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Prevalence, Causes and Associated Factors of Common Causes of Infertility among Women Attending Tertiary Maternity Hospitals in Kampala, Uganda

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Abstract

Background: Infertility is a significant public health concern affecting 12.6% of reproductive-aged couples globally, with higher rates in Africa (16.4%). Despite its psychosocial and economic burden, data on infertility prevalence, causes, and associated factors in Uganda remain scarce. This study aimed to determine the prevalence, causes, and factors associated with female infertility among women seeking care at two tertiary hospitals in Uganda. **Methods**: A cross-sectional study was conducted at Kawempe National Referral Hospital (KNRH) and Mulago Specialized Women and Neonatal Hospital (MSWNH) from November 2023 to February 2024. A structured questionnaire was administered to 211 women diagnosed with infertility. Data on socio-demographics, reproductive history, and clinical factors were analyzed using SPSS version 21.0. **Results**: Among 17,146 women of reproductive age, the prevalence of infertility was 5%. The leading causes were fallopian tubal blockage (59%) and polycystic ovarian syndrome (PCOS) (23%). Factors significantly associated with tubal infertility included: Early age at marriage (<20 years) (AOR = 11.6, 95% CI: 1.5 - 90.5, *p* = 0.019). History of pelvic inflammatory disease (PID) (AOR = 7.5, 95% CI: 2.8 - 20.2, *p* < 0.001). Sexually transmitted infections (STIs) (AOR = 3.0, 95% CI: 1.1 - 8.3, *p* = 0.003). For PCOS, bivariate analysis identified obesity (BMI >35) as a key risk factor (OR = 13, 95% CI: 3.0 - 56.0, *p* = 0.001). **Conclusion**: Infertility affects 1 in 20 women in this Ugan-

dan cohort, primarily due to tubal factors and PCOS. Modifiable risks such as STIs, early marriage, and obesity underscore the need for targeted interventions, including STI prevention, delayed marriage, and lifestyle modifications.

Keywords

Infertility, Uganda, Tubal Blockage, PCOS, Pelvic Inflammatory Disease

1. Background

Infertility, defined as the inability to conceive after 12 months of unprotected intercourse, affects millions of people worldwide, with a disproportionate burden in low-resource settings [1]. According to the World Health Organization (WHO), infertility impacts approximately 12.6% of reproductive-aged couples globally, with regional variations—rising to 16.4% in Africa [2]. The prevalence of female infertility also differs by income level, estimated at 12.4% in high-income countries compared to 23.9% in some lower-income nations [3] [4].

Infertility may stem from factors in either partner or both, though in some cases, the cause remains unexplained [5]. Reported causes of female infertility include fallopian tubal [6], ovulatory disorders, uterine/cervical abnormalities [7], endometriosis, and idiopathic factors [8]. The distribution of the causes of female infertility varies across regions due to socio-demographic differences [9]. Several risk factors have been linked to female infertility, such sexually transmitted infections (STIs) [10], education level, alcohol/tobacco use, occupation [11] [12], medical conditions, and prior abortions [13].

In many African societies, fertility is central to a woman's marital and social standing. Infertility often leads to psychological distress, stigma, social exclusion, intimate partner violence, and marital instability [14]. It also reduces quality of life, increases exposure to STIs through seeking multiple partners, and exacerbates sexual dysfunction. As such, infertility represents a critical public health, social, and personal challenge, particularly in developing countries [15].

Despite its significant impact, there is a paucity of research on the prevalence, causes, and associated factors of female infertility in Uganda. This study investigated the prevalence, etiologies, and factors associated with the common causes of infertility among women seeking care at Kawempe National Referral Hospital (KNRH) and Mulago Specialized Women and Neonatal Hospital (MSWNH).

2. Methods

2.1. Study Design and Setting

This was a cross-sectional descriptive study conducted from 1st November 2023 to 29th February 2024 in the Reproductive Endocrinology and Infertility (REI) clinics of Kawempe National Referral Hospital (KNRH) and Mulago Specialized Women and Neonatal Hospital (MSWNH), Uganda.

