

To Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding the Prevention of Urinary Tract Infection among Adolescent Girls

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Abstract

Urinary Tract Infection (UTI) is common affecting throughout their life. It occurs in all populations from neonates to geriatric patients but it has a particular impact on females of all ages especially during the adolescent period. UTIs are much more common in adults than in children but about 1-2% of children do get UTIs. A short urethra in women is mostly responsible for the high incidence of UTI among them. This study examines the effectiveness of structured teaching programs in the prevention of UTI among adolescent girls. The objectives of the study were, to identify the knowledge regarding the prevention of UTI among adolescent girls, to provide & evaluate the effectiveness of structured teaching programs on the prevention of UTI among adolescent girls & to determine the association between knowledge regarding the prevention of UTI among adolescent girls and selected demographic variables. This study was conducted at Nehru College of Nursing Panyoor post-Vaniyamkulam. The research design adopted for the study was a pre-experimental one-group pre-test post-test design. A sample of 40 students in the age group of thirteen to nineteen years was selected conveniently for the study. The data was collected by using a socio-demographic profile and a structured knowledge questionnaire regarding UTI following which, a planned teaching program on “prevention of UTI” was administered to adolescent girls on the second day. In the pretest score, about of sample 15% had good knowledge in pretest, 75% had average knowledge, and 10% had poor knowledge. After the teaching program (posttest) 87.5% had good knowledge and 12.5% had average knowledge. The previous episodes of UTI and previous knowledge regarding UTI are significant. As it is a problem focused on adolescent girls might support reducing the occurrence of UTIs.

Keywords: Structured Teaching Programme, Urinary Tract Infection, Adolescent girls

Introduction

Women constitute the most important segment of our population. A healthy woman can be made from a healthy and strong adolescent. Many health problems are affecting adolescent girls’ day by day. Some of the major health issues are anaemia, cancer of breast and cervix, Urinary Tract Infection. Urinary Tract Infection is very common among females in all age groups. During adolescence, hormonal changes favour vaginal colonization by nephritogenic strains of bacteria, which can migrate to the periurethral area and

cause UTI. It is associated with poor self-esteem impaired quality of life, social isolation and depression. Many factors like low water intake, infrequent voiding and poor menstrual and sexual hygiene have been implicated in UTI during adolescence.¹

Urinary Tract Infection is characterized by bacterial invasion and multiplication involving the kidneys and urinary tract pathway. Approximately 60% of women will have at least one episode of Urinary Tract Infection during their lives. The prevalence of Urinary Tract Infection is higher during adolescence. Significantly this health problem is contributing to the overall morbidity of females in all age of their life. Urinary Tract Infection is global and in U. S more than 150 million cases are reported every year and the economic burden is more than 6 billion. About 40% women suffers with Urinary Tract Infection at least one time in their lifetime. Nearly half of all women will have a Urinary Tract Infection once in their lives. It has been reported that one third of women will had at least one Urinary Tract Infection by age 20 years. Simple uncomplicated Urinary Tract Infection are quite common in women ages 20-50 years¹.

Urinary Tract Infection is most serious global health issues in 21st century. Urinary Tract Infection is the 2nd most common infectious presentation in community medical practice. Worldwide, above 150 million people are diagnosed with Urinary Tract Infection each year. Urinary Tract Infection is a serious alignment in human due to increasing in frequency, recurrence and difficulty in eradication; it causes stiff challenge to the medical professionals².

Statement of the problem

A study to assess the effectiveness of Structured Teaching Program on knowledge regarding the prevention of Urinary Tract Infection among adolescent girls in Nehru College of Nursing.

Objectives

- To assess the knowledge of adolescent girls regarding the prevention of Urinary Tract Infection.
- To evaluate the effectiveness of Structured Teaching Program regarding prevention of Urinary Tract Infection.
- To assess the post-test knowledge among adolescent girls regarding the prevention of Urinary Tract Infection.
- To find out the association between the knowledge of adolescent girls regarding prevention of Urinary Tract Infection with selected socio demographic variables.

