DOI: 10.53469/jcmp.2025.07(06).01

Evaluating the Efficacy of a Structured Educational Intervention on Urinary Tract Infection Prevention Knowledge and Behavioral Practices Among Rural Adolescent Females in Kangra District, Himachal Pradesh: A Quasi-Experimental Design

Peter Omolo Awino[1], Wario Guyo[2], Makori Moronge[3]

[1]M.Sc. Nursing: *awino1992@gmail.com*
[2]Associate Professor: *guyo15@gmail.com*
[3]Assistant Professor: *makori90@gmail.com*

Abstract: ***Background: Adolescence is a crucial period of transition from childhood to adulthood. Among adolescent girls, some infections occur during this period, among which urinary tract infection is very common. Urinary tract infection is an infection in any part of the urinary system including the kidneys, ureters, bladder and urethra that has a particular impact on females of all ages especially during adolescent period. It can be caused in adolescent girls due to lack of knowledge and awareness regarding hygienic toilet practices, perineal hygiene, menstrual hygiene and poor hydration status. Aim of the Study: The main aim of this study is to assess the effectiveness of Structured teaching programme on knowledge and practices regarding urinary tract infections among adolescent girls. Material & Methods: A quantitative research approach and quasi experimental research design was adopted. Non probability purposive sampling technique was used to select the sample of 60 adolescent girls, divided into experimental and control groups consisting of 30 adolescent girls in each. A pre-test & post- test was conducted to evaluate the knowledge & practices of both the experimental and control group using structured knowledge questionnaire & checklist. The data analysis was done by using the descriptive and inferential statistics. Results: The statistics reveal that, in experimental group, mean post-test knowledge score (19.83) was significantly higher than the mean post-test knowledge score (12.80) in the control group as evident from 't' value 6.163 which was significant at p<0.001 level of significance. And the mean post-test practices score (11.17) in experimental group was significantly higher than the mean post-test practices score (7.87) in the control group as evident from 't' value 7.262 which was significant at p<0.001 level of significance. Thus, it is evident that mean post-test knowledge & practices score was higher in the experimental group as compared to the control group which shows the effectiveness of the structured teaching programme.***

Keywords: Effectiveness, Knowledge, Practices, Structured Teaching Programme, Urinary Tract Infection, Adolescent girls

1.Introduction

"An ounce of prevention is better than a pound of cure."

– Benjamin Franklin.

Adolescence is the phase of transition between childhood and adulthood. It is the period between 10- 19 years of life. Adolescence years start with puberty. In girls, bodily changes such as development of breast and genital organs, beginning of menstruation are observed in these years and they may be unaware of these changes.[1] They have lack of knowledge regarding genitourinary hygiene & practices which makes them more prone to genitourinary infections among which urinary tract infection is the commonest one.[2]

Urinary tract infection is an infection in any part of the urinary system including the kidneys, ureters, bladder and urethra. It is usually caused by Escherichia coli, a type of bacteria. It commonly affects the adolescent girls because of the onset of menarche, dysfunctional voiding patterns, use of synthetic underwear, tight jeans, and poor hygiene. The most common risk factor among girls is the female anatomy, a shorter urethra.[3] Urinary tract infections can cause burning with urination, increased frequency of urination without passing much urine, increased urgency of urination, bloody urine, cloudy urine, urine that looks cola or tea colored, urine that has a strong odor, pelvic pain, and then ultimately causing significant distress in the hospital or community settings.[4]

The diagnosis of a UTI is confirmed with urine culture. The treatment of Urinary tract infections includes the antibiotic therapies. It can be prevented by lifestyle changes such as practicing good personal hygiene, cleaning the genital area wiping from front to back after having bowel movement or urination, maintaining menstrual hygiene, changing pads and tampons frequently. Urination can help prevent bacteria from forming in urinary system if done completely, frequently and without holding it for too long. In order to prevent urinary tract infections, appropriate knowledge regarding UTI must be provided to adolescent girls and effective preventive measures should be taken.[5]