MSWNH is a 450-bed public specialized national referral hospital for women and neonates, receiving an average of 7 women with infertility daily and a minimum of 120 clients per month in its infertility clinic.

KNRH, a 200-bed public specialized national referral hospital, attends to an average of 18 women with infertility per clinic day (held once weekly), totaling approximately 72 clients monthly.

2.2. Study Population and Recruitment

Women of reproductive age presenting with failure to conceive for at least 12 months were identified during clinic visits, and their numbers were recorded. Those with diagnosed causes of infertility were recruited to assess the prevalence and factors associated with the most common causes. The total number of eligible women visiting both hospitals during the study period was obtained from electronic medical records.

2.3. Population and Eligibility

1) Target Population, all women of reproductive age in Uganda.

2) Accessible Population, women who visited the Obstetrics and Gynecology departments of Kawempe National Referral Hospital (KNRH) and Mulago Specialized Women and Neonatal Hospital (MSWNH) during the study period (1st November 2023 - 29th February 2024).

3) Study Population, women seeking infertility treatment at the Reproductive Endocrinology and Infertility (REI) clinics of MSWNH and KNRH during the study period.

4) Inclusion Criteria, for prevalence assessment: women with an inability to conceive for ≥12 months.

For causes and associated factors: women with diagnosed causes of infertility.

5) Exclusion Criteria, women unwilling to participate in the study, women without obstetric/gynecological complaints (e.g., those accompanying children for medical care).

2.4. Sample Size and Sampling Procedure, the Sample Size Was Calculated Using the Formula for Estimating a Single Population Proportion [16]

$$n = \frac{Z^2 \times P \times Q}{d^2}$$

Where:

- Z = Standard normal deviate (1.96 for 95% confidence level)
- P = Estimated prevalence of the condition 17.4%, based on prior [17]
- Q = 1 - P (82.6%)
- d = Margin of error (5%)

Sample Size Calculation

Using the above parameters, the initial sample size was calculated as 220 par-

ticipants. Adjusting for an anticipated 10% non-response rate, the minimum required sample size was 198 participants.

2.4.1. Final Sample and Recruitment

A total of 861 women were identified with infertility during the study period. From this group, 211 participants who had completed all necessary diagnostic investigations and provided informed consent were enrolled. This number fell slightly short of the target (220) due to incomplete diagnostic investigations among some patients at KNRH.

Systematic sampling was employed to select participants for assessing the causes and associated factors of the most common infertility diagnoses. From the list of 861 eligible women, a sampling interval (k) was calculated ($k = 861/211 \approx 4$). A random start between 1 and 4 was selected, and every 4th woman was invited to participate until the required sample size was reached.

2.5. Study Variables,

2.5.1. Independent Variables

The following socio-demographic, clinical, and behavioral factors were assessed:

Socio-demographic: Age, marital status, occupation, level of education.

Reproductive history: Parity, age at marriage, age at menarche, history of previous conception, duration of infertility.

Menstrual characteristics: Frequency and duration of menstrual cycle.

Lifestyle factors: History of smoking, alcohol consumption, and body mass index (BMI).

Medical history: Current treatment for underlying conditions (e.g., thyroid disorders, diabetes mellitus).

Infertility-related factors: Different causes of female infertility.

2.5.2. Dependent Variable

Primary outcome: Prevalence of female infertility.

2.6. Operational Definitions

1) Etiology, the underlying pathological or physiological conditions that prevent a couple from achieving natural conception.

2) Factor, any biological, environmental, or lifestyle-related condition that increases the risk of infertility. These may include (but are not limited to) hormonal imbalances, structural abnormalities, chronic diseases, or behavioral exposures (e.g., smoking, alcohol use).

3) Infertility, the failure to conceive after ≥12 months of regular, unprotected sexual intercourse [1].

4) Reproductive-Age, a woman aged 15 - 49 years, inclusive, based on the WHO standard definition for reproductive health indicators.

