

A STUDY ON AWARENESS OF INFECTION CONTROL AND ITS TRAINING EFFECTIVENESS AMONG NURSES IN ONE THE MULTISPECIALITY HOSPITAL, MADURAI

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Abstract: Health care-associated infection is one of the most common complications of healthcare management. Controlling the spread of disease and minimising the number of health-care associated infections are primary concerns for any healthcare facility. Infection control measures practiced by healthcare personnel to prevent spread, transmission and acquisition of infection between clients, from healthcare providers to clients and from clients to healthcare provider. Hospital infection control programs can help healthcare organisations monitor and improve practices, identify risks and proactively establish policies to prevent the spread of infections. Healthcare professionals need to be educated and periodically reinforce their knowledge through seminars and workshops to ensure high understanding of how to prevent diseases transmission. It is essential for the infection control training program to work closely with employee health service. This paper explores the awareness of infection control and its training effectiveness among nurses in the hospital. A questionnaire was framed and circulated to the nurses of that hospital in order to study the nurses awareness on infection control management and its training effectiveness. The expected outcome of this paper is improvement in infection control management among nurses and increasing some of the training needs to gain more knowledge. The findings are also expected to pave the way for future research work.

Keywords: Infection control, Nurses, Training, Hospital.

I. INTRODUCTION

A. DEFINITION: Infection prevention and control is a scientific approach and practical solution designed to prevent harm caused by infection to patients and health workers. It is grounded in infectious diseases, epidemiology, social science and health system strengthening. Infection control addresses factors related to the spread of infections within the healthcare setting whether among patients, from patients to staff, from staff to patients or among staff.

B. NEEDLE STICK INJURY : Needle stick injuries are wounds caused by needles that accidentally puncture the skin. Needle stick injury are a hazard for people who work with hypodermic syringes and other needle equipment. These injuries can occur at any time when people use, disassemble or dispose of needles.

C. HOSPITAL ACQUIRED INFECTION OR NOSOCOMIAL INFECTION: It is contracted because of an infection or toxin present in the hospital. Hospital acquired infection are caused by viral, bacterial and fungal pathogens the most common types are bloodstream infection, pneumonia, urinary tract infection and surgical site infection. Nurses are responsible for providing medications, dressing, sterilization and disinfection. They are involved in more contact with patients than other health care workers. Therefore, they are more exposed to various hospital acquired infections. Hence, nurses play a vital role in transmitting nosocomial infections and their compliance with infection control measures seems to be necessary for preventing and controlling nosocomial infections .

D.OCCUPATIONAL HAZARDS: Healthcare workers undertake their jobs in different workplaces in the hospital, doing a large range of activities. Therefore, they are potentially exposed to many sources of infection. The main occupational risk for acquiring a blood pathogen in the healthcare setting , namely hepatitis B, C, D virus or HIV is the most common occupational hazardous diseases acquired in the hospital.

The objective of the study includes:

1. To study the nurses awareness on infection control management
2. To study the effectiveness of infection control management training among nurses
3. To suggest measures to improve the infection control management training

II. LITERATURE REVIEW

According to Alwabr Gawad (2017) this study shows that nursing staff had inappropriate knowledge regarding of standard precautions and nosocomial infections, there is a significant need to intervention programs that associated with standard precautions and nosocomial infection control to increase nurses' knowledge in order to adopt appropriate health behaviors and positive attitudes.

According to Awoke Kebede and Hadgu Gerensea (2018) This study revealed that more than one-third of the study participants had needle stick injury at least once in the previous 12 months. Inadequate occupational health and safety measures were factors associated with needle stick injury. So that ministry of health and health professionals associations should create awareness on health professionals on safety measures.