2.Background of the Study

UTI's are the most frequent bacterial infection in women. Globally UTI has affected 404.61 million cases and about 236,790 deaths, were estimated in 2019. They occur most frequently between the ages of 16 and 35 years, with 10% of women getting an infection yearly and 60% having an infection at some point in their lives recurrences are common, with nearly half of people getting a second infection within a year.[6] National Centre for disease control, Ministry of health & family welfare India

(2020),reported urinary tract infection as the most common and accounts for 35% of all hospital acquired infections in which female gender is considered as a most common risk factor. The most common organisms causing UTI are e.coli, Klebsiella, proteus spp., enterococci spp., & pseudomonas aeruginosa.[7] According to the reports from, National Kidney Foundation, Urinary tract infections affect nearly 10 million young females each year. 80% will have recurrence and about80-90% of urinary tract infection are caused by bacteria. Among those, 80 to 90 percent of UTIs are caused by a bacteria called Escherichia coli (E.coli)[8] Early recognition and prompt treatment help to prevent occurrence of urinary tract infection and possibility of complications. Preventive measures like, intake of more amount of water and maintenance of good hygienic measures especially after urination and during menstruation will help to reduce the incidence of Urinary Tract Infections.

Need of the Study

World Health Organization stated that adolescence is the period of human growth and development that occurs after childhood and before adulthood.[9]

The prevalence of urinary tract infection is higher during adolescence. An estimated 73% of adolescent girls report having had a urinary tract infection at some point in their lives. [3]

UTIs usually happen because bacteria enter the urethra, then make their way up into the bladder and cause an infection. Girls get UTIs much more often than boys, most likely due to differences in the shape and length of the urethra. Girls have shorter urethras than boys, and the opening lies closer to the anus and the vagina, where bacteria are likely to be. Bacteria may also get into a girl's bladder if she wipes from back to front after a bowel movement (BM), which can contaminate the urethral opening.[4]

Lamiya KK et al (2018) conducted a cross-sectional study to assess water intake and burden of urinary tract infection among school girls at Puthanangadi, Kerala. A sample of 110 girls was taken. The data was collected using a semi structured pre tested questionnaire method. The study concluded that UTI was seen in 30.9% of the girls, adequate water intake was seen in only 12.7% of girls and 71.8% of girls were not having adequate water intake during school hours because of lack of awareness about adequate amount of water intake.[10]

The urinary tract infection may occur among girls due to inadequate intake of water and infrequent passage of urine. The main reason for this is unhygienic toilets and improper teaching regarding menstrual hygiene. Dehydration can be a cause of urinary tract infection. Urinary tract infection may progress to renal damage, renal failure and sepsis. Lack of adequate knowledge and practices related to maintenances of health leads to various genitourinary infections during adolescence. [4]

Complications of UTI arises from untreated and poorly managed cases of UTI are at high risk of evolving into potentially life-threating inflammatory conditions (pelvic inflammatory disease) of kidney (such as pyelonephritis) ultimately leading to permanent destruction and scarring of renal system. The infection from urinary tract may as well spread to the bloodstream leading to generalized sepsis and seeding to distant vital organs like brain. Early recognition and prompt treatment help to prevent occurrence of recurrent urinary tract infection and possibility ofcomplication.[5]

Thus, early identification of the disease by proper diagnostic measures and management will help to prevent the complications of the Urinary Tract Infections.

Most of the adolescent are not aware of the prevention of urinary tract infection. So, the researcher felt the need to conduct a study to find out the knowledge and practices of adolescent girls on urinary tract infection and wants to give knowledge to them about preventive and hygiene practices regarding the same.

3.Problem Statement

A quasi-experimental study to assess the effectiveness of structured teaching programme on knowledge and practices regarding UTI among adolescent girls in selected rural areas of district Kangra, Himachal Pradesh.

Aim of the Study

To assess the effectiveness of structured teaching programme to improve the knowledge and practices regarding urinary tract infection among adolescent girls.

Objectives

1. To assess the pre-test and post-test level of knowledge and practices scores regarding urinary tract infection among adolescent girls in experimental & control group.
2. To compare the mean post-test knowledge and practices scores regarding Urinary tract infection among adolescent girls in experimental & control group.
3. To determine the association between post-test level of knowledge and practices scores regarding urinary tract infection among adolescent girls with their selected sociodemographic variables.