5) Rotterdam Criteria (for PCOS Diagnosis).

Presence of at least two of the following three criteria [18].

➢Menstrual irregularity (oligomenorrhea or amenorrhea),

➢Clinical or biochemical hyperandrogenism,

➢Polycystic ovary morphology (PCOM) on ultrasound (≥20 follicles per ovary or ovarian volume >10 mL).

2.7. Data Collection

Four research assistants were trained to administer the study questionnaires. The questionnaire was initially developed in English and subsequently translated into Luganda, the most widely spoken local language in Kampala, Uganda, to ensure participant comprehension.

Data collection was conducted by the principal investigator (PI) and the research assistants. To maintain data quality, the PI performed daily checks for completeness and consistency. All questionnaires were thoroughly reviewed by the PI before being securely stored for analysis.

2.8. Data Management and Analysis

Collected data was checked for completeness, coded, and entered into EPI Info for initial processing before analysis.

2.9. Prevalence Calculation

The prevalence of infertility was calculated as the proportion of women presenting to the REI clinic with an inability to conceive for at least 12 months during the study period, divided by the total number of women of reproductive age (with and without infertility) who visited the Obstetrics and Gynecology units of the two hospitals during the same period.

2.9.1. Statistical Analysis

Causes of infertility were summarized as proportions.

Data analysis was performed using SPSS (Statistical Package for the Social Sciences) version 21.0, with guidance from a biostatistician.

Bivariate and multivariate logistic regression models were used to assess factors associated with common causes of infertility.

A p-value < 0.05 was considered statistically significant.

Results are presented in tables, frequency distributions, and percentages.

Variable Selection for Multivariate Analysis: All independent variables with a p-value of less than 0.2 in the bivariate analysis were considered candidates for inclusion in the multivariate logistic regression model. A backward stepwise selection method was then used to identify the final set of significant independent factors, retaining those with a p-value < 0.05.

Multivariate analysis was employed to control for confounding factors.

3. Results

A total of 17,146 women of reproductive age visited the two hospitals during the study period for obstetric and gynecological care. Among them, 861 women were

identified with infertility, defined as the inability to conceive after at least 12 months of trying.

The prevalence of infertility was calculated as:

$$\text{Prevalence}(\%) = \left(\frac{\text{Number of infertile women}(861)}{\text{Total women of reproductive age}(17{,}146)} \right) \times 100 = 5\%$$

Thus, 5% of women in this population experienced infertility.

Description of the study population.

Table 1. Socio-demographic characteristics of the 211 study participants.

Independent Variables	Frequency (n = 211)	Percentage (%)
Age		
15 - 24 years	23	11
25 - 34 years	112	53
35 - 44 years	72	34
45 - 49 years	4	2
Level of education		
At most Primary	38	18
Secondary	96	46
Tertiary	77	36
Marital Status		
Married	210	100
Not Married	1	0
Duration of marriage		
< 4 years	68	32
>=4 years	143	68
BMI		
18.5 - 24.9 (normal)	59	28
25.0 - 29.9 (over weight)	105	50
30.0 - 34.5 (class 1 obesity)	36	17
35.0 - 39.9 (class 2 obesity)	11	5
Occupation		
Formally employed	74	35
Self employed	117	55
Unemployed	20	9
Age at first marriage		
<=20 years	38	18
21 - 25 years	99	47
26 - 30 years	65	31
>30 years	9	4
Number of sexual partners		
<=2	90	43
>2	121	57
History of infertility in the family	48	23
Without a history of infertility in the family	163	77
Ever used any recreational drugs or alcohol	25	12
Never used recreational drugs	186	88
Ever smoked or used tobacco products	1	0

Continued

Never smoked or used tobacco products	210	100
Ever used any medications that affect infertility		
Yes	1	0
No	210	100

Table 1 shows that 57% of women with infertility had more than two life time sexual partners, and 47% were had their first marriage between 21 - 25 years.

Table 2. Obstetric, gynaecological and medical history of the 211 partcipants.

