Effectiveness of Structured Teaching Programme on Prevention of UTI among Adolescent Girls

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ABSTRACT

This study examines the effectiveness of structured teaching program on prevention of UTI among adolescent girls. Objectives of the study were, to identify the knowledge regarding prevention of UTI among adolescent girls, to provide & evaluate the effectiveness of structured teaching programme on prevention of UTI among adolescent girls & to determine the association between knowledge regarding prevention of UTI among adolescent girls and selected demographic variables. This study was conducted at MIMS College of Nursing Puthukode. Research design adopted for the study was pre experimental one group pre-test post-test design. A sample of 60 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 programme on "prevention of UTI" was administered to adolescent girls on the second day. In pretest score, about 25% of samples had good knowledge in pretest, 71.6% had average knowledge and 3.3% had poor knowledge. After teaching program (posttest) 85% had good knowledge and 15% had average knowledge. There is no significant association between knowledge regarding prevention of UTI and demographic variables. As it is a problem focused among the adolescent girls might support to reduce the occurrence of UTI.

Key Words: Structured teaching programme, Urinary tract infection, Adolescent girls.

1. INTRODUCTION

Adolescents are a large and growing segment of the population. The World Health Organization has defined adolescents as the age group of 10-19 years. [1] This is a crucial period in the adolescent life because alternation in the physical and physiological functions takes place in the body. In this stage of their life the adolescents should take care of themselves in various aspects like personal hygiene, nutrition, exercise and periodic health check-ups. [2]

Urinary Tract Infection (UTI) is a common of all in affecting throughout their life. It occurs in all population from neonate to geriatric patients but it has a particular impact on females of all ages especially during adolescent period. UTI are much more common in adult than in children but about 1-2% of children do get UTI. A short urethra in women is mostly responsible for high incidence of UTI among them. [3]

Several pathogen-related factors predispose people to recurrent urinary tract infection, including periurethral bacterial colonization and Escherichia coli virulence Family pedigree analysis suggests a familial genetic predisposition for urinary tract infection among young females. Urinary tract infection (UTI) is common in pediatric practice and an important cause of morbidity and mortality in children. Retrospective case-control observational studies indicate that genetic predisposition may play a role. Some women with repeated Escherichia coli infections may also be genetically predisposed to this problem. In a case control study of more than 450 women with recurrent urinary tract infection, 47% had a maternal history of UTI and 22% had a first UTI episode before they were 15

years of age; these variables were associated with two-fourfold increase in risk of recurrent UTIs. Both maternal history and childhood onset of UTIs suggest that inherited factors may be important in some women with recurrent infections. A follow up study of school- aged girls found that those who experienced these infections during childhood were also more prone to bacteriuria and symptomatic infections as adults. [4]

Urinary tract infection is the infection of the genitourinary tract that is most commonly occurring in adolescent age group. Early identification of the disease by proper diagnostic measures and management will help to prevent the complications of urinary tract infections. Proper preventive measures like maintenance of good hygienic measures during menstruation, intake of more amount of water etc. also will help to reduce the incidence of urinary tract infections. Nurses being the part of health team have responsibility to educate the adolescent girls' and show correct pathway to prevent urinary tract infection. Hence the above mentioned factors motivated the investigator to undertake this study.

2. MATERIALS & METHODS

A Quantitative Research approach was used for this study and the research design used for study was Pre-experimental one group Pre-test post-test design. The study was conducted in MIMS College of Nursing, Malappuram district. This college is selected for easy availability and accessibility of subjects. Convenient non-probability sampling technique was found to be appropriate to select 60 adolescent girls between age group of 13-19 years. The tool used for this study was socio demographic data of the adolescent girls, containing information related to adolescent girls such as age, religion, type of family, residence, education of father, occupation of father, education of mother, occupation of mother, previous episode of UTI, previous knowledge regarding prevention of UTI and

