

**A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE OF STAFF NURSES ON PREVENTION OF URINARY TRACT INFECTION WITH INDWELLING CATHETER.****Ms. Loveleen**

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ABSTRACT

Background: Urinary tract infection (UTI) is the most prevalent of all nosocomial infections and continues to be a serious problem in healthcare settings. Urinary tract infection results in increased morbidity, extended hospital stay and enhanced hospital expenditure. The nurse should know preventive measures for the prevention of UTI because nurses deal with the patient most of the time and may also handle the wastage of the client or body fluids of the patient for example vomitus, urine etc. **Objective:** So present study focused on the assessment of the necessary knowledge required about UTI among staff nurses and the areas in which nurses lack knowledge. **Materials and methods:** A Quantitative research approach with a descriptive design was used. A convenience sampling technique was used to select 50 staff nurses. Data was collected with a self-structured knowledge questionnaire with self-report method. **Results:** Collected data was analyzed by using descriptive and inferential statistics. The study concluded that 28% of staff nurses had excellent knowledge, 34% of staff nurses had good knowledge and 26% of staff nurses had below-average knowledge. **Conclusion:** The study concludes that, despite the common occurrence of CAUTIs in healthcare settings, a noteworthy proportion of nurses demonstrated commendable knowledge in preventing CAUTIs, suggesting the potential for effective preventive measures in clinical practice.

KEYWORDS : *Prevention, Staff nurses, Urinary, Tract, Infection, Indwelling***INTRODUCTION**

Urinary Tract Infections (UTIs) are among the most common healthcare-associated infections, and indwelling catheters are identified as a significant risk factor for their development. Hospitalized patients often require indwelling catheters for various medical conditions, making it imperative for healthcare professionals, especially staff nurses, to possess adequate knowledge on preventing UTIs associated with indwelling catheters. This study aims to assess the knowledge levels of staff nurses regarding the prevention of urinary tract infections in patients with indwelling catheters.¹

The prevention of UTIs in patients with indwelling catheters is a critical aspect of healthcare, as catheter-associated infections can lead to increased morbidity, prolonged hospital stays, and escalated healthcare costs. Adequate knowledge among healthcare providers, particularly nurses, is essential to implementing effective preventive measures and ensuring patient safety.²

Several studies have highlighted the association between nurse's knowledge and the prevention of catheter-associated urinary tract infections (CAUTIs). For instance, a study by Saint et al. (2018) emphasized the importance of nursing education and awareness in reducing the incidence of CAUTIs. Similarly, Smith and Jones (2019) demonstrated a positive correlation between nurse knowledge and compliance with catheter care protocols.^{3,4}

Despite the existing literature, there is a paucity of research specifically focusing on the knowledge levels of staff nurses regarding the prevention of UTIs associated with indwelling catheters. This study aims to address this gap by conducting a descriptive analysis of the knowledge levels among staff nurses working in diverse healthcare settings.

The findings of this study will provide valuable insights into the current knowledge levels of staff nurses regarding the prevention of UTIs with indwelling catheters. The results may inform targeted educational interventions to enhance nursing awareness and adherence to evidence-based catheter care practices, ultimately contributing to the reduction of catheter-associated urinary tract infections.

MATERIAL AND METHODS

A descriptive research design was employed to evaluate the knowledge of staff nurses regarding the prevention of urinary tract infections associated with indwelling catheters. A convenience sampling technique was utilized to select a sample of 50 staff nurses. The assessment of nurses' knowledge was conducted using a self-

structured knowledge questionnaire with a self-report method. The study took place at Guru Gobind Singh Medical College and Hospital in Faridkot, Punjab, India. Data collection occurred in July 2023 at the same medical college and hospital. The data collection tool comprised two distinct parts:

Part A: Socio-demographic profile and Part B: Self-Structured questionnaire

RESULTS**Table 1: Frequency and Percentage Distribution of Staff Nurses as per Socio-Demographic Profile.**

Socio-demographic Characteristics	Frequency (f)	Percentage (%)
Age (In years)		
20-30	31	62%
31-40	07	14%
41-50	07	14%
51-60	05	10%
Gender		
Male	-	-
Female	50	100%
Professional Education		
GNM	09	18%
BSC (N)/PBBSC (N)	40	80%
MSC (N)	01	02%
Professional experience (In years)		
1-10	37	74%
11-20	05	10%
21-30	05	10%
31-40	03	06%

Table 1 illustrates the distribution of staff nurses based on their socio-demographic profile. The study encompassed a total of 50 participants. Most of the subjects, accounting for 62%, fell within the 20-30 age bracket, while an equal number, 14%, belonged to both the 31-40 and 41-50 age groups. Merely 10% of the participants fell into the 51-60 age range. Notably, all subjects were female.

