is Age, Sex, Marital Status, Professional Qualification, Year of Experience, Area of Placement and In-service Training Undergone. Dependent variable selected for the study is level of knowledge and practice regarding occupational health hazards among nursing personnel those who are working in critical and non critical care areas. The study was conducted at Vardhman Mahavir Medical College & Safdarjung Hospital, New Delhi from 15th-30th Jan 2017.

A structured knowledge questionnaire was developed (Total-36items) to assess the knowledge of nursing personnel regarding occupational health hazards including different areas like physical, biological, chemical, ergonomic and psychosocial hazards. A Practice questionnaire was developed (Total-44items) to assess the level of practice of nursing personnel on occupational safety measures. Structured Performa for prevalence of risks/hazards in workplace was developed (Total-13 items) to collect information from the nursing personnel regarding the risk they regularly exposed to in their work place.

After ensuring the reliability and validity the tool and consent from the respondents the questionnaire was given to the participants. Separate code number was used for each participant. Respondents took about 40-45 minutes to answer the questionnaire. Analysis of data was done by using descriptive and inferential statistics.

RESULTS

1. Majority of samples (28.6%) was in the age group of 31-35 yrs, whereas 22.9% were in age group of 36-40yrs and 46-50yrs of age. Among them 72.9% were female and 97% were married. Most of the samples (70%) are with GNM, 37.14% were with 6-10years of experience, 70% of the nursing personnel had undergone in-service training programme. 48.6% of the nurses were from critical care areas and 51.4% were from non critical care areas.
2. Mean knowledge scores of nursing personnel in critical care area (19.97) was higher than mean knowledge scores of nursing personnel in non critical care area (19.56) with 't' value of 0.49, and was found to be statistically non significant at 0.05 level of significance.
3. Mean Practice scores of nursing personnel in critical care

area(29.29) was higher than mean practice scores of nursing officers in non critical care area (28.89) with 't' value of 0.54, was found to be statistically non significant at 0.05 level of significance.

- The co-efficient of correlation between knowledge scores and practice Scores was ($r=0.603$) indicating a significant relationship at 0.05 level of significance

TABLE: 1Distribution of Knowledge Scores on Different Categories of Occupational Health Hazards

N=70			
S.No	Categories of Hazard	Knowledge scores	Percentage
1	Chemical	222	46.9%
2	Biological	347	50.7%
3	Physical	145	36.4%
4	Ergonomic	183	45.4%
5	Psycho Social	169	36.1%

Nursing personnel had more (50.7%) knowledge about biological hazards, whereas less knowledge about physical and psychosocial hazards ie 36.4% and 36.1% respectively.

TABLE: 2 Distribution of practice scores on different areas of practice.

N=70			
S.No	Practice scores on different area	Practice scores	Percentage
1	Practice on standard precaution measures (SP)	548	78%
2	Practice related to sharp injuries (SI)	586	76.10%
3	Practices On Safety Body Mechanics (BM)	302	61.60%
4	Safety Practices for Physical Hazards (PH)	384	60.95%
5	Safety practices for stress & violence (S&V)	281	57.34%

Nursing personnel were following correct practice on standard precaution measures (78%) and practice related to sharp injuries (76.10%).whereas partially correct practice in areas like safety body mechanics (61.6%), safety measures on physical hazards (60.95%) and safety practices on stress and violence (57.34%).



Fig: 1: Bar Graph showing distribution of prevalence of Occupational Health Hazards.

Among all Nursing personnel 80% reported increased workload.72.9% samples reported exposure to infectious diseases and 65.7% of nursing personnel reported neck and back pain. The least exposure was burns & electric shock (21.4%), latex allergy (25.7%) and needle stick injury (28.6%).

DISCUSSION

There are many studies related to the different aspects of health problems and hazards among nurses. This study was carried out to examine the knowledge and practice of nursing personnel on occupational hazards in their chosen profession. This study highlights, 56% of the nursing personnel had moderate knowledge about occupational health hazards whereas 66% of the nursing personnel were following partially correct practice. These findings are consistent with the findings conducted in *Krishna Institute of Medical Science, Karad (2011)* where 50% of HCWs were having moderate knowledge regarding occupational hazards.

The present study reveals, nursing personnel were following correct practice on standard precaution measures (78%) and practice related to sharp injuries (76.10%). This finding corroborates the findings of *OlufemiOludareAluko et al (2016)* which indicate 52.1 % "always" complied with standard procedures and most (93.8 %) practice safe disposal of sharps. It was confirmed that nursing professionals are exposed to occupational hazards and present study indicate 80% of the

nursing personnel reported increased workload and 65.7% of nursing personnel reported neck and back pain. These findings are comparable with the findings of *Mohseni (2006)*, which states that the prevalence of low back pain in nurse was over 50%. Lifting was the most common mechanism for low back pain.

This study further shows a significant positive correlation with practice and knowledge scores of nursing personnel regarding occupational health hazards. This indicated that the practices of nursing personnel on occupational health hazards were influenced by their level of knowledge.

The practical implication of the study is to improve the practices and reduce the exposure of occupational hazards. There should be regular training, proper guidelines and educational meetings for the nurses to enhance the occupational safety. Employer should develop policies or strategies on all aspects related to occupational hazards including risk allowances and compensation. There should be routine health check-ups and periodic rotation of duties to ensure occupational health. Conducive working environment should be provided for the nurses by security strengthening or proper alarming system to reduce the workplace violence especially during night shifts.

CONCLUSION

Hence, it has been established that those in the nursing profession are susceptible to a number of occupational hazards, many of which are avoidable and preventable while others are inevitable. Knowledge and preventive practice is a necessity in prevention and control of occupational hazards. So that effective measures can be taken as required and there by reduces cross contamination of diseases not only from patients to nurses but also from nurses to patients too.

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