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Effectiveness of Teaching on Nosocomial Infection

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ABSTRACT

Hospital-acquired infections (HAIs), also known as **Nosocomial infections**, are infections that patients acquire during the course of receiving healthcare treatment for other conditions in a hospital or healthcare facility. These infections are not present or incubating at the time of the patient's admission but develop 48 hours or more after hospitalization or within 30 days after receiving healthcare services. Nursing professionals play a critical role in the prevention and control of HAIs through evidence-based practices, patient education, and adherence to standard precautions. **A study to assess the effectiveness of planned teaching program, on knowledge regarding nosocomial infection among B.Sc. Nursing 1st year students of Nightingale Institute of Nursing, Noida"**. A quantitative evaluative approach with One group pre-test Post-test design was used and 40 samples were selected by Non- Probability Convenience Sampling technique. The general information was collected, level of knowledge was measured by modified structure interview questionnaire. After the pre test planned teaching program was delivered to BSc 1st year students. Post test was done after 15 days. The major findings of pre-test were, the majority students 25(62.5%) were having average level of knowledge, 8 (20%) were having good level of knowledge, 7 (17.5%) were having poor level of knowledge. The major findings of post-test were, majority of students 34 (85%) were having good level of knowledge, 6 (15%) were having average level of knowledge, 0(0%) were having poor level of knowledge. The mean post-test knowledge score was higher than mean pre-test knowledge score. Thus, the intervention was found to be effective strategy to enhance the knowledge regarding nosocomial infection.

Key points: Nosocomial infections, level of knowledge, planned teaching programme

Introduction:

Hospital-acquired infections (HAIs), commonly referred as nosocomial infections, are diseases that patients get while undergoing treatment for other illnesses in a hospital or clinic. These infections pose a significant global health challenge, contributing to increased morbidity, mortality, prolonged hospital stays, and financial burden on healthcare systems.

Nurses are frontline caregivers who spend the most time with patients, have been essential to the prevention and management of infections. Therefore, it is crucial that nursing students acquire a solid knowledge base and a favorable outlook on nosocomial infection prevention, particularly in their early years. Early education can make a big difference in lowering the prevalence of these infections in healthcare settings.

Numerous studies show that nursing students' attitudes and understanding of nosocomial diseases are lacking, despite the existence of infection control policies. It has been demonstrated that planned

educational initiatives are a successful way to improve knowledge and favorably impact health-related behaviors. In light of this, the current study intends to evaluate how well a structured teaching program enhances the first-year B.Sc. Nursing students at Nightingale Institute of Nursing, Noida, in terms of their knowledge and attitudes surrounding nosocomial infections.

Statement of problem

A study to assess the effectiveness of planned teaching program, on knowledge regarding nosocomial infection among B.Sc. Nursing 1st year, in Nightingale Institute of Nursing, Noida

Objectives:

- To assess the knowledge among BSC nursing 1st year students regarding nosocomial infection.
- To evaluate the effectiveness of planned teaching program on knowledge regarding nosocomial infection among nursing students.
- To develop a planned teaching program on nosocomial infection.
- To find out the association between the pretest level of knowledge and their selected background variables of BSC nursing 1st year students.

Assumption:

Assumption refers to a proposition of some occurrences or considerations that may be considered in eliminating the area of the study.

- Student nurses may have some knowledge regarding nosocomial infection.
- The questionnaire might be effective in assessing the knowledge of student nurses regarding nosocomial infection.

Hypothesis:

- H1: There will be significant difference between pre-test and post-test knowledge scores of B.Sc. 1st year students after implementing structured teaching program on exchange transfusion.
- H2: There will be significance association between pre-test level of knowledge scores of B.Sc. 1st year students with their selected background variables.

METHODOLOGY

Research approach: in the presents study quantitative research approach was adapted

Research Design: One group Pre-test and Post test design was adapted.

Population: The population for present study sample comprised of B.sc nursing 1st year student, in Nightingale Institute of Nursing, Noida

Sampling technique:

Non-Probability Convenience Sampling technique was used for the study.

Development of tool:

Part A included demographic Performa consisting Age, Marital status, Occupation of parents, Source of health information, Previous knowledge.

Part B consisted of structured interview questionnaire regarding knowledge response of nosocomial infection

Result:

TABLE – 1

Distribution of BSc 1st year student in terms of demographic sample characteristics.

