



“Knowledge Regarding The Prevention Of Catheter Associated Urinary Tract Infection In Patients, Among Staff Nurses In Selected Hospitals, Thrissur.”

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ABSTRACT

Catheter-associated urinary tract infection (CAUTI) is the most common healthcare-associated infection and cause of secondary bloodstream infections. Despite many advances in diagnostics, prevention and treatment, CAUTI remains a severe healthcare burden. More than 560,000 patients develop CAUTI each year, leading to extended hospital stays, increased healthcare costs, and patient morbidity and mortality. This study was undertaken to assess the knowledge of staff nurses regarding the prevention of catheter-associated urinary tract infection in patients, in selected hospitals, Thrissur. The objectives of the study were to assess the level of knowledge on prevention of catheter-associated urinary tract infection in patients, among staff nurses, to find the association of knowledge on prevention of urinary tract infection in patients among staff nurses with their selected demographic variables, and to prepare and distribute an information booklet on the prevention of Catheter-Associated Urinary Tract Infection. A descriptive survey research design was adopted for this study. The study was conducted among 60 staff nurses who were selected through the convenience sampling technique. The knowledge of the subjects was assessed using a structured knowledge questionnaire on prevention of CAUTI. The results showed that out of the 60 samples majority 50 (83.3%) staff nurses have average knowledge, where as 7 (11.7%) staff nurses have good knowledge, and only 3 (5%) of them have poor knowledge regarding the prevention of CAUTI. The study revealed that there is a significant association between the knowledge among the staff nurses regarding prevention of CAUTI with their selected demographic variables such as age and there is no significant association between the knowledge among staff nurses regarding the prevention of CAUTI with their selected demographic variables such as area of working, educational qualification, year of nursing experience and attended educational programme

Keywords : CAU TI; Knowledge; Prevention ; Nurses

INTRODUCTION

The battle between man and microbes is at its most obvious in institutions where vulnerable people are affected en masse. Historically, hospitals have a notorious reputation for infection which is ironic. The hazardous puerperal sepsis and the horrors of sepsis infection in the pre-listerian era have been well documented: admission to the hospital in the mid-nineteenth century was associated with the fear of gangrene and death. Since then, surgical and medical



techniques have developed dramatically, basic standards of infrastructure and hygiene have greatly improved and the identification and treatment of most infectious microorganisms have become possible. Despite such changes, infection acquired from hospitals remains a major cause of morbidity and mortality, leading directly or indirectly to an enormous increase in the cost of hospital care and to the emergence of new health hazards in the community¹

The terms healthcare-associated infections, hospital-acquired infections (HAI), and nosocomial infections (Greek: nosos-disease, komeion-to take care of, refers to hospitals) are defined as those infections which occur among patients admitted in hospitals and manifest after 48 hours of stay, and are neither present nor incubating at the time of hospital admission. Such infections may become evident during their stay in the hospital or, sometimes, only after their discharge². Urinary tract infection (UTI) is a term that is applied to a variety of clinical conditions ranging from the asymptomatic presence of bacteria in the urine to severe infection of the kidney with resultant symptoms³.

Catheter-Associated Urinary Tract Infections (CAUTI) are one of the most common health care-associated infections (HAIs). These infections are most likely caused by bacteria entering the body during the insertion of the catheter, as a result of prolonged or unnecessary use of urinary catheters, or due to a disruption in the closed drainage⁴. Among UTIs acquired in the hospital, approximately 75% are associated with a urinary catheter, which is a tube inserted into the bladder through the urethra to drain urine. About 15- 25% of hospitalized patients receive urinary catheters during their hospital stay. The most important risk factor for developing CAUTI is the prolonged use of the urinary catheter. Therefore, catheters should only be used after appropriate indications and should be removed as soon as they are no longer needed⁵.

Need of the study

Catheter-associated urinary tract infections (CAUTI) are the most commonly reported hospital-acquired condition and the rates continue to rise. More than 560,000 patients develop CAUTI each year, leading to extended hospital stays, increased healthcare costs and patient morbidity and mortality. Registered Nurses can play a major role in reducing CAUTI rates to save lives and prevent harm. The American Nurses Association offers an innovative, streamlined, and evidence-based clinical tool developed by leading experts⁶.

Statement of the study

A study to assess the knowledge on the prevention of catheter-associated urinary tract infection in patients, among staff nurses in selected hospitals, Thrissur.

Objectives

1. To assess the level of knowledge on prevention of catheter-associated urinary tract infection in patients among staff nurses.
2. To find the association of knowledge on prevention of catheter associated urinary tract infection in patients among staff nurses with their selected demographic variables.
3. To prepare and distribute an information booklet regarding the prevention of catheter-associated urinary tract infection.



Hypothesis

H.: There is a significant association between the selected demographic variables and knowledge score of the nurses on CAUTI.

