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# A STUDY TO ASSESS THE KNOWLEDGE REGARDING PREVENTION OF URINARY TRACT INFECTION AMONG ADOLESCENT GIRLS OF SELECTED SCHOOLS AT JAIPUR, RAJASTHAN WITH A VIEW TO DEVELOP AN INFORMATION BOOKLET

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## ABSTRACT

*The purpose of this study was to determine the level of knowledge among teenage girls in specific Jaipur, Rajasthani schools regarding how to prevent urinary tract infections. Both a quantitative and descriptive research design were employed in the study. Adolescent girls' level of knowledge regarding preventing urinary tract infections was assessed using a structured knowledge questionnaire. We selected the subjects using a non-probability convenient sampling technique, which included a sample of sixty schoolgirls. The findings demonstrated that there was no statistically significant correlation between the sociodemographic characteristics (age, mother's education, employment status, father's education, employment status, and family income) and knowledge about preventing UTIs. methods used during menstruation, previous knowledge of UTI, and previous history of UTI. ($p < 0.05$)) of girls. The study revealed a significant gap in knowledge among girls, which can be improve by conducting awareness programs focusing on prevention of urinary tract infection.*

**Keywords: Knowledge, prevention, Urinary tract infection, Adolescent girls Patient**



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## INTRODUCTION

A Urinary tract Infection is bacterial infection that can affect any part of the urinary tract. This includes the kidneys, which make urine, ureters, tubes that carry urine from kidney and the urethra, the tube that carries urine from bladder out of body.(1)

Urinary Tract Infection (UTI) most commonly occurs in adolescent age group. Lower UTIs are considered as the most common adolescent girl's infection. (2)

Among adolescent girls, poor hygiene and dysfunctional voiding pattern increases the risk for UTI. Silent UTI may occur among adolescent girls due to inadequate intake of water and infrequent passage of urine. (2)

Health promotion for this adolescent age group (10-19 years) mainly consists of teaching and guidance to avoid risk-taking activities and health-damaging behaviour that will benefit them not only during the teenage years, but also throughout their life span. (3)

During clinical posting experience, that approximately 20 adolescent girls per day visiting gynecologist in the OPD with itching, burning, swelling problem which result in sleeping disorder, lack of attention in their studies. Therefore, prevention of urinary tract infection is essential for improving the clinical outcomes, enhancing quality of life, and reducing the long-term health risks associated with the condition.

## STATEMENT OF THE PROBLEM

"A study to assess the knowledge regarding prevention of urinary tract infection among adolescent girls of selected schools at Jaipur, Rajasthan with a view to develop an information booklet".

## OBJECTIVES

- To assess the knowledge regarding urinary tract infection among adolescent girls of selected schools of Jaipur using a selected questionnaire.
- To find out association between knowledge regarding urinary tract infection and their selected demographic variable.
- To develop an information booklet on knowledge regarding prevention of urinary tract infection.


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## MATERIAL AND METHODS

1. A quantitative research methodology with a descriptive research design was implemented in this study. The study was conducted in Govt. Adarsh girls senior secondary school, Gangori bazar , Jaipur, Rajasthan with a sample size of 60 adolescent girls selected through non-probability convenient sampling. Data collection tools include a structured knowledge questionnaire validated by experts, and reliability was established using the Kuder-Richardson ($KR_{20}$) method (r = 0.72). Necessary permission for the study and data collection was secured, and informed consent was obtained from participants while ensuring their confidentiality and autonomy.

**Specification of the instrument and related measurement**

***Part A: Socio-Demographic variables consist of 09 items***

***Part B: Self-Structured questionnaire on role of lifestyle modification of PCOS***

Data collection tool comprised of 18 questions regarding prevention of urinary tract infection and each question has four options, in which one option is correct and other are incorrect answer. The maximum score expected is 18. The scoring criteria were established to quantitatively measure the level of knowledge in three categories, Good, Average and Poor, allowing for a systematic and comparative analysis across participants.

## RESULT

**TABLE NO. 1, Frequency and percentage distribution of socio - demographic variables of girls (N=60)**

| S.NO. | SOCIO DEMOGRAPHIC VARIABLE | | FREQUENCY | PERCENTAGE |
|---|---|---|---|---|
| 1. | Age – (in years) | 13-14 | 1 | 2 % |
| | | 15-16 | 32 | 53 % |
| | | 17-18 | 25 | 42 % |
| | | >18 | 2 | 3% |
| 2. | Education of mother | Primary School | 30 | 50 % |
| | | Secondary School | 24 | 40 % |
| | | Higher Secondary School | 5 | 8 % |
| | | Graduation & Above | 1 | 2 % |
| 3. | Occupation of Mother | Government Employee | 2 | 3 % |
| | | Private Employee | 7 | 12 % |
| | | Home Maker | 44 | 73 % |
| | | Self Employee | 7 | 12 % |


