

Knowledge about the prevention of urinary tract infections among adults aged 18 – 26 years attending Mukono General Hospital, Mukono District. A cross-sectional study.

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ABSTRACT

Background:

The study aimed to determine knowledge about the prevention of urinary tract infections among adults aged 18 – 26 years attending Mukono General Hospital, Mukono District.

Methodology:

The study used a cross-sectional design at Mukono General Hospital in Mukono District among adults aged 18–26 years attending the hospital. A sample of 72 participants was obtained using convenience sampling due to resource constraints. Data were collected using structured questionnaires covering knowledge, attitudes, and practices on UTI prevention. Analysis was done using SPSS version 22, and results were presented in tables and graphs. Ethical approval and informed consent were obtained, and confidentiality was ensured using participant initials.

Results:

The study involved 72 participants, with the majority aged 18–21 years (46, 64%) compared to 22–26 years (26, 36%). Most respondents had secondary education (36, 50%), followed by tertiary (18, 25%), primary (14, 19%), and no formal education (4, 6%). Regarding occupation, 39% were unemployed, 28% self-employed, 18% professionals, and 15% housewives. All participants (100%) practiced good hygiene after toilet use and always wiped from front to back. Most (96%) preferred antibiotics for UTI treatment. However, 51% were unsure about sanitary product change frequency, and 67% did not use scented soaps or bubble baths.

Conclusion:

Limited knowledge and misconceptions existed about UTI treatment and diagnostic options among adults aged 18–26 at Mukono General Hospital.

Recommendation:

Mukono General Hospital should conduct quarterly youth-focused UTI education in schools and facilities.

Keywords: Urinary tract infection, sanitary product, poor hygiene, Young adults

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BACKGROUND OF THE STUDY

Recent evidence shows that knowledge about urinary tract infection (UTI) prevention remains inconsistent across different populations. A study in Iraq found that women's understanding of UTI prevention was generally low, with higher prevalence linked to low education levels, rural residence, and poor awareness of preventive measures, particularly among pregnant women (Almukhtar, 2018). Similarly, findings from the Philippines showed that although women exhibited positive attitudes and hygienic behaviors, their knowledge on UTI prevention remained inadequate, with education level and socioeconomic status strongly influencing awareness (Demir et al., 2020). More recent evidence from Uganda indicates that knowledge gaps still persist among young people, where misconceptions about causes, prevention, and risk factors such as poor hygiene and multiple sexual partners continue

to contribute to UTI risk, highlighting ongoing public health education needs (Nanyiti, 2024).

The study aimed to determine knowledge about the prevention of urinary tract infections among adults aged 18 – 26 years attending Mukono General Hospital, Mukono District.

METHODOLOGY

Research design

The study employed a cross-sectional study design because results could be generated in a short period of time.

Study area

The study was carried out at Mukono General Hospital in Mukono District. It is located on the Kampala- Jinja highway, in the town of Mukono, approximately 20 km East of Kampala (the capital city). The coordinates are:

0°21'40.0"N, 32°44'49.0"E (Latitude:0.361123; Longitude:32.746941). Mukono General Hospital provides a comprehensive range of medical services that include outpatient and inpatient care, emergency services, maternity, and specialized care. It serves a population of about 800,000 people in Mukono municipality, Mukono district, and parts of Buikwe and Wakiso districts. The hospital employs a team of health care professionals, including doctors, clinical officers, nurses, and support staff, who work collaboratively to ensure patients receive appropriate treatment and care.

Study population

The study population covered adults aged 18 - 26 years, attending MGH during the time of study in Mukono District.

Sample size determination

The sample size was determined using Kish and Leslie's (1965) formula as shown below: $n = \frac{z^2pq}{e^2}$

Where n is the sample size required

Z is the Z-score corresponding to the 95% confidence interval = 1.96

P is the expected frequency. The national pooled prevalence of urinary tract infection in Uganda is 24.92% (Makeri, 2023) = 0.2492

e is the expected level of error = 5% = 0.05.

q is 1-p = 0.7508

= 287.5043605504

$n = \frac{(1.96)^2(0.2492)(0.7508)}{0.05^2}$

= 288 participants

Due to time and resource limitations, only one quarter of the calculated sample size was used. Therefore sample = $288/4 = 72$ participants

Sampling technique

Convenience sampling was used to obtain data for the study. Participants were selected based on their accessibility, availability, and willingness to participate during their hospital visits, as this was more practical for resource limitations.