Operational Definitions

1. **Assess:** Assess refers to measure the level of knowledge and practice regarding urinary tract infection among adolescent girls.
2. **Effectiveness:** Refers to significant gain in knowledge and practices level after attending the Structured Teaching Programme on knowledge and practices regarding urinary tract infection among adolescent girls.
3. **Structured teaching programme:** Refers to a systematically developed instructional programme using instructional aids, designed to provide information on the knowledge and practices regarding urinary tract infections in adolescent girls.
4. **Practices:** In this study practices refer to methods or ways that adolescent girls use for urinary hygiene and

other ways to prevent urinary tract infection.

5. **Urinary tract infection:** Any infection in any part of urinary system, the kidneys, bladder or urethra.
6. **Adolescent girls:** It is the phase of life between childhood and adulthood, from ages 10 to 19 also called the teenage years.

Hypothesis

(All hypothesis is tested at 0.001level of significance)

H1: There will be significant difference between mean post-test level of knowledge and practices scores regarding UTI among adolescent girls in experimental & control group.

H2: There will be a significant association of post-test knowledge and practices scores regarding UTI among adolescent girls with their selected sociodemographic variables.

Delimitations

The study will be delimited to:

1. Adolescent girls
2. Adolescent girls residing in selected rural areas of District Kangra, Himachal Pradesh

4.Research Methodology

A quantitative approach was used to determine the effectiveness of Structured Teaching Programme on knowledge and practices regarding urinary tract infection among adolescent girls in selected rural areas of District Kangra, Himachal Pradesh. The population of the present study was adolescent girls aged between (13-19) age group. The sample selected for the study consisted of 60 adolescent girls from selected rural areas of district Kangra (Himachal Pradesh) among which 30 samples were for the experimental group and 30 samples were for the control group) selected through Non – Probability Purposive Sampling technique. The variables are divided as:

Dependent variable: Knowledge and practices regarding UTI among adolescent girls. Independent variable: Structured Teaching Programme.

Demographic variables**:** Age, education, religion, family structure, family income, area of living, diet pattern, socio-economic status and previous history of UTI.

5.Analysis & Interpretation

The analysed data was organized according to the objectives and presented under the following sections:

Section- I: Findings of socio-demographic variables of adolescent girls in experimental and control group.

Section-II:

Part-A: Findings of pre-test and post-test level of knowledge scores regarding urinary tract infection among adolescent girls in experimental & control group.

Part-B: Findings of pre-test and post-test level of practices scores regarding urinary tract infection among adolescent in experimental & control group.

Section-III: Findings of comparison of post test level of knowledge & practices scores regarding urinary tract infection among adolescent girls in experimental & control group.

Section-IV: Findings of association between mean post test level of knowledge & practices scores regarding urinary tract infection among adolescent girls in experimental & control group with their socio-demographic variables.

Section-I

Findings of socio-demographic variables of adolescent girls in experimental and control group.

Frequency & percentage distribution of socio demographic variables.

N=60(30+30)

Socio Demographic Proforma		Experimental (%)	Control (%)	Experimental (N=30)	Control (N=30)
Age in Years	14-15 years	30.0%	33.3%	9	10
	16-17 years	40.0%	46.7%	12	14
	18-19 years	30.0%	20.0%	9	6
Education	Secondary	30.0%	33.3%	9	10
	Senior Secondary	40.0%	46.7%	12	14
	Graduate	30.0%	20.0%	9	6
Religion	Hindu	100.0%	100.0%	30	30
	Muslim	0.0%	0.0%	0	0
	Christian	0.0%	0.0%	0	0
	Sikh	0.0%	0.0%	0	0
Type of Family	Joint	60.0%	56.7%	18	17
	Nuclear	40.0%	43.3%	12	13
	Rs 10000-20000	26.7%	16.7%	8	5

Family Income					
	Rs 21000-30000	53.3%	53.3%	16	16
	Rs 31000-40000	10.0%	13.3%	3	4
	> Rs 41000	10.0%	16.7%	3	5
Diet Pattern	Vegetarian	60.0%	56.7%	18	17
	Non-vegetarian	40.0%	43.3%	12	13
Previous Information About Uti	Yes	0.0%	0.0%	0	0
	No	100.0%	100.0%	30	30
Previous History of Uti	Yes	3.3%	0.0%	1	0
	No	96.7%	100.0%	29	30

Section-II

Part-A

Findings of pre-test and post-test level of knowledge scores regarding urinary tract infection among adolescent girls in experimental & control group.

