

Attitude towards prevention of urinary tract infections among adolescents of Kikaaya college school Bulenga, in Wakiso district: A descriptive cross-sectional study.

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Abstract

Background: Globally, Urinary Tract Infections accounts for millions of health care visits annually in the United States alone. In Uganda, the prevalence of UTIs among adolescent stands at 13%. Therefore this study was to determine the attitudes towards prevention of UTIs and to identify practices towards prevention of UTIs among adolescents in Kikaaya College School.

Methods: The study used a descriptive cross sectional method that involved quantitative data collection methods. A simple random sampling method was used to select participants. Data was collected using a questionnaire after obtaining consent, analyzed and presented into tables and figures using Microsoft excel.

Results: The attitudes were generally positive as majority 73.3% agreed that UTIs are preventable. The general knowledge towards prevention of UTIs was good, attitude was giving but some practices were unsatisfactory.

Conclusion: The students had knowledge and positive attitude, but unsatisfactory practices towards prevention of UTIs.

Recommendation: The school should encourage UTI prevention practices through health of the adolescents by the teachers and school health team and providing enough clean drinking water to the students.

Keywords: Knowledge, Attitudes, Practices, Prevention, Urinary Tract Infections, Adolescents, Kikaaya College School, Bulenga

Background of the study

Urinary tract infections are defined as a microbial invasion of the urinary system, including the urethra, bladder, ureters, and or kidneys, resulting in inflammation and often accompanied by symptoms such as dysuria, frequency, urgency and or supra-pubic pain (Aronson, 2020). UTI can affect individuals of all ages and gender but certain populations are more susceptible. For example Common risk factors include being female, older age, having a history of UTIs, sexual activity, urinary catheterization, urinary tract abnormalities, and conditions that compromise the immune system (Stamm, 2020).

Prevention of UTIs is the process of reducing the occurrence, severity, duration and negative consequences of urinary tract infections through deliberate efforts, promotion of healthy lifestyles, early detection, improved treatment and rehabilitation. According to Mayo clinic health system,(2022),the five tips to prevent UTIs include drinking plenty of fluids especially water, empty your bladder often, urinate soon after sex, Take cranberry supplements and wiping from front to back. According to World Health Organization (WHO), UTIs are among the top10 most common infections globally, with an estimated 150 million cases reported annually. Globally, UTIs are prevalent among females and can affect up to 8% of females by adolescence (Eldelstein & Joffe, 2020). UTI is the second most common infectious disease affecting more than 150 million people annually (Mohamed, Eulambius, & Mmlugu, 2023).According to a study by Stapleton et al.,(2016) ,8% of adolescent girls and 2% of adolescent boys will experience a Urinary Tract Infection during adolescence. According to the research done in Erbil about prevalence of UTI among secondary school students in urban and rural areas, it was found out that UTI among female was higher 76.1% in urban than in rural areas 57% reversely to UTI among male students which is higher in rural areas 45.3% than males in urban areas 23.9%.while

roles of preventing in urban and rural areas are found that large numbers of students in urban areas were preventing themselves by hand washing (68.5%)

In Sub-Saharan Africa, the prevalence of UTI was 32.12% with Escherichia coli being the most commonly isolated bacteria accounting for 86.4% (Beda & Josefine, 2022).Also the prevalence of UTIs in Africa varies from country to country and geographical location. For instance in Ghana, the prevalence rate is 15.9%, In Senegal 4.5% and 12.3% in Nigeria (Beda, Josephine, & Mahami, 2022).Access to clean water and sanitation facilities is essential for preventing UTIs among adolescents in Africa.

In East Africa, Urinary Tract Infections are prevalent with rates varying between regions and populations

(Ojulong, et al., 2018). A study in East Africa showed a prevalence of 5-10% in different East African countries with variations based on local sanitation (Mwaura, 2017). Research in Tanzania found that the prevalence of UTIs among school-aged children was 9.2%, with a higher prevalence in girls compared to boy (Mmbaga, 2019). Prevention of UTIs in East Africa involves several strategies including promotion of hygiene, access to clean water and sanitation, providing education on UTI prevention, promoting appropriate use of antibiotics and addressing issues related to antibiotic resistance (Okeke, et al., 2019).

In Uganda, research revealed a prevalence rate of 10.3% urinary tract infections among adolescents in Kampala, Uganda (Nakalema, 2017). According to a study done by Kakaire et al., (2019) in Uganda, increasing fluid intake was associated with a reduction in UTI episodes among. The study showed a 30% decrease in UTIs with improved hydration practices. Initiatives aimed at preventing UTIs include educating adolescents on proper personal hygiene, including wiping from front to back and hand washing (Kaseje, 2019).

In Wakiso district, the prevalence of UTIs is approximately 15% among adolescents (Namugenyi, Nansubuga, & Nsubuga, 2012). This figure highlights the significant burden of UTIs in this region and this called for research to be done to find out adolescents knowledge, attitude and practices towards prevention of UTIs so as to take action and improve the quality of life. so this study was to determine the attitudes towards prevention of UTIs and to identify practices towards prevention of UTIs among adolescents in Kikaaya College School.