Independent Variables	Frequency N = 211	Percentage
Age at menarche		
<=14 years	145	69
>14 years	66	31
Duration of menses		
<= 6 days	171	81
>6 days	40	19
Painful periods		
Yes	131	62
No	80	38
Duration of trying to conceive		
<=2 years	72	34
>2 years	139	66
Ever been pregnant		
Yes	142	67
No	69	33
Ever undergone any surgeries that might affect fertility		
Yes	1	0
No	210	100
Ever been exposed to radiation or chemotherapy		
Yes	3	1
No	208	99
History of PID?		
Yes	128	61
No	83	39
Ever had an ectopic pregnancy		
Yes	7	3
No	204	97
Ever been diagnosed with an STI?		
Yes	143	68
No	68	32
Ever had a miscarriage?		
Yes	83	39
No	128	61
If ever had a miscarriage, how was it treated		
Medically	54	65

Continued

Surgically	**22**	**27**
Never any treatment	7	8
Any chronic medical conditions		
Yes	19	9
No	192	91

Table 2 shows that the majority of women with infertility had a history of PID and STIs.

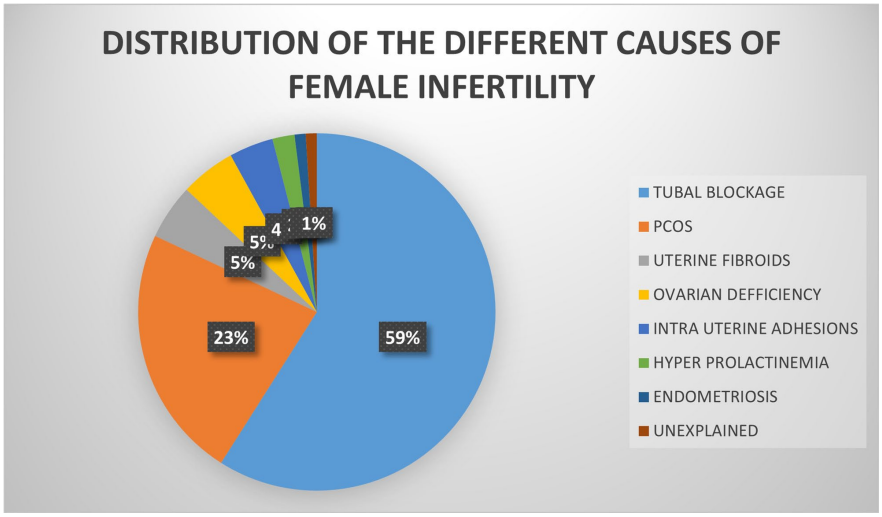

Figure 1. Showing the different causes of female infertility.

Fallopian tubal blockage and Poly Cystic Ovarian Syndrome accounted for over 92% of the causes of female infertility.

Table 3. Bivariate analysis on factors associated with fallopian tubal blockage against other causes of infertility.

Variables	Other causes (n = 87)	Fallopian tubal blockage (n = 124)	OR (95% CI)	P-value
Age				
15 - 24 years	17(20)	6(5)	1	
25 - 34 years	41(47)	71(57)	4.907(1.8 - 13.4)	0.002*
35 - 44 years	26(30)	46(37)	5.013(1.8 - 14.3)	0.003*
45 - 49 years	3(3)	1(1)	0.944(0.1 - 10.9)	0.963
Level of education				
At most Primary	8(9)	30(24)	4.271(1.7 - 10.5)	0.002*
Secondary	38(44)	58(47)	1.738(0.9 - 3.2)	0.074
Tertiary	41(47)	36(29)	1	
Duration of marriage				
< 4 years	39(45)	29(23)	1	
>=4 years	48(55)	95(77)	2.662(1.5 - 4.8)	0.001*
Occupation				
Formally employed	40(46)	34(27)	1	
Self employed	39(45)	78(63)	2.353(1.3 - 4.3)	0.005*
Unemployed	8(9)	12(10)	1.765(0.6 - 4.8)	0.268

