A Study to Assess the Effectiveness of Self-Instructional Module on Knowledge Regarding Prevention of Urinary Tract Infection Among Staff Nurses working in selected Hospitals at Bhatkal, Uttara

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Abstract—**A pre-experimental one group pretest posttest design was used for the study. Sample consisted of 30 staff nurses. The sample was selected by purposive sampling technique. A structured questionnaire was given to assess the knowledge regarding prevention of Urinary Tract Infection among Staff nurses. Before data collection the researcher introduced the purpose of the study clarifies the queries and took the verbal consent from the subjects. The mean percentage of post-test knowledge score (78.4%) was higher than the mean percentage of pre-test knowledge score (41.4%). The calculated 't' value showed significant difference between mean pre and post-test knowledge scores. Calculated 'X²' values showed significant association between the demographic variables with their pretest knowledge scores at 0.05 level of significance. The study concluded that the SIM is effective in increasing the knowledge of staff nurses.**

Index Terms—**Effectiveness, Informational booklet, Knowledge, Purposive Sampling Technique, Staff nurses, UTI**

I. INTRODUCTION

Urinary tract infections are infections of the urethra, bladder, ureters, or the kidneys, which comprise the urinary tract. E. coli bacteria cause the majority of UTIs, but many other bacteria, fungi, and parasites may also cause UTIs. When bacteria multiply an infection can occur. An infection limited to the urethra is called urethritis. If bacteria move to the bladder and multiply, a bladder infection called cystitis. If the infection is not treated promptly, bacteria may then travel further up the ureters to multiply and infect the kidneys, called pyelonephritis.[3]The organisms most commonly responsible for catheter-associated UTIs are E. coli, Proteus mirabilis, P.aeruginosa, and Streptococcus faecalis, Staphylococcus aureus, Klebsiella pneumoniae,etc can cause UTI.[5] In addition Mycoplasma and Chlamydia may be associated with sexually transmitted UTI. The caregiver should obtain a detailed history from the patient, and if a UTI is suspected, a urine sample is usually obtained. The best sample is a midstream sample of urine placed in a sterile cup because it usually contains only the pathogenic organisms instead of the transient organisms that may be washed from adjacent surfaces when the urine stream begins.[7] Treatment for a UTI should be designed for each patient individually and is usually based on the patient's underlying medical conditions, what pathogen(s) are causing the infection, and the susceptibility of the pathogen(s) to treatments. Patients who are very ill usually require intravenous (IV) antibiotics and admission to a hospital; they usually have a kidney infection (pyelonephritis) that may be spreading to the bloodstream.[2]

II. OBJECTIVE OF THE STUDY

Character istics	Category	Respondents	
		Number	Percent
Age group (years)	20-30	9	30.0
	31-40	17	56.7
	41 & above	4	13.3
Gender	Male	2	6.7
	Female	28	93.3
Professio nal Qualifica tion	ANM	17	56.7
	GNM	13	43.3
Total		30	100.0

1.To assess the knowledge regarding Urinary Tract Infection and its prevention among staff nurses in selected hospitals.

2.To assess the effectiveness of Self-Instructional Module on knowledge regarding Urinary Tract Infection and its prevention among staff nurses in selected hospitals.

3.To determine the association between pretest knowledge score on Urinary Tract Infection and its prevention among staff nurse and selected demographic variables.

HYPOTHESIS

H1: The mean posttest knowledge score of staff nurses will be significantly higher than their mean pretest score on knowledge and prevention on UTI.

H2: There will be significant association between the pretest knowledge of staff nurses and selected demographic variables.

III.METHODS AND MATERIALS

The evaluative approach was adopted for the study. A pre-experimental one group pre-test post-test design was used for the study. The purposive sampling technique was used. A descriptive research design is used to collect information within a given population having some characteristic of interest. The sample size consists of 30 staff nurses who were fulfilling the inclusion criteria. A structured knowledge questionnaire was used to assess the knowledge and self-instructional module was implemented to evaluate its effectiveness. The group included only those study subjects who were present at the time of data collection.

IV.RESULT AND ANALYSIS

SECTION I: demographic characteristics of respondents

Table 1: Classification of Respondents by Age, Gender and Professional Qualification

N=30

The age wise distribution of subjects as depicts in table 1 revealed that 30.0% of the subjects were 20-30 years, 56.7% were belongs to 31-40 years and 13.3 % belongs to 41 & above.

The gender wise distribution of subjects as depicts in table 1 revealed that 6.7% of the subjects were males and 93.3% were belongs to females.

The professional qualification wise distribution of subjects as depicts in table 1 revealed that 56.7% of the subjects were ANM and 43.3% were belongs to GNM.

SECTION II: ANALYSIS OF PRE-TEST AND POST-TEST KNOWLEDGE SCORE OF RESPONDENTS AND EFFECTIVENESS OF BOOKLET INFORMATION.
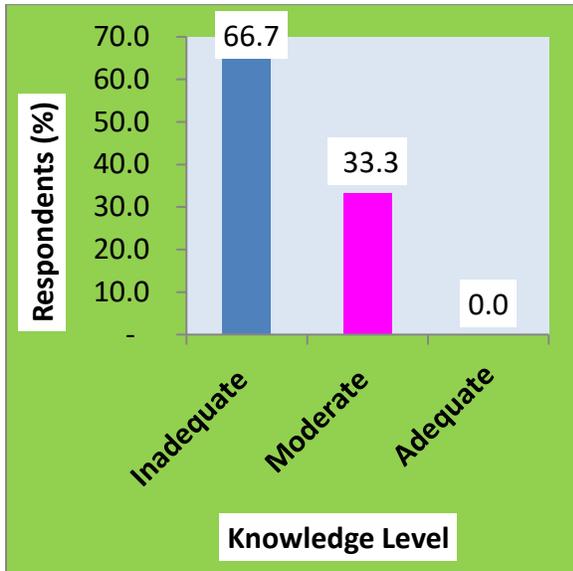
a)Overall Pretest Knowledge level on Prevention of Urinary Tract Infection

