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KNOWLEDGE ATTITUDE AND PRACTICES OF WOMEN OF REPRODUCTIVE AGE TOWARDS UTILISATION OF PRECONCEPTION CARE AT KAWOLO HOSPITAL, BUIKWE DISTRICT; A CROSS SECIONAL STUDY.

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ABSTRACT.

Background:
Preconception care has the potential to positively impact 208 million pregnancies worldwide each year, unfortunately, many adolescent girls and women in LMIC which have the highest burden of maternal and childhood mortality have poorly utilized PC.
The purpose of the study was to assess the knowledge, attitude, and practices of women of reproductive age towards utilization of PCC at Kawolo Hospital, Buikwe district.

Methodology:
This was a cross-sectional descriptive study design employing the quantitative method of data collection. The study design was selected because it helped the study to collect data in a short period and the respondents were not followed up later, the findings were analyzed manually and statistically presented using graphs and tables.

Results:
The respondents' knowledge in this study was fair as all (100%) had heard about PCC, however, (53%) were not able to define preconception care, (50%) stated counseling as a component of PCC, (48%) mentioned alcohol consumption as the mostc01mnon behavioral issues that affect before conception.
On the attitude, (67%) of the respondents disagreed with the importance of supplements in PCC, (63%) strongly agreed that only women of reproductive age should benefit from PPC, (70%) agreed with the statement that PCC can help control medical conditions before conception.
Regarding practice, (73%) of respondents had never used PCC, (50%) had ever been counseled, and (50%) had utilized pre-conception care only once. In comparison (100%) opined that they had ever used folic acid before conception.

Conclusion:
The practice was low despite the fair knowledge and attitude.

Recommendations:
Awareness creation on the benefits of PCC, educating village health teams on PCC, and disseminating of PCC services to the lower health facilities should be implemented.

Keywords: *Knowledge, Attitude, Practices, Women in Reproductive Age, Preconception Care*
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BACKGROUND OF THE STUDY.

Preconception care is one of the preventive strategies in Maternal and Newborn Health (MNH) as recommended by the World Health Organization (WHO, 2013). Despite its importance in endorsing maternal and child health, the majority of women lack any awareness of how their health before conception may influence their risk of an adverse pregnancy outcome (Birhan, et al., 2022).
In Uganda, utilization of PCC continues to be low in various health facilities all over the country. For instance, at Kawolo General Hospital, Health Service Management Inforn1ation System (HMIS) records showed that 150 women under reproductive age utilized PCC services in 2020, 89 in 2021, and only 37 utilized in 2022. Furthermore, approximately (10%) of the abortions were attributed to poor planned pregnancies. In addition, about (70%) of pregnant mothers developed complications like anemia, eclampsia, and hypertensive disorders of pregnancies and this has been attributed to poor utilization of PCC services, (HMIS, 2020).
Although some measures had been put in place by the government through the Ministry of Health (MoH, 2018) like; sensitizing the public on the benefits of PCC among others, many gaps continued to exist as low utilization of PCC continued to be registered in the area and this had led to ambitions, puerperal psychosis, pre-eclampsia, anemia among others which had been

attributed to poor utilization of preconception care. This prompted the study to conduct a study on the knowledge, attitude, and practices of women of reproductive age towards utilization of PCC at Kawolo General Hospital, Buikwe district. The purpose of the study was to assess the knowledge, attitude, and practices of women of reproductive age towards utilization of PCC at Kawolo General Hospital, Buikwe district to give recommendations that will improve its utilization.

METHODOLOGY.

Study Design.

This used a cross-sectional descriptive study design employing a quantitative method of data collection. The study design was selected because it helped the study to collect data in a short period and the respondents were not followed up later, The findings were analyzed manually and statistically presented using graphs and tables.

Study Setting and Rationale.

The study was carried out at Kawolo General Hospital also known as Kawolo Hospital which is a public hospital located in the central region of the country along the Kampala-Jinja highway in Buikwe district, about 34.5km (2lmi) west of Jinja Regional Refe1rnl Hospital. It has a bed capacity of approximately l 06 patients admitting about 11,699 patients annually and handles a significant number of road traffic accidents. Among the services provided include; laboratory, surgical, orthopedic, medical, and gynecological services. Kawolo Hospital II has 10 wards which include; a medical ward, maternity, and children's wards, Orthopedic, gynecological others. The study setting was selected because of the high levels of unwanted pregnancies and abortions registered in the health facility.