Methodology

Study design

A descriptive cross sectional study design was used. It involved the collection of data at a single point in time, over a short period of time, from a specific population. It included both quantitative and qualitative data. Quantitative data collection involved use of numbers to represent findings while the qualitative data collection method involved use of open ended questions to allow participants express themselves well. This helped to provide a better understanding of the knowledge, attitude and practices towards prevention of UTI among adolescents.

Study area.

The study was conducted in Kikaaya College School, located in Bulenga, Wakiso district due to a high prevalence of UTI cases among adolescents in that school.

Study population.

The study targeted only female adolescents from senior one to senior six who were studying from Kikaaya College School, Bulenga in Wakiso district.

Sample size determination.

The sample size was determined by Solarzonas formula, 2013.

$$n = N \div (1 + Ne^2)$$

Where, n = sample size; N=71(Population estimate) e=0.059 (Level of significance) $n = 71 \div (1 + 71 \times 0.05^2)$
n=60.29

Therefore, n=60 respondents.

The study population was 60 adolescent students studying from Kikaaya College School.

Sampling technique

The study adopted a stratified random sampling technique.

Sampling procedure

Participants were chosen by dividing all the six classes, from senior one to senior six into six strata, and taking ten students from each strata. These were chosen by making 10 equal sized papers, each with a word "YES" and other 20 papers with a word "NO". These papers were randomly mixed and students from class had to choose one paper each. The 10 students that chose a paper with the word "YES" had to participate in the study while those that choose a paper with a word "NO" did not have to take part in the study. The same was done to all the six strata to make a total of 60 participants.

Data collection method

Data was collected from the respondents by use of survey method which uses a questionnaire to collect data. The researcher considered this method to be the most appropriate for data collection as per the study design. The researcher set objective questions covering all the aims of the study that included assessing for knowledge, determining the attitude and identifying the practices of adolescents towards prevention of UTIs, and asked the respondents to tick in the box corresponding to their answer.

Data collection procedure.

A letter obtained from the research committee of International Paramedical Institute, Maya was presented to the administration of Kikaaya College School, Bulenga, where the researcher received another letter allowing her to carry out data collection on the required participants. A written consent was obtained from the respondents before data collection, questionnaires with clear instructions were administered and the researcher collected them when the respondents had filled the required information on that same day and an appreciation in form of thanking them was given. This process took a period of one day due to maximum

cooperation from both the students and the teachers.

Study variables

These included the dependent and independent variable Dependent variable was prevention of UTI among adolescents.

Independent variable was knowledge, attitude and practices of adolescents.

Quality control

The researcher conducted one day training for 2 research assistants who were then sent for field testing of the study tools, to ensure validity and reliability. Three questions were distributed for the pretest with my close supervision. This helped to determine the extent to which the questionnaires address the variables of interest.

Selection criteria

This included the inclusion and exclusion criteria

Inclusion criteria

The study involved only female adolescents studying from Kikaaya College School Bulenga, Wakiso district, who consented.

Data analysis and presentation.

Data was summarized, then coded and themes were developed. The data was then entered into Microsoft excel which was used to draw charts and graphs, and some data was presented in table form. Narratives were also given.

Ethical consideration

The researcher obtained an approval letter from International Paramedical Institute, Maya, before proceeding to the study area. The letter was then presented to the administration of Kikaaya College School, where she received another letter allowing collection of data from the target population. Consent was obtained from each respondent using a consent form after explaining to the students the importance of the study.

Confidentiality was maintained at all levels, in this regard. Respondents were not required to write their names on the questionnaires and papers were kept safely.

Results

Social demographic data

Table 1: Showing socio demographic data n=60

Variable	Category	Frequency (f)	Percentage (%)
Age	14years to 16 years	27	45
	17years to 19 years	33	55
Class	Senior 1 to Senior 3	30	50
	Senior 4 to Senior 6	30	50

Table 1 that majority of the respondents 33(55%) were between 17 years to 19 years of age while the least 27(45%) were between 14years to 16 years. Considering class, half 30(50%) of the respondents were from senior 1 to senior 3 and the other half 30(50%) were from senior 4 to senior 6.

Attitude of adolescents towards prevention of Urinary Tract Infections Table 1 Showing adolescents' attitude towards prevention of UTIs. n=60

Variable	Category	Frequency(f)	Percentage (%)
UTIs are preventable	Agree	44	73.3
	Disagree	6	10
	Not sure	10	16.7
Practicing good hygiene plays a significant role in UTI prevention	Agree	60	100
	Disagree	0	0
	Not sure	0	0
Adolescents are at a high risk of getting UTIs	Agree	33	55
	Disagree	24	40
	Not sure	3	5
Education interventions can improve adolescents attitude and practices related to UTI prevention	Agree	55	91.7
	Disagree	5	8.3
	Not sure	0	0

Table 6 shows that majority of the respondents 44(73.3%) agreed that UTIs are preventable through everyday practices whereas the least 6(10%) disagreed. In addition, all 60(100%) of the respondents agreed that practicing good hygiene plays a significant role in UTI prevention. Furthermore, majority 33(55%) of the respondents agreed that adolescents are at high risk of getting UTIs while the least 3(5%) were not sure. Finally, majority 55(91.7%) of the respondents agreed that education interventions can improve

adolescents attitude and practices related to UTI prevention whereas the least 5(8.3%) disagreed.