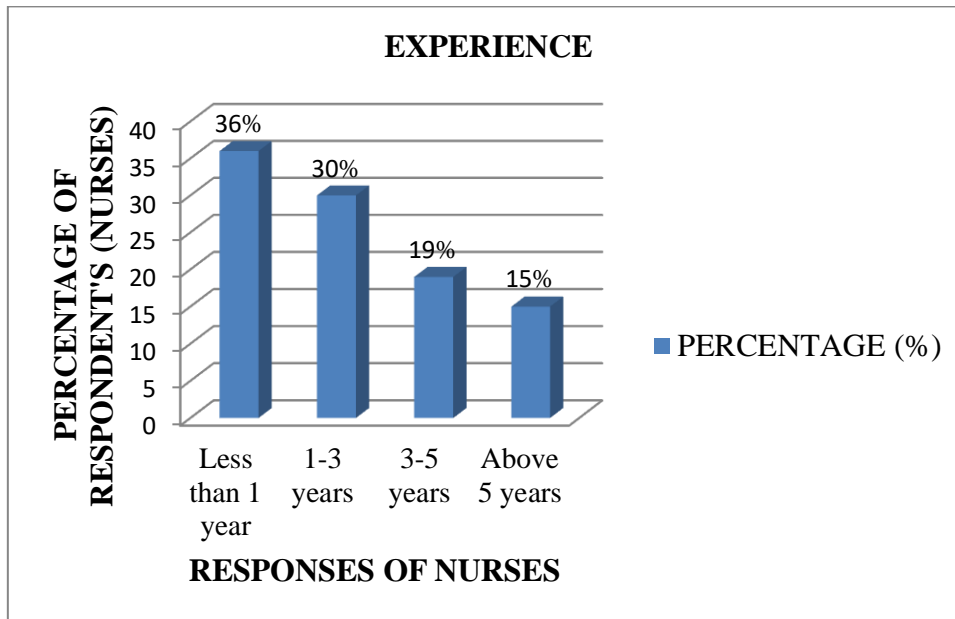
According to Kennedy Diema Konlan, Millicent Aarah-Bapuah, Joseph M. Kombat and Gifty Mary Wuffele (2017), this study shows that, Nurses are aware of their risk of occupational exposure to hepatitis B but lack the requisite knowledge on post exposure management as well as measures that reduce the exposure. Nurses should familiarize with the principles of post exposure management as part of job orientation and on-going job training. Also, there is a need for a national policy on occupational safety and health which should include HB vaccination of health care workers as a requirement for appointment into the health service.

III. METHODOLOGY

This is a descriptive research that aims on the nurses of the selected hospital and their awareness on infection control and its training effectiveness of that hospital. The simple random sampling is used in order to collect data. About 135 nurses were present in the hospital and by considering Morgan's table with 95% confidence and 5% error, 100 data was collected. For this purpose, a questionnaire has been designed, making sure that the research questions do justice to what the researcher is trying to find and to provide the direction and shape of the research. Accordingly the survey tool is a structured questionnaire divided in two parts. The first part includes the demographic questions such as age, gender, marital status, experience and occupation and the second part is composed of fifteen questions that test the nurses awareness on infection control and its training effectiveness.

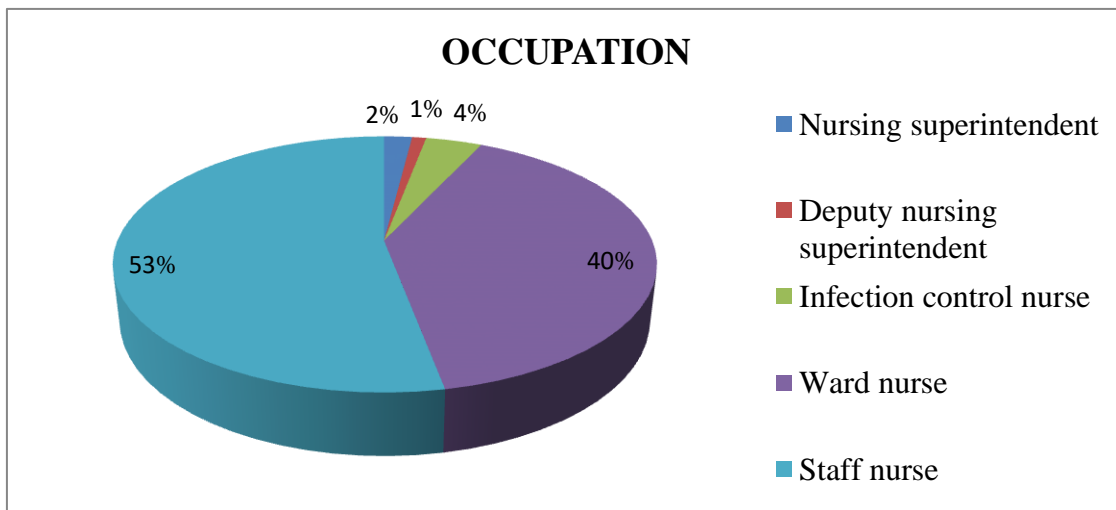
IV. ANALYSIS

Chart -I showing the respondent’s (nurses) responses according to the experience in the hospital :



