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A Descriptive Study on Infection Control

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Abstract In order to create an information booklet, a descriptive investigation was conducted with B.Sc. nursing students at Metro College of Nursing in Greater Noida to ascertain their familiarity with infection control.

The purpose of the study is to assess BSc nursing students' understanding of infection management in order to produce an infection-specific manual.

Delimitations The study only included B.Sc. nursing students who were present at the time the data were collected.

Assumptions Students studying nursing have a certain understanding of infection management.

The B.Sc. nursing students' understanding of infection management will improve thanks to the infecciones book.

Methods A quantitative method was used in this study to assess participants' knowledge of infection control. The purpose of the study is to assess students' understanding of infection control among BSc nursing students in order to develop an infection control manual for second- and third-year B.Sc nursing students. Research is the overarching strategy. A descriptive research design was adopted for the current investigation. Greater Noida, Uttar Pradesh's Metro College of Nursing was the site of the study. The population of the current study was made up of B.Sc. nursing students enrolled in Metro College of Nursing in Greater Noida, Uttar Pradesh. There were 60 students in the sample overall. For the current investigation, an easy sampling strategy was used. The tool was split into two parts:

Section A: Student demographic information.

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Section B: It was made up of In order to evaluate the knowledge of infection control among B.Sc. nursing 2nd and 3rd year students, a quantitative technique was used for this study. "study is the total strategy for answering a study issue, including tactics for enhancing infection control-related structured surveys..

A student information pamphlet was given to them following the data collection.

Result The results showed that the mean knowledge score for B.Sc. nursing students overall was 16.23, the median was 15, and the standard deviation was 2.83; the majority of students, 58(96.67%), had average knowledge, one (1.67%) had poor knowledge, and only one (1.67%) had good knowledge.

Key words: Descriptive, Infection, Knowledge, Infection control.

INTRODUCTION

An infection is a conflict between the host and the invasive microorganisms. Human bodies are capable of repelling invasive germs that can spread illness. We refer to this as our natural defenses. Human immune system activates in reaction to infection. To clear our body of foreign invaders, white blood cells, antibodies, and other systems get to work.1

The term "infection" describes the invasion of pathogens into an organism's bodily tissues, their growth, and the host tissues' response to the pathogens and the toxins they release.2

Health care associated infection (HAI), which is a more accurate word for an illness contracted while receiving medical care, can occur anywhere along the continuum of care settings, including long-term care facilities, residential care facilities, and outpatient facilities in a hospital.

3The primary goal of a hospital is to isolate and stop the transmission of infection in order to safeguard the patient. Hospitals are areas where infections are concentrated. Nosocomial infections, also referred to as hospital-acquired infections, are illnesses that are contracted in a hospital or healthcare facility and that manifest for the first time 48 hours or more after hospital admission1 or within 30 days of release

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after patient treatment. They are neither present nor incubating at the time of admission, and they have no connection to the primary ailment that brought the patient to the hospital.4

Health care-associated infections, often known as "nosocomial" and "hospital" infections, afflict people who are being treated in a hospital or other healthcare institution but are not yet manifested or incubating at the time of admission. Additionally, they include illnesses that patients pick up while receiving care at a hospital or facility but develop after leaving, as well as occupational infections among personnel. The majority of nations lack infection surveillance programmes related to healthcare. The complexity and absence of standardised standards for infection diagnosis plague those who do have systems frequently. The results of research clearly show that hundreds of millions of patients around the world are impacted by healthcare-associated infections each year, despite the fact that this makes it challenging to acquire accurate worldwide data on these diseases. Public awareness of healthcare-associated infections typically only occurs during epidemics.

Various invasive technologies and techniques are used in healthcare settings to treat patients and aid in their recovery. The equipment used in medical operations has the potential to cause infection. Hospital acquired infections might include ventilator-associated pneumonia (VAP), catheter-associated urinary tract infection (CAUTI), central line-associated blood stream infection (CLABSI), and surgical site infection (SSI).6

The mission of the WHO's infection prevention and control in health care initiative is to support member states in reducing the spread of infections associated with healthcare by providing assistance with the assessment, planning, implementation, and evaluation of National Infection Control Policies. The planning's ultimate goal is to support member states in endorsing quality promotion of healthcare that is safe for patients, health care workers, and the environment. 8

There are numerous protocols and recommendations that can be followed to reduce the transmission of infection within

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a community. Infection control is a global issue. By enhancing procedures in medical facilities, infection control can also be increased. In order to protect susceptible patients from healthcare-associated infections, health professionals everywhere must make sure they create plans and put them into practice that safeguard those who may be immune-compromised. At least one HAI will be acquired by up to 7% of patients worldwide and 10% of patients in underdeveloped nations9.