Hypotheses

H1: There will be a significant difference in the pre and post-test knowledge regarding prevention of Urinary Tract Infection after Structured Teaching Programme.

H2: There will be a significant association between knowledge of selected demographic variables.

Research approach: The research approach used for this study is Quantitative Research approach.

Research design: A one group pre-test post-test experimental design is used for this study.

Variables: Variables are quality, character and properties of person, things or structure that change or vary.

Dependent variable: The knowledge of adolescent girls regarding the prevention of Urinary Tract Infection.

Independent variable: Structured Teaching Programme regarding the prevention of Urinary Tract Infection.

Setting of study: Research setting is the more specific place where the data collection occurs. The study was conducted in Nehru College of Nursing, Vaniyamkulam, Palakkad District, A college of nursing with more than 200 students. It is started in the year 2012. This institution was selected for the study due to easy availability of the subjects and investigators.

Sample and sampling technique:

Sampling criteria:

The sample for the current study consists of 40 students studying in Nehru College of Nursing, Vaniyamkulam, Palakkad District. Convenient non-probability sampling technique was used in this study.

Inclusion criteria:

The study includes the adolescents, who are:

1. Students of age group between 17-19 studying in Nehru College of Nursing, Vaniyamkulam, Palakkad District.
2. Available at the time of data collection.
3. Willing to participate in the study.
4. Adolescents who can understand English.

Exclusion criteria:

The study excludes the adolescents, who are :

1. Students of age group above 17-19 studying in Nehru College of Nursing, Vaniyamkulam, Palakkad District.
 2. Students who are not available at the time of data collection.
- Students who are not willing to participate in the study.

Adolescents who already attended a programme on prevention of UTI.

Description of tool:

Tool 1: A Semi structured questionnaire which has 2 parts.

* Part A: Socio-demographic performa.

* Part B: Semi structured knowledge questionnaire regarding the prevention of Urinary Tract Infection

Part A: socio demographic Performa

It includes age, religion, type of family, residence, education of father, occupation of father, education of mother, occupation of mother, previous episodes of UTI, previous knowledge regarding the prevention of UTI.

Part B: structured knowledge questionnaire regarding the prevention of Urinary Tract Infection

The Structured Knowledge Questionnaire consists of 30 questions for assessing the effectiveness of Structured Teaching Programme on knowledge regarding the prevention of Urinary Tract Infection among adolescent girls in Nehru College of Nursing. The multiple-choice questionnaire was used. The maximum score of the tool is 30. Each correct answer carry “one” mark and wrong answer carry “zero” mark. The minimum score of the tool is 10. A total score of 25 and above is indicated as excellent knowledge, 20 and above is indicated as good knowledge, 15-20 is indicated as average knowledge and score below than 15 is indicated as poor knowledge.

Intervention:

The intervention given was Structured Teaching Programme. Hence the researchers developed is structured lesson plan regarding Urinary Tract Infection and its prevention.

Plan for data analysis:

Descriptive and Inferential statistics would be used for the data analyzing using excel.

1. Frequency distribution and percentage would be used to analyze socio demographic variables.
2. Mean and Standard Deviation which would be used to analyze the knowledge regarding prevention of Urinary Tract Infection.
3. Effect of Structured Teaching Programme will be assessed by using paired t test.
4. Chi square will be used to find out the association between the pre-test level of knowledge regarding Urinary Tract Infection and selected socio demographic variables.

