



A study to assess effectiveness of structured teaching program regarding the knowledge and practices on prevention of urinary tract infection among adolescent girls residing in selected hostels at Bangalore

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ABSTRACT

BACKGROUND AND OBJECTIVES: - The urinary system, also known as the renal system, consists of the two kidneys, ureters, the bladder, and the urethra. The kidneys are a pair of small organs that lie on either side of the spine at about waist level. A urinary tract infection also known as acute cystitis or bladder infection is an infection that affects part of the urinary tract. WHO identifies adolescence as the period in human growth and development that occurs after childhood and before adulthood, from 10 to 19 years of age.

METHOD: - The research approach is evaluative approach, the research design is one group pre-test and post-test design and the setting is Girls Hostel of R.R College Bangalore, comprised of 60 adolescent girls residing in hostel of R.R College. Purposive sampling technique was used to draw samples for the study. Experts validated the tool and the tool was found to be reliable and feasible. Collected data was analysed by using descriptive and inferential

RESULTS: - In the present study, a majority 51(85%) had inadequate knowledge, 9(15%) had moderately adequate knowledge and none of them had adequate knowledge in the pre-test. But, after the intervention of STP, a majority, 42 (70%) was found with moderately adequate knowledge, 14(23.3%) had adequate knowledge and only 4 (6.7%) of them had inadequate knowledge. These findings evidenced the increase in knowledge regarding UTI among adolescent girls after the intervention of structured teaching programme (STP). These findings evidenced the increase in knowledge and practices regarding prevention of urinary tract infection among adolescent girls after administering structured teaching programme.

INTERPRETATION AND CONCLUSION:- Overall findings showed that the structure teaching programme was significant in improving knowledge scores of the adolescent girls regarding prevention of urinary tract infection. The results revealed that the teaching programme will enable and empower the adolescent girls with adequate knowledge and attitude which in turn contribute to improve the total quality and health of the girls.

Key Words: Effectiveness, structure teaching programme, urinary tract infection, adolescent girls.

1. INTRODUCTION

The urinary system, also known as the renal system, consists of the two kidneys, ureters, the bladder, and the urethra. A urinary tract infection also known as acute cystitis or bladder infection is an infection that affects part of the urinary tract. It is a time in which values and skills are developed that have great impact on well-being. E.coli is the main cause in at least 90% of uncomplicated urinary tract infections.

2. LITERATURE REVIEW:

The study was conducted among 796 male and female patients aged 16 years and above with an objective to find the prevalence of urinary tract disease in general practice. prevalence rate were 6 to 7 times higher in females than males.



Urinary tract infection in females without symptoms of bacteriuria was peak in the month of February. The prevalence of recurrent or chronic urinary tract infection were found five in 1000 women per year.

A study was conducted regarding the prevalence of tampon use among 250 female college students between 17 to 21 years of age. Percentage were calculated for most outcome measurements and Fisher's Exact Test was used to compare the groups. Researcher concluded that majority of young women use tampons based on own decision or maternal influence for comfort, convenience. Based on participants report in this survey, the incidence of UTI seems to be significantly higher among pad users.

A study was conducted to evaluate the role of family history, in frequent voiding poor fluid intake, functional stool retention and inadequate anogenital hygiene or toilet habit in girls with recurrent urinary tract infection. Study sample was 90 Swiss girls with recurrent urinary tract infection and in control group of 45 girls. Researcher concluded that girls with recurrent UTI should focus on identifying behavioural aspect including infrequent voiding, poor fluid intake and functional stool retention.

A study was conducted on prevention of urinary tract infection with the instillation of hyaluronic acid with the objective to evaluate the efficiency of vesicles instillation of hyaluronic acid against urinary tract infection. Study concluded that intra vesicle instillation of hyaluronic acid is effective in preventing occurrence and recurrence of urinary tract infection among adolescent girls.

An intervention study was conducted in Tainan Science Based Park to find the effectiveness of health education programme on prevention of urinary tract infection among 166 females. The study found that, a significant association between decrease in the prevalence of urinary tract infection and increase in the prevalence of water intake and urine voiding three times or more in a day.

A pre-experimental one group pre test-post test design study was conducted to assess the level of knowledge regarding urinary tract infections among adolescent girls in selected colleges at Nellore. Convenient sampling technique was followed. 30 samples were selected for the study. Data was collected using structured questionnaire. concluded that self-instructional module is effective in enhancing the knowledge among adolescent girls.

