

URINARY TRACT INFECTION IN PATIENTS WITH INDWELLING CATHETER

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Abstract

Urinary tract infection is an important cause of morbidity and mortality in Indian subjects, affecting all age groups across the life span. The objectives of the study is to (1) To assess the existing knowledge score regarding preventive measures of urinary tract infection in patients with indwelling catheter among nursing students.

(2) To assess the existing practice score regarding preventive measures of urinary tract infection in patients with indwelling catheter among nursing students. (3) To develop and implement nursing intervention guidelines regarding preventive measures of urinary tract infection in patients with indwelling catheter. (4) To assess the outcome of knowledge scores regarding preventive measures of urinary tract infection in patients with indwelling catheter among nursing students. (5) To assess the outcome of practice scores preventive measures of urinary tract infection in patients with indwelling catheter among nursing students. (6) To find an association between pretest knowledge scores of nursing students with their socio-demographic variables. An evaluative research approach with pre- experimental design is used. Non probability convenience sampling technique was used to select the 60 samples of internship nursing students and data collection was done. In the pretest conducted among 60 subjects, none had good knowledge score. In the post test, **80%** had excellent knowledge score on care of preventive measures of UTI after administration of nursing guidelines. In the pretest conducted among 60 subjects, none had good practice score. In the post test, **80%** had good practice score on catheter care after administration of nursing guidelines. There was a significant increase in posttest knowledge scores through nursing guidelines. In this research study findings revealed that nursing guide lines is highly effective in improving knowledge and practice

of internship nursing students regarding preventive measures of urinary tract infection in patients with indwelling catheter.

Key words: Outcome, indwelling catheter, care of preventive measures of UTI, nursing guidelines, internship nursing students.

Introduction

“Prevention is better than cure”.

- Desiderius Erasmus.

The urinary system consists of the kidneys, ureters, bladder, and urethra. The key elements in the system are the kidneys, a pair of purplish-brown organs located below the ribs toward the middle of the back. The kidneys remove excess liquid and wastes from the blood in the form of urine, keep a stable balance of salts and other substances in the blood, and produce a hormone that aids the formation of red blood cells. Narrow tubes called ureters carry urine from the kidneys to the bladder, a sac-like organ in the lower abdomen. Urine is stored in the bladder and emptied through the urethra.

Urinary tract infections are a serious health problem affecting millions of people each year. Infections of the urinary tract are the second most common type of infection in the body. Urinary tract infections (UTIs) account for about 8.3 million doctor visits each year. Women are especially prone to UTIs for reasons that are not yet well understood. One woman in five develops a UTI during her lifetime. UTIs in men are not as common as in women but can be very serious when they do occur.

A urinary tract infection (UTI) is a bacterial infection that affects any part of the urinary tract. The

main causative agent is *Escherichia coli*. Although urine contains a variety of fluids, salts, and waste products, it usually does not have bacteria in it. When bacteria get into the bladder or kidney and multiply in the urine, they cause a UTI. The most common type of UTI is a bladder infection which is also often called cystitis. Another kind of UTI is a kidney infection, known as pyelonephritis, and is much more serious. Although, they cause discomfort, urinary tract

infections can usually be quickly and easily treated with a short course of antibiotics.

Methodology

Source of Data Collection: Data will be collected from the internship nursing students who have worked in Dhiraj General Hospital.

Research Design: The research design will be one group pre-test and post-test under pre experimental approach.

Table 1:

Schematical representation of research design

Group	Pre-test	Intervention	Post-test
Internship nursing students in Dhiraj General Hospital.	O ₁ O ₂	X	O ₃ O ₄

O₁ O₂ - Pre-test to assess the knowledge & practice level of nursing intervention on guidelines regarding preventive measures of UTI.

X - Administration of nursing guidelines on knowledge and practice regarding preventive measures of UTI.

O₃ O₄ - Post-test to assess the knowledge & practice level of nursing intervention of guidelines on regarding preventive measures of UTI.

Research setting: the study will be conducted at Dhiraj General Hospital, Piparia, Vadodara.

Population: Target population: Internship nursing students.

Accessible population: Internship nursing students who have worked in Dhiraj General Hospital, Piparia, Vadodara.

Sampling Criteria

Sample: The sample consists of internship nursing student who fulfill the inclusion criteria.

Sample Size: The sample size for the study will be 60 internship nursing students.

Sampling Technique: Sampling procedure adopted for the study will be convenient sampling.

Inclusion Criteria

- Internship nursing students studying in the nursing colleges of Vadodara district.
- Present during data collection.

Exclusion Criteria

- Who are absent during pre-test, or post-test.
- Unable to follow the instructions.

Method of Data Collection

Instruments for study: The data collection will be done with the help of nursing guidelines knowledge questionnaire & check list for practice.

It consists of: **Section A-** To analyze demographic data, nursing guidelines questionnaire contains variable like age, gender, professional, present placement area, residential area.