source of information &Structured questionnaire to assess the knowledge on prevention of UTI. The tool was distributed to four experts from various specialties along with the objective of the study for validation of research tool. Modification of tool was made based on expert's suggestion and recommendations were incorporated in the semi structured questionnaire schedule. Internal consistency of structured knowledge questionnaire was calculated by using split half method. Pilot study was conducted on 22.05.2017 to determine the feasibility in the research plan before main study was attempted after obtaining the permission from concerned authority. Formal administrative permission was taken from the college authority. Data were collected in 23.05.2017. Informed consent was taken from the participants prior to the data collection. The data were collected using structured questionnaire. The intervention was planned teaching programme on UTI among adolescent girls in selected Nursing College of Malapuram district. The planned educational intervention consisted of definition, classification, clinical features, diagnosis, and treatment, of UTI and in detail regarding prevention of UTI. Data analysis was planned on the basis of descriptive and inferential statistics.

3. RESULTS

The result findings were organized in the following sections;

Section I: Distribution of subjects according to socio-demographic variables.

Section II: Assessment of knowledge of adolescent girls regarding prevention of UTI before and after structured teaching programme.

Section III: Effectiveness of structured teaching programme on knowledge of adolescent girls regarding prevention of UTI.

Section IV: Association of pre-test knowledge with selected socio-demographic variables.

Section I: Distribution of subjects according to socio-demographic variables.
Table -1: Socio-demographic characteristics of subjects

Table 1.1: Frequency and percentage distribution of subjects based on Age, Religion, and Type of family:

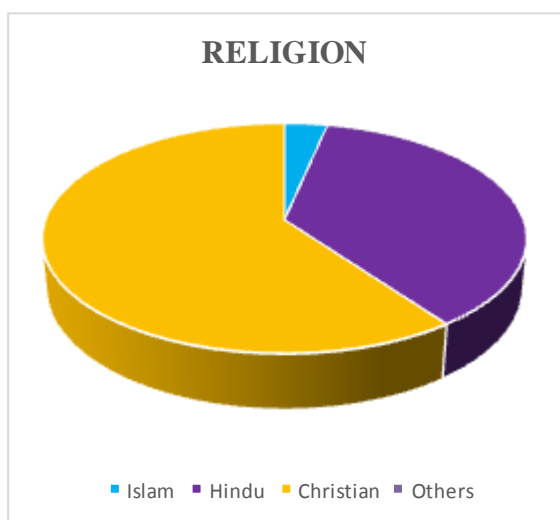| Demographic Variable	Frequency (f)	Percentage(%)
❖ **Age**		
16-17	0	0
18-19	60	100
❖ **Religion**		
Islam	2	3.33
Hindu	22	36.6
Christian	36	60
❖ **Type of family**		
Nuclear	53	88.3
Joint	7	11.6

Figure 2: Distribution of sample based on religion

Figure 2 shows that majority of sample were Christian (60%), 37% were belongs to Hindu and 3% were belongs to Islam.

Table 1.2: Frequency and percentage distribution of subjects based on residence, education of father, occupation of father

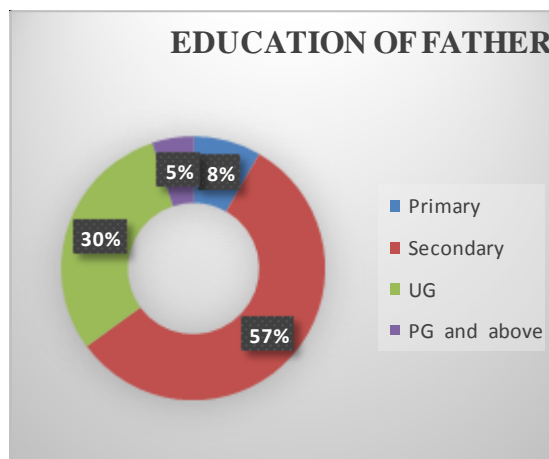| Demographic Variable	Frequency(f)	Percentage (%)
• **Residence**		
Urban	23	38.33
Rural	37	61.66
• **Education of father**		
Primary	5	8.33
Secondary	34	56.66
	21	35
UG and above		
• **Occupation of father**		
Govt. employee	8	13.33
Private employee	9	15
Self-employee	20	33.33
Others	23	38.33

Figure 4: Distribution of samples based on education of father

This figure shows that 57% has secondary education, 30% has UG, 8% Primary and 5% has PG and above educational level.