Table 1: Frequency & Percentage distribution of Pre-test and post-test level of knowledge scores regarding urinary tract infection among adolescent girls in experimental & control Group

N=60(30+30)

Criteria Measure of Knowledge Score				
Score Level	**PRE- EXPERIMENTAL**	**POST-EXPERIMENTAL**	**PRE- CONTROL**	**POST- CONTROL**
ADEQUATE (21-30)	3(10%)	16(53.3%)	3(10%)	3(10%)
MODERATE (11-20)	16(53.3%)	12(40%)	14(46.7%)	14(46.7%)
INADEQUATE (0-10)	11(36.7%)	2(6.7%)	13(43.3%)	13(43.3%)

Maximum score=30 **Minimum score=0**

Table 2: Mean, median, standard deviation and mean percentage of pre-test and post-test knowledge scores in experimental and control group

N=60(30+30)

Descriptive Statistics	**Mean Score**	**S.D.**	**Median Score**	**Mean%**
Pre-Experimental	11.90	3.818	11	39.67
Post Experimental	19.83	4.379	21	66.11
Pre-Control	12.53	4.281	11.5	41.78
Post Control	12.80	4.460	11.5	42.67

Maximum score=30 **Minimum score=0**

Table 3: Paired "t" test to compare pre-test and post-test level of knowledge score regarding urinary tract infection in experimental and control group.

Paired t test

N=60(30+30)

		Knowledge Score				**Paired t test**		
		Pre test		**Post test**				
Group	**N**	**Mean**	**SD**	**Mean**	**SD**	**df**	**T**	**Result**
Experimental Group	30	11.90	3.818	19.83	4.379	29	10.466	P value=<0.001 Significant
Control Group	30	12.53	4.281	12.80	4.460	29	1.975	p value=0.058 Non-Significant

p value<0.001 highly significant

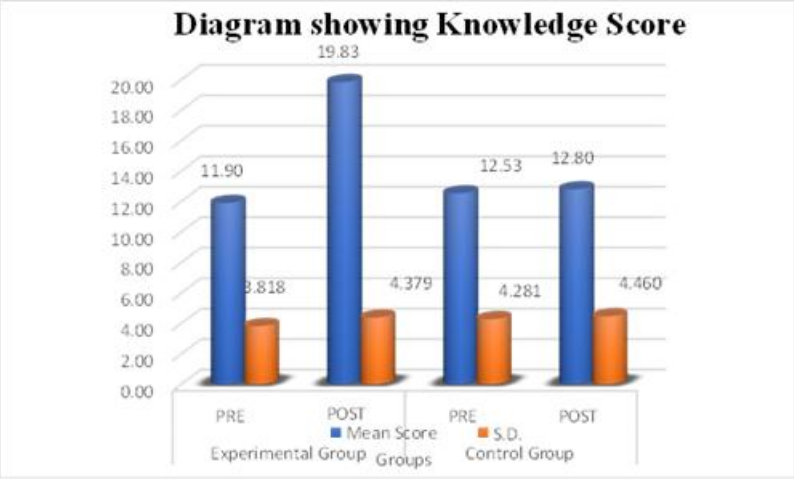

Figure 1: Bar diagram representing comparison between pre-test & post-test knowledge scores in experimental & control group

Part-B

Findings of pre-test and post-test level of practices scores regarding urinary tract infection in experimental & control group.