Study Population.

The study was carried out among women of reproductive age receiving care at Kawolo General Hospital, Buikwe district. Priority was given to only women of reproductive age who sought antenatal services at the health facility.

Inclusion Criteria.

Only women of reproductive age who sought antenatal services at Kawolo General Hospital, Buikwe district, and consented to the study were included.

Exclusion criteria.

Women who were mentally ill and those who were very ill at the time of the study did not participate in the study.

Sample Size Determination.

Thirty (60) women of reproductive age were selected and interviewed during the study because it is the minimum number recommended by research guidelines. A small number of respondents was selected for easy data collection.

The Fisher et al formula was used to determine sample size.

Therefore $n= Z2pq/d^2$ where n is the derived size of the population.

Z is the standard deviation at 95% of the degree of confidence which is 1.96

P is the estimated proportion of target population (25% of the women)

q Is 1-p which gives the remaining population?

d is the desired accuracy level (Precision standard error= 0.05)

z = 95% = 1.96 p= 25% (0.25) q= 1-0.25= 0.75 d= 0.05, n= (1.96)2 x 0.25 x 0.75 / (0.05)2 = 384 since the population sample size is less than 1,000. I will use the finite population correlational factor formula; n = n where N= estimated sample (1+n) /N

size which is equal to 60

n = (n)/ = 384/ (385/30) = 60 approximately = 60 participants.
$1+n\ N$

Sampling Procedure.

A simple random technique was used to pick the respondents because everyone in the target group had an equal chance of being included in the study, (120) papers (60) were written yes, and (60) no were put in a box. Only those respondents who picked the yes papers were included in the study

Definition of Variables.

Independent variables.

These included; Knowledge, attitudes, and practices of women of reproductive age.

Dependent variables.

These included the utilization of preconception care.

Research Instruments.

Self-administered structured questionnaires were used to collect data. The English language was used, however, the research was translated for the respondents doing data collection. The attitude was assessed using 5 5-point Likert

of agree, strongly agree, disagree, and strongly disagree.

Quality control.

Pre-testing was done on 2% of women of reproductive age of the same characteristics at Buwenge Health Centre IV, Jinja district, editing, and adjustments were made where necessary to ensure validity and reliability. The study trained two research assistants who assisted in data collection and after data collection cross-checked tools to be sure that they were all answered.

Data Collection Procedure.

After getting a letter of introduction from the training school, it was delivered to the in charge of Kawolo General Hospital who then introduced the research to the In-charge maternal and child health clinic who then introduced the research to the respondents. Before giving out the questionnaires, the study fully explained the questions to the respondents and translated them for those who did not know how to read and write. Each filled-in questionnaire was checked for accuracy and completeness by study immediately and was kept in a locked keyboard.

Data Management.

The data obtained was stored in notebooks, a computer, and a flash disk as a backup copy.

Data Analysis.

After collecting the data, it was manually analyzed through tallying and entered into the computer using the Microsoft Excel package and was presented in figures and texts with corresponding frequencies and percentages.

Ethical Consideration.

On approval of the research by the supervisor, an introductory letter was provided by the principal of St. Francis School of Health Sciences which was delivered to the In-charge Kawolo General Hospital, Buikwe district, and the purpose of the study was fully explained to him. He/she then introduced the study to the in-charge antenatal department who later introduced the study to the respondents. The study asked for consent from respondents before interviewing them. By signing or putting on the consent form, the respondents were assured of the confidentiality of their responses and participation.

RESULTS.

Socio-demographic characteristics of the respondents.

Table 1: The socio-demographic characteristics of respondents (n=60)

Variables	Category	Frequency (f)	Percentage (%)
Age range	18-24 years	12	20.0
	25-30 years	28	47.0
	31 years and above	20	33.0
Total		60	100
Education level	Primary Secondary	30	50.0
	Institution University	16	27.0
		08	13.0
		06	10.0
Total		60	100
Religion	Protestant-Catholic Moslem	18	30.0
	Others	16	27.0
		14	23.0
		12	20.0
Total		60	100
Marital status	Single Married Separated	08	13.0
	Widow	44	73.0
		06	10.0
		02	03.0
Total		60	100

Almost half 28(47%) of the respondents were between the ages of 25-30 years while the least 12 (20%) were 18-24 years old, half 30 (50%) of the respondents had reached primary level while the minority 6(10%) had reached university, 18 (30%) of the respondents were protestant while the least 12(20%) belonged to other religions, and the highest number 44(73%) of respondents were married while only 2(3%) reported being widowed. (table 1)

Knowledge of women of reproductive age towards utilization of PCC.

