

Research Article

A Study to Analyse the Impact of Structured Teaching Programme on Awareness of Adolescent Girls regarding Urinary Tract Infection

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A B S T R A C T

Introduction: Urinary tract infection (UTI) is a common problem among adolescent girls causing much discomfort to them and leading them to drop out of school. Inadequate hydration, unclean toilets, and poor menstrual and sexual hygiene practices predispose an adolescent girl to UTI. An international survey reported that 8.1 million girls visit healthcare providers every year; a national family health survey reported a prevalence of 16.6% positivity for UTI among adolescent girls. MP survey reported in 2014, says 8% of adolescent girls are affected.

Method: The study was conducted from August 2019 to September 2019 at Neelbud rural community in Bhopal. The sample consisted of 60 adolescent girls selected through the non-probability purposive sampling technique.

Result: Investigators highlight the finding of the study that the mean value of knowledge score was found to be higher in the post-test (15.8) as compared to that obtained in the pre-test (11.8). A significant difference observed between pre- and post-test scores showed the efficacy of the selected STP.

Conclusion: The selected STP proved to be effective in raising the level of knowledge of adolescent girls regarding the management and prevention of UTI.

Keywords: Adolescent Girls, Urinary Tract Infection, Structured Teaching Programme, Knowledge

Introduction

The term adolescent comes from the Latin word 'adolescere' which means growth towards maturity. Adolescence is a period of transition from carefree childhood to responsible adulthood, that is, age group between 10 and 19 years. This is a crucial period and needs to be handled with care. Developmental changes take place during this period which can have lifelong effects on the health of the girl. In recent years, the ability to lead socially and economically productive

life is being included in these changes.¹ The common causes of urinary tract infection are unhygienic practices, use of dirty toilets, poor perineal hygiene, lack of hydration, and lack of knowledge. An international survey reported that 8.1 million girls visit healthcare providers every year; a national family health survey reported a prevalence of 16.6% positivity for UTI among adolescent girls. MP survey, reported in 2014, says 20% of adolescent girls were affected with UTI. The increased prevalence of UTI among females was caused by shortness of the female urethra, which was the principal

cause among females.² Till graduation, approximately 5% to 6% of girls experience urinary tract infections at least once. Every year approximately 6-7 million adolescent girls visit the hospital due to UTI.³ In 2016, a pilot study conducted on the prevalence of UTI among females in their adolescence found that many (78%) adolescent girls were suffering from lower UTI due to unhygienic perineal care and use of the unclean toilets.⁴ UTI is one of the main underlying reasons of morbidity and mortality in India, which affects all age groups across the lifespan.

Materials and Methods

This research was performed to evaluate the impact of a well-structured teaching program regarding the awareness of treatment and prevention of UTI among adolescent girls living in a rural community in Neelbud, Bhopal. This research was based on a quantitative approach with a pre-experimental research design. Ethical approval was received from the Research Advisory Committee and Institutional Ethics Committee of Chirayu College of Nursing, Bhopal. The study was conducted from August 2019 to September 2019 at Neelbud rural community in Bhopal. Non-probability purposive sampling was utilised for the inclusion of 60 adolescent girls who fulfilled the inclusion as well as exclusion criteria.

The community medical officer gave the required permission. Consent was obtained from the participants, after which they were given a self-structured questionnaire consisting of two sections, the first included socio-demographic data, and the second included a knowledge questionnaire consisting of 30 items related to the aetiology, causes, urinary tract infection signs, symptoms, diagnostic test, prevention, and treatment of UTI. The data were compiled and analysed by using SPSS Statistical software by the statistician. The result was explained in terms of frequency as well as percentage distribution of the assessment. Chi-square test was employed to analyse the association with demographic variables. Value of p more than 0.05 was considered a significant level. The t-test was used to analyse the efficacy of the STP.

Results

Demographic Variables

Age of the adolescent girl: The majority of respondents (33.3%) were more than 18 years of age.

Type of Family: Maximum (43.3%) participants had a nuclear family and the remaining were in joint and extended families.

Family Income: 26 (43.3%) participants had a monthly income of 10001 to 15000 rupees and the remaining had less family income.