Section B - It consists of nursing guidelines knowledge questionnaire regarding preventive measures of UTI.

Section C - It consists of observational checklist to assess the practice on catheter care.

Development of tool

Tool I - The Demographic data collection tool: Questionnaires for demographic data collection tool are that of age, gender, professional present placement area, and residential area.

Tool II - Nursing guidelines in 22 knowledge questionnaire and 20 for checklist regarding preventive measures of UTI.

The investigator prepared this tool based on the objectives of the study. This tool consists 22 multiple choice questions to assess the level of knowledge regarding preventive measures of UTI. Total of 22 multiple choices questions involving education on modification of introduction of UTI, catheter care, removal of catheter. And also 20 statement of catheter care through observation practice checklist.

Plan for data collection procedure

Content validity was ascertained in consultation with guides and experts in the fields of urology and nursing. Reliability of the tool was established by test re- test method.

After obtaining permission from the concerned authority an informed consent will be obtain from the subject. The process of the study will be explained to the subjects, after explaining the process of the study, socio demographic data will be collected with the help of a nursing guidelines questionnaire. The knowledge of patients regarding preventive measures of UTI. Nursing guidelines education will be provided to internship nursing students regarding preventive measures of UTI. On the same day of pretest.

After 7 days pos-test will be conducted to evaluate the outcome of nursing guidelines on preventive measure of UTI among internship nursing student.

Results

Part I: Description demographic characteristic of the samples.

Despite the majority 32(53.33%) responds belongs to the age group of 23 years of age while in the age group of 22 years, 12(20%) responds belongs to this category also in the age group of 21 years, 11(18.33%) and >23 years, 05(8.33%) responds belonged in this particular study.

With regard of gender depicts the finding related to gender of the internship nursing student's shows that higher response of the female 53 (88.33%) and the remaining were males (11.66%).

Among the subjects students, 30(50%) of them were having GNM qualification and 30(50%) were having B.Sc. nursing qualification.

There are 39% internship nursing students who were working in the critical ward, 23% working in MMW & FMW ward, 23 working in MSW & FSW, 5% working in a pediatric wards, 5% working in a urology & nephrology wards, and 5% internship nursing students working in a other specify area of hospital during their past experience.

Depict the analysis related to residential areas basis of information received by the respondents reveals that majority of 49 (81.66%) of the respondents was semi urban, 7(11.66%) of the respondents was rural as urban respondents 4(6.67%).

Part II: Evaluation of the outcome of Nursing Guidelines regarding preventive measures of UTI.

Knowledge Score of Internship Nursing Students.

(N=60)

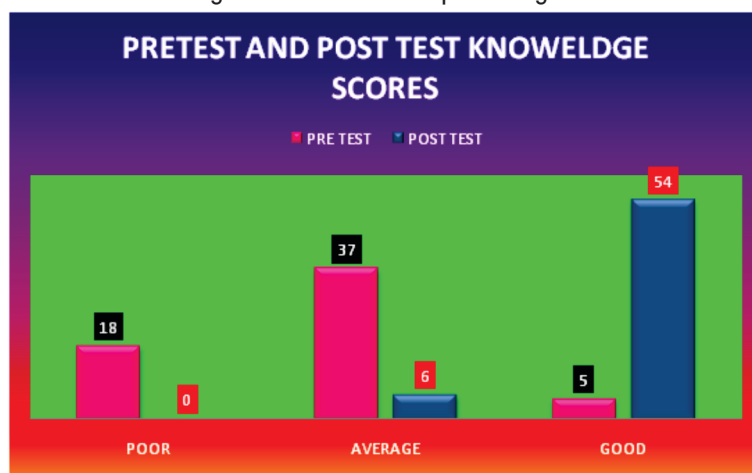


Fig 1. Bar diagram representing pre-test & post-test and frequency interpretation of respondents.

The data from the above table shows that scoring difference between pre-test and post-test. It shows that in pre-test among all internship nursing students majority of 37(61.66%) internship nursing students scored average performance, 18(30%) scored poor performance, 5(8.34%) internship nursing students scored good performance.

In the post-test there was a marked improvement in the knowledge of internship nursing students. In post-test score maximum 54(90%) internship nursing students scored good performance and 6(10%) scored good performance.

