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A STUDY TO ASSESS THE KNOWLEDGE AND PRACTICE OF NURSES IN CATEGORY D HOSPITAL MARDAN

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ABSTRACT

Background: *The Nurses play very crucial role in promoting and maintaining the health of the patients in the hospital, by maintaining standard precautions and healthy environment all over in the world. Specifically In hospitals the patients are also the ports for transmission of the infection to health care workers, to other patients and the visitors thus leading to health care related infections, for Eg: Nosocomial infections, which is the main cause for morbidity and mortality rate and thus has major concern globally, the aim of the study is to assess the knowledge and practice of staff nurses regarding nosocomial infection.*

Objectives: 1. *To assess the knowledge of staff nurses regarding nosocomial infection.*
2. To assess the practice of staff nurses regarding nosocomial infection.
3. To find out the relationship between the knowledge and practice of staff nurses regarding nosocomial infections.
4. To find out the association between knowledge of staff nurses regarding Nosocomial infections with their demographic variables in Mardan.

Methodology: *Among staff nurses at selected hospital District Mardan, a sample of 100 participants were selected using convenient sampling; descriptive survey research design was used. Data was collected by using knowledge questionnaire and checklist to assess practice, using structured interview schedule. Data obtained in these areas were analysed using descriptive and inferential statistics,*

Result: *The overall knowledge scores obtained was 3 (3%) of staff nurses had adequate knowledge, 40 (40%) moderate knowledge and57 (57%) had inadequate knowledge. Whereas in practice none had showed good practice, 20% had fair practice, 80% showed having poor practices. There was a positive correlation between the knowledge and practices scores.*

Conclusion: *The study concluded that continuing education programmes are needed to improve the health awareness and early prevention skills and method thus, suppressing the possibility of the spread and transmission of nosocomial infections as well as continuous surveillance in each department and for the health personnel must be followed by the CDC (centres for disease control) recommendations.*

Keywords: *Nosocomial infection, Infection control, CentresFor Disease Control (CDC).*

INTRODUCTION

Nosocomial infection is the infection that develops 48 hours after or within 45 hours after the admission the patient in the hospital. Infectious disease spread vastly through

nosocomial infection. There is increasing evidence that up to 40% of these infections are transmitted through airborne. 4,00,000 or more dust mites can live in 1 table spoon of hospital dust that may become airborne route, patients in hospital rooms constantly produce transmissible air borne organization by coughing and sneezing. Single sneeze can produce 10,000 droplets of mucus at the distance of upto 10m at a speed of 99mph, continued exposure to these airborne particles lead to life threatening diseases.

The bacterial, viral and fungal pathogens such as Staphylococci, Trichosporon, *E. coli*, *Mycobacterium tuberculi*, Aspergillus, Candida. Hospital infections are typically exogenous, the source being any part of the hospital ecosystem, including people, objects, food water and air in the hospital.

Nosocomial infections is a major problem in many health care facilities affecting around 40% of patients during stay in hospital particularly in Mardan. Dramatic increases in new antibiotic resistance microorganisms has led to improve the protection of health care professional and patients. The risk of nosocomial infections in ICU is 5-10 times greater than those acquired in general and medical wards. The increased risk is that critically ill patients frequently requires invasive medical procedures that includes devices, such as urinary catheter, central venous and arterial catheters endotracheal tubes thus compromising normal skin and mucosal barriers.

Hospital in the developing countries have a lack of awareness of infection control programmes and also in proper documentation. It is very difficult to investigate the spread of infections (Epidemics). Therefore establishment of an infection control team is essential. One of the most important responsibilities of the infection control team is to establish a system for case finding and to initiate the maintenance of baseline infection rate for entire hospital to control nosocomial infection.

Nursing is a profession of art and science that involves interaction with the client equipped with a touch of care. Nurses are the heart and hands of the team and they are sensitive to the needs of clientand are rendering services in hands – on manner. That would mean constant contact and exposure with the various nosocomial infections present in the hospital setting. It is the duty and responsibility of the nurse to strictly comply and adhere to the hospitals preventive measures against nosocomial infections and other infectious diseases.

OBJECTIVES:

1. To assess the knowledge of staff nurses regarding nosocomial infection.
2. To assess the practice of staff nurses regarding nosocomial infection.
3. To find out the relationship between the knowledge and practice of staff nurses regarding nosocomial infections.

HYPOTHESIS:

H_1: There will be significant association between the knowledge scores on nosocomial infection among staff nurses with their socio demographical variables.

H_2: There will be significant association between the practice scores on nosocomial infection among staff nurses with their socio demographical variables.

MATERIALS AND METHODS:

Research approach: Descriptive survey approach was adopted for this study.

Design: Non-Experimental Descriptive survey design.

Setting: For this study selected Hospital, Type D Hospital Mardan KPK

Population: Registered nursing officers

Sampling Technique: Non-Probability convenient sampling.

Sample Size: 100 staff nurses. Prior to data collection official permission was obtained; informed consent was taken from the participants.

TOOLS: Structured knowledge questionnaire:
Section I: Socio demographic variables

Section II: Knowledge questionnaire on nosocomial infection
Section III: Rating scale checklist

Later informational booklet was given to staff nurses on nosocomial infection. Data was analysed and interpreted by using Descriptive and Inferential statistics.

RESULTS:

Section I: Level of knowledge of staff nurses regarding nosocomial infection

Table No. 1: Mean, Median, Mode, Standard Deviation and Range of knowledge score of subjects regarding nosocomial infection n=100

Area of analysis	Mean	Median	Mode	Standard Deviation	Range
Knowledge	17.68	20	20.94	4.586	20

Table No. 1 reveals that the mean value of knowledge scores was 17.68, median 20; mode 20.94, standard deviation 4.586 and range was 20.