A case control study was conducted regarding dietary factors protecting women from UTI, among 139 women in Oulu university of Hospital, with mean age of 30.5 ± 10.5 years. A questionnaire was used to collect the data regarding women's dietary and life style habits. The results showed that increased consumption of fresh fruit or berry juice reduces the risk for UTI.

Keeping all this in mind, the researcher felt the need for assessing the knowledge of adolescent girls regarding the knowledge and practices on prevention of urinary tract infection as well as developing a structured teaching programme on these aspects that can benefit not only the adolescent girls but also to spread the knowledge regarding urinary tract infection to general public.

3. OBJECTIVES / AIMS:

- To assess the knowledge regarding urinary tract infection and its prevention among adolescent girls at selected hostel in Bangalore.
- To assess the effectiveness of structured teaching programme on urinary tract infection and its prevention among adolescents at selected hostels Bangalore.
- To assess the practices regarding prevention of urinary tract infection among adolescent girls.
- To find out association between pre test and post test knowledge scores among adolescent girls on urinary tract infection and its prevention.

4. RESEARCH METHOD /METHODOLOGY :

RESEARCH APPROACH:

Research approach is an umbrella that covers the basic procedure for conducting research. An evaluative research approach was used for the present study.

RESEARCH DESIGN:

The research design adopted for this study was Pre experimental (one group pre- test post-test) design.



SETTING OF THE STUDY:

Setting for the present study was R.R. girls hostel, Bangalore.

Inclusion criteria:

1. The adolescents who are in selected hostel at, Bangalore. The age between 17 to 19 years.
2. The adolescents who are willing to participate in study.
3. The adolescents who are present at the time of study.

Exclusion criteria:

1. The adolescents who are not 17 to 19 years of age.
2. The adolescents who are not present at the time of study.

TOOLS :

A Self-administered knowledge questionnaire was developed by the investigator to collect the data on knowledge based on the conceptual frame work and hypothesis.

The questionnaire was prepared in English in 3 sections.

Section-I Demographic Data:

It consists of items seeking general information about the Age, educational status, religion, number of roommates, family income, dietary habits, age at menarche, duration of menstrual cycle, types of menstrual cycle and bleeding, previous history of UTI and source of information.

Section-II: Structured questionnaire on knowledge regarding prevention of Urinary Tract Infection.

Section-III: Checklist on practice of prevention of Urinary Tract Infection(UTI).

Data Collection Procedure: The study was conducted in R.R Girls Hostel Bangalore by obtaining prior permission from the Chairman and the Hostel warden, subjects were selected according to the selection criteria of the study. The investigator collected 60 adolescent girls of 17 to 19 years. Pre-test was conducted by self-administered questionnaire. The girls were asked to read the instructions carefully and answer every question. On an average the participants took 55 minutes to fill the data. On the same day after the pre-test the structure teaching programme was administered. Post-test was given on the seventh day to assess the effectiveness of the teaching with the same questionnaire. A good rapport was maintained throughout the data collection procedure. The investigator found no difficulty in the data collection.

Plan for Data Analysis:

- ❖ Frequency and percentage distribution was used to analyse the demographic variables.
- ❖ Mean and standard deviation was used to analyse the pre and post-test level of knowledge and practices on prevention of urinary tract infection.
- ❖ Paired "t" test was used to determine the effectiveness of structured teaching program.
- ❖ Chi-square test was used to find the association between the knowledge score and the selected demographic variables.

Table:1 Mean, standard deviation and mean percentage for level of knowledge before and after administering Structured Teaching Program (STP).

N=60

Sl.no	Aspects of knowledge	Max score	Pre-test				Post-test			
			range	mean	SD	Mean%	range	mean	SD	Mean%
1	General information on UTI	9	0-8	4.20	2.427	46.67	4-9	7.18	1.501	79.81
2	Knowledge on symptoms, causes and risk factors	17	1-11	6.00	2.408	35.29	5-16	11.35	2.686	66.76
3	Prevention and management	14	0-8	4.08	1.871	29.17	4-13	8.52	2.143	60.83
Over all		40	6-23	14.28	4.072	35.71	15-37	27.05	5.209	67.63



Table: 2 Effectiveness of STP

N=60 *Significant at P<0.05			59 df				
Sl.no	variable	Max score	Enhancement			Paired t-test	P-value
			mean	SD	Mean%		
1	General information on UTI	9	2.98	2.087	33.15	11.073*	P<0.05
2	Knowledge on symptoms, causes and risk factors	17	5.35	2.827	31.47	14.657*	P<0.05
3	Prevention and management	14	4.43	2.746	31.67	12.508*	P<0.05
Over all		40	12.77	3.784	31.92	26.135*	P<0.05

Table: 3 Mean and standard deviation and mean percentage of practice before and after STP

Sl.no	Aspects of knowledge	Max score	Pre-test				Post-test			
			range	mean	SD	Mean%	range	mean	SD	Mean%
Over all		10	3-7	4.92	0.869	49.17	6-10	7.52	0.930	75.17

Table : 4 Chi-square test was used to find the association between the knowledge score and the selected demographic variables.

