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# A Descriptive Study to Assess the Knowledge and Practices Regarding Prevention of Urinary Tract Infection (UTI) among Adolescent Girls at Selected Higher Secondary Schools

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***Abstract--- Background of the study:*** *Urinary Tract Infection is one of the most usual adolescent girl's infections. Permanent renal cortical scarring may occur in effect girls, especially with urinary tract infection, leading to long term complication. A urinary tract infection is common infection that can upset any part of the urinary system. Among adolescent girls, lower urinary tract infections are very common. At least one episode of urinary tract infection will occur in nearly 5-6% of girls during first grade to graduation from high school. Compare to boys, the recurrence rate is 50% greater in girls. Due to urinary tract infection every year nearly 6-7 million young women visits physicians. The present study was conducted with the aim to assess knowledge and prevention practice regarding of urinary tract infection among adolescent girls.*

***Material and method:*** *In this study cross sectional descriptive Survey research design was used. The simple Random sampling technique was used to collect samples. Data collection was done by administering the structured knowledge questionnaire and self-reported Practice Check list.*

***Results:*** *Descriptive and inferential statistics was used. The result reveals that most of the samples (71.5%) were having poor knowledge and majority (87%) has poor practice standard.*

***Conclusion:*** *A significant poor knowledge and practice was found regarding prevention of urinary tract infection among adolescent girls. Health care professionals and facilities have the responsibility to broadcast proper information about urinary tract infection so that women will be made aware of the causes, risk factors, symptoms and Prevention practices of urinary tract infection.*

***Keywords---*** *Urinary Tract Infection, Adolescent Girls.*

## I. INTRODUCTION

The urinary framework comprise of the kidneys, ureters, bladder, and urethra. The key components in the framework are the kidneys.[1]Urinary tract infection is a unique infection that can occur any place along the urinary

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tract[2].

Urinary tract infection and its associated complications are the reason of approximately 150 million deaths per year globally. The involvement of the upper urinary tract can lead to symptomatic bacteriuria and is characterized by acute Pyelonephritis[3]. The disease can be established in 40% - 50% of women and 5% of men. After anaemia, UTIs are the subsequent common complications in pregnant women, which if not controlled well, can adversely affect the well-being of infant or the pregnant mother.

WHO defined adolescent as the period of transition from childhood to adulthood in the age range of 10-20 years Adolescence is an important segment of our society with one fifth of them constituting the population. Thus it is the largest ever generation in human history. In India 21% of the total population comprises of adolescents. (National youth policy 2000). Adolescence is a period between child hood and manhood/ womanhood. Lack of sufficient knowledge may lead to various genitourinary diseases among adolescent girls.[4,5]

A urinary tract infection (UTI) is a bacterial infection that influences any portion of the urinary tract. The fundamental causative specialist is Escherichia coli.[6]Despite the fact that urine contain an assortment of liquids, salts, and waste items, it for the most part doesn't have microscopic organisms in it. At the point when microscopic organisms gets into the bladder or kidney and duplicate in the pee, the reason an UTI. Among adolescent girls, lower urinary tract infections are very common. At least one episode of urinary tract infection will occur in nearly 5-6% of girls during first grade to graduation from high school. Compare to boys, the recurrence rate is 50% greater in girls. Due to urinary tract infection every year nearly 6-7 million young women visits physicians. [7.8.9]

Predisposing factors for urinary tract infections are sexually-active pre-menopausal women, the use of spermicides for contraception, taking on different sexual partners, the age of the first UTI, a maternal history of UTI and voiding dysfunction. Many other factors have been believed to influence women to UTIs, such as voiding patterns pre- and post-coitus, wiping technique, wearing tight undergarments, deferred voiding habits and vaginal douching; however, there has been no proven association.[10]

## II. MATERIAL AND METHODS

Cross-sectional study was done over a period of 2 months. Approval of Institutional Ethics Committee & Principals of selected higher secondary schools, Vadodara, Gujarat was obtained prior to the conduction of the study. Study subjects were adolescent girls studying at selected higher secondary schools of Vadodara. Total 200 samples were selected by applying Simple random sampling.

Pilot-tested structured knowledge questionnaire and self-reported practice checklist was administered to each study participant. The subjects were clarified about the need of the study and informed assent was taken. Data were analyzed by using descriptive and inferential Statistics.

## III. RESULTS

A total of 200 adolescent girls were included in the final study for analysis.

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Table 1: Frequency and Percentage Distribution of Samples According to their Demographic Characteristics **[N=200]**