Table 2: Knowledge of women of reproductive age towards PCC (n=60)

	Frequency (f)	Percentage (%)
Source of information		
Friends	06	10.0
Health institutions	36	60.0
Mass media	14	23.0
Others	04	07.0
Total	60	100
Components of preconception care		
Health promotion	06	10.0
Counselling	30	50.0
Treatment and screening for STIs	15	25.0
Did not know	09	15.0
Total	60	100
The most common behavioral issues that affect before conception		
Alcohol consumption	29	48.0
Cigarette smoking	18	30.0
Poor nutrition	13	22.0
Total	60	100
Awareness of the harmful effects of alcohol		
Yes	38	63.0
No	22	37.0
Total	60	100
The best time to start preparing to conceive		
1-2 months before	03	05.0
2-3 months before	36	60.0
4 months	15	25.0
6 months before	06	10.0
Total	60	100

According to table 2, more than half 36(60%) of the respondents mentioned health institutions as their source of information regarding preconception care while only 4(7%) mentioned other sources of information like relatives.

Half 30(50%) of respondents stated counselling as a component of preconception care while the minority 06(10%) mentioned health promotion.

Most 29(48%) of the respondents mentioned alcohol consumption as the most common behavioral issue that affects before conception while the least 13(22%) stated poor nutrition,

The majority 38(63) of the respondents knew the harmful effects of alcohol while the minority 22(37%) did not know.

More than half 36(60%) of the respondents said that 2-3 months before is the best time to start preparing to conceive while only 3(5) mentioned 1-2 months before.

The attitude of women of reproductive age towards utilization of PCC.

Most of the respondents 48(80%) strongly agreed that preconception care is important to ensure good health while the least 12(20%) disagreed.

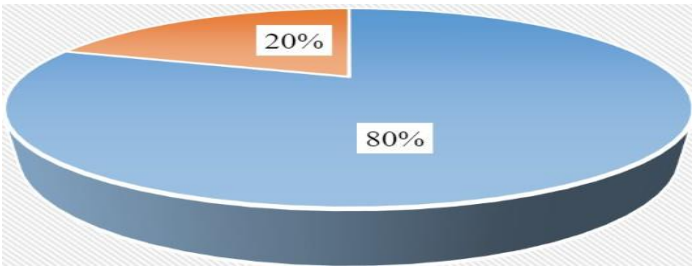

Figure 1: Perceived importance on PCC (n=60)

More than half 40(67%) of the respondents disagreed with the statement that 'supplements are important before conception' while the least 20(33%) agreed in Figure 2.

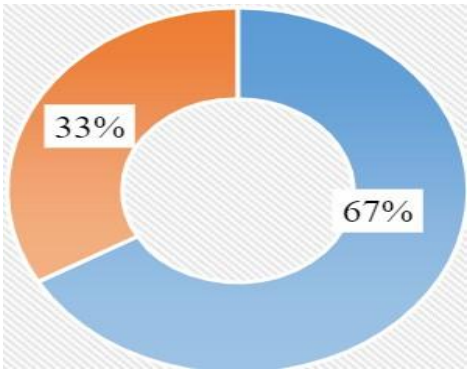

Figure 2: Importance of supplements before conception (n=60)

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Table 3: Attitude of women of reproductive age towards utilization of PCC (n=60)

Category	Frequency (f)	Percentage (%)
Only women of reproductive age should benefit from PCC		
Agreed	16	27.0
Strongly agreed	38	63.0
Disagreed	06	10.0
Total	60	100
PCC can help control medical conditions before conception		
Agreed	42	70.0
Strongly agreed	18	30.0
Total	60	100
Preconception care should be offered anytime		
Agreed	47	78.0
Disagreed	13	22.0
Total	60	100
Husband gave support to the respondents before conception		
Agreed	45	75.0
Disagreed	05	25.0
Total	36	100

According to table 3, more than half 38(63%) of the respondents strongly agreed that only women of reproductive age should benefit from PCC while the least 6(10%) disagreed.

The majority 42(70%) of the respondents agreed with the statement that PCC can help control medical conditions before conception while the minority 18(30%) disagreed.

The greatest number 47(78%) of respondents agreed that preconception care should be offered anytime while the lowest 13(22%) disagreed.