Table 2: Classification of Respondent Pre-test Knowledge level on Prevention of Urinary Tract Infection

Knowledge Level	Category	Respondents	
		Number	Percent
Inadequate	≤ 50 % Score	20	66.7
Moderate	51-75% Score	10	33.3
Adequate	> 75 % Score	0	0.0
Total		30	100.0

Tabe 2 shows that classification of respondent`s knowledge according to their knowledge level in the pretest. The data shows that, majority of respondents

66.7 % had inadequate knowledge, 33.3% had moderate knowledge and none of them adequate knowledge.
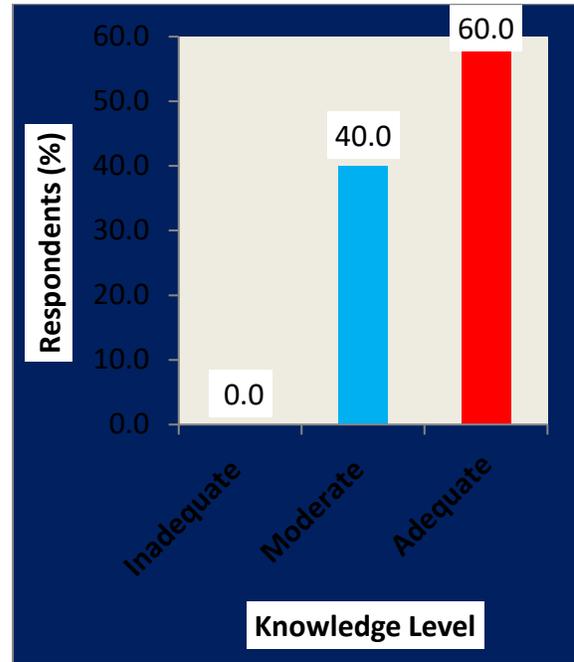

b) Overall Post test Knowledge level on Prevention of Urinary Tract Infection

Table 3: Classification of Respondents of Post test Knowledge level on Prevention of Urinary Tract Infection

Knowledge Level	Category	Respondents	
		Number	Percent
Inadequate	$\leq 50\%$ Score	0	0.0
Moderate	51-75 % Score	12	40.0
Adequate	> 75 % Score	18	60.0
Total		30	100.0

Tabe 3 shows that classification of respondent`s knowledge according to their knowledge level in the post-test. The data shows that, majority of respondents 60.0% had adequate knowledge, 40.0% had moderate knowledge and none of them inadequate knowledge.

Classification of Respondents of Post test Knowledge level on Prevention of Urinary Tract Infection

SECTION – 3: ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLES AND PRE-TEST KNOWLEDGE LEVEL ON PREVENTION OF URINARY TRACT INFECTION

The findings revealed that association between pre-test and post -test level of knowledge of study participants and their socio demographic variables and calculated X^2 values. The calculated X^2 values with regard to all the selected socio demographic variables viz. Age ($X^2 =7.24$), gender ($X^2= 0.75$), professional qualification ($X^2 =4.34$), experience ($X^2 =5.31$), department of working ($X^2 =9.43$), were less than table value a 0.05 level of significant at respective degree of freedom at hence were statistically not significant. The findings reveal that, the X^2 values calculated for age group ($X^2 = 7.4$) and source of information ($X^2 =0$) were more than X^2 table value at 0.05 level of significance which indicate that there is significant association between pre-test knowledge score and this demographic variable.

Hence the stated null hypothesis H_0 accepted and research hypothesis H_1 is rejected with regard to all the selected socio demographic variables and pre-test knowledge of study participants.

V. DISCUSSION

UTIs occur due to bacteria present on the skin and around the rectum and vagina. However, some risk factors are female- or male-specific. Treatment includes antibiotics, and a person should drink plenty of fluids. If an individual notices symptoms of a UTI, they should contact a healthcare professional. Without treatment, a kidney infection can occur.

This chapter present the major findings of the study and discuss them in relation to similar study conducted by other researcher. Present study intended to assess effectiveness of informational booklet on knowledge regarding prevention and treatment of UTI among selected staff nurses in Uttar Kannada. The finding of the study is discussed with reference to the objective and with findings of other studies. The overall experience was a satisfying one. The investigator found that self-instructional module was an effective teaching strategy to improve on knowledge regarding Urinary Tract Infection and its prevention among staff nurses in selected hospitals, Uttar Kannada.

VI. CONCLUSION

The study significantly proved that there is a significant difference between mean pre- test and post-test knowledge score of the staff nurses of the hospital regarding UTI and its prevention. Hence it is concluded that informational booklet and its prevention improved the knowledge among staff nurse of hospitals.

VII. SUMMARY

The researcher experienced profound satisfaction and fulfillment upon conducting the study, which provided deeper insight and empathy regarding the training needs of staff nurses concerning prevention of urinary tract infections. The valuable contribution from experts, the assistance of college staff and the cooperation of participants rendered the study both fruitful and engaging. The findings demonstrated that self-instructional module is an effective educational strategy.

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