An infection control nurse's job is to spot, stop, and contain infectious outbreaks in medical facilities. Even in a clean, sterile setting, an illness can quickly spread and harm a patient.

To lessen the spread of infection within a community, many protocols and suggestions can be followed. A global problem is infection prevention. Infection control can be improved in medical institutions by streamlining procedures. Health practitioners everywhere must make sure they develop plans and put them into action that protects people who may be immune-compromised in order to prevent susceptible patients from healthcare-associated infections. Up to 7% of patients worldwide and 10% of patients in developing countries will contract at least one HAI9.

To identify, stop, and contain infectious outbreaks in healthcare settings is the responsibility of an infection control nurse. An infection can spread swiftly and cause harm to a patient even in a clean, sterile environment.

BACKGROUND

Preventing patients and healthcare professionals from contracting an infection is possible through the use of an effective, evidence-based strategy called infection control. Effective infection control necessitates ongoing effort at all health system levels. 14

No one should contract an infection while receiving medical care, but outbreaks and numerous standard care procedures can transmit these infections, which every year harm hundreds of millions of people worldwide.15

Due to hazardous and subpar healthcare, millions of individuals suffer injuries and pass away every year. Numerous medical procedures and risks connected to health

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care are becoming important obstacles for patient safety and greatly increase the burden of harm from subpar treatment. In high-income countries and low- and middle-income countries, respectively, 7 and 10 out of every 100 hospitalised patients get a healthcare-associated infection. Up to 25% of patients experience difficulties as a result of unsafe surgical care methods. Every year, over 7 million surgical patients experience serious problems, and 1 million of them pass away during or right after operation.16

Infections that originate in a hospital or other healthcare institution and first manifest 48 hours or more after hospital admission or within 30 days of getting care are referred to as health care-associated infections (HCAIs). According to the US Centre for Disease Control and Prevention (CDC), about 1.7 million hospitalized people each year develop HCAIs while receiving treatment for other medical conditions, and more than 98,000 of these patients (one in 17) pass away as a result. Numerous studies indicate that straightforward infection-control measures can prevent HCAIs, save lives, lower morbidity, and lower health care costs.17

Infections contracted while in the hospital are known as nosocomial infections. With an estimated 2 million cases per year, these infections affect 5–15% of hospitalised patients and can have problems for 25–33% of those referred to the intensive care unit. These are a significant contributing factor to (80.000 per year), and the economic costs are high, including those associated with extended hospital stays, expensive medications, postponed discharge, etc. 20

According to the WHO, 9% of nosocomial infections occur globally assuming that 10% is the cost of healthcare in India. In India, the average patient pays an additional 1.2–1.5 lakhs in addition to the actual cost of their therapy.21

Statement of the problem

A Descriptive study to assess the knowledge on infection control among B.Sc. Nursing students of Metro College of Nursing, Greater Noida with a view to develop an information booklet.

Objectives

1. To assess the level of knowledge among B.Sc. Nursing students regarding Infection control.

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2. To develop an information booklet.

METHODOLOGY

The study's goal is to assess students in the second and third years of their B.Sc. in nursing's knowledge about infection control, a quantitative technique was selected.

Research methodology A descriptive research strategy was employed for the current investigation.

Variables:

Dependent variable: In the current study, the dependent variable was the degree of knowledge held by 2nd and 3rd year B.Sc. nursing students.

Demographic information: In the current study, the demographic information included the following:

Age, gender, religion, educational background, and place of residence

Previous infection control webinar or lecture attended.

The study was carried out at Metro College of Nursing in Greater Noida, Uttar Pradesh.

Population: In this study, the participants were B.Sc. nursing students from Metro College of Nursing in Greater Noida, Uttar Pradesh.

Sample: A total of 60 students made up the sample for this investigation.

Sample Technique: A practical sample technique was used for the current investigation.

Sampling Standards:

Students who are available at the time of data collection are the inclusion criteria.

Students who are unwilling to participate or who are absent on the day of data collection are excluded.