Table1.3: Frequency and percentage distribution of subjects based on family, education of mother, occupation of mother.

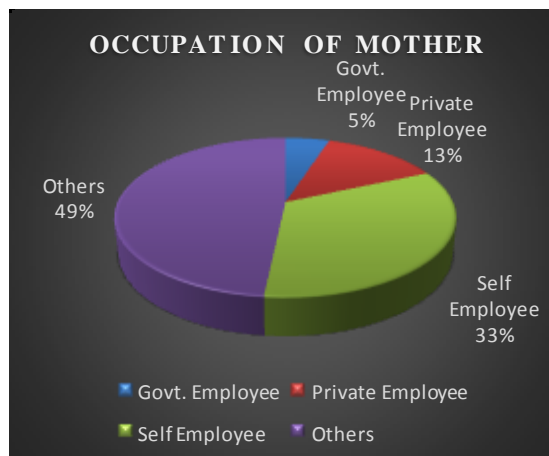| Demographic Variable	Frequency (f)	Percentage (%)
• **Education of mother**		
Primary	2	3.33
Secondary	32	53.33
UG and above	26	43.32
• **Occupation of mother**		
Govt. employee	3	5
Private employee	8	13.33
Self-employee	20	33.33
Others	29	48.33

Figure5: Distribution of samples based on occupation of mother

Figure5 revealed that 5% of mothers have government jobs, 13% private employment, 33% self-employment and majority (49%) belongs to other jobs.

Table 1.4: Frequency and percentage distribution of previous knowledge regarding UTI, previous episode of UTI.

Demographic Variable	Frequency (f)	Percentage (%)
• **Previous episode of UTI**		
YES	10	16.66
NO	50	83.33
• **Previous knowledge regarding UTI**		
YES	35	58.33
NO	25	41.66

Section II: 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 progamme.

level of knowledge	PRE-TEST		POST TEST	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
GOOD(17-25)	15	25%	51	85%
AVERAGE(9-16)	43	71.66%	9	15%
POOR(17-25)	2	3.33%	0	0
TOTAL	60	100%	60	100%

N=60

The results show that 25% of subjects had good knowledge, 71.66% had average knowledge and 3.33% had poor knowledge before the structured teaching programme. Whereas 85% subjects acquired good knowledge &15% gained average knowledge after the structured teaching programme.
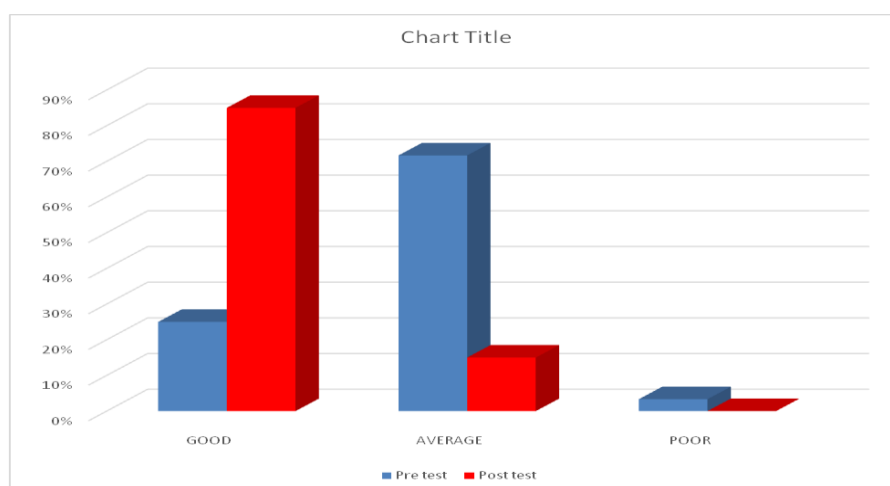

