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Behavioural factors contributing to the prevalence of sexually transmitted infections among women attending Mukono General Hospital in Mukono district. A cross-sectional study.

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Abstract

Background:

A steady increase in sexually transmitted infections has been recognized, where Syphilis, Chlamydia trachomatis, Mycoplasma genitalium, and Neisseria gonorrhea cases were reported. The study aimed at assessing the behavioural factors contributing to the prevalence of sexually transmitted infections among women attending Mukono General Hospital in Mukono district.

Methodology:

A descriptive cross-sectional study design to collect quantitative data. All women with a diagnosis of STI and those being treated for STI who attended Mukono general hospital during the study period were interviewed and recruited to participate in the study. A sample size of 75 respondents was used.

Results:

29 (39%) were aged between 18-24 years, while the least 7 (9%) were aged above 35 years. Most of the respondents, 35(47%), were married, while the least, 10(13%), were divorced. 38(50%) reported having more than one sexual partner while 18(24%) never had sexual partners. 55 (73%) had ever used substances before having sex, while the minority, 20 (27%), had never used. Out of 55 respondents who used substances before or during sex, most of the respondents, 33(60%), used alcohol, while the least, 22 (40%), used other drugs. 65(93%) had ever engaged in unprotected sex while the minority 10(7%) never engaged in unprotected sex.

Conclusion:

Therefore, substance use and unprotected sex were the major factors contributing to the prevalence of STIs.

Recommendation:

The health facility should put in place enough protective equipment, such as condoms, on the premises so that youths can use them adequately.

Keywords: *Behavioural factors, Prevalence of sexually transmitted infections, symptomatic and asymptomatic STIs.*
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Background of the study

A steady increase in sexually transmitted infections has been recognized, where Syphilis 66%, Chlamydia trachomatis (CT) 86%, Mycoplasma genitalium (MG) 25%, Neisseria gonorrhea (NG) 46% cases were reported (Angelika et al, 2020), in Europe, since the beginning of the 21st century. WHO estimated that in the African region, the total incidence of curable STIs was 92.6 million, with 8.3 million cases of CT, 21.1 million cases of NG, 3.4 million cases of syphilis, and 59.7 million cases of TV (Naidoo et al, 2015). The African region is particularly affected by the high prevalence of these infections, and the total number of curable cases of STIs was estimated to be 63 million, representing 18% of the global incidence. Socio-demographic characteristics and sexual behaviour factors for patients with sexually transmitted infections attending hospital in Southern Italy revealed that those who reported STIs 44.5% had a higher education level (Teresa et al, 2021). WHO estimates that the sub-Saharan African region bears approximately 40% of the global burden of STIs. Symptomatic and asymptomatic STIs are a major cause of mortality in developing countries, PID, and pregnancy complications (Ssemwogere et al, 2020).

In Uganda, the prevalence of STIs has remained persistently high, with an increase from 22% in 2006 to 27% in 2011, while up to 1.5 million cases of STIs were reported between 2015 and 2017. The high prevalence is due to having unprotected sex multiple sex partners and not being vaccinated. If left untreated, STIs can result in adverse sexual, reproductive, and maternal-child health

consequences, including infertility, PID, HIV risk, and ectopic pregnancies. Uganda's current strategy on STI/HIV management includes male circumcision, vaccination for Hepatitis B, and syndromic management, such as signs and symptoms which guide the treatment of STIs (Masanja et al 2021). The study aimed at assessing the behavioural factors contributing to the prevalence of sexually transmitted infections among women attending Mukono General Hospital in Mukono district.

Methodology

Study design

The researcher used a descriptive cross-sectional study design to collect quantitative data from respondents. This study design was used because it was affordable, less costly, and suitable for a short timeframe.

Study area

Mukono district has a total area of 2,986.47 sq km, lies in the Central region of Uganda, sharing borders with the Buikwe District in the East, Kayunga along River Sezibwa District in the North, Luwero in the North West, Kampala and Wakiso in the South West, Tanzania, Lake Victoria in the South, with the Islands of Buvuma district. Coordinates 00º28'50"N32º46'14"E.

The study was carried out at Mukono General Hospital, Mukono district. It has medical and non-medical staff such as Clinical officers, Midwives, Nurses, Doctors, with cleaners and security guards as non-medical staff.

It offers a variety of services, including inpatient, outpatient, maternity services, theatre services, reproductive health services, etc.

Study population

All women with a diagnosis of STI and those being treated for STI who attended Mukono general hospital during the study period were interviewed and recruited to participate in the study.