The study was carried out at Metro College of Nursing in Greater Noida, Uttar Pradesh.

Ethics Perspective

The Metro College of Nursing in Greater Noida granted ethical permission, and the Metro College of Nursing granted formal permission to conduct the research. These actions were taken to protect the participant's rights.

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The subjects were coded, guaranteeing their anonymity.

DATA ANALYSIS AND INTERPRETATION

The following headings have been used to organise and convey the study's data and findings:

Results pertaining to sample characteristics are in Section A.

Part I: Calculation of frequency and percentages to explain the study's sample's characteristics.

Findings on knowledge scores for infection control among B.Sc. nursing students at Metro College of Nursing, Greater Noida, are presented in Section B.

Part I: Knowledge score mean, median, and standard deviation.

Part II: Teenagers' prevalence and percentage distribution according to their familiarity with infection control.

A SECTION

This section discusses the age, gender, religion, educational background, region of residence, and previous infection control seminars or webinars that B.Sc. Nursing students have attended.

We computed frequency and percentage.

Table 1 : shows the frequency and percentage breakdown of subjects by age group. n=60

AGE	(f)	(%)
17-20 Years	35	58.3
21-24 Years	24	40
Above 24 Years	1	1.7

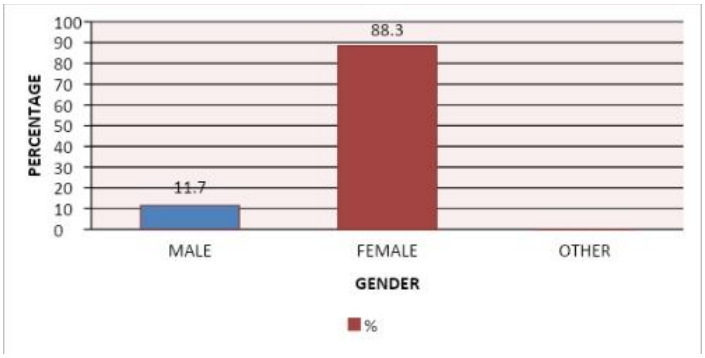

Fig.1: the proportion of male and female B.Sc. nursing students.

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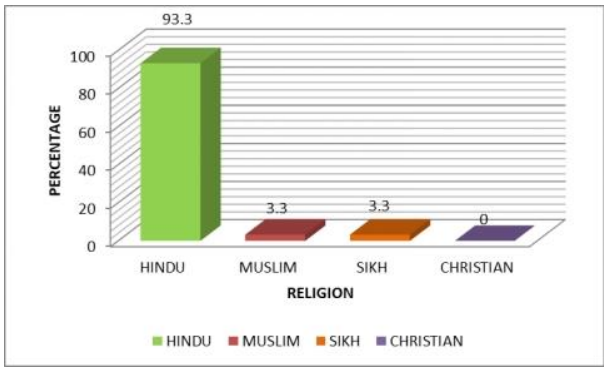

FIG. 2 : % breakdown by religion of B.Sc. nursing students.

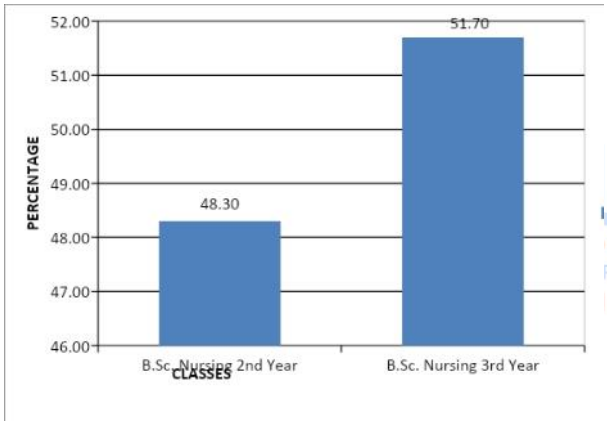

FIG.3: displaying the distribution of educational background among B.Sc. nursing students.