Sl.no	Demographic variable		%	frequency	Chi square test		df	P-value
					Pre-knowledge	Pre-practice		
1	Age In Years	17 Years 18 Years 19 Years	31.7 43.3 25.0	19 26 15	2.144	0.432	2	>0.05
2	Educational Status	Nursing B.Pharmacy Engineering Polytechnic	31.7 20.0 15.0 33.3	19 12 9 20	1.725	0.430	3	>0.05
3	Religion	Hindu Muslim Christian Others	31.7 15.0 53.3 0.0	19 9 32 0	0.676	0.111	2	>0.05



4	Number Of Roommates	2 Members 3 Members 4 Members More than 4 Members	20.0 46.7 33.3 0.0	12 28 20 0	1.718	0.373	2	>0.05
5	Family Income (Rs/Month)	<Rs. 5000 5001-10000 10001-15000 >15001	0.0 0.0 31.7 68.3	0 0 19 41	0.799	0.138	1	>0.05
6	Dietary Habits	Vegetarian Non-vegetarian Mixed	0.0 15.0 85.0	0 9 51	5.62	0.007	1	>0.05
7	Age At Menarche	13 Years 14 Years 15 Years After 15 Years	0.0 78.3 21.7 0.0	0 47 13 0	0.695	0.001	1	>0.05
8	Duration Of Menstrual Cycle And bleeding	2-3 Days 4-5 Days 6-7 Days	0.0 31.7 68.3	0 19 41	0.436	0.081	1	>0.05
9	Type of menstrual cycle and bleeding	Regular with Normal Blood Flow Regular with Heavy Blood Flow Irregular with Normal Blood Flow Irregular with Heavy Blood Flow	18.3 36.7 0.0 45.0	11 22 0 27	0.120	1.389	2	>0.05
10	Previous history of UTI	Yes No	78.3 21.7	47 13	0.695	0.001	1	>0.05
	If yes, treatment taken for UTI	Yes No	35.0 65.0	21 39	0.415	0.332	1	>0.05
11	If yes, source of information	Newspaper Health Personnel Mass Media Family Members and Friends	0.0 0.0 0.0 25.0	0 0 0 15	NA	NA		>0.05



5. RESULT / FINDINGS :

- 1) The knowledge score of adolescent girls on prevention of urinary tract infection inadequate before the administration of structured teaching programme.
- 2) Overall knowledge scores of adolescent girls were found to be 35.71% before administration of structured teaching programme.
- 3) Overall knowledge scores of adolescent girls were found to be 67.63% after administration of structured teaching programme.
- 4) Overall findings reveals that the knowledge and practices of adolescent girls prevention of urinary tract infection was not adequate before the administration structured teaching programme but it showed gain in knowledge after the administer of structured teaching programme.
- 5) There was statistically significant association found between the dietary habits am remaining variables were found to be non-significant.

6. DISCUSSION / ANALYSIS : The analysis found out the association between pre-test knowledge regarding urinary tract infection and its prevention with selected demographic variables of the adolescent girls. Out of the demographic variables accounted for test for association the variables dietary habits ($\chi^2=0.433$, $df=1$), was found to be statistically significant at 5% level (ie, $p<0.05$). The rest of the variables were not significant at 5% level (ie, $p>0.05$).
CONCLUSION / SUMMARY: This chapter deals with the conclusion, implications, recommendations and limitations of the study. The focus of this study was to evaluate the effectiveness of structured teaching programme regarding knowledge and practices on prevention of urinary tract infection among adolescent girls residing in hostels of R.R college, Bangalore.

9. LIMITATIONS:

- The study is limited to the adolescent girls residing in hostels of R.R college, Bangalore.
- The study cannot be generalized since it covers only a minor part of the hostel.
- The study did not use any control group.
- Sample size is limited

10.RECOMMENDATIONS:

- * A similar study can be undertaken on large scale
- * An experimental study can be undertaken with a control group for effective comparison of result.
- * An explorative study may be conducted to identify the awareness of the adolescent girls

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