Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 9 (2025): September 2025 Issue
https://doi.org/10.51168/sjhrafrica.v6i9.2133
Original Article

Contraceptive use and associated factors among female adolescents living in Katwe – Butego Division, Masaka District, Uganda: A cross-sectional study.

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Abstract

Background
The study aims to assess the factors associated with contraceptive use among adolescents in Masaka district.

Methods
A cross-sectional study design incorporating both quantitative and qualitative approaches was employed. The study targeted 6,338 female adolescents aged 15–24 years. Using proportionate sampling, 90 adolescents were selected from Butego parish and 97 from Katwe parish. Data was analyzed using STATA version 17. Descriptive statistics were used to determine contraceptive use prevalence, while binary logistic regression identified factors associated with use.

Findings
The results show that 51.9% of the respondents were from Katwe Parish, while 48.1% were from Butego Parish, and the majority were married (64.7%. Most respondents were aged between 15 and 19 years (72.7%), while a smaller proportion were aged between 10 and 14 years (27.3%). Of the 187 female adolescents, 62% were using contraceptives. The married female adolescents were 3.9 times more likely to use contraceptives than single adolescents (AOR = 3.987; 95% CI: 1.528–10.407; p = 0.005). Divorced or separated adolescents had lower odds of using contraceptives than their single counterparts(AOR = 0.018; 95% CI: 0.001–0.597; p = 0.024). Adolescents who had ever faced challenges in affording contraceptives had significantly higher odds of contraceptive use compared to those who had never faced such challenges (AOR = 51.130; 95% CI: 5.777–452.553; p = 0.000.

Conclusion
For every 10 adolescents, 6 of are using contraceptives. Potential health risks associated with contraceptive methods, and whether adolescents had ever faced challenges in affording contraceptives, were key factors associated with contraceptive use among female adolescents. A low contraceptive uptake was higher among single adolescents.

Recommendation
Targeted outreach programs through communities, youth clubs, and social media should focus on educating and encouraging this group to seek reproductive health services.

Keywords: *Contraceptive use, Female adolescents, Katwe-Butego division, Masaka district.*
Submitted: August 12, 2025 **Accepted:** September 20, 2025 **Published:** September 27, 2025

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Introduction

Worldwide, adolescents represent a significant proportion of the population, accounting for 23% in the least developed countries. Despite this, the sexual and reproductive health (SRH) needs of adolescents are largely not addressed on a global scale. By 2017, an estimated 36 million adolescent girls between 15 and 19 years old were

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either married or sexually active and did not wish to conceive within the next two years. Among these, more than half, approximately 20 million girls, were not utilizing modern contraceptive methods despite the need for them [1]. Globally, only 10.2% of sexually active adolescent women aged 15 to 19 are utilizing modern contraceptives, with particularly low prevalence rates observed in Sub-Saharan Africa [2]. Millions of adolescent girls, especially in developing countries, encounter significant barriers to accessing contraception [3] .

In low- and middle-income countries, the rate of contraceptive usage among adolescent girls stands at 31.6 percent, while for young adults, it is 43.5 percent. The limited adoption of contraceptives significantly contributes to elevated levels of adolescent pregnancies, unsafe abortions, maternal mortality, and sexually transmitted infections [4], [5], [6]. In sub-Saharan Africa (SSA), the prevalence of contraceptive use among adolescents is estimated at 25.4 percent, varying from 4 percent in Chad to 60.5 percent in Namibia [3]. Approximately 14 million unintended pregnancies occur annually in SSA, with adolescent girls and young women aged 15–24 years being the most susceptible group. This vulnerability stems from several factors, including the notably high prevalence (around 70%) of sexually active young women, coupled with a low utilization of effective contraceptive methods (less than 10%). This highlights a critical gap in access to and use of modern contraceptives among adolescents in SSA, leading to a heightened risk of unintended pregnancies.