Table 4: Frequency & percentage distribution of pre-test and post-test practices scores regarding UTI among adolescent girls

N=60(30+30)

Criteria Measure of Practice Score				
Score Level	**Pre-Experimental**	**Post Experimental**	**Pre- Control**	**Post Control**
GOOD (11-16)	3(10%)	22(73.3%)	3(10%)	3(10%)
AVERAGE (6-10)	17(56.7%)	8(26.7%)	22(73.3%)	23(76.7%)
POOR (0-5)	10(33.3%)	0(0%)	5(16.7%)	4(13.3%)

Maximum Score=16 **Minimum Score=0**

Table 5: Mean, median, standard deviation, and mean percentage of pre-test and post-test practices score in experimental and control group

N=60(30+30)

Descriptive Statistics	Mean Score	S.D.	Median Score	Mean%
Pre-Experimental	7.27	2.363	7.5	45.42
Post Experimental	11.17	1.487	11	69.79
Pre-Control	7.70	1.968	8	48.13
Post Control	7.87	1.995	8	49.17

Maximum Score=16 **Minimum Score=0**

Table 6: Paired "t" test to compare the pre-test and post-test practices score regarding urinary tract infection among adolescent girls in experimental and control group.

Paired T Test

N=60(30+30)

		Practices Score						
		Pre test		Post test				
Group	**N**	**Mean**	**SD**	**Mean**	**SD**	**df**	**T**	**Result**
Experimental Group	30	7.27	2.363	11.17	1.487	29	8.120	P value=<0.001 Significant
Control Group	30	7.770	1.968	7.87	1.995	29	1.409	P value=0.169 Non-Significant

Maximum Score =16 **Minimum Score=0**

value<0.001 highly significant

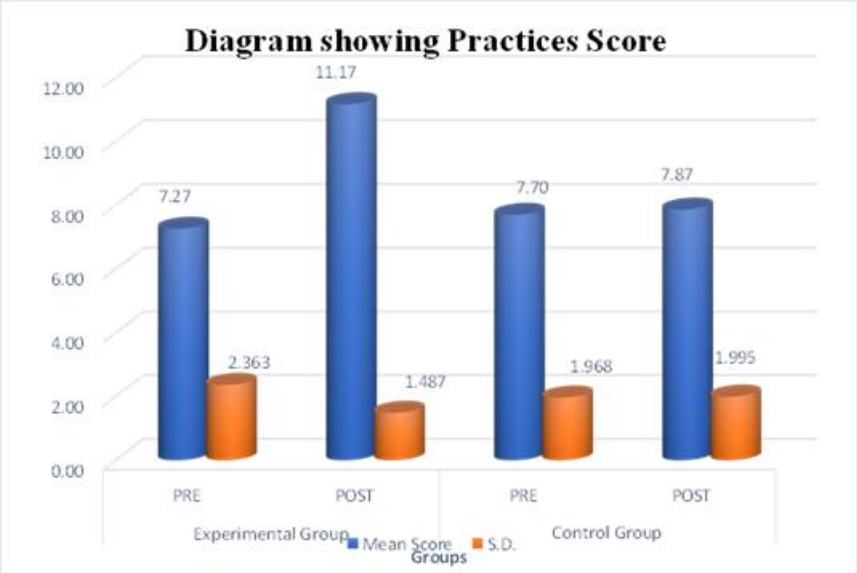

Figure 2: Bar diagram representing comparison between pre-test & post-test Practices scores in experimental & control group

Section-III

Findings of comparison of post test knowledge & practices scores regarding urinary tract infection among adolescent girls in experimental & control group.

Table 7: Frequency & Percentage distribution of Post-Experimental and Post-Control level of knowledge and practices scores regarding UTI among adolescent girls in experimental & control Group.

N=60(30+30)

Criteria Measure of Knowledge Scores			**Criteria Measure of Practices Scores**		
Score	**Post experimental**	**Post control**	**Score**	**Post experimental**	**Post control**
Adequate (21- 30)	16(53.3%)	3(10%)	**Good (11-16)**	22(73.3%)	3(10%)
Moderate (11-20)	12(40%)	14(46.7%)	**Average (6-10)**	8(26.71%)	23(76.7%)
Inadequate (0-10)	2(6.7%)	13(43.3%)	**Poor (0-5)**	0(0%)	4(13.31%)
Maximum=30 Minimum=0			**Maximum=16 Minimum= 0**		

Table 8: Mean, median, standard deviation and mean percentage of knowledge & practices score in post experimental and post control group

N=60(30+30)