Continued

Age at first marriage				
<=20 years	11(13)	27(22)	2.531(1.1 - 5.9)	0.033*
21 - 25 years	40(46)	59(48)	1.521(0.8 - 2.9)	0.192
26 - 30 years	33(38)	32(26)	1	
>30 years	3(3)	6(5)	2.063(0.5 - 9.0)	0.334
Number of sexual partners				
<=2	52(60)	38(31)	1	
>2	35(40)	86(69)	3.362(1.9 - 6.0)	<0.001*
Age at menarche				
<=14 years	64(74)	81(65)	1	
>14 years	23(26)	43(35)	1.477(0.8 - 2.7)	0.205
Duration of menses				
<= 6 days	53(61)	118(95)	12.616(5.0 - 31.9)	<0.001*
>6 days	34(39)	6(5)	1	
Ever been pregnant?				
Yes	45(52)	97(78)	3.353(1.8 - 6.1)	<0.001*
No	42(48)	27(22)	1	
History of PID?				
Yes	28(32)	100(81)	8.780(4.7 - 16.5)	<0.001*
No	59(68)	24(19)	1	
Diagnosed with an STI?				
Yes	40(46)	103(83)	5.763(3.1 - 10.8)	<0.001*
No	47(54)	21(17)	1	

Table 3 above shows that at bivariate analysis, the factors that were significantly associated with fallopian tubal factor cause of infertility were age, level of education, duration of marriage, being self-employed, age at first marriage, number of sexual partners, duration of menses, pelvic inflammatory diseases and sexually transmitted infections.

Table 4. Multivariate Model for predicting factors associated with fallopian tubal factor cause of infertility.

Independent variable	Aor	95% CI	P-value
Age at first marriage			
<=20 years	11.603	1.5 - 90.5	0.019*
21 - 25 years	1.981	0.7 - 5.6	0.193
26 - 30 years	1		
>30 years	4.812	0.5 - 47.0	0.177
History of pid?			
Yes	7.501	2.8 - 20.2	<0.001*
No	1		
Have you ever been diagnosed with an sti?			
Yes	3.039	1.1 - 8.3	0.003*
No	1		

Table 4 shows multivariate analysis. Having controlled for other factors (age,

level of induction, occupation), the factors that remained associated with fallopian tubal factor as a cause of infertility were age at first marriage, pelvic inflammatory diseases and sexually transmitted infections.

Table 5. Bivariate analysis on factors associated with polycystic ovarian syndrome against other causes of infertility.

variable	Other cause (n = 163)	PCOS (n = 48)	OR (95% CI)	P-value
Age				
15 - 24 years	7(4)	16(33)	25.143(7.4 - 85.1)	<0.001*
25 - 34 years	87(53)	25(52)	3.161(1.2 - 8.1)	0.017*
35 - 44 years	66(40)	6(13)	1	
45 - 49 years	3(2)	1(2)	3.667(0.3 - 40.9)	0.291
Level of education				
At most Primary	34(21)	4(8)	1	
Secondary	70(43)	26(54)	3.157(1.0 - 9.8)	0.046*
Tertiary	59(36)	18(38)	2.593(0.8 - 8.3)	0.108
Marital Status				
Married	162(99)	48(100)	-	
Not Married	1(1)	0(0)		
Duration of marriage				
< 4 years	39(24)	29(60)	4.853(2.5 - 9.6)	<0.001*
>=4 years	124(76)	19(40)	1	
BMI				
18.5 - 24.9	52(32)	7(15)	1	
25.0 - 29.9	85(52)	20(42)	1.748(0.7 - 4.4)	0.238
30.0 - 34.5	22(14)	14(29)	4.727(1.7 - 13.3)	0.003*
35.0 - 39.9	4(2)	7(15)	13(3.0 - 56.0)	0.001*
Age at menarche				
<=14 years	105(64)	40(83)	2.762(1.2 - 6.3)	0.016*
>14 years	58(36)	8(17)	1	
Duration of menses				
<= 6 days	157(96)	14(29)	1	
>6 days	6(4)	34(71)	63.548(22.8 - 177.2)	<0.001*
Duration of trying to conceive?				
<=2 years	45(28)	27(56)	3.371(1.7 - 6.6)	<0.001*
>2 years	118(72)	21(44)	1	

Table 5 shows that at bivariate analysis, the factors that were significantly associated with PCOS were, age, Body mass index, age at menarche, duration of menses.