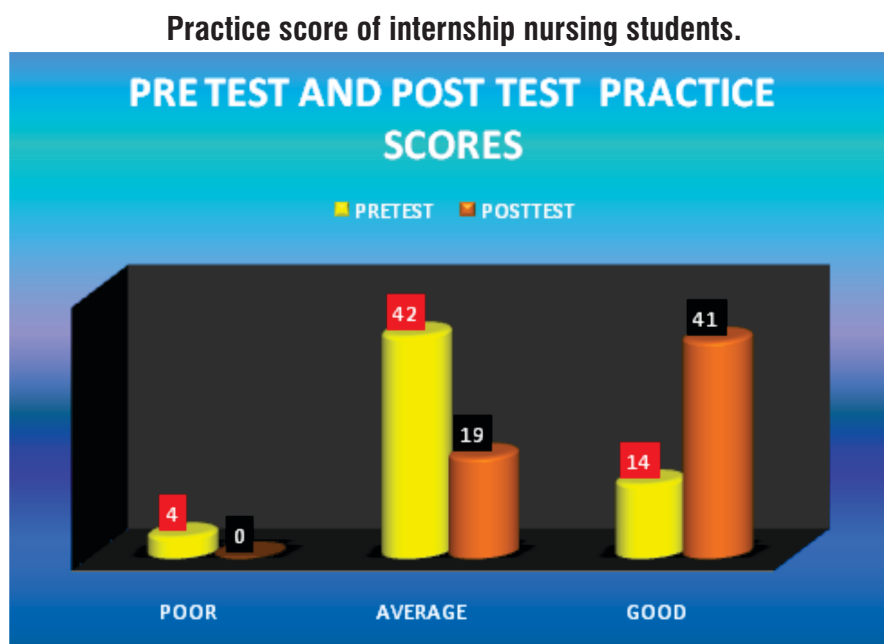


Fig 2. Bar diagram representing pre-test & post-test frequency interpretation of respondents.

In the pre-test among all internship nursing students majority of 42(70.0%) internship nursing students scored average performance, 4(6.7%) scored poor performance, and 14(23.3%) internship nursing students scored good performance.

In the post-test there was a marked improvement in the practice of internship nursing students. In the post-test score, maximum 41(68.3%) internship nursing students scored good performance and 19 (31.3%) scored average performance.

Part III: Testing the research hypothesis.

There is a significant difference between pre-test and post-test knowledge and practice scores. Hypothesis was tested using paired 't' test. The value of 't' was calculated to analyze the difference in knowledge and practice of internship nursing student with their pre-test and post-test scores. The research hypothesis H_1 & H_2 was formulated to evaluate the outcome of the nursing guidelines on knowledge and practice regarding preventive measures of UTI.

H_1 & H_2 : the mean post-test knowledge score of internship nursing students regarding preventive measures of UTI in patients with indwelling catheter was significantly higher than mean pretest knowledge score.

Association of the pre-test knowledge scores with selected demographic variables (N=60).

H_3 : There will be significant association between pretest, knowledge scores of internship nursing students with their socio-demographic variables.

Table 1:
Association of Demographic Variable with the Level of Pre-Test Knowledge Score of Internship
Nursing Students. (N=60)

Variables	Poor	Average	Good	Total	X ²	Level of significance
Age (years)					5.77 (DF-6)	NS
21years	4	7	1	12		
22 years	1	9	2	12		
23 years	10	19	2	31		
>23 years	3	2	0	5		
Total	18	37	5	60		
Gender					3.06 DF-2	NS
Male	4	3	0	7		
Female	14	34	5	53		
Total	18	37	5	60		
Professional Qualification					6.62 DF- 2 p=0.3	S
GNM	13	15	1	29		
B.Sc. NURSING	5	22	4	31		
Total	18	37	5	60		
Present Placement Area					13.7 DF-10	NS
Critical care	6	18	2	26		
Urology/nephrology ward	2	1	0	3		
MMW&FMW	4	10	0	14		
MSW &FSW	6	4	1	11		
Pediatric wards	0	2	1	3		
Other specify	0	2	1	3		
Total	18	37	5	60		
Residential area					2.97 DF-4	NS
Urban	0	4	0	4		
Rural	2	4	1	7		
Semi urban	16	29	4	49		
Total	18	37	5	60		

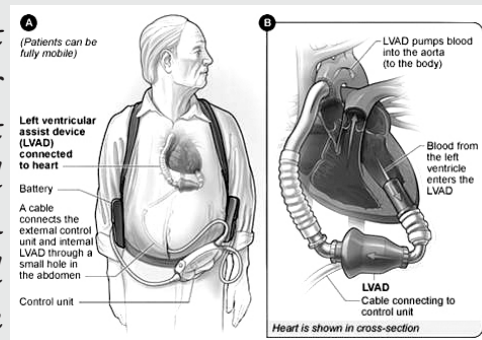
So we conclude that from the entire variable only one variable that is significantly associated with pre-test knowledge hence the hypothesis (**H₃**) was accept with only professional qualification.

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Caregivers also report stress when heart failure patients receive LVADs

When heart failure patients receive a left ventricular assist device (LVAD), their caregivers also seem to suffer, at least initially, according to new research published March 7, 2018 in *Journal of the American Heart Association*. While patients reported dramatic improvement in quality of life in the first month after receiving an LVAD, caregivers reported significantly increased stress related to caregiving in terms of time constraints (no time for self-care or other obligations) and compromised social life, followed by physical strain. (eMediNexus, 08 March 2018.)



Perfection is not attainable,
but if we chase perfection we can catch excellence.

-Vince Lombardi