Sample size determination

The sample size of the client will be determined using Burton's formula, which was formulated as;

$$n = \frac{QR}{O}$$

Where n = sample size of the study

Q =Number of days data was collected.

R = Number of patients.

O = Time spent on each respondent.

$$n = \frac{30\ x\ 100}{40}$$

n = 75

Therefore, the researcher used 75 respondents in the study.

Sampling technique

The study was carried out using a simple random sampling technique because it gives equal chances to all members to be selected, reduces research bias, and is cheap.

Sampling procedure

The researcher obtained the list of clients willing to participate in the study. The researcher then got 20 pieces of paper and wrote words YES/NO, then put them into a box, shook them well, and asked the respondents to pick the papers. Only those who picked YES proceeded with the interviews of the study, and those who picked NO were excluded from the study. The researcher repeated the procedure until obtaining a total of 75 respondents.

Data collection technique

The data was collected using the questionnaire method, which is because it is cost-effective, saves time, safeguards confidentiality, and provides sufficient time to respondents to answer questions.

Data collection tool

A semi-structured self-administered and researcher-guided questionnaire containing closed-ended questions was used to collect data from the respondents because respondents felt more comfortable expressing their true opinions in the questionnaire, direct straight forward to the analysis, and was interpreted in the local language to the illiterate clients.

Data collection procedure

After getting permission from the school administration through the principal, the researcher went ahead and presented the letter to the person in charge of Mukono General Hospital, who introduced and gave him permission to access the respondents. Before data collection, each participant was given an explanation of the objectives of the study and was asked to sign a consent form.

The respondents were also being briefed on the importance and purpose of the study. The researcher will explain clearly that there were no incentives that the researcher will offer to respondents after data collection. Questionnaires were independently distributed to literate respondents and researcher-guided illiterate respondents, and each filled questionnaire will be thoroughly checked for accuracy and completeness by the researcher.

Study variables

These include the dependent and independent variables.

Dependent variables

The dependent variable is Sexually transmitted infections among women attending Mukono General Hospital.

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Independent variable
These include Socio-economic, Demographic, and Behavioural factors contributing to the prevalence of STIs.

Quality control
Pretesting of the research tool
The relevance, reliability, and suitability of the research tool will be assured through pretesting of the questionnaire on respondents at Goma Health Centre III. Thereafter, the questionnaire will be edited to fill in all the missing information, and all ambiguous questions will be removed. Training of the research assistant to avoid many errors, and ample time was given to collect the data.

Piloting the study
The researcher visited the facility before the study, sought permission from the responsible people, checked on the conditions in the area to see if they are relevant to the research study, obtained available research and information about the study from the clients within the health facility, and determined if the study area qualifies for the research before carrying out the research.

Inclusion criteria
The clients who attended Mukono General Hospital with STIs, consented and were mentally stable on research days, participated in the study.

Exclusion criteria
The clients who attended Mukono General Hospital with STIs were mentally stable and did not participate in the study.

Ample time for the collection of data from one client
The literate client took 15 minutes, and the illiterate client used 20 minutes in the collection of data.

Adherence to SOPs
Confidentiality and privacy of respondents were maintained while not affecting day-to-day health facility activity schedules.

Data analysis and presentation
The researcher tallied the information manually using a pen, paper, and tally sheets. The information was analyzed using Microsoft Excel and later presented in the form of frequency distribution tables, pie charts, and bar graphs with narratives following to make meaning of the results.

Data management
To ensure that there are no mistakes or uncovered areas, data editing was done accurately before leaving the field, and the mistakes found were corrected before leaving the study area. The data obtained was stored in notebooks and a flash disk as backup to avoid the risk of data loss during report writing. Questionnaires were kept in safety locker under a key and lock until data analysis, and for privacy and confidentiality.

Ethical consideration
After getting permission from the school administration through the Research committee, the researcher went ahead and presented the letter to the person in charge of Mukono General Hospital, who introduced and permitted him to access the respondents. He then obtained consent from the respondents, assuring them of the utmost privacy and confidentiality of the information that he got from them.