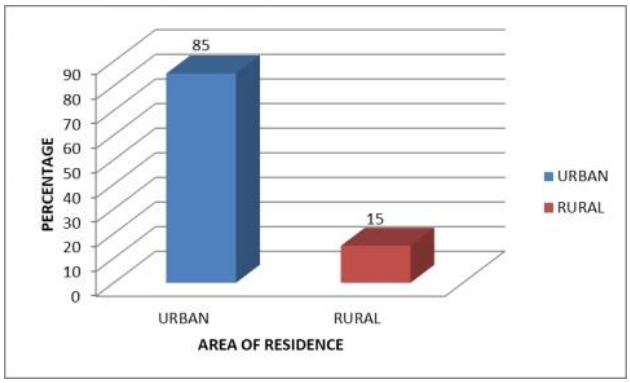

FIG: 4 % breakdown of B.Sc. nursing students according to where they live.

60 participants were examined, and 51 (85%) of the samples were from metropolitan areas, whereas 9 (15%) came from rural areas.

Table:2 .accordance to the frequency and percentage distribution of topics from a prior infection control webinar or seminar

n=60

Previous seminar or webinar attended on infection control	Frequency (f)	Percentage (%)
YES	36	60
NO	24	40

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SECTION-B

This section explains the data analysis and interpretation used to evaluate the B.Sc. nursing students' knowledge of infection control using a structured knowledge questionnaire.

Observations concerning the knowledge scores of B.Sc. nursing students enrolled in Metro College of Nursing.

Table 2: Mean, Median and Standard deviation of knowledge scores.

n=60

MEAN	MEDIAN	STANDARD DEVIATION
16.23	15	2.83

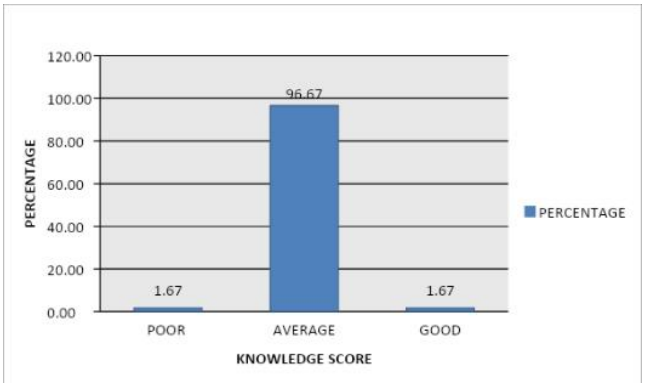

FIG: displaying the knowledge score's % distribution for the B.Sc. nursing student.

MAJOR FINDING OF THE STUDY

Section A: Findings related to sample characteristics

Part I: Frequency and percentage computation were used to describe the sample characteristics in the study.

·Out of 60 samples, 35(58%) belonged to the age group between 17-20 years, 24(40%) belonged to the age group between 21-24 years and 1(2%) belonged to the age group of above 24 years.

·Nearly 7(11.7%) of samples were male and 53(88.4%) samples were female.

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·With regard to religion of samples, 56 (93.3%) were Hindu, 2 (3.3%) were Muslim, 2 (3.3%) were Sikh.

·29 (49.3%) were studying in B.Sc. Nursing 2nd year and 31 (51.67%) were studying in B.Sc. Nursing 3rd year.

·51 (85%) of samples belonged to the urban area and 9 (15%) belonged to rural area.

Findings on knowledge scores for infection control among B.Sc. nursing students at Metro College of Nursing, Greater Noida, are presented in Section B.

Part I: Knowledge score mean, median, and standard deviation.

According to the results, B.Sc. nursing students' average knowledge score was 16.23, median was 16, and standard deviation was 2.83.

Part II: Teenagers' prevalence and percentage distribution according to their familiarity with infection control.

According to the results, 58 students (96.67%) had average understanding of infection control, 1 student (1.67%) had bad knowledge, and only 1 student (1.67%) had good knowledge.

DISCUSSION

According to the current study, the majority of students (96.70%) had an average level of knowledge regarding infection management, with a mean score of 16.23, a median of 16, and a standard deviation of 2.83.

CONCLUSION: In order to evaluate the information, a quantitative research approach was used for this study. The data were gathered using a standardised questionnaire, and they were evaluated using a proper statistical method. The results showed that the mean knowledge score for B.Sc. Nursing students overall was 16.23, the median was 15, and the standard deviation was 2.83; the majority of students, 58 (96.67%), had average knowledge, one (1.67%) had poor knowledge, and only one (1.67%) had good knowledge about infection control. The study's findings show that the B.Sc. nursing students had an average understanding of the topic of infection control, and the information booklet will help them learn more.

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