Data collection method

Interpersonal discussion and interview guides were given to only adults aged 18 -26 years who consented to participate in the study.

Data collection tools

A structured closed-ended questionnaire that was divided into sections A, B, and C, which entailed Knowledge, Attitude, and Practices about UTI treatment and prevention, respectively, was used. The questionnaire was translated into local languages (Luganda and Lusoga) for those who had challenges in relating to the English language.

Data collection procedure

The researcher approached the medical superintendent of Mukono General Hospital for approval, then proceeded to meet the participants who were given random numbers among those willing to participate, and were later selected randomly. Consent forms and questionnaires were offered to the participants who had qualified for the study for data collection.

Study variables

Independent variable

The independent variable in this study is knowledge about the prevention of urinary tract infections.

Dependent variables

The dependent variable was the occurrence of urinary tract infections.

Quality control

The data collection instrument was pre-tested among respondents using questionnaire drafts before the study was carried out to ensure that the objectives of the study were well met. Adjustments were made to improve the questionnaire accordingly.

Inclusion criteria

Adults aged 18–26 years who consented and were attending MGH during the time of data collection were included to participate in the study.

Exclusion criteria

Adults aged 18–26 years who did not consent, those who were in critical medical condition, and those who were not within the age scope were excluded from the study.

Data analysis and presentation

The collected data were analyzed using SPSS version 22 to ensure completeness, coded and entered into an Excel spreadsheet, and edited for inconsistencies before being presented in tables, graphs, and texts.

Ethical consideration

Approval was sought from the Research and Ethics Committee of Mildmay Uganda School of Clinical Officers in the form of an introductory letter. Permission to carry out the research was obtained from the medical superintendent of Mukono General Hospital, Mukono District. Initials were used to provide privacy and confidentiality of the participants' data. Before data collection, the objectives of the study were fully explained to the participants to obtain their consent.

RESULTS

Demographic characteristics

Table 1 shows demographic characteristics of the participants.

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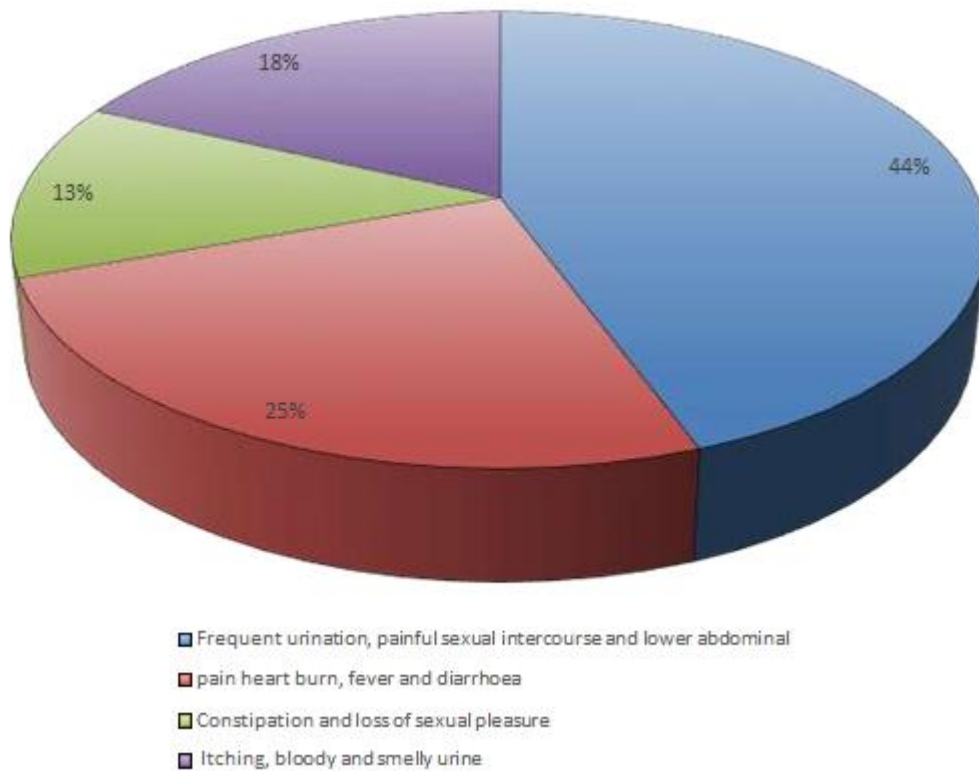
Variables		Frequency (n = 72)	Percentage (%)
Age (years)	18 - 21	46	64
	22 - 26	26	36
	Total	72	100
Highest education level of	No formal education	4	6
	Primary level	14	19
	Secondary level	36	50
	Tertiary level	18	25
	Total	54	100
Occupation	Housewife	11	15
	Professional	13	18
	Unemployed	21	39
	Self employed	27	28
	Total	72	100