Methodology

Research approach : in this study quantitative research approach was used

Method of data collection

Data collection consists of the procedures for gathering information to address the research problem. A formal permission to conduct the study was obtained from the Principal of Aswini College of Nursing followed by permission from the Nursing Superintendent of Aswini hospital Ltd, Thrissur. Data Collection was carried out from 16/08/2023 to 18/08/2023. The investigator assured that the study will not interfere with the clinical duty hour of staff nurses. After explaining the nature and purpose of the study, written consent was taken from the subjects. The investigators introduced themselves and established good rapport with the staff nurses. Then the investigators collected data from 60 samples who were selected through a purposive sampling technique. They were provided with a structured questionnaire with two sessions, in which section A consists of the demographic profile of the subjects and session B consists of a knowledge questionnaire on the prevention of CAUTI. Each sample took approximately 20 minutes to complete the questionnaire. The answers were recorded after their response. All samples cooperated during the collection of data. The information booklet on the prevention of CAUTI was given and the nurses got adequate knowledge regarding the prevention of catheter-associated urinary tract infection.

Research design:

In this study descriptive survey design was used .

Demographic variables :

In this study the demographic variables are age, educational qualification, year of nursing experience ,area of working , attended educational programme.

Population: The population selected for this study comprised all the staff nurses working in hospitals.

Target population: The target population comprised all the staff nurses working in hospitals in Thrissur.

Accessible population: In this study the accessible population comprised staff nurses working at wards, ICUs and the casualty of Aswini Hospital Ltd, Thrissur.

Sampling Technique

Non probability purposive sampling technique was adopted for selecting the samples.

Sample Size

The sample size of the present study is 60 staff nurses working at Aswini Hospital Ltd, Thrissur

Sample criteria

Inclusion criteria:

Staff nurses who are;

- working at Aswini Hospital Ltd, Thrissur



- willing to participate
 - available during data collection
- Exclusion criteria:

Staff nurses who are;

- not willing to participate in the study.
- on leave on the day.

Data analysis

Data was analyzed by using Fishers exact test

Description and scoring

Section A: Demographic variables

The demographic data includes age, educational qualifications, year of nursing experience, area of working and attended educational programme.

Section B: Structured knowledge questionnaire

This part consists of a knowledge questionnaire related to the prevention of catheter associated urinary tract infection. It contains 30 questions. The maximum score was 30 and the minimum 1 to interpret the level of knowledge.

RESEARCH FINDINGS

Section A : Description of the demographic profile of staff nurses.

Sl No	Demographic variables	Frequency (f)	Percentage (%)
1	AGE		
	<25 years	9	15%
	26-30 years	8	13.3%
	31-35 years	26	43.3%
>35 years	17	28.4%	
2	EDUCATIONAL QUALIFICATION		
	GNM	40	66.7%
	BSc Nursing	14	23.3%
	Post basic nursing MSc	6	10%
Nursing	0	0	



3	YEAR OF NURSING EXPERIENCE			
	<1 Year		9	15%
	1-5 years		12	20%
	6-10 years		15	25%
	>10 years		24	40%
4	AREA OF WORKING			
	ICU		22	36.7%
	Ward		33	55%
	Casualty OT		5 0	8.3% 0
5	ATTENDED	EDUCATIONAL		
	PROGRAMME			
	Yes		28	47.7%
	No		32	53.3%

Section B: Description on assessment of knowledge level of staff nurses regarding prevention of catheter associated urinary tract infection.

Table 2:- Frequency and percentage distribution of knowledge scores of staff nurses regarding the prevention of catheter-associated urinary tract infection

Level of knowledge	Frequency(f)	Percentage (%)
Poor knowledge	3	5%
Average knowledge	50	83.3%
Good knowledge	7	11.7%

DISCUSSION

Objective 1: To assess the level of knowledge on prevention of catheter-associated urinary tract infection in



patients among staff nurses

The present study revealed that out of the 60 samples 50(83.3%) have average knowledge, 7(11.7%) have good knowledge and only 3(5%) have poor knowledge regarding the prevention of catheter-associated urinary tract infection.

Objective 2: To find the association of the knowledge on prevention of catheter-associated urinary tract infection in patients among staff nurses with their selected demographic variables.

The current study revealed that there is a significant association between the level of knowledge among the subjects with their demographic variables like age (P value =0.049) in which P value is less than 0.05. Hence, the null hypothesis is rejected and the research hypothesis is accepted since there is a significant association between the level of knowledge among the subjects with their age whereas there is no association between level of knowledge among the subjects with their demographic variables such as educational qualifications (P value = 0.632), year of nursing experience(P value=0.418), area of working (P value = 0.838), attended educational programs (P value = 0.867), in which P value is greater than 0.05. Hence the null hypothesis is accepted.

CONCLUSION

The results showed that an association was found between the knowledge among the staff nurses with their selected demographic variables such as age (0.049) which was significant at 0.05 level and there is no association between the knowledge of staff nurses with their selected demographic variables such as educational qualification, year of nursing experience, area of working and attended educational programme which was non significant at 0.05 level. Based on the level of knowledge ,the investigators prepared and distributed an information booklet regarding the prevention of CAUTI.

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