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Knowledge on Urinary Tract Infection among the Adolescent Girls of Selected High Schools of Golaghat District, Assam

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Abstract: ***Women and adolescent girls are frequently predisposed to Urinary tract infections due to their shorter urethra and its proximity to the anus. Urinary Tract infections are most often caused by bacteria (germs) that get into the bladder which is part of the urinary tract. Objectives and methodology: A quantitative research approach with a non-experimental descriptive survey design was adopted for the present study. The study settings were the selected high schools of Golaghat district, Assam. Data were collected from a sample of 89 adolescent girls by using self-structured questionnaire on knowledge on Urinary Tract Infection. Collected data were analyzed using descriptive and inferential statistics. Results: The findings revealed that only 4.4% of participants had adequate knowledge of urinary tract infection, 77.6% had moderately adequate knowledge indicating a partial understanding of urinary tract infections and 18% of participants had inadequate knowledge on Urinary Tract infection.***

Keywords: Knowledge, Urinary Tract Infection, Adolescent girls

1. Introduction

A urinary tract infection (UTI) is an infection in any part of the urinary system. The urinary system includes the kidneys, ureters, bladder and urethra. Most infections involve the lower urinary tract- the bladder and the urethra. Urinary tract infections (UTIs) are one of the most frequent infections worldwide and the burden of UTIs is a substantial global health problem as approximately 150 million patients are diagnosed worldwide each year.[1] In Assam, urinary tract infections (UTIs) are a growing concern, particularly due to antimicrobial resistance among common uropathogens. A study conducted in southern Assam found that 59.7% of urine sample showed significant bacteriuria, with E. coli being the most frequently isolated bacteria.[2] Urinary tract infections (UTIs) are among the most prevalent bacterial infections in the world, globally accounting for more than 404 million clinical cases in 2019.[3] It is estimated that about 50% – 80% of individuals are affected by any form of UTI in their lifetime.[4] Females are more frequently infected with UTIs; about 60% of females experience UTIs at least once in a lifetime.[5]

2. Materials and Methods

A quantitative descriptive survey research design was used in the study. The sample was selected using simple random technique with a total of 89 adolescent girls studying in class VIII, IX and X from selected high schools of Golaghat district, Assam. Data were collected using a self- structured questionnaire consisting of two sections, section-I: socio-demographic proforma and section-II: a knowledge questionnaire on Urinary Tract Infection.

Data collection procedure

Permission was taken from the Principal of Ponka R.H higher secondary school and Head Master of Prayas Vidya Mandir school Telgaram Golaghat. Data were collected in the month of June and July 2024. The purpose and title of the study were explained to the participants and informed consent was obtained. Confidentiality and anonymity of the data was ensured. The questionnaire was administered to the sample and it took around 20 -30 minutes to complete the procedure which was followed by debriefing of the session.

Data analysis

Data were compiled and transferred to the master sheet which was analyzed by using descriptive and inferential statistics.

3. Results

Majority of the subjects under study (71.91%) belongs to the age group of 13–15 years while 21.35% were above 15 years and only 6.74% were below 13 years. Most participants identified as Hindu (79.77%), followed by Muslim (7.88%), with 12.35% belonging to other religious groups. Majority of the subjects father (28.08%) had occupation as daily wage workers whereas majority of mothers (69.66%) were homemakers. Most fathers (51.68%) had secondary education, while 23.6% father of the sample had completed primary education. A smaller portion (20.22%) of participants' father had no formal education and only 4.5% attained graduate-level education. Similarly, most mothers (44.94%) had secondary education, followed by primary education (23.6%) while 19.10% mothers had no formal education, and 12.36% completed graduate studies. The majority (82%) resided in rural areas, while 18% lived in urban settings. [Table-1]

Table 1: Frequency and percentage distribution according to demographic characteristics of the sample, n = 89

Variable		Frequency	Percentage (%)
Age	Below 13 years	6	6.74
	13-15 years	64	71.91
	Above 15 years	19	21.35
Religion	Hindu	71	79.77
	Muslim	7	7.88
	Others	11	12.35
Occupation of father	Unemployed	8	8.98
	Private job	24	27
	Govt job	13	14.60
	Daily wager	25	28.08
	Business	19	21.34
Occupation of mother	Homemakers	62	69.66
	Private job	3	3.37
	Govt jobs	4	4.5
	Daily wager	17	19.10
	Business	3	3.37
Education of father	No formal education	18	20.22
	Primary education	21	23.6
	Secondary education	46	51.68
	Graduate and above	4	4.5
Education of mother	No formal education	17	19.10
	Primary education	21	23.6
	Secondary education	40	44.94
	Graduate and above	11	12.36
Area of residence	Rural	73	82
	Urban	16	18