The study found that most participants were between the ages of 18 and 21 years, at 64%, the highest level of education attained was secondary level, at 50%, and occupation was unemployed at 39%.

Knowledge about the prevention of urinary tract infections among adults aged 18 – 26 attending Mukono General Hospital.
Signs of UTI

Figure 1: is a pie chart showing responses about signs of UTI that participants had experienced and suspected a UTI (n=72)

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As shown in the pie chart above, the study found that among the signs of UTI that participants had experienced and suspected a UTI, 32 (44%) had experienced frequent urination.

UTIs are healing without going to the hospital

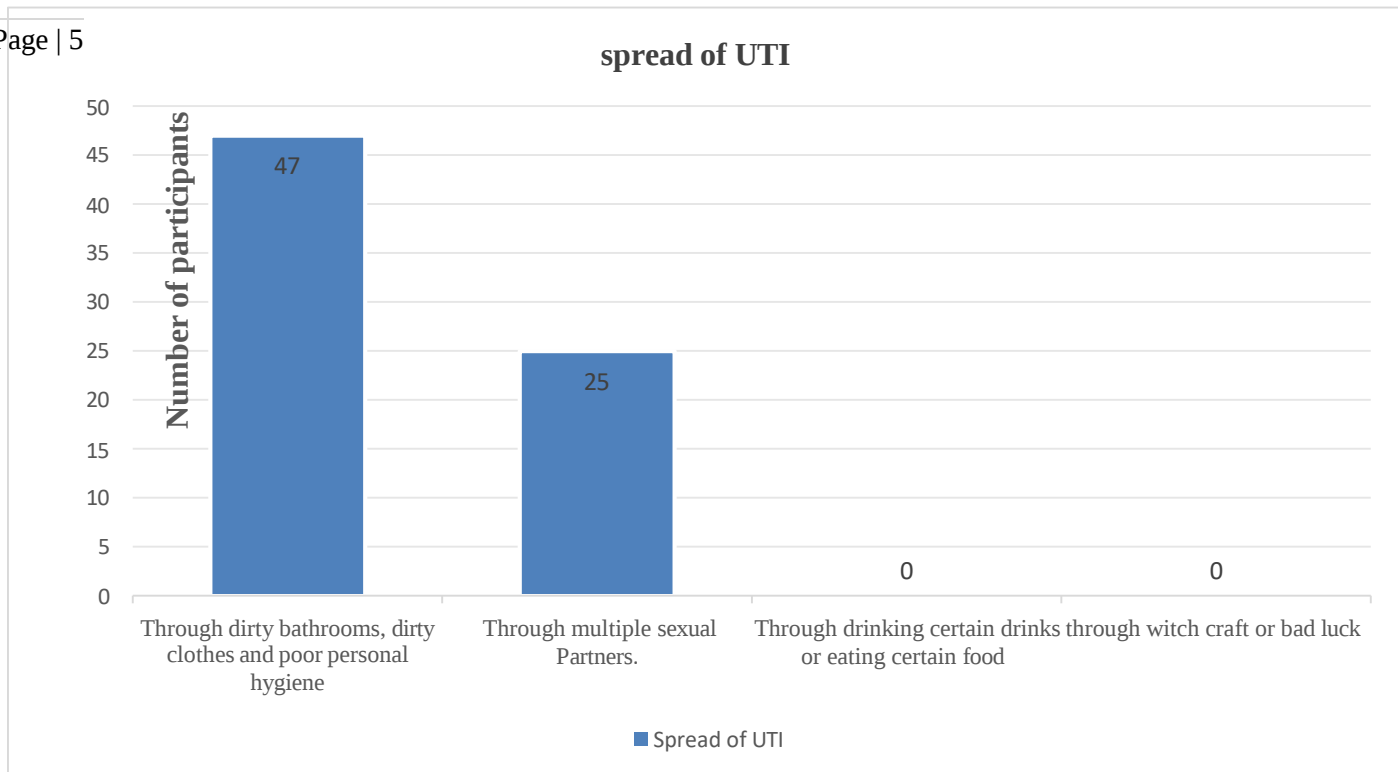
Table 2: showing responses about UTI healing without going to the hospital