Facility in the Toilet at Home: Maximum adolescents (45%) had a public toilet, whereas others had to defecate in the open. It seems that maximum adolescent girls used public toilets hence there were more chances of urinary tract infection.

Water facility in their toilets: It is evident that the majority were having the facility of tap water in the toilet and 45 (75%) were having stored water facilities in their toilet.

Previous knowledge regarding urinary tract infection: 41.7% of adolescent girls had no previous knowledge regarding UTI and others had some knowledge.

Source of information related to the topic: The percentage-wise distribution of adolescent girls according to previous exposure showed that 21 (35%) got information on urinary tract infections from media and newspapers.

Number of family members: It revealed that maximum (41.6%) subjects had more than 5 and others had 2 members in their families.

Pre-test level of knowledge: 43 (71.7.3%) subjects had average knowledge, whereas 17 (28.3%) had poor knowledge. No respondent had good or excellent knowledge.

Post-test level of knowledge: 50 (83.3%) participants had good knowledge (score between 21 and 30), whereas 8 (13.3%) had excellent knowledge (score between 31 and 40). Two (3.3%) subjects had average and no subject had poor knowledge.

Comparison of pre- and post-test knowledge scores: Data presented in Table 1 and Figure 1 show that the mean knowledge score was higher in the post-test (15.8) as compared to the pre-test (11.8). The t value was determined to be 4.1 (2.00, $p < 0.05$ df: 59) which indicated that the selected STP is effective in raising the level of awareness of females in their adolescence regarding the management and prevention of UTI.

Table I. Comparison of Pre-test and Post-test Knowledge Scores

Knowledge Score	Mean	Mean Difference	Mean Percentage	Standard Deviation (SD)	t-value
Pre-test	11.8	4.0	43	2.11	4.1 significant at the level 0.005
Post-test	15.8		57	3.11	

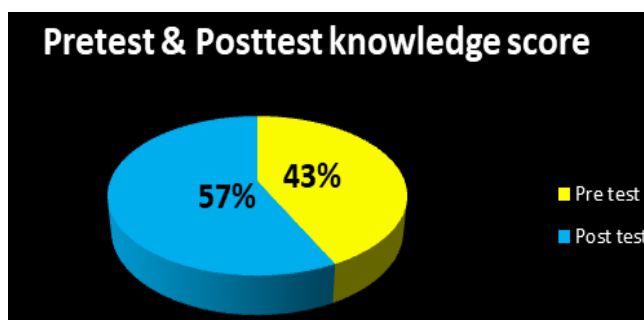


Figure 1. Pre-test and Post-test Knowledge Scores

Association of pre-test knowledge scores with their selected demographic variable: The demographic variables of study subjects such as family income and source of water in toilets were found to have no association with the pre-test knowledge at significance level and types of family, age of the adolescent girl, religion, type of toilet, source of information related to the topic, number of family members, and previous knowledge regarding topic were found to be significant at the level of 0.05.

Discussion

Researchers have identified UTI as one of the primary reasons for adolescent girls to visit a physician. The study found the mean knowledge score to be higher in the post-test (15.8) than in the pre-test (11.7), with the mean difference between the two being 4.0. The calculated t value (4.1) indicated the efficacy of the STP in increasing the knowledge of females in their adolescence regarding the management and prevention of UTI. Ahmed and Avasarala conducted a similar study and found that 12.7% of girls were suffering from UTI.⁶ Vyas et al. carried out a study on nursing students and found that 20% of girls in the study had UTI, with a higher prevalence among girls aged 17 to 20 years.⁷

Conclusion

Urinary tract infection is a common problem among adolescent girls causing much discomfort to them and leading them to drop out of school. Inadequate hydration, unclean toilets, and poor menstrual and sexual hygiene practices predispose an adolescent girl to UTI. It is essential to provide adolescent girls with information on proper hydration and proper perineal hygiene. Schools and other public areas should be equipped with basic and hygienic sanitation facilities. As Nurse Educators, the onus of creating awareness and organising educational programmes for adolescent girls regarding the treatment as well as prevention of urinary tract infections is also on us.

Source of Finding: None

Conflict of Interest: None

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