N=40

S.No	Demographic variables	Frequency	Percentage
1.	Age		
	a. 17-20	33	82.5%
	b. 21--24	07	17.5%
2.	Marital status		
	a. Unmarried	35	97.5%
	b. Married	05	12.5%
3.	Batch		
	a. Bsc.1st semester.	40	100 %
	b. Bsc.2nd semester.	0	0
4.	Occupation		
	a. Medical	06	15%
	b. Non-medical	25	62.5%
	c. One of them is from medical	09	22.5%
5.	Source of health information		
	a. Family members	14	35%
	b. Mass media	06	15%
	c. Friends	03	05%
	d. Health professional	18	45%
6.	Previous knowledge		
	a. Yes	36	90%
	b. No	04	10%

The table 1 shows that majority of sample i.e. 80% (32) were in the age group of 17- 20 years, 20% (08) were in the age group of 21- 24 years. All of the sample was Female 100% (40). In educational level all of them 100% (40) were belong to BSc 1st Semester. Majority of sample 97.5% (39) have previous knowledge regarding nosocomial infection.

- In pretest, majority of nursing students having knowledge score 7(17.5%) were range of poor, 25(62.5%) were range of average, 8(20%) we're range of good as well as in post test 34(85%) we're in the range of good and 6(15%) we're in the range of average and 0(0%) was in poor. So, it shows that structured teaching program was effective in improving the knowledge of Bsc 1st year students.
- **The Table 2** shows that the mean post test knowledge score (14.12) was higher than their mean pre-test knowledge score (12). The mean difference of 2.12 between pre-test and post test knowledge score of subjects were found to be statistical highly significant as calculated value of "t" (2.127) is more than the table value of "t" (2.0227) at 0.05 level of significance.

Table 2: Mean, Mean difference, Median, Standard deviation and pre- test. Value knowledge score of nursing students.
N=40

Test	Mean	Mean Difference	Median	Standard deviation	T-Value
Pre test	12	**2.12**	12.46	3	**2.127**
Post test	14.12		14	3.30	

Table 3: H2 - There will be significant association between the pre- test level knowledge with their selected demographic variables of BSc 1st year student
N=40

Demographic variables	Below median	Above median	Degree of freedom	Chi square	Level of significance
1. Age in years 17-20 21-24	 8 7	 22 3	3	5.96	Not Significant
2. Marital status • Unmarried • Married	 24 1	 15 0	3	0.66	Not Significant
3. Batch • Bsc.1st sem. • Bsc.2nd sem.	 0 0	 40 0	3	7.43	Not Significant
4. Occupation • Medical • Non-medical • One of them is from medical.	 11 6 5	 4 6 8	2	2.77	Not Significant
5. Source of health information. • Family members • Mass media • Friends • Health professional	 4 9 6 2	 3 8 4 4	3	2.14	Not Significant
6. Previous knowledge • Yes • No	 15 10	 12 4	1	0.71	Not Significant

- Hence null hypothesis HO1 is rejected therefore alternative Hypothesis H1 is accepted — indicating that there is a statistically significant difference between the mean pre-test and mean post-test knowledge

scores of B.Sc. Nursing 1st year students after the implementation of a structured teaching program on nosocomial infections, as assessed by a structured knowledge questionnaire at the 0.05 level of significance."

- Hypothesis H2 :- There will be no significant association between the pre-test knowledge scores of B.Sc. Nursing 1st year students and selected demographic variables. The Chi-square test was used to determine the association between pre-test knowledge scores and the demographic variables. Upon analysis, it was found that there was no statistically significant association, as the obtained Chi-square values were greater than the p-value at the 0.05 level of significance. Therefore, Hypothesis H_2 is rejected.

RECOMMENDATIONS:

- The study can be replicated on a large number of samples for wider generalization of findings.
- The study can be conducted by using other strategies like information booklets and video assisted teaching.
- The study can also carry out in large scale comparing with other educational variables, urban and rural areas.
- Similar study can be conducted for staff nurses also.

CONCLUSION:

On the basis of the results of data analysis, the following salient conclusions were reached. Nosocomial infection is a common problem among nursing students. It adversely affects the healthcare professionals. The present study was conducted to assess the effectiveness of a structured teaching program on knowledge regarding nosocomial infections among B.Sc. Nursing 1st year students. The findings revealed a significant improvement in the post-test knowledge scores compared to the pre-test scores, indicating that the structured teaching program was effective in enhancing the students' knowledge about nosocomial infections. The finding of this study can be used to find appropriate solution for students facing problems of Nosocomial infection.

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