

1 *A quasi experimental study to assess the effectiveness of structured teaching*
2 *on the level of knowledge regarding catheter associated urinary tract infection*
3 *among staff nurses.*

4 **Abstract**

5 **Background:** Urinary tract infection (UTI) is defined as an infection that involves any part of
6 the urinary system, including the urethra, bladder, ureters and kidneys. Urinary tract
7 infections (UTI) are among the most common bacterial infections, and affect about 150
8 million individuals annually worldwide. UTIs in men are considered complicated regardless
9 of clinical scenario. In the United States, up to 80% of complicated urinary tract infection are
10 attributable to indwelling urinary catheters. The aim of the study was to assess the
11 effectiveness of structured teaching program on the level of knowledge regarding Catheter
12 associated urinary tract infection.

13 **Objectives:** To evaluate the effectiveness of structured teaching program on the level of
14 knowledge regarding catheter associated urinary tract infection among staff nurses.

15 **Material and methods:** A quantitative research approach with a Quasi experimental one
16 group Pre-test and Post- test design was used for the study to accomplish the objectives. The
17 sample consisted of 60 staff nurses. They were chosen by purposive sampling technique. The
18 study was conducted at Metro hospital Haridwar. A structured knowledge questionnaire was
19 used to assess the knowledge regarding catheter associated urinary tract infection. Reliability
20 of the tool was text by using split half method.

21 **Results:** The results showed the enhancement of knowledge with a mean score of 8.86 and
22 the combined 't' test value was significant i.e 50.719 at $P < 0.05$ level.

23 **Conclusion:** The study concluded that structured teaching program was effective and
24 improving knowledge of staff nurse regarding catheter associated urinary tract infection. It is
25 cost effective and can be done at any time.

26 **Introduction:** Today, healthcare-associated infections are considered a major public health
27 problem by the World Health Organization (WHO) as they increase morbidity and mortality,
28 length of stay in hospital, and healthcare-associated costs, causing additional suffering for
29 affected patients and their families.

30 Urinary tract infection (UTI) is defined as an infection that involves any part of the urinary
31 system, including the urethra, bladder, ureters and kidneys. Urinary tract infections (UTI) are
32 among the most common bacterial infections, and affect about 150 million individuals
33 annually worldwide.

34 Catheter-associated UTI (CAUTI) is one of the most common types of HAIs reported by the
35 National Healthcare Safety Network (NHSN). CAUTIs are also probably the most
36 preventable HAIs; however, despite advances in diagnosis and treatment, CAUTIs continue
37 to be a serious healthcare problem. CAUTIs are the most common nosocomial infections, and
38 account for 1 million cases per year in the United States. They are the most common cause of
39 secondary bloodstream infections. 3–10% of residents in long-term care facilities are
40 managed with chronic indwelling catheters.

41 **Material and methods:** Conducted in the Metro Hospital Haridwar, Uttarakhand from
42 Quasi experimental, Pre-Experimentalonegrouppre-test,post-testdesign was adopted and 60
43 subjects were included in the study by purposive sampling technique. Self-structured
44 questionnaire was used to assess demographic variables and thelevelof knowledge regarding
45 Catheter associated urinary tractinfection.

46 **Instrument/Tool:**The tool was prepared according to objectives of the study. The researcher
47 used a Self-structured questionnaire to assess demographic variables and thelevelof
48 knowledge regarding Catheter associated urinary tractinfection among staff nurses.

49 **Tool 1 Socio demographic variables.**

50 It contains 8 items, Age, Gender, educational status, Duration of clinical experience,
51 Religion, Monthly family income, Place of residence, Previous knowledge on supra pubic
52 catheterisation

53 **Tool 2 Structured knowledge questionnaire.**

54 Structured knowledge questionnaire was used to assess the level of knowledge regarding
55 Catheter associated urinary tractinfection among staff nurses. It consists of 25 items each
56 items had 4 alternatives varying from the response “inadequate to moderate” knowledge.
57 Each response carries a score of 1,2,3,4 respectively.

58 **Statistical Analysis**

59 The data was presented as Mean \pm Standard deviation (SD). Frequency and percentage
 60 distribution was used to evaluate socio demographic variables of staff nurses at Metro
 61 hospital Haridwar, Uttarakhand. Self-structured questionnaire was used to assess the level of
 62 knowledge regarding Catheter associated urinary tract infection.

63 **Table No.1:- Frequency and percentage distribution of the demographic variables**
 64 **among staff nurses N=60**

S.No.	Variables	Frequency	Percentage %
1.	Age (in years)		
	21-25 years	23	38.3 %
	26-30 years	07	11.7%
	Above 31 years	30	50%
2.	Gender		
	Male	12	20%
	Female	48	80%
3.	Educational status		
	GNM	49	81.7%
	B.Sc. Nursing	11	18.3%
4.	Duration of clinical experience		
	0-1 year	07	11.7%
	2-5 years	23	38.3%
	More than 5 years	30	50%
5.	Religion		
	Christian	21	35%
	Hindu	35	58.3%
	Muslim	04	6.7%
6.	Monthly family income		
	Below Rs 20,000	11	18.3%
	Rs 20,000-30,000	34	56.7%
	Rs 30,000-40,000	12	20%
	Rs 40,000 and above	03	5%
7.	Place of residence		
	Urban	58	96.7%
	Rural	02	3.3%
8.	Previous source of knowledge on		

cathetherassociated UTI			
	Health Professionals	19	31.7%
	Books	34	56.7%
	Media	03	5%
	Other	01	1.6%

