EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON PREVENTION OF NOSOCOMIAL INFECTION AMONG NURSING STUDENTS

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Abstract:This study was aimed in assessing the effectiveness of structured teaching programme on prevention of nosocomial infection among nursing students. The study was conducted at MIMS College of Nursing, Puthukode. A sample of 30 students from second year and fourth year BSc. Nursing were selected using convenience sampling technique. Methodology: Research design adopted for the study was pre- experimental one group pre-test post-test design. The data was collected by using a questionnaire on socio-demographic profile and a structured knowledge questionnaire on nosocomial infection followed by a planned teaching programme on "prevention of nosocomial infection" were administered to nursing students on second day. The post- test data was collected after one week. About 53.3% of the sample had good knowledge and 46.6% possessed average knowledge in pretest. After teaching programme (post-test) 93.3% possessed good knowledge and 6.66% had average knowledge. There was a significant association between knowledge regarding prevention of nosocomial infection and year of experience in the hospital environment. There was no association between knowledge with age, religion, type of family and residence.

Key words: **Effectiveness, Structured Teaching Programme, Nosocomial Infection, Nursing Students**

INTRODUCTION

'Nosocomial or 'Hospital Acquired Infections' appear in a patient under medical care in the hospital which was absent at the time of admission. These infections can occur during healthcare delivery for other diseases and even after the discharge of the patients[1]. Infections occurring more than 48hrs after admission are usually considered nosocomial in this regard[2]. Populations at stake are patients in intensive care units, burn units, undergoing organ transplant and neonates. According to extended prevalence of infection in intensive care study, the proportion of infected patients within the ICU are often as high as 51%[3]. Based on extensive studies in USA and Europe shows that HAI incidence density ranged from 13.0 to 20.3 episodes per thousand patient- days[4].

Newborns are at high risk of acquiring health care associated infection in developing countries are 3-20 times higher than in high income countries [5]. In India 17.7% of the ICU patients are affected with nosocomial infection [6].According to estimated report of WHO, approximately 15% of all hospitalized patients suffer from these infections[7].The incidence is high enough in high income countries that is, between 3.5% and 12% where as it varies between 5.7% and 19.1% in middle low income countries[8].

Nosocomial infections are most commonly transmitted by direct contact between health personnel and patient or from patient to patient. The nursing students should possess adequate knowledge on nosocomial infection was found to be minimal. It also emphasized the need to educate the nursing students. The structured teaching programme proved that the knowledge regarding preventive measures of nosocomial infections can be maximized which will help to deliver quality care in the health care settings [9].Assessment of knowledge of nursing personnel is also the responsibility of the infection control nurse in order to find out the areas where nurses require more information to control the infection[10].

PROBLEM STATEMENT

A study to assess the effectiveness of structured teaching programme on prevention of Nosocomial infection among nursing students in a selected college at Malappuram.

OBJECTIVES

- To assess the knowledge of nosocomial infection among nursing students.
- To assess the effectiveness of structured teaching programme on prevention of nosocomial infections using structured questionnaire regarding knowledge on prevention of nosocomial infections among nurses.
- To find the difference between pre-test and post-test knowledge scores.
- To determine the association between pre-test knowledge scores with selected demographic variables.

Hypotheses

H_1: There will be significant difference between pre and posttest level of knowledge regarding nosocomial infection and its preventive measures among nursing students.
H_2: There will be significant association between pretest level of knowledge and selected demographic variables.
H_{01}: There will not be significant difference between pre and posttest level of knowledge regarding nosocomial infection and its preventive measures among nursing students.
H_{02}: There will no significant association between pretest level of knowledge and selected demographic variables.

Assumption

1) Student nurses may not have complete knowledge regarding nosocomial infection.
2) Structured teaching programme will significantly increase the knowledge level of staff nurses.

MATERIALS AND METHODS

The present study was aimed at assessing the effectiveness of structured teaching programme on prevention of Nosocomial infection among B.Sc. Nursing students in MIMS College of Nursing, Malappuram. The research design used was pre-experimental one group pre-test post- test design.Convenience sampling technique was used for the study. The data was collected from15 Second Year B.Sc. Nursing students and 15 fourth year BSC Nursing students.The tool used in the present study is structured questionnaire consisted of three sections.Section A consists of socio demographic variables like age, religion, residence type, and years of experience in the hospital environment. Section B included 30 questions on knowledge on prevention of Nosocomial infection among nursing students. Section C consists of 10 true/false items on knowledge on prevention of nosocomial infection. Score 1 (one) for correct answer and 0(zero) for wrong answers. Scores are categorized into inadequate knowledge (0-13 marks), moderate knowledge (14-26 marks), adequate knowledge (27-40 marks).After obtaining permission from institutional ethical committee, the researchers approached the nursing students who met the inclusion criteria and explained the purpose of the study. Informed consent was obtained and the anonymity of the information and confidentiality was assured by the researcher.

RESULTS

The results were categorized as,

- Section 1 :Distribution of subjects according to socio demographic variables
- Section 2 : Assessment on knowledge of nursing students regarding prevention of nosocomial infection before and after structured teaching programme.
- Section 3 : Effectiveness of structured teaching programme on knowledge of nursing students regarding prevention of nosocomial infection.
- Section 4 : Association of pretest knowledge with selected demographic variables.