Most 45(75%) of the respondents opined that their husbands gave support to them before conception while the least 5(25%) disagreed.

Practice of women of reproductive age towards utilization of PCC.

The majority 44(73%) of the respondents had never utilized any component of preconception care while the least 16(27%) agreed to have used it. (Figure 3)

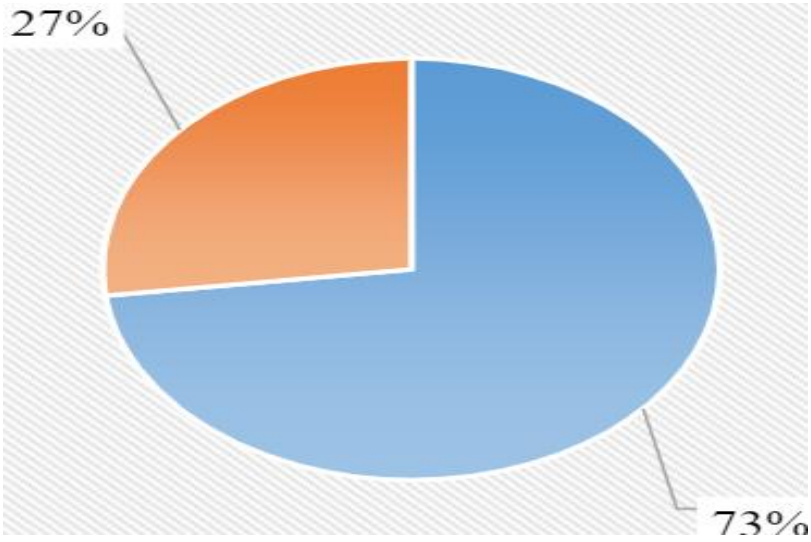

Figure 3: Utilization of PCC (n=60)

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Table 4: Practice of women of reproductive age towards utilization of PCC (n=16)

Category	Frequency (f)	Percentage (%)
At times respondents utilized preconception care		
Once	08	50.0
Twice	02	12.5
Thrice and above	06	37.5
Total	16	100
Supplements received before conception		
Folic acid	16	100
Iron	-	-
Folic acid and iron	-	-
Total	16	100
Counseling and testing for HIV/AIDs before conception		
Yes	16	100
No	-	-
Total	16	100
Consideration for proper nutrition before conception		
Yes	16	100
No	-	-
Total	16	100

Table 4 shows that half 8(50%) of the respondents had utilized preconception care only once while the least 2(12.5%) mentioned three times and above.

All the 16(100%) respondents had ever used folic acid before conception.

All the 16(100%) respondents had ever been counseled and tested for HIV/AIDs before conception.

All the 16(100%) respondents had ever considered proper nutrition before conception.

DISCUSSION.

Socio-demographic characteristics of the respondents.

Study findings about respondents' age showed that almost half (46.7%) of the respondents were between the age of 25-30 years. This is attributed to the fact that the study targeted those in an active reproductive age.

According to study results, the majority (33.3%) of the respondents had reached the primary level. This could be due to the high rate of poverty in communities that makes most community members access only primary education which is provided for free by the government.

On religion, most (30%) of the respondents were protestant. This may be because the area is dominated by the Anglican community.

Research findings on marital status indicated that the highest number (73.3%) of respondents were married. This is because most of the respondents were within the age group legally allowed to marry as per the constitution of Uganda.

Knowledge of women of reproductive age towards utilization of PCC.

Research findings indicated that the majority (60%) of the respondents had heard about preconception care. This may be due to the effort by the Ministry of Health to create awareness of preconception care to avert the looming effect of unwanted pregnancies. This is similar to a study done by Mulugeta, (2017) on the women's knowledge of preconception care in Adet, West Gojjam, Northwest Ethiopia which indicated that of 422 participants, 134(31.8%) of women had heard about preconception care before.

According to study results, most (53.3%) of the respondents were not able to define preconception care. This could be attributed to the low level of education since most of them had stopped at the primary level. This differs from a study done by Srijana, (2018) on the knowledge of preconception care among reproductive-aged women in Kaski District, Nepal whereby (69.5%) of the respondents defined preconception care as the care provided to couples before conception.

Results showed that more than half (60%) of the respondents mentioned health institutions as their source of information regarding preconception care. This could be because health institutions are the major source of health-related information. This is contrary to a study conducted by Zemenu, (2018) on women's knowledge of preconception care at a public Health Institution in Hawassa City, South Ethiopia which indicated that mass

media (Television and radio) (4%), Flier or brochures (1.6%), family or friend (2.2%), school or university (1.0%), and internet (0.2%) were mentioned as sources of information regarding preconception health care.

