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## Effectiveness of structured teaching program on knowledge regarding prevention of urinary tract infection among the adolescence girls

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### Abstract

The current study has been undertaken to assess effectiveness of structured teaching program on knowledge regarding prevention of urinary tract infection among the adolescence girls in schools of Indore. The research design used for study was pre- experimental in nature. The tool for study was self-structured knowledge questionnaire which consists of 2 parts-PART- I consisted questions related to Socio-demographic data; PART-II consisted of self -structured knowledge questionnaire to assess knowledge score regarding prevention of urinary tract infection among the adolescence girls. The data was analyzed by using descriptive & inferential statistical methods. The most significant finding was that 23.3% of Peoples were having average knowledge regarding Pediatric thalassemia whereas 76.6% had good knowledge after post-test. It was suggested that nurses must educate adolescence girls regarding prevention of urinary tract infection.

**Keywords:** Effectiveness, structured teaching program, knowledge & urinary tract infection

### 1. Introduction

Urinary tract infection is defined as the presence of microbial pathogens in the urinary tract. The infection of the bladder and urethra are referred to as the infection of the lower urinary tract whereas the kidney and ureter infection is an indication of the upper urinary tract infection. UTI affects both gender women of the reproductive age group (16-44 years) are the most vulnerable, maybe due to their anatomy and reproductive physiology women are particularly at risk of developing UTIs because of their short urethra and certain behavior factors which include delay in micturition. The most common cause of infection is Escherichia coli, though other bacteria or fungi may rarely be the cause. Risk factors include female anatomy, sexual intercourse, diabetes, obesity, and family history.

### 2. Need for study

Urinary tract infection is predominantly a female disease. From infancy until age of 25yrs the frequency of UTI in girls about 8% with 1/3<sup>rd</sup> of their infection being asymptomatic. Incidence of UTI globally includes 34% of adult below 20yr and also 794 per 10000 adult aged below 20yrs have at least one occurrence of urinary tract Infection. The prevalence of UTI globally include 1 in 5 women will develop UTI in their life time. 34% adult below 20 self reported having at least one occurrence of UTI. 53.5% of adult aged 13-19 yrs who self reported having UTI. The incidence of UTI in India including is the second peak commonly occurring infection in adolescent girls. The prevalence of UTI in India induces; up to 8% of girls in India are getting during adolescent period. [Singh Baldev Aulakh (2013)].

### 3. Objective of the study

1. To assess the pre-test knowledge score regarding prevention of urinary tract infection among adolescence girls
2. To assess the effectiveness of structured teaching programmed on knowledge regarding prevention of urinary tract infection among adolescence girls.
3. To find out the association between pre-test score with their selected demographic variable among adolescence girls.

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**4. Hypotheses**

**RH0:** There will be no significance difference between pre-test and post-test knowledge Score regarding prevention of urinary tract infection among adolescence girls.

**RH1:** There will be a significant difference between pre-test and post-test knowledge score regarding prevention of urinary tract infection among adolescence girls at the level  $p < 0.05$

**RH2:** There will be significant association between pre-test knowledge score regarding prevention of urinary tract infection with selected demographic variables. at the level  $p < 0.05$

**5. Assumption**

1. Adolescent girls may have deficit knowledge regarding prevention of urinary tract infection.
2. Structured teaching program will enhance knowledge of Adolescence girls regarding prevention of urinary tract infection.
3. It is assumed that the selected demographical variable may influence the knowledge regarding of urinary tract infection.

**6. Methodology**

An evaluative approach was used and research design pre-experimental one group pre-test post-test research design was used for the study. The samples consisted of 30 adolescent girls selected by Non probability convenient sampling technique. The setting for the study was Om Shri Hari Convent School of Indore. Data was gathered with help of demographic variables & administering a self-structured knowledge questionnaire by analyst prior & after Structured teaching program. Post-test was done after seven days of pre-test. Data were analysis using descriptive & inferential statistics.