Regarding professional experience, the most of staff nurses (80%) held a Bachelor of Science in Nursing (BSc (N) qualification, 18% were General Nursing and Midwifery (GNM), and a mere 2% had graduated with a Master of Science in Nursing (MSc (N)). Concerning the duration of professional experience, around three-fourths of the staff nurses (74%) had 1-10 years of experience, with an equivalent number of participants (10%) falling into both the 11-20 and 21-30 years of experience categories. Only a small proportion (6%) had 31-40 years

of professional experience. It is noteworthy that none of the staff nurses had attended any in-service education programs related to urinary tract infections.

Table 2: Frequency and Percentage Distribution of Staff Nurses according to levels of Knowledge.

Level Of Knowledge	Score Percentage (%)	n	Percentage
Excellent	>75	14	28%
Good	60-75	17	34%
Average	50-60	13	26%
Below Average	<50	06	12%

Maximum score: 22

Minimum score: 00

Table 2 illustrates that 28% exhibited excellent knowledge with a mean score percentage exceeding 75, 34% demonstrated good knowledge with a mean score percentage ranging between 61 and 75, 26% possessed average knowledge mean scoring percentage between 50 and 60, and 12% displayed below-average knowledge with a mean score percentage score below 50.

Table 3: Knowledge Mean Score of Staff Nurses according to Age Group, Professional Education and Professional Experience

Age (In years)	Mean score	Mean Score Percentage (%)	Level of Knowledge
20-30	13.4	60.9%	Good
31-40	14.7	66.8%	Good
41-50	16.1	73.1%	Good
51-60	16.2	73.6%	Good
Professional Education			
GNM	13.55	61.5%	Good
B.Sc.(N)/P.B.B.Sc. (N)	14.7	66.8%	Good
M.Sc.(N)	17	77.2%	Excellent
Professional Experience (in years)			
1-10	13.8	62.7%	Good
11-20	16	72.7%	Good
21-30	16.8	76.3%	Excellent
31-40	17.3	76.3%	Excellent

Table 3 depicts that the 20-30 years age group achieved a mean score of 13.4 (60.9%), the 31-40 years age group attained a mean score of 14.7 (66.8%), the 41-50 years age group secured a mean score of 16.1 (73.1%), and the 51-60 years age group obtained a mean score of 16.2 (73.6%). This indicates that all staff nurses possess a good level of knowledge regarding preventing Urinary Tract Infections.

It also illustrates that staff nurses with GNM qualifications obtained a mean score of 13.5 (61.5%), BSC staff nurses achieved a mean score of 14.7 (66.8%), and those with an MSc in Nursing attained a mean score of 17 (77.2%). Consequently, GNM and BSC staff nurses exhibited good knowledge, whereas staff nurses with an MSc in Nursing demonstrated excellent knowledge regarding the prevention of UTI.

This table further presents that the nurses with 1-10 years of experience attained a mean score of 13.8 (62.7%), those with 11-20 years of experience achieved a mean score of 16 (72.7%), subjects with 21-30 years of experience secured a mean score of 16.8 (76.3%), and those with 31-40 years of experience garnered a mean score of 17.3 (76.3%). Consequently, it can be inferred that staff nurses with 1-10 years and 11-20 years of experience demonstrated good knowledge, while those with 21-30 and 31-40 years of experience exhibited excellent knowledge.

DISCUSSION

The present study was conducted to assess the level of knowledge of staff nurses on urinary tract infections and their prevention. Results indicated that 28% exhibited excellent knowledge, 34% demonstrated good knowledge, 26% possessed average knowledge, and 12% displayed below-average knowledge.

Staff nurses in the age group of 41-50 years and 51-60 years obtained a mean score percentage of 73.1 and 73.6 (%) respectively. Further, postgraduate nurses had an excellent level of knowledge, with a mean score percentage of 77.2 (%). Staff nurses with 21-30 years of experience secured a mean score of 16.8 (76.3%), and those with 31-40

years of experience garnered a mean score of 17.3 (76.3%), and hence had excellent knowledge.

A similar study conducted by Algarni, Sofar, and Wazqar aimed to assess 137 nurses' knowledge concerning the prevention of Catheter-Associated Urinary Tract infections (CAUTI) at King Abdulaziz University Hospital (KAAUH) in 2019. The findings revealed that a substantial proportion of nurses exhibited a low level of knowledge (62.77%).⁵

Another study was conducted at Rajshahi Medical College Hospital, Bangladesh, by Miah et al. (2023) to evaluate 110 nurses' knowledge concerning the prevention of Catheter-Associated Urinary Tract infections (CAUTI). Findings revealed that a substantial portion of nurses (67%) fell within the 31-40 age group, with 59% holding a Diploma in Nursing. Notably, 47% exhibited a high level of knowledge regarding CAUTI prevention, possibly influenced by clinical experiences.⁶

CONCLUSION

The study concludes that, despite the common occurrence of CAUTIs in healthcare settings, a noteworthy proportion of nurses demonstrated commendable knowledge in preventing CAUTIs, suggesting the potential for effective preventive measures in clinical practice.

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