Table 6. Multivariate Model for predicting factors associated with polycystic ovarian syndrome (PCOS)

Independent Variable	AOR	95% CI	P-Value
Age Group			
15 - 24 years	18.921	4.8 - 74.2	<0.001

Continued

25 - 34 years	**2.145**	**0.7 - 6.3**	**0.166**
35 - 44 years	1		
BMI			
30.0 - 34.5 (Class 1)	3.855	1.2 - 12.1	0.021
35.0 - 39.9 (Class 2)	9.112	1.9 - 43.0	0.005
18.5 - 24.9 (Ref)	1		

4. Discussion

4.1. Prevalence of Female Infertility among Women Seeking Care at KNRH and MSWNH

This study found that the prevalence of female infertility among women of reproductive age seeking care at Kawempe National Referral hospital and Mulago Specialized Women and Neonatal hospitals was 5%.

The results of this study were far below those found in the study done on the prevalence of female infertility in rural Ghana that showed prevalence of 11.8% [19] and it was slightly close to findings in the study done in Pakistan that showed prevalence of female infertility as 7% [20].

The results of this study were however far below the prevalence of female infertility in southwestern Cameroon that showed prevalence of 24% among women [21] and also far below the 24.2% prevalence of female infertility in [22].

The difference in the prevalence between this study and the rest of the studies done is Africa could be due to the different denominators used by different studies when calculating the prevalence, in this study we used the total number of women of reproductive age who visited the two hospitals during the study period (both maternity and gynecology) while some studies used only those women seen in the gynecological unit. Another reason could have been the study setting, this study was done in the urban setting while the other two studies were done in rural areas. The difference in the findings further highlight the fact that the prevalence varies from region to region.

4.2. Causes of Infertility among Women Seeking Infertility Treatment at KNRH and MSWNH

This study showed that the causes of infertility among women seeking infertility treatment at KNRH and MSWNH were tubal blockage 59%, polycystic ovarian syndrome 23%, uterine fibroids5%, ovarian deficiency 5%, intrauterine adhesions 4%, hyperprolactinemia 2%, endometriosis 1% and unexplained 1%.

The results of this study were in agreement with early studies that showed that the commonest cause of female infertility were tubal blockage and disorders of ovulation like PCOS. Studies done in Greece showed that the commonest cause of female infertility was tubal blockage at 27% [23]. Systematic reviews with meta-analysis on the causes of female infertility in Africa showed that the commonest cause of female infertility was tubal blockage at 39% [24], however studies done in Iran showed that the commonest cause of female infertility was ovulatory dis-

orders [25], the difference in the causes of female infertility may be due to difference in the prevalence of STIs, PIDs and Obesity.

4.3. Factors Associated with the Common Cause's Female Infertility among Women Seeking Infertility Treatment at KNRH and MSWNH

This study showed that the factors that were significantly associated with fallopian tubal blockage as cause of infertility were; age at first marriage, pelvic inflammatory diseases and sexually transmitted infections this was in agreement with studies showing that pelvic inflammatory diseases were significantly associated with fallopian tubal [9].

In this study Pelvic inflammatory disease (PID) AOR 7.501, (95% CI) was a significant factor associated in tubal blockage. PID is an infection of the female reproductive organs. It typically occurs when sexually transmitted bacteria spread from the vagina to the uterus, fallopian tubes, or ovaries.