Knowledge scores

Descriptive Statistics		**Mean Score**	**S.D.**	**Median Score**	**Mean%**
POST	Experimental	19.83	4.379	21	66.11
	Control	12.80	4.460	11.5	42.67

N=60(30+30)

Practices Scores

Descriptive Statistics		**Mean Score**	**S.D.**	**Median Score**	**Mean%**
POST	Experimental	11.17	1.487	11	69.79
	Control	7.87	1.995	8	49.17

Table 9: Unpaired "t" test

N=60(30+30)

Knowledge Score								
P O S T	**Group**	**Mean Score**	**S.D.**	**N**	**Unpaired "t" test**	**d f**	**p value**	**Result**
	Experimental	19.83	4.379	30	6.163	58	<0.001	Significant
	Control	12.80	4.460	30	0.605	58	0.548	Not significant

Maximum Score=30 **Minimum Score=0**

Unpaired "t" test

N=60(30+30)

	Practices Score							
	Group	**Mean Score**	**S.D.**	**N**	**Unpaired "t" test**	**d f**	**p value**	**Result**
P O S T	Experimental	11.17	1.487	30	7.262	58	<0.001	Significant
	Control	7.87	1.995	30	0.772	58	0.443	Not significant

Maximum Score=16 **Minimum Score=0**

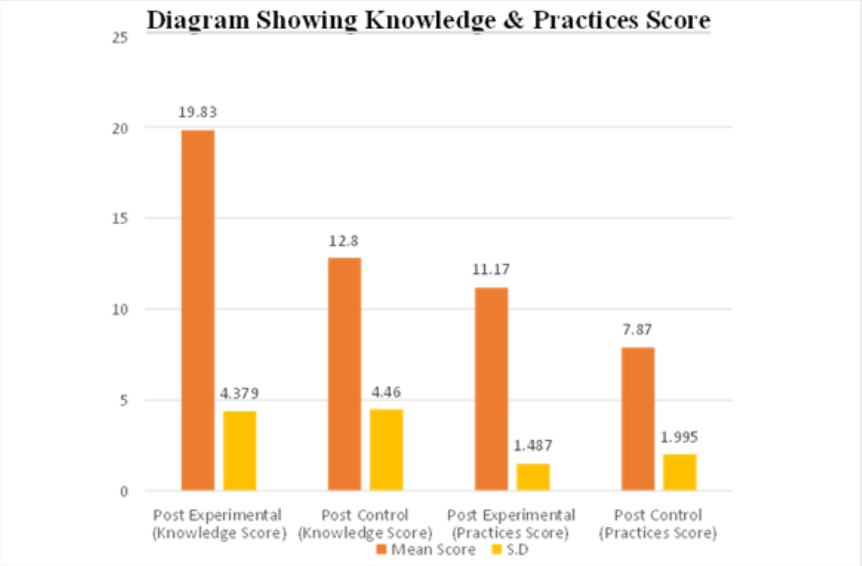

Figure 3: Bar diagram representing comparison between post-test knowledge & practices scores in experimental & control group

6.Discussion

Objective 1: To assess the pre-test & post-test knowledge and practices scores regarding urinary tract infection among adolescent girls in experimental & control group.

The statistical findings in the study revealed that, in pre-experimental group among 30 adolescent girls, majority 16(53.3%) of the adolescent girls had moderate knowledge, 11(36.7%) had inadequate knowledge, and minority 3(10%) had adequate knowledge and the practices score they had was, majority 17(56.7%) of adolescent girls had average practices, 10(33.3%) had poor practices, and minority 3(10%) had good practices.

In post- experimental group among 30 adolescent girls, majority 16(53.3%) had adequate knowledge, 12(40%) had moderate knowledge and minority 2(6.7%) had inadequate knowledge, and the practices score they had was, majority 22(73.3%) of the adolescent girls had good practices, 8(26.7%) had average practices and minority (0%) of them had poor practices.

In pre-control group, among 30 adolescent girls, majority 14(46.7%) of the adolescent girls had moderate knowledge 13(43.3%) had inadequate knowledge, and minority 3(10%) had adequate knowledge and the practices score they had was, majority 22(73.3%) of the adolescent girls had average practices 5(16.7%) had poor practices, and minority 3(10%) of them had good practices.