Study findings on the components of preconception care indicated that half (50%) of respondents stated counseling as a component of preconception care. This could be because couples often receive premarital counseling before the marriage. This is in disagreement with a study done by the Global Journal of Health Science (2018) on the assessment of the knowledge on pre-conception care among women of reproductive age in Ruiru Sub-County, Kiambu County, Kenya where the component of PCC that was highly indicated by the study participants was screening for infectious diseases (28.4%) and the least known component being screening for genetic diseases (7.6%).

Results showed that most (48%) of the respondents mentioned alcohol consumption as the most common behavioral issue that affects before conception. This may have been attributed to the fact that alcohol consumption is the most common bad practice among community members and in line with some study findings regarding women's knowledge of preconception health and behavioral risk factors in Ethiopia where alcohol consumption (33.9%), cigarette smoking (33.4%) and STIs including HIV/AIDS were mentioned as the major issues faced by couples before conception, whereas gender-based violence (15.6%), and genetic problem (13%), were the least frequently mentioned issues, (Yitayal, 2017).

Furthermore, the majority (63) of the respondents knew the harmful effects of alcohol. This may be attributed to the fact that alcohol has several complications both for the mother and fetus. This is in agreement with a study conducted in River State, Nigeria by Ordinioha, & Birsibe (2015) on alcohol consumption among pregnant women attending the ante-natal clinic of a tertiary hospital where more than half (51.5%) of the respondents knew the harmful effects of alcohol on the fetus.

Furthermore, more than half (60%) of the respondents said that 2-3 months before is the best time to start preparing to conceive. This could be because one requires ample time to prepare psychologically, physically, and economically for conception and this is in line with a study done by Krishma, (2018) on the knowledge of preconception care among reproductive-aged women in Kaski District, Nepal whereby (40.5%) of the respondents stated 3 months as a time for PCC.

The attitude of women of reproductive age towards utilization of PCC.

According to research findings, most of the respondents (80%) strongly agreed that preconception care is important to ensure good health. This may be due to the education, supplements, and treatment of medical ailments that couples receive during preconception care. This is in agreement with ash1dy ca1Tied out by Adina, (2017) concerning preconception health attitudes and behaviors of women in Australia whereby the majority of women felt that preconception was an important time to ensure good health, with regular engagement in physical activity being regarded as one of the most important priorities.

Furthermore, more than half (67%) of the respondents disagreed with the statement that 'supplements are important before conception'. This could be due to a knowledge gap on the benefits of supplements. This differs from a sh1dy ca1Tied out by Jacqueline, (2017) regarding preconception health attitudes and behaviors of women in Australia which showed that the majority of women opined that maintaining a healthy diet and taking pregnancy supplements, including folic acid, iodine, iron, and vitamin D, were considered important preconception behaviors.

In addition, more than half (63%) of the respondents strongly agreed that only women m reproductive age should benefit from PCC. This may be attributed to the fact that preconception care is meant for couples who wish to have a baby. This is in line with a study carried out by Osemen, (2019) on the assessment of attitudes amongst pregnant women towards PCC in tertiary facilities in Nigeria whereby (22.6%) of the sh1dy populace felt that only women in the reproductive age group should benefit from PCC and28 (18.1%) perceived that women trying to conceive only should benefit from this form of care.

Study results showed that the majority (70%) of the respondents agreed with the statement that PCC can help control medical conditions before conception. This could be because screening and treatment of medical conditions is one of the components of preconception care. This is supported by a study done by Opeyemi, (2019) on the assessment of the attitude amongst pregnant women towards preconception care in a tertiary facility in Nigeria where thirty (27.02%) of respondents felt that PCC will help in controlling medical conditions before pregnancy.

Research findings indicated that the greatest number (78%) of respondents agreed that preconception care should be offered anytime and this could be because different couples seek the service at different times. On the contrary, a study done by Gbemi, (2019) on the assessment of the attitude amongst pregnant women in a tertiary facility in Nigeria indicated that the majority (92.1%) felt that it should be offered before pregnancy, (42.1%) felt it should be at any time, (39.5%) at any opportunistic visit and (18.4%) felt that it should be after delivery.