Descriptive and inferential statistics were used to analyze the data. 50% of the sample belongs between 19-20 years of age, 46.6% of the sample were between 21-22 years of age and 3.3% were between 17-18 years of age. 53.3% of the sample were Christians and 43.3% were Hindus.96.6%were from nuclear families.43.3% residing in rural area, 40% were from semi urban and urban areas.50% of the sample had 4 years and 2 year experience in the hospital environment. About 53.3% have good knowledge in the pre-test.46.6% have average knowledge and no one has poor knowledge. After teaching programme (post-test) 93.3% have good knowledge and 6.6% possessed average knowledge.

Section 1 : Distribution of subjects according to socio demographic variables

Table 1: Distribution of subjects according to socio demographic variables

N=30

Demographic Variable	Frequency(f)	Percentage (%)
• **Age**		
17-18	1	3.3
19-20	15	50
21-22	14	46.6
Above 22	0	0
• **Religion**		
Islam	1	3.3

Hindu	13	43.3
Christian	16	53.3
• **Type of family**		
Nuclear	29	96.6
Joint	1	3.3
Extended	-	-

Table 1 show that 50% of the students are in between 19-20 years of age. 53.3% are Christians and most of them coming from nuclear family

Section 2 : Assessment on knowledge of nursing students regarding prevention of nosocomial infection before and after structured teaching programme.

Table 2 : Level of knowledge of nursing students regarding prevention of nosocomial infection before and after structured teaching programme.

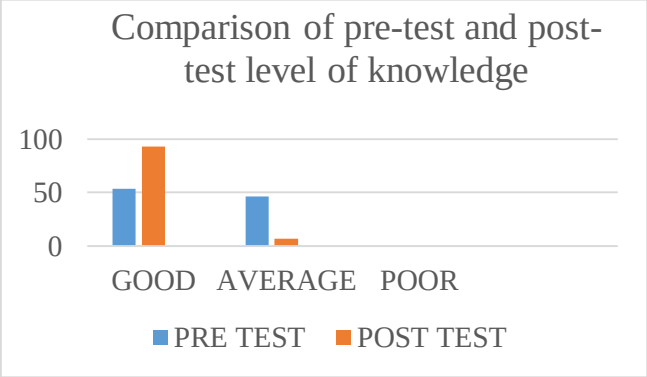
N = 30

LEVEL OF KNOWLEDGE	**PRE-TEST**		**POST-TEST**	
	Frequency (f)	**Percentage (%)**	**Frequency (f)**	**Percentage (%)**
GOOD (27-40)	16	53.3%	28	93.3%
AVERAGE (14-26)	14	46.6%	2	6.66%
POOR (1-13)	0	0	0	0
TOTAL	30	100%	30	100%

The result shows that 53.3% subjects had good knowledge, 46.6% had average knowledge before the structured teaching programme. On the other side out of 30 samples 93.3% subjects acquired good knowledge, 6.66% gained average knowledge after the structured teaching programme.

Section 3 : Effectiveness of structured teaching programme on knowledge of nursing students regarding prevention of nosocomial infection.

Figure 1 : Bar diagram representing the level of knowledge of nursing students regarding prevention of nosocomial infection before and after structured teaching programme.



This figure shows that 53.3% students have good knowledge and 46.6% has average knowledge in pre-test. Post-test reveals that 93.3% has good knowledge and 6.66% has average knowledge.

Section 4 : Association of pretest knowledge with selected demographic variables.

Table 3: Association of pre-test knowledge with selected socio demographic variables.

(N=30)

Variable	Chi-square	df	Table Value
a) Age	4.97	2	5.99
b) Religion	0.814	1	3.84
c) Type of family	0.905	1	3.84
d) Residence	3.36	2	5.99
e) Year of experience in the hospital environment	4.84	1	3.84*

Table 5 shows that there is a significant association between knowledge of nursing students regarding prevention of nosocomial infection and year of experience in the hospital environment and there is no significant association between other socio demographic variables.

Discussion

The present study revealed that mean posttest knowledge score (33.8) was greater than the pretest knowledge score (26.23). There is significant relationship between knowledge on prevention of nosocomial infection among nursing students and year of experience in the hospital environment.A similar study done at Indhira Gandhi Medical College at Shimla proved that mean posttest knowledge score (37.30) was higher than the pretest knowledge score (32.32).So the study done to assess the effectiveness of Planned Teaching Programme regarding prevention of Nosocomial Infection among Staff Nurses was significant.

LIMITATIONS OF THE STUDY

- Generalization of the study is limited to a sample size of 30.
- Study is limited to students who are not willing to participate in the study.

RECOMMENDATION

- The same study can be replicated on a large sample size.
- The same study can be conducted on staff nurses.
- The knowledge on prevention of nosocomial infection can be identified in all Health Care Professionals.

CONCLUSION

The present study conclude that 93.3% have good knowledge and the rest have average knowledge on prevention of nosocomial infection.As a result of increasing incidence is crucial that health care professionals to become informed about the infectionrisks and educating appropriately regarding proper measures.

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