Results
Demographic factors contributing to the prevalence of STIs among respondents.
Table 1: Showing the distribution of respondents according to the demographic factors contributing to the prevalence of STIs. (n=75)

Variable	Response	Frequency(f)	Percentage (%)
What is your age?	18-24 years	29	39
	25-30 years	23	31
	31-35 years	16	21
	Above 35 years	7	9
	Total	**75**	**100**
What is your place of residence?	Rural	40	53
	Urban	**35**	47
	Total	**75**	**100**
What is your highest education level?	Primary	39	52
	Secondary	10	14

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	Tertiary	7	9
	Not educated	19	25
	Total	**75**	**100**
What is your marital status?	Single	30	40
	Married	35	47
	Divorced	10	13
	Total	**75**	**100**

Table 1 shows that 29 (39%) were aged between 18 and 24 years, while the least 7 (9%) were aged above 35 years. It was revealed that most of the respondents were from rural areas (40, 53%), while a significant number, 35, 47%, were from urban areas. More than half of the respondents, 39(52%), had their lowest education level of primary, while less than half, 7(9%), of the respondents were highly educated. Most of the respondents, 35(47%), were married, while the least, 10(13%), were divorced.

Behavioural factors contributing to the prevalence of STIs among women.

Figure 1: Showing the distribution of respondents' responses on the number of sexual partners they had. ***(n=75)***

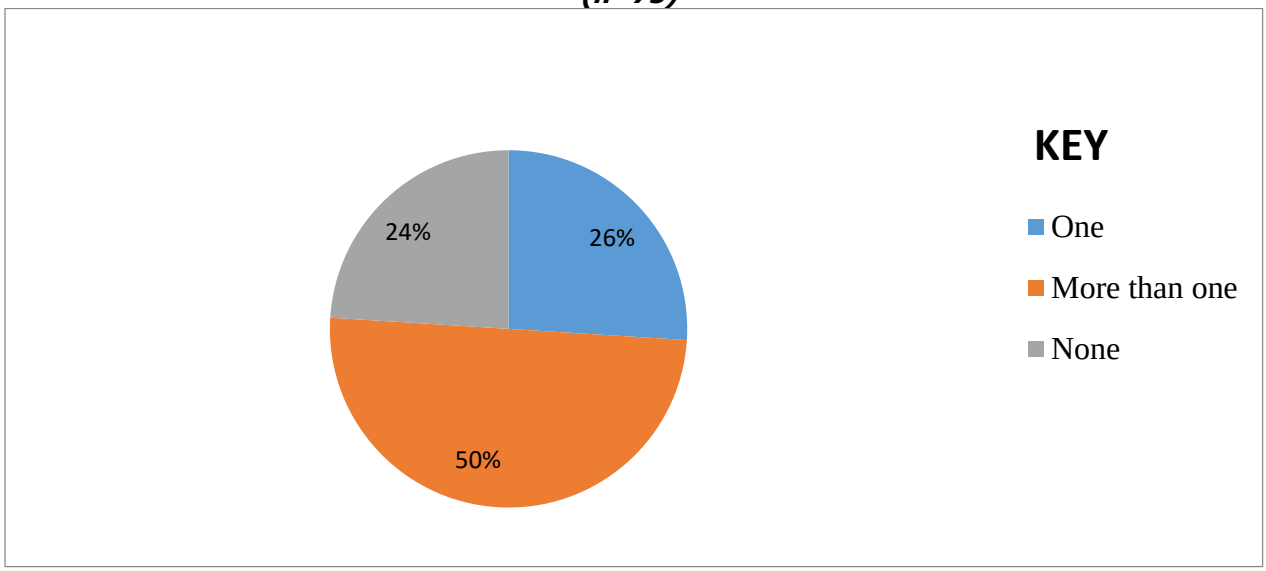

Figure 1 shows 38(50%) reported having more than one sexual partner, while 18(24%) never had sexual partners.

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Figure 2: Showing the distribution of the respondents' responses on whether they used substances before or during sex (n=75)