Results

Table 1: Distribution of subjects section according to socio-demographic variables

DEMOGRAPHIC VARIABLES	FREQUENCY (f)	PERCENTAGE (%)
Age		
18	10	25%
19	30	75%
Type of family		
Nuclear	38	95%
Joint	2	5%
RESIDENCE		
Urban	18	45%
Rural	22	55%
OCCUPATION		
Govt.employee	3	7.5%
Private employee	8	20%
Self employee	22	55%
Others	7	17.5%
EDUCATION OF MOTHER		
Primary	7	17.5%
Secondary	22	55%
UG and above	11	27.5%

OCCUPATION OF MOTHER		
Govt.employee	1	2.5%
Private employee	7	17.5%
Self employee	11	27.5%
Other	21	52.5%
PREVIOUS EPISODES OF UTI		
Yes		
No	11	27.5%
	29	72.5%
PREVIOUS KNOWLEDGE REGHARDING UTI		
Yes		
No	39	97.5%
	1	2.5%

Fig 1: The distribution of subject based on religion.

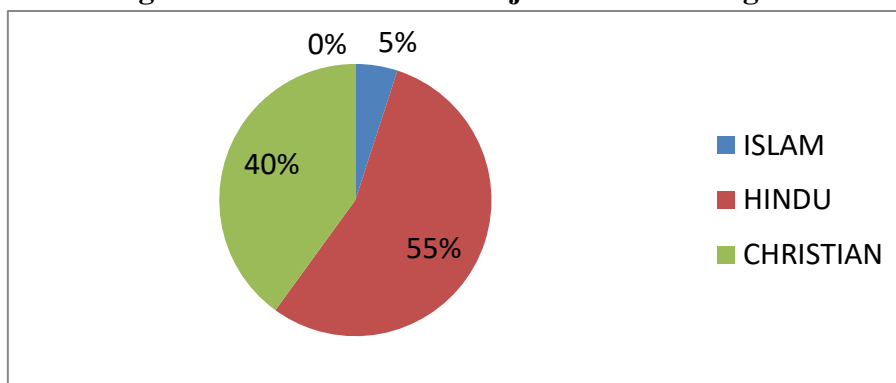
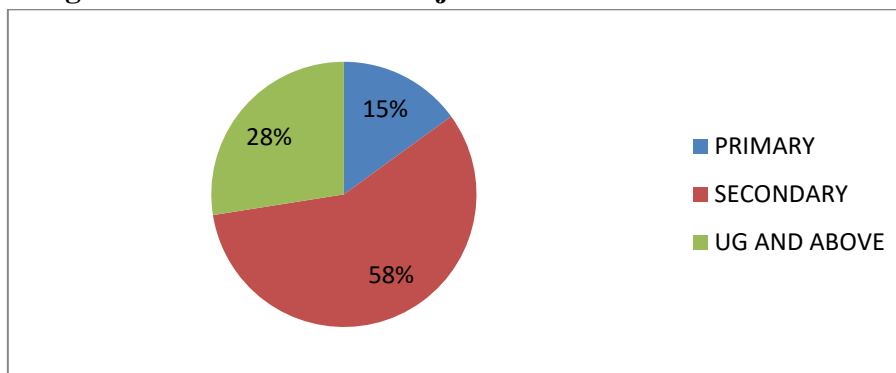


Fig 2: The distribution of subject based on education of father



Assessment of knowledge of adolescent girls regarding prevention of UTI before and after Structured Teaching Programme.

Table 2: Level of knowledge of adolescent girls regarding prevention of UTI before and after Structured Teaching Programme.

KNOWLEGDE LEVEL	PRETEST		POSTTEST	
	Frequency(f)	Percentage(%)	Frequency(f)	Percentage(%)

GOOD (15-20)	6	15%	35	87.5%
AVERAGE (10-15)	30	75%	5	12.5%
POOR BELOW (10)	4	10%	0	0

Effectiveness of Structured Teaching Program on knowledge of adolescent girls regarding prevention of UTI.

Table 3: Mean, Median, Mode, Range and Standard deviation.

TEST	MEAN	MEDIAN	MODE	RANGE	STANDARD DEVIATION
Pre test	12.3	16	12.5	11	1.56
Post test	16.9	16	18	19	1.52

This table 3 indicate increased post knowledge with mean of 16.95.