Results in this study showed that most (75%) of the respondents opined that their husbands gave support to them before conception. This is attributed to the fact that it's the man's responsibility to fend for his family. This is similar to a study done by Tesfanesh, (2019) on the utilization of preconception care among reproductive age group women in Debre Birhan town, North Shewa, Ethiopia whereby the majority (92.3%) of the study participants had support from their husbands for preconception screening.

The practice of women of reproductive age towards utilization of PCC.

Study results showed that the majority (73%) of the respondents had never utilized any component of preconception care. This could be due to low knowledge regarding the benefits of preconception care. This is in line with a study carried out by Desta, (2019) regarding the mothers' utilization of preconception care in northern Ethiopia which showed that among 561 participants, (18.2%) of mothers had utilized at least one component of the World Health Organization package of PCC services before their last baby.

According to study results on the component respondents had ever utilized, half (50%) of the respondents had ever been counseled. This is attributed to the fact that counseling is the major component of PCC provided in health facilities. This is in agreement with a study conducted by Pramsgam, (20l 0) concerning the utilization of preconception care among Oklahoma women which showed that only (12.0%) of Oklahoma women received advice or counseling to prepare for becoming pregnant.

Results showed that half (50%) of the respondents had utilized preconception care only once. This could be due to limited knowledge on the benefits and all had ever used folic acid before conception. This may be in an attempt to prevent complications that result from folic acid deficiency during pregnancy. This is supported by Gbemi, (2019) in a study on the assessment of the practice of PCC amongst pregnant women in a tertiary facility in Nigeria which found that the majority of these respondents (26.7%) received folic acid supplementation as PCC.

Results showed that all the (100%) respondents had ever been counseled and tested for HIV/AIDs before conception. This could be attributed to the fact that HIV/AIDS screening has been made a prerequisite for every patient who seeks health services in government health facilities for early diagnoses and treatment. This is supported by a study conducted by Aliyu, (2019) regarding the utilization of preconception care among reproductive age group women in Debre Birhan town, NorthShewa, Ethiopia indicated that (13.4%) of women utilized preconception care services, among those, HIV testing and counseling was majorly utilized (92.7%) service.

Study findings showed that all the (100%) respondents had ever considered proper nutrition before conception. This could be due to the benefits attached to good nutrition during pregnancy. This is contrary to a study done by Opeyemi, (2019) on the assessment of the practice amongst pregnant women towards preconception care in a tertiary facility in Nigeria whereby (10%) had lifestyle modification such as smoking and alcohol/genetic counseling and screening, respectively, (5%) had considered proper nutrition, respectively.

CONCLUSIONS

The respondents' knowledge in this study was fair as all (100%) had heard about PCC, however, (61.l%) did not define preconception care, (50%) stated counseling as a component of PCC, (48%) mentioned alcohol consumption as the most common behavioral issues that affect before conception.

This study identified a fair attitude among respondents since (80%) strongly agreed that preconception care is important to ensure good health, (55.6%) disagreed with the statement that it is important to take supplements before conception, (63%) strongly agreed that only women of reproductive age should benefit from PCC and (70%) agreed with the statement that PCC can help control medical conditions before conception.

The practice was generally bad since only (44.4%) of respondents agreed to have used PCC, (50%) had ever been counseled, (50%) had utilized preconception care only once while (100%) opined that they had ever used folic acid before conception and (100%) had ever been counseled and tested for HIV/AIDs before conception.

RECOMMENDATIONS.

- The Government should train and recruit more health personnel to address the problem of understaffing and should ensure that trainings are organized for health personnel on preconception care.
- The government of Uganda should also set clear policies about preconception care and make it one of the maternal and child health indicators.
- The district health team (DHT) should put priority on preconception care during resource allocation.
- The hospital administration should organize continuous Professional Development (CPDs) for health workers on preconception care.
- More studies should focus on the factors influencing the utilization of preconception care among women of reproductive age.
- The Ministry of Health should sensitize the public massively about preconception care.
- Community members should encourage couples of childbearing age to always utilize preconception care.

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May God bless you all.

LIST OF ABBREVIATIONS.

CDC: Centers for Disease Control and Prevention.
HMIS: Health Management Information System.
PCC: Preconception Care.
UNICEF: United Nations Children's Emergency Fund.
UNMEB: Uganda Nurses and Midwives Examination Board.
WHO: World Health Organization.

SOURCE OF FUNDING.

The source of funding.

CONFLICT OF INTEREST.

The author declares no conflict of interest.

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