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| | | | | |
|---|---|---|---|---|
| 4. | Education of Father | Primary School | 20 | 33 % |
| | | Secondary School | 28 | 47% |
| | | Higher Secondary School | 8 | 13% |
| | | Graduation & Above | 4 | 07% |
| 5. | Occupation of Father | Government Employee | 02 | 03 % |
| | | Private Employee | 14 | 23 % |
| | | Self Employee | 18 | 30 % |
| | | Labour | 26 | 44 % |
| 6. | Monthly Income of Family | Rs 10,000/- to Rs 20,000/- | 33 | 55% |
| | | Rs 20,001/- to Rs 30,000/- | 16 | 27 % |
| | | Rs 30,001/- to Rs 40,000/- | 5 | 8 % |
| | | >40,001/- | 6 | 10 % |
| 7. | Methods Used During menstruation | Clothes | 5 | 8 % |
| | | Sanitary pads | 54 | 90 % |
| | | Menstrual cup | 1 | 2 % |
| | | Tempon | 0 | 0 % |
| 8. | Previous Knowledge | YES | 16 | 27% |
| | | NO | 44 | 73 % |
| 9. | Previous History of UTI | YES | 6 | 10 % |
| | | NO | 54 | 90 % |

**Table no.1**, represents that, majority of participants 32(54%) were in 15-16 years of category, mothers' education, the largest group had completed primary schooling 30(50%), and a majority group of mothers were homemakers 44 (86%). For fathers' education, the majority group had completed secondary schooling 28 (47%), and most of them employed in the labour 26 (44%). The Family income 33 (55%) reported in the range of ₹10,000–₹20,000. Most of participants 54(90) used sanitary pads during menstruation ,Majority of participants 44 (73%) had no previous knowledge of UTI, most participants 90 (90%) reported no history of UTI.


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**TABLE NO. 2, Frequency and percentage distribution of level of knowledge regarding prevention of urinary tract infection among adolescent girls**

**(N-100)**

| LEVEL OF KNOWLEDGE | Score | Frequency (F) | Percentage (%) |
|---|---|---|---|
| **GOOD** | 15-18 | 7 | 12% |
| **AVERAGE** | 10-14 | 39 | 65 % |
| **POOR** | 1-9 | 14 | 23 % |

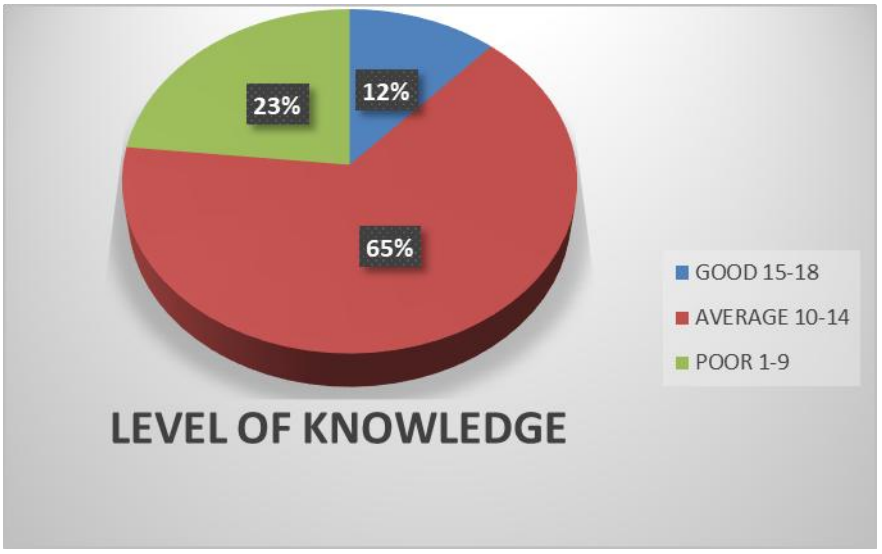


***Figure 1 Pie graph showing the percentage distribution of level of knowledge regarding prevention of urinary tract infection among adolescent girls***

**Table no.2 & Figure no. 1,** represents that, 65% had average knowledge which are in 10-14 category, 12% of girls had good knowledge which are in 15-18 category and 23% have poor knowledge which are in 1-9category.

**TABLE NO. 3, Mean, Median, Mode and Standard Deviation**

| S. No. | Mean | Median | Mode | Standard deviation |
|---|---|---|---|---|
| 1. | 11.66 | 12 | 12 | 2.60 |

**Table no.3**, Data presented in above table showing the, mean, median, mode and standard deviation of level of knowledge score prevention of urinary tract infection among adolescent girls. In this mean was 11.66, median was 12, mode was 12 and standard deviation was 2.60.