In Uganda, the adoption of contraceptives among adolescents is reported at 9.5%, which is lower compared to the regional average of 25.4% [7], [8]. This limited uptake has contributed to Uganda's adolescent fertility rates ranking among the highest globally [8]. The ongoing low contraceptive utilization and high teenage pregnancy rates among adolescents in Uganda are attributed to various factors. These include unpredictable and irregular sexual activity, restricted access to contraceptives, insufficient knowledge about contraceptive methods, and concerns about potential side effects [9].

However, no studies have been conducted in the Katwe–Butego division, Masaka District. This study, therefore, examines the factors associated with contraceptive use among adolescents.

Materials and methods

Study design and setting

The study employed a cross-sectional design incorporating qualitative and quantitative research methods from 1st March, 2025 to 30th June, 2025 from Katwe-Butego division in Masaka district, with in Masaka City, which has got three Divisions:- Butego Division, Kimanya - Kyabakuza Division, and Nyendo-Senyange division. Borders are located in south western Central, about 130 km south western Kampala, the capital city, and it borders Mpigi district, Kalung district in the north, Lwengo district in the west, and Kyotera district in the south, Kalangala district in the east. Masaka District has a population of 115,251, of which 56,695 are females. It occupies a total area of 100 square Kilometres (25,000 acres). The division was chosen due to its large population of young people aged 10 to 19 years and the notably low rate of contraceptive use among adolescents. The division has three public health facilities where information can be obtained, with the main Masaka Regional Referral Hospital, Masaka police HC III, and Masaka Municipality HC II.

Study population

The study targeted a population of 6,338 female adolescents living in the Katwe and Butego Division of Masaka. The study involved 9 health workers providing contraceptive services at health centers within Katwe/Butego Division.

Inclusion and exclusion criteria

The study included all female adolescents aged 10 to 19 years residing in the Katwe/Butego Division of Masaka City.

Female adolescents who were critically and/or mentally ill were excluded from the study.

Sampling techniques

The sampling process involved several stages to effectively reach the respondents. Initially, the Katwe-Butego division was stratified into two parishes: Katwe and Butego. Following this stratification, a list of adolescents aged 10 to 19 years was obtained from the planning department of the Masaka District local government. Using this list, then a proportionate size method was used to randomly select 90 adolescents from Butego parish and 97 adolescents from Katwe parish. In addition, the study purposively selected 9 health officials who are involved in providing

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contraceptive services in the district to participate in key informant interviews. A summary of the study population, sample size, and sampling techniques is presented in Table 1.

Table 1: Study population, sample size, and sampling techniques

Parish	Nature of Respondent	Population	Sample Size	Sampling Technique
Butego	Adolescents	3,003	90	Stratified random
Katwe	Adolescents	3,336	97	Stratified random
	Total	6,347	196	
Kimanya-Kyabakuza	Adolescents	2910	-	-
Nyendo-Senyange	Adolescents	3542	-	-

Data collection procedure

The data used for analysis were collected by the principal investigator together with trained research assistants from both structured interviews with adolescents and key informant interviews with health officials. Data collection instruments were pretested in Katwe-Butego division. Eligible female adolescents aged 15–24 years were provided with detailed information regarding the study and consented to participate in the study.

Sample size calculation

The study sample size was calculated using the Kish (1965) sample size formula, which is widely recognized for its application in survey research. This formula helps to determine an appropriate sample size that can yield reliable and generalizable results for the population under study (Singh & Masuku, 2014). The Kish sample size formula is as follows:

$n = \frac{Z\alpha^2 pq}{d^2}$

Where:

n is the required sample size, Z is the z-value (the number of standard deviations from the mean, corresponding to the desired confidence level, typically 1.96 for a 95% confidence level), p is the estimated proportion of the population with the attribute of interest (e.g., the proportion of adolescents using contraceptives estimated to be 0.15 according to UDHS (2016)), q is 1−p (the proportion of the population without the attribute of interest), and d is the margin of error (the acceptable error level, typically set at 0.05 or 5%).