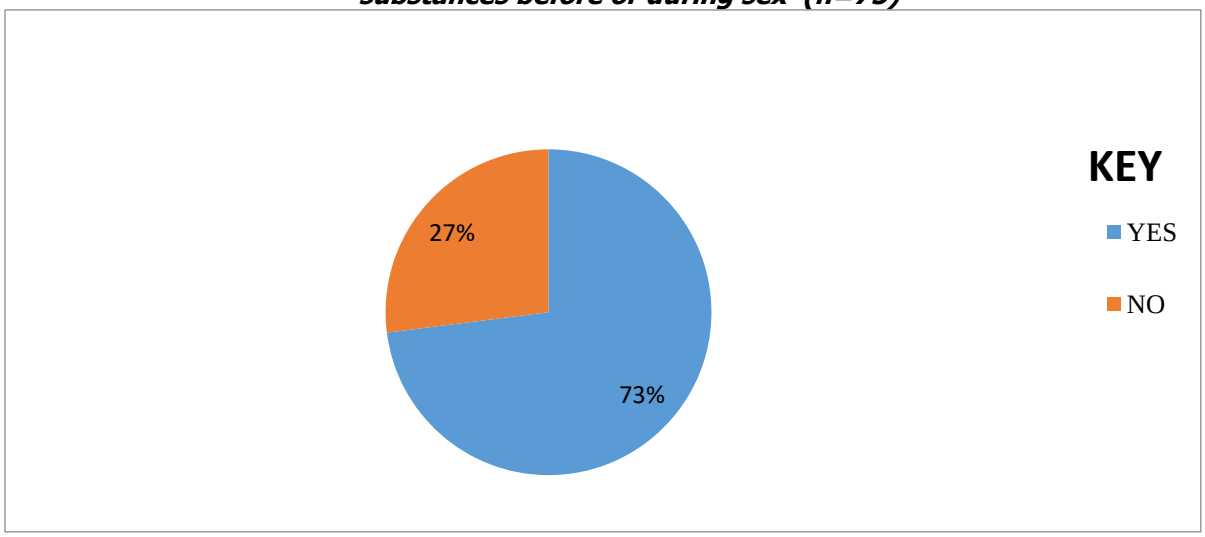

Figure 2 indicated that 55 (73%) had ever used substances before having sex, while the minority, 20 (27%), had never used.

Table 2: Showing the distribution of respondents who agreed to using substances before and during sex. (n=55)

If yes, which substances do you always use	**Frequency(f)**	**Percentage (%)**
Alcohol	33	60
Other drugs	22	40
Total	**55**	**100**

Table 2 shows that out of 55 respondents who used substances before or during sex, most of the respondents, 33(60%), used alcohol, while the least, 22 (40%), used other drugs.

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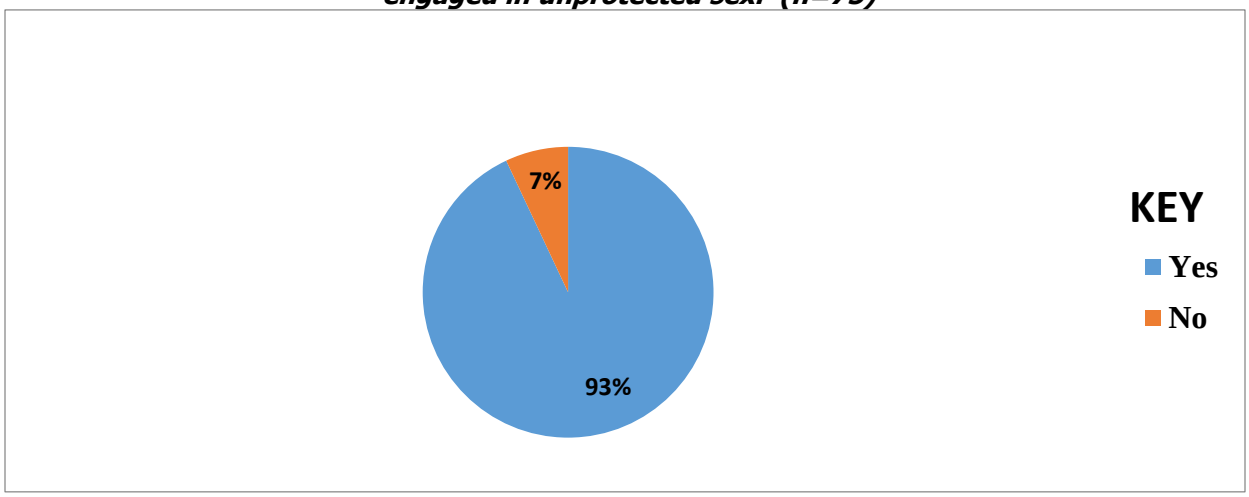
Figure 3: Showing the distribution of respondents' responses on whether they had ever engaged in unprotected sex. (n=75)



In Figure 3, 65(93%) had ever engaged in unprotected sex, while the minority, 10(7%), never engaged in unprotected sex.

