



A STUDY TO EVALUATE THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME REGARDING INFECTION CONTROL BUNDLES AMONG THE B.Sc. NURSING STUDENTS OF ROYAL GLOBAL UNIVERSITY, ASSAM.

Nursing Science

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ABSTRACT

Nosocomial infections are also referred to as Hospital-acquired Infection(HAI). Measures to control the infections comprise of identifying patients at risk of getting infected, evaluating hand hygiene practices, monitoring and surveillance of medical instruments such as vascular catheters, respiratory tubes and other hospital gear. Care bundles aim to ensure that patients receive recommended treatments on a consistent. A bundle is a structured way of improving the processes of care and patient outcomes. Aim: The aim of the study is to assess the knowledge regarding infection control bundles among the B.Sc. Nursing students of Royal Global University. It also aims to find out the association between knowledge score and some selected demographic variables. Methods: Pre-experimental one group pre- test, post- test design a study was conducted in Royal School of Nursing, Assam Royal Global University. 90 samples were drawn by using convenient sampling technique. The knowledge of students was assessed by using a self- structured questionnaire. Results: The study results revealed that majority of the students that is (32.40%) fall under the age group of 19-20 years, (69.30%) students are female, (63%) students are from even semester, (65%) students are got the information from college/ friend. Study findings also revealed that after post test majority (58%) students had adequate knowledge, (14.4%) students had moderately adequate knowledge and (8%) students had inadequate knowledge regarding infection control bundles.

KEYWORDS

Planned Teaching Programme, Infection Control Bundles, Nursing Students.

INTRODUCTION

Hospital-acquired infections (HAI) are another name for nosocomial infections. Finding patients who are at risk of infection, assessing hand hygiene habits, and keeping an eye on medical equipment like vascular catheters, breathing tubes, and other hospital supplies are all part of the infection control measures. Care bundles are straightforward collections of research-proven techniques that, when used in concert, increase delivery dependability and enhance patient outcomes. In contexts with limited resources, healthcare facilities might apply a variety of particular bundles. These care packages help prevent infections, cut down on the over prescription of antibiotics, and may prevent antibiotic resistance in medical institutions.³

This study was deemed vital to be conducted among B. Sc. Nursing students since it is new and will help them learn more about infection control bundles during their study term, particularly when they are exposed to clinical environments. emergence of antibiotic resistance in medical settings.

Statement Of The Problem

A study to evaluate the effectiveness of planned teaching programme regarding infection control bundles among the B.Sc. Nursing students of Royal Global University.

Objectives Of The Study

- To assess the pretest knowledge regarding infection control bundles among the B.Sc. Nursing students of Royal Global University.
- To determine the posttest knowledge level regarding infection control bundles among the B.Sc. Nursing students of Royal Global University.
- To associate the posttest knowledge score regarding infection control bundles among the B.Sc. Nursing students with this selected demographic variable.

Assumption

- The study assumes that, the B.Sc. nursing students of Royal Global University will have poor knowledge regarding infection control bundles.
- The planned teaching programme will improve the knowledge level of the B.Sc. nursing students of Royal Global University.

Hypothesis

H₁- There will be significant difference between pre- test and post-test score on knowledge regarding infection control bundles among the selected B.Sc. nursing students in Royal Global University after implementation of planned teaching programme.

H₂- There is significant association between post-test level of knowledge with selected demographic variables among the selected B.Sc. nursing students of Royal Global University.

MATERIAL AND METHODS

Research Approach

A quantitative research approach was used for this study.

Research Design

A pre experimental, one group pre and posttest design was adopted for this study.

Variables

- Independent Variables:** Planned teaching programme.
- Dependent Variables:** Knowledge of the B.Sc. nursing students regarding infection control bundles.
- Demographic Variables:** Age, gender, education, previous source of information.

Setting Of The Study

The present study was conducted at The study was conducted in Royal Global University, Royal School of Nursing, Guwahati, Assam.

Population

Target Population

The target population in this study includes B.Sc. Nursing students of Royal School of Nursing, Royal Global University who met the inclusion criteria.

Sample And Sample Size

In the present study sample size consist of 152 of the total accessible population which was found to be 90 students after calculating it by Taro Yamane's formula.

Sampling Technique

The technique used was "Non- Probability Convenient Sampling" depending upon the availability of samples in Royal School of Nursing, based on inclusion criteria.

Inclusion Criteria:

- B.Sc. Nursing students at Royal School of Nursing.

Exclusion Criteria

Students who are not willing to participate

Tools And Techniques

Part I: Demographic Data

This section consists of 4 items on demographic data, like- age, gender, education, previous source of information of infection control bundles.

Part II: Knowledge Questionnaire

It consists of Structured Multiple Choice Questionnaires related to the assessment of the level of knowledge regarding infection control bundle among BSc nursing students during pre and posttest.

Data Collection Procedure

Formal permission was obtained from the principal of Royal College of Nursing. Consent from the subjects was obtained, and confidentiality was maintained throughout the study. The pre-test was conducted to assess knowledge regarding infection control bundle. The planned teaching was administered, and the post-test was conducted. The total duration of data collection was two weeks.