$n = \frac{1.96^2 * 0.15 * 0.85}{0.05^2}$ =196 respondents

Data analysis

Information from each questionnaire was summarized in Microsoft Excel version 16, coded, and transferred into STATA version 17 for analysis. Descriptive statistics, including frequencies and proportions, were calculated in one-way tabulations for the prevalence of contraceptive use and covariates. Bivariate analysis at a 95% confidence interval was done, and factors with P≤0.2 were analyzed further at the Multivariate level to remove confounders, and those that had P≤0.05 were considered significant in this study.

Ethical considerations

This research project was approved by the research ethics committee of Bishop Stuart University and the facility's in-charges and management to seek permission to conduct the study. The study was registered with the Uganda National Council for Science and Technology (UNCST). All study participants were provided written informed consent. All ethical standards were followed.

Results

Response rate

Table 2 shows that the study intended to conduct 187 structured interviews and 9 key informant interviews. All the 187 structured interviews and 8 key informant interviews were a success, resulting in response rates of 100% and 88.9%, respectively.

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Table 2: Response rate

Respondents	Targeted sample size	Obtained Sample size	Percentage
Structured Interviews	187	187	100%
Key Informants	9	8	88.9%
Total	**196**	**195**	**99.5**

Characteristics of the study participants

For Socio-economic Characteristics, the results show that. 51.9% of the respondents were from Katwe Parish, while 48.1% were from Butego Parish. The majority were married (64.7%), followed by those who were single (32.1%), and the least were divorced or separated (3.2%). Most respondents were aged between 15 and 19 years (72.7%), while a smaller proportion were aged between 10 and 14 years (27.3%). In terms of education, the majority had some primary education (56.7%), followed by those with some secondary education (20.3%), and the least had completed secondary education (0.5%). The majority of female adolescents were not working (87.7%), while a few were working (12.3%). A large proportion of respondents came from low-income backgrounds (87.7%), while a small proportion came from high-income backgrounds (12.3%). Regarding religion, the majority were Anglicans (36.9%), followed by Catholics (31%), and the least were Muslims (9.1%).Table 3

Table 3: Distribution of respondents by socio-economic characteristics

Variables	Frequency (N=187)	Percentage (%)
Parish		
Butego	90	48.1
Katwe	97	51.9
Marital status		
Divorced/separated	6	3.2
Married	121	64.7
Single	60	32.1
Age bracket		
10-14	51	27.3
15-19	136	72.7
20-24	0	0.0
Highest level of education		
No formal education	8	4.3
Some primary	106	56.7
Completed primary	34	18.2
Some secondary	38	20.3
Completed Secondary	1	.5
Tertiary education	0	0.0
Main occupation		
Not Working	164	87.7
Working	23	12.3
Wealth quintile		

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Poor	164	87.7
Rich	23	12.3
Religion		
Anglican	69	36.9
Catholic	58	31.0
Muslim	17	9.1
Pentecostal	43	23.0

For culturally related characteristics of respondents, the majority of respondents indicated that religious beliefs do not affect their contraceptive choices (71.7%), while a smaller proportion reported that they do (28.3%). Most respondents revealed that cultural norms do not discourage their use of contraceptives (75.4%), whereas 24.6% indicated that they are discouraged by cultural norms. The majority of adolescents stated that traditional beliefs do not influence their family planning choices (80.7%), while 19.3% said they do. The majority (63.1%) of the respondents indicated that fear of disclosure does not affect their willingness to use contraceptives, while 36.9% reported that it does. The majority of respondents (76.5%) stated that societal stigma does not make it difficult to access contraceptives, while 23.5% felt that it does. A larger proportion (67.4%) indicated that parents or guardians do not influence their decisions regarding contraceptive use, whereas 32.6% said they are influenced. A significant proportion of female adolescents (51.9%) reported that their parents are not open to discussing contraceptive use, while 48.1% said their parents are open to such discussions. Likewise, most respondents indicated that parents do not provide information about contraceptive options (63.1%), while 36.9% reported receiving such information.