**7. Analysis and Interpretation**

**Section-I Table -1 Frequency & percentage distribution of samples according to their demographic variables. n = 30**

**Table 1:** Frequency & percentage distribution of samples according to their demographic variables n = 30

S. No	Demographic Variables	Frequency	Percentage
<b>1</b>	<b>Age in Years</b>		
a.	11-13	15	49.95
b.	14-16	11	36.63
c.	17-19	4	13.32
<b>2</b>	<b>Types of family</b>		
a.	Nuclear	21	69.93
b.	Joint	9	29.97
<b>3</b>	<b>Socioeconomic Status</b>		
a.	Higher Class	6	19.98
b.	Middle Class	23	76.59
c.	Lower Class	1	3.33
<b>4</b>	<b>Maintenance of personal hygiene</b>		
a.	Yes	27	83.25
b.	No	26	16.65
<b>5</b>	<b>Environment Condition</b>		
a.	Clean	30	100
b.	Dirty	00	00

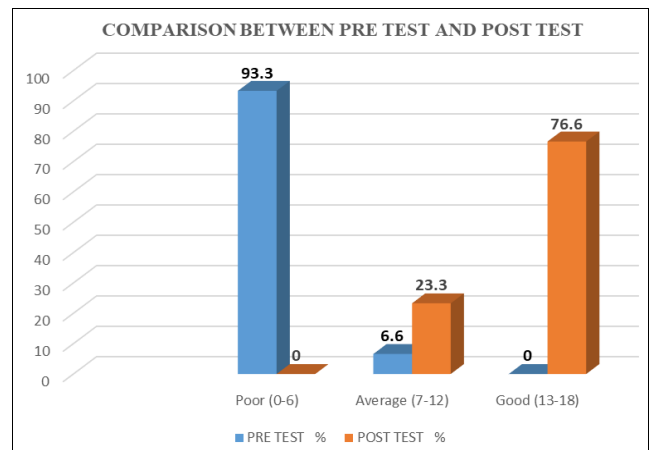
**Section 2:** The comparison of pre-test and post-test knowledge score regarding prevention of uti among adolescence girls.

**Table 2:** Distribution According to Pre-test and Post-test Knowledge Grade

S. No.	Knowledge Grade	Pre-test		Post-test	
		No.	%	No.	%
1.	Poor (0-6)	28	93.3	00	0.0
2.	Average (7-12)	02	6.6	07	23.3
3.	Good (13-18)	00	0.0	23	76.6
	Total	30	100.0	30	100.0

The present table 2.1.1 concerned with the existing knowledge regarding Prevention from urinary tract infection among Adolescent girls shown by pretest 28 (93.3%) adolescence girls got poor knowledge grade, 2 (6.6%) adolescence girls got average knowledge grade and only 0(0.0%) adolescence girls got good knowledge grade. Then these adolescence girls were given an intervention and the same set of knowledge questionnaire was re-administered. In the post-test, 7(23.3%) adolescence girls got average knowledge grade and 23 (76.6%) adolescence girls got good knowledge grade. Thus, the intervention was helpful in improving the knowledge grade of the adolescence girls.

**Comparison between pre-test knowledge score and post-test knowledge score (Table 4.2.2)**



**Graph 1:** Comparison of Mean Practice Score before and after intervention

**Section 3: Effectiveness of self-structured teaching programme**

**Table 3:** Effectiveness of Self-Structured Teaching Programme Regarding Prevention of Urinary tract infection among Adolescence Girls

S. No.	Knowledge Score	Mean ± SD	't' value	P value
1.	Pre-test	3.3 ± 1.737	-26.570, df=29	<0.001*
2.	Post-test	14.4 ± 2.206		

Paired 't' test applied. P value = <0.001, not Significant

The above table shows the comparison of pre-test and post-test knowledge score. The mean pre-test knowledge score was 3.3 ± 1.737 and in the post-test it was 14.4 ± 2.206. The difference was found

to be statistically not significant ( $t = -26.570$ ,  $df=29$ ,  $p$  value  $<0.001$ , not Significant), showing a higher post-test score in comparison to the pre-test. Thus, the intervention was helpful in improving the knowledge score of the

adolescence girl.

#### Section 4: Association between pre-test knowledge score and selected demographic variables

**Table 4:** Association of age of adolescent girls with pre-test scores:

S. No.	Age	Pre-test knowledge Grade			$\chi^2$ value	P value
		Poor(0-6)	Average(7-12)	Good(13-19)		
1.	Age			5.99 df = 2	<0.05	
	a) 10-13 years	12	0			0
	b) 14-16 years	12	2			0
	c) 17-19 years	4	0			0
	Total	28	2	00		

$\chi^2=5.99$ ,  $df=2$ ,  $P$  value  $=<0.05$ , Not Significant

The above table shows the association between age and the pre-test knowledge grade. There was statistically not significant association seen between age and the pre-test

knowledge grade ( $\chi^2=5.99$ ,  $df=2$ ,  $P$  value  $=<0.05$ , not Significant), showing that the pre-test knowledge grade is dependent on the age of the urinary tract infection.