When compared to mean of pretest score of 12.3.

- Median value pretest is 16 and post test is also 16.
- Mode 12.5 in pretest 18 in posttest.
- Range 11 in pretest and 19 in post test.
- Standard deviation 1.56 in pretest 1.52 in post test.

Table 4: Association of pretest knowledge with selected socio-demographic variables

VARIABLE	Chi SQUARE	df	TABLE VALUE	SIGNIFICANT
Religion	1.6	2	9.21	There is no relationship between data, pre and posttest knowledge
Type of family	3.24	1	6.63	
Residence	0.4	1	6.63	
Education of father	1.18	2	9.21	
Education of mother	8.94	2	9.21	
Previous episode of UTI	8.1	1	6.63	Significant
Previous knowledge regarding UTI	36.1	1	6.63	

This table 4 shows there is the significant association between knowledge of adolescent girls regarding prevention of UTI. But the previous episodes of UTI and previous knowledge regarding UTI are associated to selected demographic variables.

Discussion

In this study Percentage wise distribution of adolescent girls according to their religion shows that highest percentage (55%) belong to Hindu religion, where only (40%) of adolescent girls were belongs to Christian, and only (5%) of adolescent girls belong to Islam religion.

A similar study was conducted by Muthulakshmi M & Gopalakrishnan S about study on Urinary Tract Infection among adolescent girls of reproductive age in Tamil Nadu demographic variables shows that that around 44% females belonged to 15-20 years of age followed by 36% who belong to 35-44years of age. Around 20% belonged to 25-30years of age.³

The findings of this study is in par with a study conducted by Abijitha G,Sreehari K,Anbiitha K about a study on Urinary Tract Infection among staff nurse according to gender shows that 90% belong to female and least10% belong to male⁴

In contrast to the above study conducted by Akshai S,Radhika k & varun P shows that percentage wise distribution of adolescent girls according to their type of family shows that highest percentage (95%) belong to Nuclear family, where only (5%) of adolescent girls belong to joint family.³

In this study the knowledge level of adolescent girls regarding previous knowledge of UTI shows that highest percentage (97.5%) where only (2.5%) of adolescent girls have no previous knowledge regarding UTI.

A similar study conducted by Arunacalam, PV Das and D Vignesh on 2017 about prevalence of women suffering from UTI , the demographic variables according to places shows that that In Lawindi El et al it is 41.4%,in Monalisa et al it is 58.6%⁴

A similar study conducted by subhashini to assess the prevalence of UTI in 3 age group of women by face to face interview. The demographic variables result suggest that the knowledge on UTI in less educated women are poor compared to educated women³

In contrast to a study conducted by department of Biochemistry and Microbiology ,universiity of Fort Hare Private Bag X1314 to assess the incidence of urinary tract infection among children & adolscent women and men. The demographic variables shows that Out of 301 samples((124 women & 177 males)that participated in this study only 36 (11.96%)had urine samples with significant bateriuria and 28 (77.8%)of these samples were females between the age 5-18 years⁵.

Conclusion

The study reveals that in the pre-test knowledge assessment, majority of 48% of adolescent girls have very good knowledge ,14.33% had excellent knowledge,35% have good knowledge and 2.3% have poor knowledge regarding prevention of UTI.

The overall post-test mean percentage was 42.37% with mean \pm SD was 1.52 and the pre-test percentage was 30.75% with mean \pm SD was 1.56. This concludes that there was significant difference between mean pre-test and mean post-test scores.

The difference between the pre-test and post-test knowledge score was highly significant ($t=34.84$) indicating the effectiveness of Structured Teaching Programme in improving the knowledge of adolescent girls regarding cause and prevention of UTI

The findings of the present study showed that there was an association between pre-test knowledge scores with selected socio-demographic variables of adolescent girls

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