In post-control group, among 30 adolescent girls, majority 14(46.7%) of the adolescent girls had moderate knowledge, 13(43.3%) had inadequate knowledge and minority 3(10%) had adequate knowledge and the practices score they had was, majority 23(76.7%) of the adolescent girls had average practices 4(13.3%) had poor practices, and minority 3(10%) of them had good practices.

The study findings were supported by, Nimmy Saji, (2018) on pre-experimental study to examine the effectiveness of structured teaching program on prevention of UTI among adolescent girls at MIMS College of Nursing, Malappurama. A sample of 60 adolescent girls was taken using convenient non probability sampling technique. The data was collected using a structured questionnaire method. The result showed that shows that majority (90%) of adolescents had moderately adequate knowledge and 5.6% of them had inadequate knowledge, whereas only 4.3% of adolescents had adequate knowledge on prevention of urinary tract infection. The study concluded that teaching programme is effective in giving knowledge regarding prevention of Urinary tract infections in adolescent girls.[11]

Objective 2: To compare the mean post-test knowledge and practices scores regarding Urinary tract infection among adolescent girls in experimental & control group.

The statistical findings in the study revealed that, in experimental group, mean post-test knowledge score (19.83) was significantly higher than the mean post-test knowledge score (12.80) in the control group as evident from 't' value 6.163 which was significant at p<0.001 level of significance. And the mean post-test practices score (11.17) in experimental group was significantly higher than the mean post-test practices score (7.87) in the control

group as evident from 't' value 7.262 which was significant at p<0.001 level of significance.

Thus, the finding revealed that there was a significant difference between the post-test score of knowledge & practices between experimental & control group regarding prevention of urinary tract infection among adolescent girls. The present study shows that the Structured Teaching Programme is very effective in improving the knowledge and practices regarding Urinary tract infection.

The findings were supported by, Natali et al. (2022) conducted a quasi-experimental study to determine the effectiveness of Structured Teaching Programme on knowledge & expressed practices regarding menstrual hygiene. In the Experimental group, mean post-test knowledge score, 25.98 was significantly higher than the mean pretest knowledge score 13.50 as evident from 'Z' value 18.08 at 0.005 level of significance. In the control group Mean post-test knowledge score, 13.66 was significantly higher than the mean pretest knowledge score 13.56 as evident from 'Z' value 0.279 at

0.005 level of significance, concluding that Structured teaching programme is very effective in increasing knowledge.[12]

Objective 3: To determine the association between mean post-test knowledge and practices scores regarding urinary tract infection among adolescent girls with their selected sociodemographic variables.

As per the association of mean post-test knowledge and practices scores regarding urinary tract infection among adolescent girls with their selected socio demographic variables, there was no significant association of post-test knowledge & practices score with their selected socio-demographic variables i.e. Age, education, religion, type of family, family income, area of living, diet pattern, previous information about UTI, Previous history of UTI. Therefore, selected socio-demographic variables had no impact on knowledge scores among adolescent girls in experimental and control group.

No socio-demographic variables were found associated with the mean post-test knowledge and practices scores regarding urinary tract infection in adolescent girls.

Nursing Implications

Nursing Education

- The nursing personnel should be educated to update their knowledge and skills for assessment of the adolescent girls.
- Prepare the nursing students to develop the skills in identifying the symptoms and signs of urinary tract infection among adolescent girls.
- Nurses have to update their knowledge regarding prevention of urinary tractinfection by participating and listening to programmes in various settings.

Nursing Practice

- Nurses can learn accurate assessment of knowledge regarding prevention of urinary tract infection by using structured questionnaire among adolescent girls and magnify the importance to plan out the programmes depending upon the need of the girls in various setting.
- Nurses play an important role in providing primary care for urinary tract infection and also giving health education regarding prevention.
- The impact of formulating and implementing steps on primary prevention of urinary tract infection by nursing personnel.
- The nurse motivates the adolescent girls to utilize the health care services to improve health.