Fallopian tubal blockage is a serious complication of PID and can lead to infertility. The mechanism of tubal blockage in PID is a result of inflammation, scarring, tissue damage, abscess formation, and adhesion formation in the fallopian tubes and surrounding tissues. These changes can impair the normal function of the fallopian tubes, leading to infertility.

This study also revealed that age at marriage less than 20 years was significantly associated with tubal blockage AOR 11.603, 95% CI (1.5 - 90.5), the possible explanation could be that younger individuals may engage in risky sexual behavior or have multiple sexual partners, increasing their susceptibility to STIs. Certain STIs, such as chlamydia and gonorrhea, can lead to pelvic inflammatory disease (PID), which can cause scarring and damage to the fallopian tubes, resulting in tubal blockage.

While factors associated with PCOS/ovulatory disorders were; age at menarche, BMI. BMI of >35 was significantly associated with PCOS at bivariate analysis with OR 13 (95% CI).

The findings of this study on the association between high BMI with PCOS are in agreement with findings of the study that analyzed 25 publications on association between BMI and PCOS [17].

One of the possible explanations for association between high BMI and PCOS/infertility is that High BMI often correlates with insulin resistance, a condition where the body's cells become less responsive to insulin. Insulin resistance is commonly associated with PCOS and can lead to elevated insulin levels in the blood. High insulin levels can disrupt ovarian function and contribute to hormonal imbalances characteristic of PCOS

4.4. Conclusion

Infertility in Uganda is predominantly caused by tubal factors and PCOS, with modifiable risks (STIs, obesity) offering critical intervention points. The high burden of tubal infertility, driven by a history of PID and STIs, points directly

to gaps in sexual and reproductive health services. This underscores an urgent need to strengthen national STI prevention, screening, and treatment programs, particularly for adolescents and young women, to prevent the long-term sequelae of PID.

4.5. Recommendations

- Enhanced sexuality education and accessible, early treatment services to reduce the incidence of PID.
- Support for policies and programs, such as Uganda's free primary and secondary education, that empower girls and delay early marriage.
- Community-based lifestyle programs targeting obesity, given its strong association with PCOS.
- Research: Standardized diagnostic protocols for future multi-center studies.

5. Declarations

Ethics approval and consent to participate

Permission to conduct the study was obtained from the Department of Obstetrics and Gynecology, Ethical approval was obtained from the School of Medicine Research and Ethics Committee (SOMREC) and Kawempe National Referral Hospital and Mulago Specialized Women and Neonatal Hospital. Informed written consent was obtained from the study participants. The study carried minimal risk to the participants and did not influence health care given to their participants. Participation was voluntary with participants free to withdraw from the study at any point. All the data was kept under lock and key. Any authorized representative of the Institutional Review Board (IRB) was allowed to inspect all documents and records required to be maintained by the investigator. All the information was treated with utmost confidentiality. Access to data entered on the computer was through a password known to the researcher.

Availability of Data and Materials

The corresponding author is willing and ready to provide the de-identified datasets used and/or analyzed during the current study upon reasonable request.

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Authors' Contributions

FW contributed to the conception of this research idea, study design and including supporting all stages of this paper. MS, ANS, SG, NP and JKB supported with the study design, study conceptualization, data analysis, and interpretation of findings. All authors reviewed this manuscript and approved the final version of the manuscript.

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Disclaimer

The findings and conclusions in this report are those of the author(s) and do not necessarily represent the official position of Makerere University, School of Medicine.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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List of Abbreviations

AOR	Adjusted odds ratio
BMI	Body Mass Index
Gyn	Gynaecology
HSG	hysterosalpingography
KNRH	Kawempe National Referral Hospital
LMIC	Lower- and Middle-Income Countries
MOH	Ministry of Health
MSWNH	Mulago Specialized Women and Neonatal Hospital
Obs	Obstetrics
PCOS	Poly Cystic Ovarian Syndrome
REI	Reproductive Endocrinology and Infertility
SDG	Sustainable Development Goals
SPSS	Statistical Package for the Social Sciences
STIs	Sexually Transmitted Infections
WHO	World Health Organizations