Section II: Level of practice scores of staff nurses regarding nosocomial infection

Table No 2: Mean, Median, Mode, Standard Deviation and Range of practice scores of subjects regarding nosocomial infection. n=100

Area of analysis	Mean	Median	Mode	Standard Deviation	Range
practice	70.43	74	73.08	8.592	44

Table No 2 reveals that the mean value of practice score was 70.43, Median 74, Mode 73.08, Standard Deviation 8.592 and range 44.

Table No. 3: Frequency and percentage distribution of level of knowledge scores of subjects regarding nosocomial infection

Knowledge score	Frequency (f)	Percentage (%)
Inadequate (1-17)	57	57%
Moderate (18-26)	40	40%
Adequate (27-above)	3	3%

Table No. 3: reveals that 57(57%) subjects had inadequate knowledge, 40(40%) subjects had moderate knowledge and 03(03%) subjects had adequate knowledge.

Figure 1: The doughnut graph represents the distribution of subjects according to their level of knowledge scores.

Table 4: Frequency and percentage distribution of level of practice scores of subjects regarding nosocomial infection in District Mardan. n=100

Practice score	Frequency (f)	Percentage (%)
Good (83 and above)	00	0%
Fair (67 to 82)	20	20%
Poor (66 and below)	80	80%

Table No. 4 Reveals that 80(80%) subjects had poor practices, 20(20%) subjects had fair pracice and none of them had good practices.

Figure 2: The bar diagram represents the distribution of participants according to their practice scores on nosocomial infection.

Section III: Corrletion between Knowledge and Practice Scores among Staff Nurses Regarding Nosocomial Infection:

Table No 5: Co-relation between knowledge and practice scores among staff nurses regarding nosocomial infection:

Catergory	Mean	Standard deviation	Coefficient of correlation value	Level of significance
Knowledge	17.68	4.586	r= 0.577	0.005
Practice	70.43	8.592		

Table No 5: reveals that r_{xy}= 0.577. There is a positive correlation (0<rxy<1) between the level of knowledge and practice scores. Hence $H_1$was accepted.

Analysis and interpretation of data to find out association between knowledge scores and practice scores with selected demographic variables:

Among nurses in Category D Hospital In the association of knowledge scores with their socio demographic variables such age, educational qualification, years of professional experience, and area of work it was found that the calculated chi-square value was more than tabulated value hence there was association except in the area of source of information it is found that there was no association.

In the association of practice scores with their socio demographic variables such as, educational qualification, years of professional experience, and area of work it was found that the calculated chi-square value was more than tabulated value hence there was association. But in the areas of age and source of information it is found that there was no association.

DISCUSION:

The overall knowledge scores of the staff nurses revealed that majority of the subjects majority of the subjects that is 57% of them had an inadequate knowledge, 40% showed had moderate knowledge and only 3% had showed they had moderate knowledge. In the assessment of the practice using the checklist, among the staff nurses most of the nurses that is 80% followed poor practice, 20% of them had fair practice and none of them had good practice. In relation t the knowledge of staff nurses and their demographic variables there was association with the education qualification, years of professional experience and areas of work.

The relationship between knowledge and practice of the staff nurses regarding nosocomial infection and its prevention the correlation coffecient was r = 0.5. hence it was identified that there is a definite correlation between the knowledge and practice. In practice also the significant relationship between the practice and their demographical variables was found only in educational qualification, area of work and years of professional experience.

CONCLUSION:

From the findings of the knowledge and practice scores of the staff nurses on nosocomial infection the conclusion drawn was that majority of the had inadequate knowledge and followed poor practices. Hence there is need for constant emphasis on improving awareness by regular sessions and training sessions implemented as a quality improvement project in infection control measures and emphasis on the universal

precaution. It is also necessary for an effective infection prevention team for updating of existing practices to reduce hospital acquired infections among staff nurses.

IMPLICATIONS:

The findings of the present study have implication in the field of nursing practice, nursing education, nursing administration and nursing research.

Nursing practice:

There is a need to develop strategies for educating staff nurses like continuing education programmes to improve the health awareness and early prevention skills and methods thus, suppressing the possibility of the spread and transmission of nosocomial infection.

Continuous surveillance in each department and for health personnel's must be followed according to the CDC Recommendations.

Nursing education:

As there is a vast trend in the changing scenario of the health sector, emphasis should be made on the students by the schools and colleges in putting efforts to improve the knowledge on spread of nosocomial infection, its effects on both the patients and health personnel and measures to reduce the rate of nosocomial infection.

Nursing administration:

The administrators must see that the health personnel are having enough supportive measures in providing the needed protective equipment's needed for the practice in terms of quality and that are resourceful.

The administrator's should also make strict policies in regard to the implementation of the disposal or disinfecting of the protective equipment's as required.

Regular monitoring of the health personnel's if or not are they adhering to policies in the prevention of the nosocomial infection are followed are not needs to be assessed.

Nursing research:

The researcher should focus attention on the spread of nosocomial infection and its effects, means of transmission the organism's viability so that the morbidity and the mortality rated caused by nosocomial infections can be reduced.

The public in general also will be aware of the means of transport of nosocomial infection and will follow the hospital guidelines.

RECOMMENDATIONS:

- Prospective studies can be carried out
- Nurse managers need to supervise the staff nurses on the of practicing infection prevention standards, techniques and monitor the nurses are adhering to policies of the hospital.
- Administrators and various members of infection control, should promote feedback of practice, individual reinforcement and appropriate rewards for the good practice.

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