Figure: Bar diagram representing the level of knowledge of adolescent girls regarding prevention of UTI before and after structured teaching programme.

Section III: Effectiveness of structured teaching programme on knowledge of adolescent girls regarding prevention of UTI.

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

Tests	Means	Median	Mode	Range	Standard Deviation
Pre test	15.133	15	15	14	2.9657
Post test	20.2	20	22	13	2.742

Table 3 depicts an increase in posttest knowledge score, with a mean of 20.2 when compared to the mean pre-test score of 15.13. The median value of pre-test is 15 and of posttest is 20. The mode of pre-test is 15, while that of posttest is 22 and the range of pre-test and posttest are 14 and 13 respectively.

Table 4: Comparison of pretest and posttest knowledge by paired t test.   N=60

Tests	Mean	Standard Deviation	Mean Difference	't' value
Pre test	15.133	2.9657	5.069	9.2515
Post test	20.2	2.742		

The mean pre-test knowledge score is 15.133 and mean post test score is

20.2.Paired t-test was used to compare the pre-test and post test scores. As the calculated test statistic value 9.2515 is higher than table value 2.0 at 59 degree of freedom (p<0.001), the null hypothesis was rejected and already stated research hypothesis was accepted. i.e. the mean post-test knowledge score of adolescent girls is significantly higher than their mean pretest knowledge score.

Section IV: Association of pre-test knowledge with selected socio demographic variables.

Table 5: Association between pre-test knowledge with selected socio- demographic variables

Variable	Chi-square Value	df	Table value	Significance
a)Religion	1.269	4	9.49	Not significant
b)Type of family	0.1438	2	5.99	Not significant
c)Residence	5.082	2	5.99	Not significant
d)Education of father	3.737	4	9.49	Not significant
e)Education of mother	0.6265	4	9.49	Not significant
f)Previous episode of UTI	3.304	2	5.99	Not significant
g) Previous knowledge about UTI	4.138	2	5.99	Not significant

Table5 shows there is no significant association between knowledge of adolescent girls regarding prevention of UTI and selected demographic variables

4. DISCUSSION

The present study identified that the structured teaching programme regarding prevention of urinary tract infection must be conducted timely for newcomers in the college in order to prevent the UTI among adolescent girls. This finding is consistent with a study conducted to assess the effectiveness of structured teaching programme regarding the prevention of urinary tract infection among 110 first year nursing students of SGL Nursing College, Semi, Jalandhar, and Punjab. A Pre-experimental study-one group pretest and posttest design was selected for the study. Samples selected through convenience sampling technique. Data was collected through using a self-structured knowledge questionnaire. Pretest was administered to the group followed by structured teaching programme which took about 45 minutes. Posttest was taken after one week of administration of structured teaching programme. The findings of the study showed that pretest mean knowledge score was 15.9 out of 30 whereas posttest mean knowledge score was 24.7 out of 30. Therefore, the difference of pretest and posttest mean knowledge score of first year nursing students was statistically significant.

Hence it was concluded that structured teaching programme regarding prevention of urinary tract infection had significant impact on knowledge of first year nursing students. Knowledge of nursing students was found to be statistically associated with the Professional qualification.

CONCLUSION

Urinary tract infection is a well-known entity among female children. Significantly this health problem is contributing to the overall mortality and morbidity of females in all ages of their life. The nurses are in a position to help adolescent girls to resolve the health related problems like urinary tract infection.

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