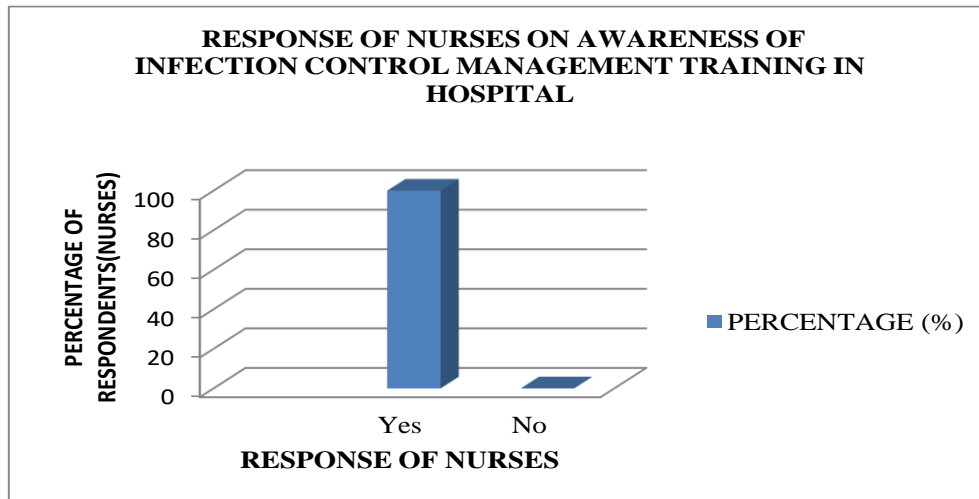
The above chart- I shows that in this study, the nurses less than 1 year of experience (36%) has participated more when compared to 1-3 years(30%), 3-5 years(19%) and above 5 years(15%) experienced.

Chart-II showing the respondent’s (nurses) responses according to the occupation:



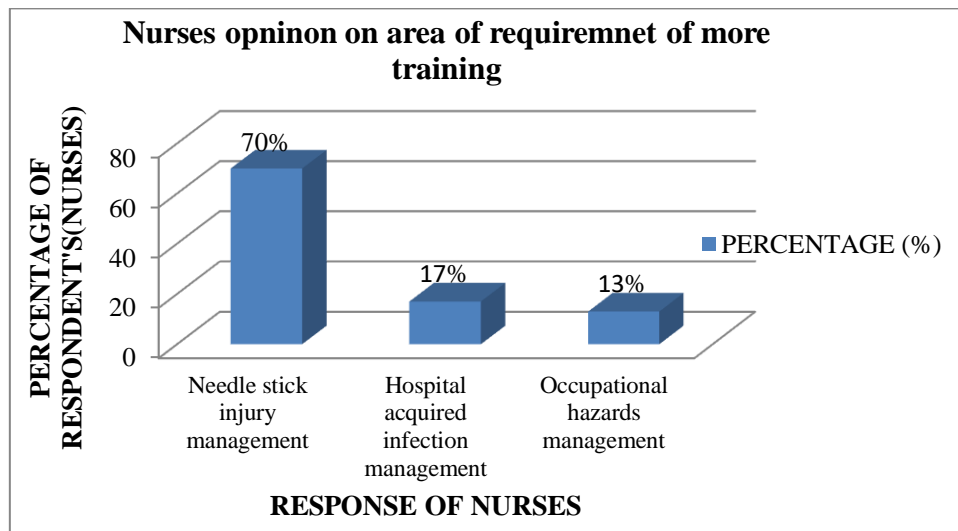
The above chart-II shows that in this study, staff nurse (53%) has participated more when compared to nursing superintendent(2%), deputy nursing superintendent(1%), infection control nurse(4%), ward nurse(40%).