| Sr. No. | Variable | Category | Frequency | Percentage |
|---|---|---|---|---|
| 1 | Age | 16-17 | 175 | 87.5% |
| | | 18-19 | 25 | 12.5% |
| 2 | Religion | Hindu | 181 | 90.5% |
| | | Muslim | 18 | 9% |
| | | Christian | 1 | 0.5% |
| | | Other | 0 | 0% |
| 3 | Area of residence | Urban | 78 | 39% |
| | | Rural | 122 | 61% |
| 4 | Education of Father | Illiterate | 5 | 2.5% |
| | | Primary | 48 | 24% |
| | | Secondary | 63 | 31.5% |
| | | Higher secondary | 51 | 25.5% |
| | | Graduate & above | 33 | 16.5% |
| 5 | Education of Mother | Illiterate | 15 | 7.5% |
| | | Primary | 71 | 35.5% |
| | | Secondary | 58 | 29% |
| | | Higher secondary | 26 | 13% |
| | | Graduate & above | 30 | 15% |
| 6 | Occupation of Father | Unemployed | 5 | 2.5% |
| | | Self-employed | 64 | 32% |
| | | Government Employee | 40 | 20% |
| | | Labourer | 44 | 22% |
| | | Private employee | 47 | 23.5% |
| 7 | Occupation of Mother | Unemployed/ housewife | 98 | 49% |
| | | Self-employed | 39 | 19.5% |
| | | Government employee | 11 | 5.5% |
| | | Labourer | 23 | 11.5% |
| | | Private employee | 29 | 14.5% |
| 8 | Elder female sibling | Yes | 98 | 49% |
| | | No | 102 | 51% |
| 9 | Past UTI | Yes | 6 | 3% |
| | | No | 194 | 97% |
| 10 | Previous sources of knowledge | No any | 86 | 43% |
| | | TV | 31 | 15.5% |
| | | Newspaper | 8 | 4% |
| | | Magazines | 2 | 1% |
| | | Internet | 23 | 11.5% |
| | | Seminar at school or anywhere | 50 | 25% |

Above table shows that the majority (87.5%) were belongs to 16-17 years of age. 90.5% were Hindu, 61% were comes from rural area, very few Fathers and mothers were graduate (16.5%, 15% respectively), Majority (32%) of Fathers were Self-employed and 49% Mothers were Housewife, 49 % were having elder female sibling, only 3% were suffered from Urinary tract infection in past, majority (43%) had no any previous knowledge regarding Urinary tract infection.

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Table 2: Distribution of Samples According to Knowledge Index

| *Score* | *Knowledge Index* | *Frequency* | *Percentage* |
|---|---|---|---|
| <7 | Poor | 143 | 71.5% |
| 7-13 | Average | 48 | 24% |
| >13 | Good | 9 | 4.5% |

The knowledge score of samples is presented in Table No: 2 which reveals that majority (71.5%) of the people were having poor knowledge regarding urinary tract infection.

Table 3: Frequency and Percentage Distribution of Samples According to their Practice Score

| *Score* | *Practice Standard* | *Frequency* | *Percentage* |
|---|---|---|---|
| 0-7 | Poor | 174 | 87% |
| 8-15 | Good | 26 | 13% |

Above table reveals that 87% adolescent girls have demonstrated poor practice regarding prevention of urinary tract infection.

Table 4: Association of Knowledge and Demographic Variable

| **Sr. no.** | **Characteristics** | **Knowledge Score** | | | **Degree of freedom** | **Chi Value □ 2** | **t value** | **Significant at 0.05 level** |
|---|---|---|---|---|---|---|---|---|
| | | **Poor** | **Average** | **Good** | | | | |
| 1. | Area of Residence | | | | | | | |
| | Urban | 32 | 40 | 6 | 15.665 | 1 | 3.84 | S |
| | Rural | 111 | 8 | 3 | | | | |

Above table shows that Students belongs to rural area having poor knowledge regarding Urinary Tract Infection.

Table 5: Analysis and Interpretation Association of Practice and Demographic Variable

| **Sr. no** | **Categories** | **Practice Sore** | | **Degree of freedom** | **Chi Value** | **t Value** | **Significant at 0.05 level** |
|---|---|---|---|---|---|---|---|
| | | **Poor** | **Good** | | | | |
| 1 | Presence of elder female sibling | | | | | | |
| | Yes | 78 | 20 | 1 | 0.321 | 3.84 | S |
| | No | 96 | 6 | | | | |
| 2 | Previous UTI | | | | | | |
| | Yes | 1 | 24 | 1 | 7.556 | 3.84 | S |
| | No | 173 | 2 | | | | |

Above table shows that who have elder female siblings and previous history of urinary tract infection have demonstrated good practice.

## IV. DISCUSSION

Analysis of the demographic characteristics of the samples participated in this study showed that majority of the samples' characteristics were similar to study conducted by Mafuyai Joseph Mangai, et al.[11]

The prominent finding in our study shows that Knowledge & Practice was poor regarding prevention of urinary tract infection which is steady with baseline and control findings from studies conducted by Bhat et al.[12], . NimmySaji at al[13], Marziyeh et al.[14]

The present study has some limitations as the study was conducted by student researchers who had limited time

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and other resources the study was confined to only vadodara district. Therefore the findings of the present study have the limitations of under generalization. In spite of these limitations every effort was made by the researchers to keep this study as objectives as possible hence the findings of the study would be applicable to the regions where similar conditions exists.

## V. CONCLUSION

Study concluded that knowledge and practice of prevention of urinary tract infection were dismal. Adolescent girls have to be made aware of the causes, risk factors, symptoms and prevention practices of this infection.

### *Conflict of Interest*

The authors declare that there is no conflict of interests regarding the publication of this manuscript.

### *Source of Funding*

Researchers have used own finance to complete research study.

### *Ethical Clearance*

Approval of Institutional Ethics Committee & Principals of selected higher secondary schools, Vadodara was obtained prior to the conduction of the study. Privacy and confidentiality of collected information were ensured throughout the process.

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