Table 2: Frequency and percentage distribution according to knowledge on Urinary Tract Infection

Level of knowledge on Urinary Tract Infection	Frequency	Percentage (%)
Adequate	4	4.4
Moderately adequate	69	77.6
Inadequate	16	18
Total	89	100

Only 4.4% of participants demonstrated adequate knowledge of UTIs. The majority 77.6%, had moderately adequate knowledge indicating a partial understanding of UTI-related concepts and 18% of participants had inadequate knowledge of UTI which suggest the need for further education and awareness among the adolescent girls. These results highlight the importance of targeted interventions to enhance UTI related knowledge among women and adolescent girls for adopting preventive measures [Table-2]. The Knowledge on urinary tract infection was found to be significantly associated with Age, Religion, Occupation of father, Occupation of mother and Education of mother. [Table-3]

Table 3: Association between knowledge on urinary Tract Infection among adolescent girls and selected demographic variables

Area		x^2	df	*P*-value	Remarks
Age	<13 years	38.42	4	0.000	*S
	13-15 years				
	>15 years				
Religion	Hindu	11.82	4	0.018	*S
	Muslim				
	Others				
Occupation of father	Unemployed	32.69	8	0.00007	*S
	Private job				
	Govt. job				
	Daily wage worker				
	Business				
Occupation of mother	Home maker	18.22	8	0.0196	*S
	Private job				
	Govt. job				
	Daily wageworker				
	Business				
Education of father	Illiterate	3.68	6	0.7198	*NS
	Primary education				
	Secondary education				
	Graduate & above				
Education of mother	Illiterate	13.84	6	0.031	*S
	Primary education				
	Secondary education				
	Graduate & above				
Area of residence	Urban	2.55	2	0.278	*NS
	Rural				

*S=Significant at P<0.05 *NS= Not Significant

4. Discussion

This study provides valuable insights in relation to the knowledge of urinary tract infections (UTIs) among adolescent girls. The findings indicate that the majority of participants (71.91%) were between 13-15 years old, with smaller groups falling into younger age group. Additionally, the study highlights a significant rural-urban divide, showing

that 82% of the adolescent girls resided in rural areas. This contradicts previous research by Almukhtar SH (2018)[6], which found a higher prevalence of urban residency among study participants. Regarding UTI awareness, most girls (77.6%) demonstrated moderately adequate knowledge, yet only a small portion (4.4%) adolescent girls had adequate understanding on UTI suggesting a gap in comprehensive education on the topic. Interestingly, while the study aligns with Kour S. (2016)[7], which observed similar trends in nursing students regarding moderate UTI knowledge, it diverges from Bokolia R. (2016)[8], whose research indicated significantly lower awareness among school-going adolescent girls. These findings reinforce the need for targeted educational interventions, particularly in rural regions, to improve knowledge and preventative measures related to UTIs among adolescents.

The results of the present study revealed that there was significant association between knowledge and Age, Religion, Occupation of parents and Education of mother. Baruah PA (2023)[9] in his study found know significant association between knowledge on urinary tract infection and demographic variables.

The primary role of nurses is to educate people about UTIs and equip them with the knowledge to manage and prevent these infections. To enhance awareness, targeted health education must be provided to both adolescents and their parents, ensuring they understand the importance of personal hygiene and preventative measures. Nurses play a vital role in guiding young girls on hygiene practices and management strategies for UTIs.

Assessing adolescent girls' knowledge regarding UTIs can pave the way for further interventions, including community health education programs and specialized training for health workers involved in school and community health initiatives. These efforts can bridge gaps in awareness and foster a proactive approach to UTI prevention and management.

In clinical practice, health promotion and illness prevention remain crucial components of nursing care. The findings of this study can assist nurses in identifying risk factors and determining the necessity for UTI-related health education in hospital and community settings. By integrating preventive strategies into routine adolescent health care, nurses can contribute to better long-term health outcomes.

5. Recommendations

Further studies on awareness and preventive measures of urinary tract infection can be conducted among women and adolescent girls in larger group and in various settings using different research methodologies.

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