Chart -III showing the respondent’s (nurses) responses on awareness of infection control management training in hospital:



From the chart –III, It is evident that about 100% i.e., all the nurses are aware of infection control management training happening in the hospital.

Chart-IV showing the respondent’s (nurses) opinion on area of requirement of more training



From the above chart-IV It is interpreted that 70% of the respondent’s (nurses) require more training in needle stick management, 17% of the respondent’s(nurses) require more training in hospital acquired infection management, 13% of the respondent’s (nurses) require more training in occupational hazards management.

Table- I showing the difference between the occupation and nurse’s response towards high risk of causing infection to them in hospital:

ANOVA					
nurses response towards high risk of causing infection to them in hospital	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	43.520	4	10.880	26.347	.000
Within Groups	39.230	95	.413		
Total	82.750	99			

In the following interpretation, H denotes “Hypothesis”

H0: There is no difference between the occupation and nurse’s response towards high risk of causing infection to them in hospital.

H1: There is difference between the occupation and nurse’s response towards high risk of causing infection to them in hospital.

From the above table, the significant value is .000, which is less than .05, hence we reject H0 and accept H1. Thus, we prove that there is difference between the occupation and nurses response towards high risk of causing infection to them in hospital.

Table –II showing the relationship between which one of the incident is more in the hospital and nurse’s opinion on frequency of such incident occurrence in the hospital:

CORRELATIONS			
		which one of the incident is more in the hospital?	nurses opinion on frequency of such incidence occurrence in hospital
which one of the incident is more in the hospital?	Pearson Correlation	1	.810**
	Sig. (2-tailed)		.000
	N	100	100
nurses opinion on frequency of such incidence occurrence in hospital	Pearson Correlation	.810**	1
	Sig. (2-tailed)	.000	
	N	100	100
**. Correlation is significant at the 0.01 level (2-tailed).			

In the following interpretation, H denotes “Hypothesis”

Null hypothesis H0: There is no relationship between the which one of the incident is more in the hospital and nurse’s opinion on frequency of such incident occurrence in the hospital.

Alternative hypothesis H1: There is relationship between the which one of the incident is more in the hospital and nurse’s opinion on frequency of such incident occurrence in the hospital.

From the above table, the significant value is .000, which is less than .05, hence we reject H0 and accept H1. Thus, we prove that there is relationship between the which one of the incident is more in the hospital and nurse’s opinion on frequency of such incident occurrence in the hospital.

V. MAJOR FINDINGS & RECOMMENDATIONS:

- From the chart –III, It is evident that about 100% i.e., all the nurses are aware of infection control management training happening in the hospital.
- The above chart- I shows that in this study, the nurses less than 1 year of experience (36%) has participated more when compared to 1-3 years(30%), 3-5 years(19%) and above 5 years(15%) experienced.
- From the above chart-IV It is interpreted that 70% of the respondent’s (nurses) require more training in needle stick management, 17% of the respondent’s(nurses) require more training in hospital acquired infection management, 13% of the respondent’s (nurses) require more training in occupational hazards management.

The recommendations include:

- Majority of the nurses participated in this study are having less than 1 year of experience in hospital, thus they need to be trained more on infection control management because they lack knowledge and are not aware on handling such incidence within the hospital.
- The hospital can provide additional training based on the incident reported to the nurse’s in order to gain knowledge, awareness and prevention of such future incidents from happening.
- Training needs assessment can be done before conducting the training and training feedback forms can be collected after conducting the training, thus it can improve the training effectiveness among the nurses.

VI. CONCLUSION

To conclude, Health care-associated infection is one of the most common complications of healthcare management. Therefore it is very clear that in the hospital, nurse's are aware of infection control management training happening in the hospital, they attend the training periodically but lack knowledge due to their less experience on infection control management and require more training in management of needle stick injury, hospital acquired infection and occupational hazards. Thus increasing the training based on their training needs and incidence occurrence within the hospital will improve the effectiveness of the training and create awareness among nurse's on infection control.

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