Variables	Frequency (n = 72)	Percentage (%)
UTI heals without going to the hospital	22	30
UTI does not heal without going to the hospital	36	50
Not aware	14	20
Total	72	100

As shown in the table above, the study found that 36 (50%) did not believe that a UTI could heal without going to the hospital.
Spread of UTIs

Figure 2 is a graph showing the response to the spread of UTI (n=72)

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As shown in the graph above, about the spread of UTIs, the study found that 47 (65%) of the participants believed that UTIs spread through dirty bathrooms, dirty clothes, and poor personal hygiene.

Method of UTI diagnosis

About the methods for diagnosing UTI, the study found that all 72 (100%) participants reported urine sample testing was the only known method for testing for UTI. None knew about methods like imaging tests, physical exams, or blood tests.

DISCUSSION

Data analysis and interpretation revealed the following major findings under this objective. It revealed that the majority of participants were young adults aged 18–21 years (64%), with half having attained tertiary education, and most identifying urine sample testing as the sole method for diagnosing UTIs (100%). Notably, frequent urination, painful intercourse, and lower abdominal pain were the most commonly reported symptoms (44%), while misconceptions persisted—30% believed UTIs could heal without hospital care, and 65% attributed UTI spread to poor hygiene rather than sexual behavior or other causes. These findings indicate that young adults aged 18–26 attending Mukono General

Hospital demonstrate basic awareness of UTI symptoms and hygiene-related prevention, but show limited knowledge about comprehensive treatment options and diagnostic methods. This is probably because of limited access to accurate health education and inadequate information about UTIs. These findings agree with Almkhatar (2018) that education level and occupation influence UTI knowledge.

CONCLUSION

The study established that knowledge regarding treatment options and alternative diagnostic procedures for urinary tract infections (UTIs) was limited, with notable misconceptions among adults aged 18–26 years attending Mukono General Hospital, Mukono District. These findings indicate a need for targeted health education interventions aimed at improving awareness and understanding of UTIs among young adults.

RECOMMENDATION

Mukono General Hospital should implement targeted UTI health education campaigns focusing on young people. These interventions should be conducted within health facilities and extended to schools across Mukono District, with regular follow-up every three months to improve knowledge, correct misconceptions, and enhance prevention

practices.

Acknowledgement

I solely appreciate the work of the research supervisor, the research committee of Mildmay Institute of Health Sciences, the hospital administration of Mukono General Hospital, and all the participants who were involved in the success of this research exercise.

List of abbreviations

UTI – Urinary Tract Infection
MGH – Mukono General Hospital
SPSS – Statistical Package for the Social Sciences
KAP – Knowledge, Attitudes and Practices
CI – Confidence Interval
WHO – World Health Organization

Source of funding

The study received no external funding.

Conflict of interest

The authors declare no conflict of interest.

Informed consent

Written informed consent was obtained from all participants prior to their inclusion in the study. Participants were informed about the purpose of the study, procedures involved, potential risks and benefits, and their right to withdraw at any time without penalty.

Author contributions

MA: collected the data.
HN: supervised the study.

FS: supervised the study.

JFN: supervised the study

Data availability

Data is available upon request from the author.

Author biography

Michelle Aacha is a student pursuing a diploma in clinical medicine and community health.

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Jane Frank Nalubega: research supervisor at Mildmay School of Allied Health Sciences

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