Nursing Administration

- Nurse administration has to make provision to promote health education with Audio Visual aids regarding prevention of urinary tract infection.
- In-service education program and continuing education programme can be conducted for the nurses on this specialization with urinary tract infection to update their knowledge.
- The nurse administration should provide necessary facilities to equip the staff to focus on preventive, promotive and curative aspect of care regarding prevention of urinary tract infection.
- Nurse administrator should motivate the nurses to conduct the mass education programme in the school and community area regarding prevention of urinary tract infection.
- Collaborate with hospital administration in policies and employ the specially trained nurses who needed knowledge for the prevention of urinary tract infection.

Nursing Research

- Adds to the research review about the importance of prevention for urinary tract infection among adolescent girls.
- Conduct further research in a different setting by using the above findings as a baseline data to expand the scientific body of professional knowledge.
- Disseminated the finding through journals and publications.

7.Limitations

- The study was confined to a specific geographical area only and only selected rural areas were included in the study, which imposes limits to any large generalization.
- The study was limited only to adolescent girls and the groups were small which resulted in reduced power in statistical analysis.
- The data was collected from 60 samples to find out the awareness. It could be done on more samples for the larger generalization.
- The data collection period was only one month.
- Extraneous variable are controlled to some extend only.

8.Recommendations

On the basis of the findings of the study the following recommendations have been made:

- A similar study can be conducted for a larger group of adolescent girls.
- A similar study can be conducted with a true experimental design.
- The same study can be conducted in a different setting such as a hospital.
- A comparative study can be done regarding prevention of urinary tract infection between girls from a private and a government school.

9.Conclusion

Adolescent girls being in their developmental phase, have rapid changes in their body including the genitourinary system, and they may be unaware of these changes. They have lack of knowledge regarding genitourinary hygiene & practices which makes them more prone to genitourinary infections among which urinary tract infection is the commonest one. To prevent this, they must be educated well about the knowledge regarding urinary tract system & its infection and the preventive practices for the UTI from the present study it was concluded that the implementation of structured teaching programme shows the effectiveness of tool by enhancing the knowledge &practices of adolescent girls.

References

[1] Hall GS. Adolescence: Its psychology and its relations to physiology, anthropology, sociology, sex, crime, religion and education. New York: D. Appleton and Company;1904: 1844-1924.
[2] Vijayan CP. Adolescent health special care. Asian journal of Obstetrics and Gynaecological practice 2006;10(1)
[3] Moreno MA. Urinary Tract Infections in Children and Adolescents. JAMA Pediatrics. 2016;170(9):916. doi:10.1001/jamapediatrics.2016.2163
[4] Weir M, Brien J. Adolescent urinary tract infections. Adolesc. Med. 2000 Jun;11(2):293-313.
[5] Salvatore S, Salvatore S, Cattoni E, Siesto G, Serati M, Sorice P, Torella M. Urinary tract infections in women. Eur J Obstet Gynecol Reprod Biol. 2011 Jun;156(2):131-6.
[6] Yang X, Chen H, Zheng Y, Qu S, Wang H, Yi F. Disease burden and long-term trends of urinary tract infections: A worldwide report. Front Public Health. 2022 Jul 27; 10:888205. doi: 10.3389/fpubh.2022.888205
[7] National Centre for disease control. Ministry of health & family welfare India. Government of India. January 2020.
[8] National Kidney Foundation. Urinary Tract Infections. Available from: https://www.kidney.org/atoz/content/uti
[9] World Health Organization. Sexually transmitted infections (STIs). 2013.
[10] Lamiya KK, Kunjabdulla JP, Salim J, Jyothika P, Lakshmi K, Aiswarya L, Betsy A, Bincy P,Mundodan, JM.Water Intake and Burden of Urinary Tract Infection among School Girls. J Community Prev Med 2018;1(1):1-5.
[11] Natali, Chauhan K, Soni R, Kanwar RA.A quasi experimental study to assess the effectiveness of structured teaching programme on knowledge and expressed practices regarding menstrual hygiene among adolescent girls in selected schools of Shimla. International Journal of Creative Research Thoughts. 2022;10(5): 2320-2882
[12] Saji N, Amrutha C, Varkey J. Effectiveness of structured teaching programme on prevention of UTI among adolescent girls. International Journal of Science and Healthcare Research. 2018;3(3):01-06.