Data Analysis

Descriptive statistics like frequency, mean, SD, mean percentage was used for description of demographic characteristics and assessment of knowledge. Inferential statistics like paired t test was used to evaluate the effectiveness of STP and chi-square test was used to find out the association between knowledge with demographic variables.

RESULTS AND DISCUSSION

Section-A: Description Of Socio Demographic Variables.

Table 1: Frequency And Percentage Distribution Of Demographic Variables Among Bsc Nursing Students.

Demographic Variable	Frequency (n)	Percentage (%)
Age (Years)		
19-20	32	32.40%
21-22	22	22.50%
23-24	21	21.60%
>24	4	4.50%
Gender		
Male	11	11.70%
Female	69	69.30%
Education (semester)		
Even	63	63%
Odd	18	18%
Source of information		
Media/ Internet	15	15.30%
College/Friend	65	65.70%

Table 1 shows that out of 90 student's majority i.e. 32 (32%) students are fall under the age group of 19-20 years, 22(22%) students are fall under age group 21-22years, 21(21%) students are fall under age group 23-24years, 4(4%) students are fall under age group >24years. majority students 69 (69.30%) are female, 11(11.70%)students are male, majority of students 63(63%)are from even semester and 18(18%)students are from odd semester, out of 90 students 65(65.70%)students are got the information from college/friend and 15(15.30%) students are got the information from media/internet.

Section B: Level of pre-test knowledge regarding infection control bundles.

Table 2: Mean, standard deviation, frequency and percentage distributions of students according to their pre-test knowledge level. N=90

Score	Frequency	Percentage	Mean	SD
Adequate knowledge (>15)	19	17.1%	12.6	2.4
Moderately adequate (10-14)	61	54.9%		
Inadequate	10	9%		

Table shows that Pre-test knowledge level of 90 students were assessed by using self-structured questionnaire. The mean, standard deviation and range have been calculated. The maximum possible score for knowledge questionnaire was 21, out of which knowledge score was categorized as 'adequate'(score >15), 'moderately adequate'(score 10-14), 'inadequate'(score<10) using formula $M + \frac{SD}{2}$.

Table 3: Mean, standard deviation, frequency and percentage distributions of students according to their post-test knowledge level

Score	Frequency	Percentage	Mean	SD
Adequate knowledge(>15)	65	58.5%	16.6	1.4
Moderately adequate knowledge(13-15)	16	14.4%		

Inadequate knowledge(<13)	9	8.1%		
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This table depicts that Post-test knowledge level of 90 students were assessed by using self-structured questionnaire. The mean, standard deviation and range have been calculated. The maximum possible score for knowledge questionnaire was 21, out of which knowledge score was categorized as 'adequate'(score>15), 'moderately adequate'(score13-15) and 'inadequate knowledge'(score<13).

Section C: Comparison between pre-test score and post-test score by paired T-test.

Table 4: Comparison between pre-test score and post-test score by paired T-test.

	Mean	SD	MD	DF	T	P value
Pre-test	12.6	2.4	4	86	9.11	0.007
Post-test	16.6	1.4				

The data presented in the above table shows that the mean post-test knowledge score (16.6) was higher than the mean pre-test score (12.6). The calculated value of paired "T" was found 9.11 and P value i.e. 0.007. The null hypothesis is accepted($p < 0.05$) which means that there is no significance difference between the mean score of pre-test and post-test knowledge.

Section D: Association between pre-test score with selected demographic variable

Chi square test was used to find out the association between demographic variable and level of knowledge of infection control bundle. It reveals that there is no statistically significant association between demographic variables and the level of knowledge on infection control bundle among the B.Sc Nursing students at the level of $p < 0.05$.

DISCUSSION

This study aimed to evaluate the effectiveness of a Structured Teaching Program (STP) in enhancing the knowledge of B.Sc. Nursing students regarding infection control bundle. The results demonstrated a significant improvement in knowledge post-intervention, emphasizing the importance of educational programs in nursing curricula. The pretest results revealed that 9% of students had inadequate knowledge, while 54.5% had moderately adequate knowledge, 17.1% of the students demonstrated an adequate understanding of infection control bundle before the intervention.

The post-test results showed a dramatic improvement, with 58.5% of students achieving adequate knowledge, and only 14.4% remaining at a moderately adequate level. The mean knowledge score increased from 12.6 in the pre-test to 16.6 in the post-test, with a statistically significant t-value of 9.11 ($p < 0.001$), indicating a highly effective STP. No significant association was found between demographic variables (age, gender, education and source of information) and post-test knowledge scores, suggesting that the STP benefited students across all backgrounds equally.

The study highlights the need for structured educational interventions in nursing training programs. As future healthcare providers, nursing students must be well-informed about infection control bundle, including infection control bundles referred – Catheter Associated Urinary Tract Infection (CAUTI), and Surgical Site Infection (SSI) bundles, Central Line Associated Bloodstream Infection (CLABSI), Ventilator Associated Pneumonia (VAP) bundles.

Integrating STPs into the curriculum can ensure that students are adequately prepared to educate patients and promote infection control bundle awareness in clinical and community setting.

CONCLUSION

The findings of this study highlight the effectiveness of structured teaching programs in enhancing infection control bundle knowledge among nursing students. Given the increasing HAI, integrating such educational interventions into nursing curricula can significantly improve awareness and early prevention practices.

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