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66 **Table 1-** Shows that, in gender the majority of 80% staff nurses were female and 20% staff
67 nurses were male in study. Majority of 81.7% staff nurses were GNM followed by 18.3% had
68 completed B.Sc. nursing. Majority 50% staff nurses had clinical experience of more than 5
69 years. Around 58.3% staff nurses belongs to Hindu religion. Depicts that 56.7% staff nurses
70 family monthly income was Rs 20,000- 30,000. Around majority of 96.7% staff nurses lives
71 in urban area. Most of the staff nurses 56.7% had their source of previous knowledge through
72 books.

73 **Table No.2:-Findings related to effectiveness of structured teaching program**
74 **N=60**

S.no.	Knowledge	Mean	Mean%	SD	t value	Df	Inference
1	Pre test	12.35	49.42	1.23	50.719	59	S
2	Post test	21.21	84.85	1.39			

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76 **Table 2-** Depicts the effectiveness of the structured teaching program.It shows that the t value
77 were 50.719 at degree of freedom 59. Inference was significant which shows that structured
78 teaching program was effective.

79 Hence Hypothesis H1 stated that the mean post-test knowledge score regarding
80 catheter associated UTI will be significantly higher than the pretest knowledge score
81 among staff nurses who received structured teaching program is accepted and null
82 hypothesis is rejected.

83 **Table 3- Comparison of Pre test and Post Test knowledge scores regarding catheter**
84 **associated Urinary Tract Infection among staff nurses.**

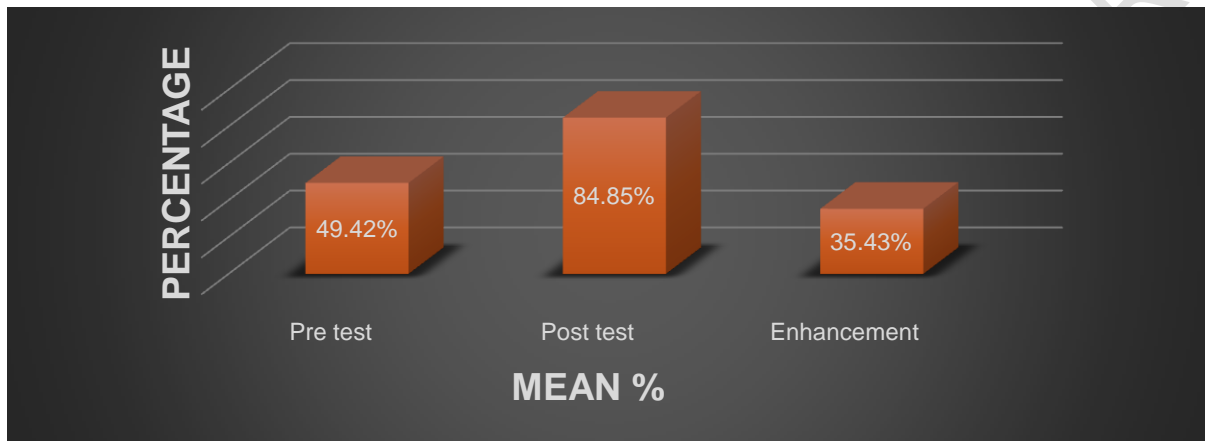
85

N=60

S.No.	Knowledge	Mean	Mean %	SD	Enhancement
1	Pre Test	12.35	49.42	1.23	35.43
2	Post test	21.21	84.85	1.39	

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89 **Fig.-**Showing enhancement in knowledge level of staff nurses regarding Catheter associated
90 UTI among staff nurses.

91 **Table 3 :-**Depicts comparison of pretest and post-test knowledge scores. The knowledge
92 score of Staff nurses regarding catheter associated urinary tract infection during pretest. The
93 mean pretest score was 12.35 with a standard deviation of 1.23 and mean Percentage was
94 49.42%. after intervention with Structured teaching program knowledge score of Staff nurses
95 regarding catheter associated urinary tract infection during post-test was enhanced. The mean
96 posttest score was 21.21 with a standard deviation of 1.39 and mean Percentage was
97 84.85%.The overall enhancement was 35.43%.

98 **Limitations :-**

99 1.The study was confined to a small number of samples which limit the generalization of the
100 findings.

101 2. While collecting the data some staff nurses were not interested to participate in the study
102 due to busy schedule.

103 3. Intervention was given for a very short period.

104 **Conclusion :-**The present investigation concludes that structured teaching program was
105 effectual in increasing the knowledge regarding Catheter associated urinary tract infection
106 among staff nurses. This chapter has dealt with the discussion of the findings and provides
107 the implications for nursing practice, nursing education, nursing administration and nursing
108 research. It clarifies the limitations of the study and gives recommendations for further
109 research.

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