**Table 5:** Association of types of family with pre-test scores:

S. No	Type of family	Pre-test knowledge Grade			$\chi^2$ value	P value
		Poor (0-6)	Average(7-12)	Good(13-19)		
2.	Types of family			3.84 df = 1	>0.05	
	a) Nuclear	19	0			0
	b) Joint	09	2			0
	Total	28	2			0

$\chi^2=3.84$ ,  $df=1$ ,  $P$  value  $=>0.05$ , Not Significant

The above table shows the association between type of family and the pre-test knowledge grade. There was statistically not significant association seen between type of family and the pre-test knowledge grade ( $\chi^2=3.84$ ,  $df=1$ ,  $P$

value  $>0.05$ , Not Significant) showing that the pretest knowledge grade is not dependent on the type of family of the Urinary tract infection.

**Table 6:** Association of socioeconomic status with pre-test scores:

S. No.	Socioeconomic status	Pre-Test Knowledge Grade			$\chi^2$ value	P value
		Poor (0-6)	Average (7-12)	Good (13-18)		
3.	Socioeconomic status			5.99, $df=2$	>0.05	
	a) High class	6	0			0
	b) Middle class	21	2			0
	c) Lower class	1	0			0
	Total	28	2	0		

$\chi^2=5.99$ ,  $df=2$ ,  $P$  value  $>0.05$ , Not Significant

The above table shows the association between socioeconomic status and the pre-test knowledge grade. There was statistically not significant association seen between socioeconomic status and the pre-test knowledge

grade ( $\chi^2=5.99$ ,  $df=2$ ,  $P$  value  $>0.05$ , Not Significant), showing that the pre-test knowledge grade is not dependent on the socioeconomic status of the adolescence girls.

**Table 7:** Association between personal hygiene and the pre-test scores:

S. No.	Personal hygiene	Pre-Test Knowledge Grade			$\chi^2$ value	P Value
		Poor (0-6)	Average (7-12)	Good (13-18)		
4.	Personal hygiene			3.84, $df=1$	<0.05*	
	a) Yes	23	2			0
	b) No	5	0			0
	Total	28	2			0

$\chi^2=3.84$ ,  $df=1$ ,  $P$  value  $=<0.05$ , not Significant

The above table shows the association between personal hygiene and the pre-test knowledge grade. There was statistically not significant association seen between personal hygiene and the pre-test knowledge grade

( $\chi^2=3.84$ ,  $df=1$ ,  $P$  value  $=<0.05$ , not Significant), showing that the pre-test knowledge grade is dependent on the personal hygiene of the adolescence girls.

**Table 8:** Association between environment condition and the pre-test scores:

S. NO.	Environmental condition	Pre-test knowledge Grade			$\chi^2$ value	P Value
		Poor(0-6)	Average (7-12)	Good (13-18)		
5.	a) Clean	28	2	0	3.84 df = 1	>0.05,
	b) Dirty	0	0	0		
	Total	28	2	0		

$\chi^2=3.84$ ,  $df=1$ , P value >0.05, Not significant

The above table shows the association between any environment condition and the pre-test knowledge grade. There was statistically not significant association seen between environment condition and the pre-test knowledge grade ( $\chi^2=3.84$ ,  $df=1$ , P value >0.05, Not significant), showing that the pre-test knowledge grade is not dependent on the environment condition of the adolescence girls.

## 8. Results

The result of this study indicates that there was a significant increase in post-test knowledge scores compared to pre-test scores of Prevention of urinary tract infection. The mean percentage knowledge score was observed  $3.3 \pm 1.7377$  in pre-test & after implementation of awareness program post-test mean percentage was observed with  $14.4 \pm 2.206$ .at the level of p value <0.001.

## 9. Conclusion

Thus, after the analysis and interpretation of data we can conclude that the hypothesis RH1 that, there will be significance difference between pre-test knowledge score with post-test knowledge score at (P<0.05) is being accepted.

Furthermore, prevention related to urinary tract infection among adolescent girl may consider as an effective tool when there is a need in bridging & modifying knowledge.

## 10. Limitations

- This was limited to selected schools of Indore.
- This was limited to 30 Peoples.

## Conflict of Interest

Not available

## Financial Support

Not available

## 11. Reference

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