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**TABLE NO. 4 Represents the association of the level of Knowledge with selected Socio - demographic variables**

**(N=60)**

| S.NO. | SOCIO DEMOGRAPHIC VARIABLE | CATEGORIES | FREQUENCY | KNOWLEDGE SCORE | | | CALCULATED VALUE | DEGREE OF FREEDOM | TABULATED VALUE | LEVEL OF SIGNIFICANCE @ 0.05 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | POOR | AVERAGE | GOOD | | | | |
| 1. | AGE (in years) | 13-14 | 1 | 1 | 0 | 0 | 6.59 | 6 | 12.59 | N.S. |
| | | 15-16 | 32 | 7 | 22 | 3 | | | | |
| | | 17-18 | 25 | 6 | 16 | 3 | | | | |
| | | >18 | 2 | 0 | 1 | 1 | | | | |
| 2. | Education of mother | Primary school | 24 | 4 | 16 | 4 | 3.95 | 6 | 12.59 | N.S. |
| | | Secondary school | 27 | 6 | 18 | 3 | | | | |
| | | Higher secondary school | 7 | 3 | 4 | 0 | | | | |
| | | Graduation and above | 2 | 1 | 1 | 0 | | | | |
| 3. | Occupation of Mother | Government employee | 6 | 6 | 12 | 3 | 4.87 | 6 | 12.59 | N.S. |
| | | Private employee | 9 | 2 | 6 | 1 | | | | |
| | | Home maker | 39 | 8 | 27 | 4 | | | | |
| | | Self-employee | 6 | 2 | 2 | 2 | | | | |
| 4. | Education of father | Primary School | 21 | 6 | 12 | 3 | 2.08 | 6 | 12.59 | N.S. |
| | | Secondary School | 19 | 3 | 14 | 2 | | | | |
| | | Higher Secondary School | 11 | 2 | 8 | 1 | | | | |
| | | Graduation and above | 9 | 3 | 5 | 1 | | | | |
| 5. | Occupation of father | Government employe | 9 | 3 | 5 | 1 | 5.56 | 6 | 12.59 | N.S. |
| | | Private employe | 13 | 3 | 8 | 2 | | | | |
| | | Businessman | 17 | 1 | 13 | 3 | | | | |
| | | Self-employe | 21 | 7 | 13 | 1 | | | | |



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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 6. | **Methods used during menstruation** | **Clothes** | **5** | 1 | 4 | 0 | 2.77 | 4 | 9.48 | N.S. |
| | | **Sanitary pads** | **52** | 13 | 33 | 6 | | | | |
| | | **Menstrual cup** | **3** | 0 | 2 | 1 | | | | |
| | | **Tempon** | **0** | 0 | 0 | 0 | | | | |
| 7. | **Monthly income of family** | **10,000-20,000/-** | **33** | 8 | 22 | 3 | 4.63 | 6 | 12.59 | N.S. |
| | | **20,001-30,000/-** | **7** | 2 | 4 | 1 | | | | |
| | | **30,001-40,000/-** | **11** | 4 | 6 | 1 | | | | |
| | | **>40,000 /-** | **9** | 0 | 7 | 2 | | | | |
| 8. | **Previous Knowledge** | **YES** | **16** | 6 | 7 | 3 | 4.33 | 2 | 5.99 | N.S. |
| | | **NO** | **44** | 8 | 32 | 4 | | | | |
| 9. | **Previous History of UTI** | **YES** | **6** | 1 | 4 | 1 | 0.27 | 2 | 5.99 | N.S. |
| | | **NO** | **54** | 13 | 35 | 6 | | | | |

**N.S. –** non-significant
**S. –** Significant

**Table no.4**, , represents the association of the level of Knowledge with selected Background variables (Age, Education of mother, occupation of mother, education of father, occupation of father, monthly income of family, methods used during menstruation and previous knowledge of urinary tract infection) have no statistically significant effect on the knowledge score at the 0.05 significance level.

## DISCUSSION

The current study evaluated the awareness of teenage girls in a few Jaipur, Rajasthan, schools about preventing urinary tract infections (UTIs). Because of a number of physiological and behavioral factors, including inadequate hydration, inappropriate menstrual practices, and poor hygiene, UTIs are acknowledged as a common health issue among females, especially during adolescence.According to the study's findings, the majority of participants (65%) knew about UTI prevention at an average level, whereas 12% knew a lot and 23% knew very little. This indicates a moderate level of awareness among teenage girls, but it also points to a substantial knowledge gap that may make it more difficult for them to adopt effective preventive measures. The results are in keeping with earlier research, including that conducted by Kaur (2016), Bokolia (2016), and Saji et al. (2018), which found that although adolescents have some awareness of UTIs, this knowledge is frequently lacking or predicated on false information. In a similar vein, studies by Jaydev & Mittal (2022) and Joseph (2021) have demonstrated the beneficial effects of interventions like structured teaching programs on raising knowledge levels.


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## CONCLUSION

In order to fill in identified knowledge gaps, an informational booklet was created to gauge teenage girls' awareness of UTI prevention in a few Jaipur schools.

The results show that a significant percentage of participants still lacked adequate knowledge about UTIs and how to prevent them, even though the majority had average knowledge. The urgent need for organized educational interventions in this area is highlighted by the fact that only a small percentage of girls showed good knowledge.

Crucially, the study found no statistically significant correlation between knowledge levels and certain demographic factors like age, parental education, occupation, or prior UTI history. This suggests that, regardless of background, the sample group as a whole shares a common problem of having little knowledge about UTIs.

According to the study's findings, improving health education about urinary tract hygiene and prevention techniques is imperative, especially for teenagers. School-based health initiatives, such as awareness campaigns and educational materials, can be very effective in encouraging healthy habits and lowering the risk of infection.

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