Peer influence was also noted, with 57.2% of adolescents indicating that their peers discuss contraceptive use with them, while 42.8% said they do not. Furthermore, 58.3% of respondents believed that community programs are effective in promoting awareness about contraception, while 41.7% felt they are not. Lastly, the majority of respondents (62%) expressed concern about potential health risks associated with contraceptive methods, while 38% were not concerned. Table 4.

Table 4: Distribution of respondents by cultural characteristics

Variables	Frequency (N=187)	Percentage (%)
Religious Beliefs Affecting Contraceptive Choices		
No	134	71.7
Yes	53	28.3
Cultural Norms in Discouraging Adolescent Contraceptive Use		
No	141	75.4
Yes	46	24.6
Traditional Beliefs Affecting Family Planning Choices		
No	151	80.7
Yes	36	19.3
Fear of disclosure affecting willingness to use contraceptives		
No	118	63.1
Yes	69	36.9
Parents or guardians influence decisions regarding contraceptive use.		
No	126	67.4
Yes	61	32.6

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Parents are open to discussing contraception.		
No	97	51.9
Yes	90	48.1
Parents provide information about contraceptive options.		
No	118	63.1
Yes	69	36.9
Peers discuss contraceptive use with the adolescent.		
No	80	42.8
Yes	107	57.2
Community programs are effective in promoting awareness about contraception.		
No	78	41.7
Yes	109	58.3
Concerned about potential health risks associated with contraceptive methods		
No	71	38.0
Yes	116	62.0

For facility-related characteristics, the majority of female adolescents reported that they do not face challenges in affording contraceptives (75.4%). Most respondents (71.7%) stated that cost is not a determining factor in their choice of contraceptive method. A larger proportion of respondents (64.7%) indicated that they have easy access to contraceptive services in their area. The majority also stated that it is convenient to obtain contraceptives from a health facility or clinic when needed (75.4%). Most respondents (74.9%) revealed that contraceptive services are available at convenient times and locations. A significant majority of adolescents (80.2%) expressed confidence in the knowledge and skills of health workers providing contraceptive services. The majority of adolescents (80.7%) reported satisfaction with the range of contraceptive methods available. Most respondents (81.8%) expressed satisfaction with the quality of care received during contraceptive service access. The majority of adolescents were obtaining contraceptives from government health facilities (87.7%). Most respondents reported never experiencing stigma for using contraceptives (72.7%), while a minority had experienced such stigma (27.3%). In addition, most respondents reported never experiencing stigma for using contraceptives (72.7%). Table 5.

Table 5. Distribution of respondents by facility characteristics

Variables	Frequency (N=187)	Percentage (%)
Ever faced challenges in affording contraceptives?		
No	141	75.4
Yes	46	24.6
Cost considerations are a factor in the choice of contraceptive method.		
No	134	71.7
Yes	53	28.3
Have easy access to contraceptive services in the area		
No	66	35.3
Yes	121	64.7
It is convenient to obtain contraceptives when needed from a health facility or clinic.		
No	46	24.6

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Yes	141	75.4
Contraceptive services are available at convenient times and locations.		
No	47	25.1
Yes	140	74.9
Confident in the knowledge and skills of health workers who provide contraceptive services		
No	37	19.8
Yes	150	80.2
Satisfied with the range of contraceptive methods available		
No	36	19.3
Yes	151	80.7
Satisfied with the quality of care received when accessing contraceptive services		
No	34	18.2
Yes	153	81.8
A place where contraceptives are obtained when needed		
Government health facility	164	87.7
Private facilities	23	12.3
Societal stigma makes it difficult to access contraceptives.		
No	143	76.5
Yes	44	23.5
Ever experienced stigma for using contraceptives		
No	136	72.7
Yes	51	27.3

The findings on the uptake of contraceptives among female adolescents in Katwe–Butego Division. Out of 187 female adolescents, 116 (62%) were using contraceptives, while 71 (38%) were not. Among those using contraceptives, the majority (37.4%) used them to delay pregnancy, while 24.6% used them for child spacing. Most respondents indicated that they do not return for contraceptive refills (68.4%), while a few reported that they do (31.6%). Table 6.