Table 3: Showing the distribution of respondents' responses on whether they often sought information and the sources from which they sought information about STIs. (n=75)

Do you seek information about STIs	**Frequency (f)**	**Percentage (%)**
Yes	60	80
NO	15	20
Total	**75**	**100**
If yes, from which source		
Hospital	6	10
Friends	9	15
Social media	15	25
Relatives	30	50
Total	**60**	**100**

Table 3 indicates 60(80%) sought information about STIs while 15(20%) did not seek.
Out of the 60 respondents who sought information about STIs, most of them, 30(50%), sought it from relatives, while the least, 6(10%), sought it from the hospital.

Discussion

Behavioural factors contributing to the prevalence of STIs among women.

Research findings showed that majority73% of the respondents, used substances before having sex. This indicates that most of them were involved in sex with an altered level of consciousness, hence likely practiced risky sexual behaviour. This is probably due to the myth that substances increase sexual pleasure and confidence. This study is in concur with the study on "the prevalence and correlates of hazardous alcohol consumption and binge drinking among men who had sex with men in San Francisco" that revealed 24.9% alcohol consumption who reported STI prevalence, 43% and 19.3% binge drinking, with a prevalence of 29.9% hazardous (Santos et al, 2018). Altered level of consciousness due to the use of substances resulted in an increase in the spread of STIs. This is because people who use substances likely do not use protective measures like condoms while having sex.
Most of the respondents 60% reported that they used alcohol before sex. This implies that most of them are alcohol consumers, and alcohol is easily accessible on the market in different types and strengths. This is probably due to the myth that alcohol increases sexual pleasure and confidence. This is in agreement with the study on the association of sex related substance use motives, substance choice and use behaviours, a sample of 936 participants 50% male revealed substance use to relax and to get sex partner and 75%

commonly endorsed for use of alcohol in order to improve performance and enhance sex experience and 58% were commonly endorsed to drugs (Elliott et al, 2021). It was realized that due to respondents being alcohol consumers, they had a high negligence in treating and preventing STIs, which led to the spread of the infections.

The study showed that the majority of the respondents 93% had ever engaged in unprotected sex. This indicates that the majority of people do have unprotected sex. This is thought to be because of the negligence of clients to use condoms when having sex and the scarcity of free condoms in their areas. These findings concur with the study carried out on the substance use patterns and unprotected sex among the street-involved youth in a Canadian setting that revealed that among the respondents recruited into the study, 75% reported engaging in recent unprotected sex at some point (Cheng et al, 2016). Spread of STIs due to unprotected sex increased the levels of poverty, whereby the money that would have been used to do other developmental purposes was spent on treating the infections.

Regarding seeking information about STIs, the majority of the respondents 80% sought information about STIs. This implies that clients try to seek information about STIs. This could be because the clients also try to search for a way to get healed. This is in line with the behavioural study done in Mhakulo region, Eastern Cape, South Africa, on factors which revealed that among learners who were surveyed, 56% of them knew about STIs (Pract et al, 2014).

The study found that most of the respondents 50% had information from relatives. This implies that there was an unclear explanation about STIs. This could be because relatives do not have a proper explanation and knowledge about how to prevent and control STIs. This is in disagreement with the behavioural study done in Mhakulo region, Eastern Cape, South Africa, which revealed that among learners who were surveyed, 88% of the participants learnt STIs from health care workers/nurses/ doctors or clinics, the media, and friends (Pract et al, 2014). Unclear explanation and information about STIs resulted in self-medication, whereby some respondents tried to treat the infection by themselves basing on the information of their relatives, which led to poor healing and spread the STIs.

Conclusion

Regarding behavioural factors contributing to the prevalence of STIs, it was revealed that substance use and unprotected sex were the major factors.

Recommendation

The government of Uganda, through the Ministry of Health, should encourage a health-seeking culture among people in the community on radios and televisions, and extend intensive health education and campaigns on the harm of STIs in the community.

The health facility should put in place enough protective equipment, such as condoms, on the premises so that youths can use them adequately.

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Finally, I would like to acknowledge the effort of my research supervisor, **NAKAGIRI OLGA,** for her continuous encouragement and support throughout my research activity.

List of Abbreviations

HIV: Human Immunodeficiency Virus.
PID: Pelvic Inflammatory Disease.
STIs: Sexually Transmitted Infections.
WHO: World Health Organization.

Source of funding

The author reported no source of funding.

Conflict of interest

There's no conflict of interest declared.

Data availability

Data was available upon request.

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

Bagenda Jovan is the researcher who did the data collection and designed the report.

Nakagiri Olga assisted in timely supervision at all levels of the research project.

Author Biography

Bagenda Jovan, a student offering a Diploma in Clinical Medicine and Community Health at Kampala Institute of Health Professionals.

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