Discussion

Attitude of adolescents towards prevention of UTIs

The study findings revealed that majority of the respondents 73.3% agreed that UTIs are preventable through everyday actions. This shows a positive attitude towards UTI prevention because adolescents understand that some of the everyday actions can determine ones capability of getting UTIs hence encouraging good health practices. These findings contradicts with those of Davies et al., (2020) who found out that there is a prevalent attitude that UTIs are minor issues and are not preventable through everyday actions.

On the other hand, the study demonstrated that all 100% of the respondents agreed that practicing good hygiene plays a significant role in UTI prevention. This indicated a positive attitude towards UTIs prevention and it would lead to improved hygiene practices. These findings agree with those of Griffiths, Naylor and Reid. (2020) who found out that while some adolescents practice good personal hygiene, there is variability in adherence to practices that specifically prevent UTIs, such as proper wiping techniques and staying hydrated

Furthermore, the study showed that more than half 55% of the respondents agreed that adolescents are at high risk of getting UTIs. This also indicated positive attitude towards prevention of UTIs and it would lead to increased self-awareness and as well promote practices that prevent UTIs. This finding contradicts with the finding of Ellis et al., (2020) who found out that only around 30% of adolescents in their sample perceived themselves as at risk for UTIs.

Finally, most of the respondents 91.7% agreed that education interventions on UTIs can improve adolescents' attitude and practices related to UTI prevention, which also shows a positive attitude towards UTI prevention. This would widen adolescents' knowledge about UTI prevention practices. This finding is in line with that of Harris, Smith and Jones. (2022) who found out that studies suggest that targeted education interventions can improve adolescents' attitude and practices related to UTIs prevention.

Conclusion

Respondents held generally positive attitude as majority of them agreed that UTIs are preventable through everyday actions and all adolescents agreed that practicing good hygiene plays a significant role in UTIs prevention.

Recommendations

To the government through the ministry of health

The Ministry of Health should lay down health standards and issue license to schools that meet the standards.

The Ministry of Health should regularly survey schools to ensure that sanitation and personal hygiene are maintained

The Ministry of Health should health educate adolescents through media about different health practices that prevent UTIs

To Kikaaya College School

The school should ensure that there is enough water near the toilet to enable students washes their hands after visiting the toilet

The teachers and school health team should health educate the adolescents about different UTI prevention practices

The school should Provide enough safe drinking water to the students to help flush out the bacteria

Counseling and guiding of the adolescents to abstain from sexual practices that put them at risk of getting UTIs

To the adolescents

Students should practice good personal hygiene such as bathing, washing panties, drinking a lot of water and also washing hands after using the toilet

Students should maintain good sanitation practices such as cleaning the bath rooms and toilets to kill the bacteria. Students should avoid sharing tight clothes and panties with others to prevent transfer of infections from one person to another.

Acknowledgement

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List of Abbreviations

CDC	: Centre for Disease Control
H/C	: Health Centre
IPI	: International Paramedical Institute
KCS	: Kikaaya College School

MOH : Ministry Of Health
NHS : National Health Services
UAHEB : Uganda Allied Health Examinations Board
UTI : Urinary Tract Infection
UTS : Urinary Tract System
WHO : World Health Organization

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This study did not receive any external funding. The research was self-funded by the researcher with financial support from relatives to facilitate printing of questionnaires, transport to the study area, and other related research costs.

Conflict of Interest

The author declares that there was no conflict of interest regarding the publication of this research report. The study was conducted purely for academic purposes in partial fulfillment of the award of Diploma in Clinical Medicine and Community Health.

Author Contributions

Nalwadda Zaharah was solely responsible for the conception and design of the study, development of the research proposal, data collection, data analysis, interpretation of results, and preparation of the final research report. The supervisor provided academic guidance and technical support throughout the study process.

Data Availability

The data used and analyzed during this study are available from the corresponding author upon reasonable request. The data are not publicly available in order to maintain confidentiality of the participants and the study institution.

Ethical Approval

Ethical approval to conduct the study was obtained from the International Paramedical Institute, Maya. An introductory letter from the institute was presented to the administration of Kikaaya College School, Bulenga, Wakiso District, where permission was granted to carry out the study among the selected participants.

Informed Consent

Written informed consent was obtained from all participants before data collection. The purpose of the study was clearly explained to the respondents, and participation was voluntary. Confidentiality was maintained by not requiring participants to write their names on the questionnaires.

Author Biography

Nalwadda Zaharah is a Diploma student in Clinical Medicine and Community Health at the International Paramedical Institute, Maya. She has a strong interest in adolescent health, infection prevention, and community based research. This study reflects her academic commitment to improving knowledge, attitude and practices related to urinary tract infection prevention among adolescents in Wakiso District, Uganda.

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