Table 6. Use of contraceptives among female adolescents

Variables	Frequency (N=187)	Percentage (%)
Uptake of Contraceptives		
No	71	38.0
Yes	116	62.0
Role of Using Contraceptives		
NA	71	38.0
Child spacing	46	24.6
Delay pregnancy	70	37.4
Consistently return for contraceptive refills.		
No	128	68.4
Yes	59	31.6

To identify factors associated with Contraceptive Use among Female Adolescents, Univariate and Multivariate analyses were carried out. Married female adolescents were 3.9 times more likely to use contraceptives compared to

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those who were single (AOR = 3.987; 95% CI: 1.528–10.407; p = 0.005). Adolescents who were divorced or separated had lower odds of using contraceptives compared to their single counterparts (AOR = 0.018; 95% CI: 0.001–0.597; p = 0.024). Table 7

Table 7. Socio-economic factors associated with contraceptive use among female adolescents

Variables	Contraceptive Uptake		COR	P-value	AOR	P-value	95% Confidence Interval
	No n(%)	Yes n(%)					
Parish							
Butego (Ref)	35 (38.9)	55 (61.1)	1.000	-			
Katwe	36 (37.1)	61(62.9)	1.078	0.803			
Marital status							
Single (Ref)	32(53.3)	28(46.7)	1.000	-	1.000	-	-
Married	34(28.1)	87(71.9)	2.924	0.001	3.987	0.005	1.528 -10.407
Divorced/separated	5 (83.3)	1(16.7)	0.229	0.190	0.018	0.024	0.001 - 0.597
Age bracket							
10-14 (Ref)	19(37.3)	32(62.75)	1.000	-			
15-19	52(38.2)	84(61.8)	0.959	0.902			
20-24	0(0.0)	0(0.0)	-	-			
Highest level of education							
No formal education (Ref)	1(12.5)	7(87.5)	1.000	-	1.000	-	-
Some primary	49(46.2)	57(53.8)	0.166	0.099	0.145	0.123	0.012 - 1.688
Completed primary	10(29.4)	24(70.6)	0.343	0.345	0.363	0.440	0.028 - 4.759
Some secondary	11(29.0)	27(71.0)	0.351	0.353	0.702	0.788	0.054 - 9.207
Completed Secondary	0(0.0)	1(100.0)	1	-	1	-	-
Main occupation							
Not Working (Ref)	63(38.4)	101(61.6)	1.000	-			
Working	8(34.8)	15(65.2)	1.170	0.737			
Wealth quintile							
Poor (Ref)	63(38.4)	101(61.6)	1.000	-			
Rich	8(34.8)	15(65.2)	1.170	0.737			
Religion							
Anglican (Ref)	30(43.5)	39(56.5)	1.000	-	1.000	-	-
Catholic	19(32.8)	39(67.2)	1.579	0.218	2.285	0.109	0.831 - 6.288
Muslim	4(23.5)	13(76.5)	2.500	0.140	1.230	0.813	0.222 - 6.803
Pentecostal	18(41.9)	25(58.1)	1.068	0.866	1.082	0.895	0.334 - 3.508

Ref=Reference Category, COR=Crude Odds Ratio, AOR=Adjusted Odds Ratio

Adolescents who expressed concern about the potential health risks associated with contraceptive methods were significantly less likely to use contraceptives compared to

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those who were not concerned (AOR = 0.136; 95% CI: 0.051–0.363; p =0.000). Table 8

Table 8. Cultural factors associated with contraceptive use among female adolescents

Variables	Contraceptive Uptake		COR	P-value	AOR	P-value	95% Confidence Interval
	No n(%)	Yes n(%)					
Religious Beliefs Affecting Contraceptive Choices							
No (Ref)	52(38.8)	82(61.2)	1.000	-			
Yes	19(35.9)	34(64.2)	1.135	0.707			
Cultural Norms in Discouraging Adolescent Contraceptive Use							
No (Ref)	55(39.0)	86(61.0)	1.000	-			
Yes	16(34.8)	30(65.2)	1.199	0.608			
Traditional Beliefs Affecting Family Planning Choices							
No (Ref)	55(36.4)	96(63.6)	1.000	-			
Yes	16(44.4)	20(55.6)	0.716	0.375			
Fear of disclosure affecting willingness to use contraceptives							
No (Ref)	48(40.7)	70(59.3)	1.000	-			
Yes	23(33.3)	46(66.7)	1.371	0.319			
Parents or guardians influence decisions regarding contraceptive use.							
No (Ref)	48(38.1)	78(61.9)	1.000	-			
Yes	23(37.7)	38(62.3)	1.017	0.959			
Parents are open to discussing contraception.							
No (Ref)	36(37.1)	61(62.9)	1.000	-			
Yes	35(38.9)	55(61.1)	0.927	0.803			
Parents provide information about contraceptive options.							
No (Ref)	40(33.9)	78(66.1)	1.000	-	1.000	-	-
Yes	31(44.9)	38(55.1)	0.629	0.135	0.526	0.179	0.206 - 1.343
Peers discuss contraceptive use with the adolescent.							
No (Ref)	27(33.8)	53(66.3)	1.000	-			
Yes	44(41.1)	63(58.9)	0 .729	0.305			

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Community programs are effective in promoting awareness about contraception.							
No (Ref)	27(34.6)	51(65.4)	1.000	-			
Yes	44(40.4)	65(59.6)	0.782	0.425			
Concerned about potential health risks associated with contraceptive methods							
No (Ref)	17(23.9)	54(76.1)	1.000	-	1.000	-	-
Yes	54(46.6)	62(53.5)	0.362	0.002	0.136	0.000	0.051 - 0.363

Ref=Reference Category, COR=Crude Odds Ratio, AOR=Adjusted Odds Ratio

Respondents who had ever faced challenges in affording contraceptives had significantly higher odds of contraceptive use compared to those who had never faced such challenges (AOR = 51.130; 95% CI: 5.777–452.553; p = 0.000). Table 9a and 9b

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Table 9a) Health facility factors associated with contraceptive uptake among female adolescents

Variables	Contraceptive Uptake		COR	P-value	AOR	P-value	95% Confidence Interval
	No n(%)	Yes n(%)					
Ever faced challenges in affording contraceptives?							
No (Ref)	68(48.2)	73(51.8)	1.000	-	1.000	-	-
Yes	3(6.5)	43(93.5)	13.352	0.000	51.130	0.000	5.777 - 452.553
Cost considerations are a factor in the choice of contraceptive method.							
No (Ref)	59(44.0)	75(56.0)	1.000	-	1.000	-	-
Yes	12(22.7)	41(77.4)	2.688	0.008	1.744	0.340	0.556 - 5.470
Have easy access to contraceptive services in the area							
No (Ref)	24(36.4)	42(63.6)	1.000	-			
Yes	47(38.8)	74(61.2)	0.900	0.739			
It is convenient to obtain contraceptives when needed from a health facility or clinic.							
No (Ref)	23(50)	23(50)	1.000	-	1.000	-	-
Yes	48(34.0)	93(66.0)	1.938	0.055	0.907	0.861	0.305 - 2.695
Contraceptive services are available at convenient times and locations.							
No (Ref)	23(48.9)	24(51.1)	1.000	-	1.000	-	-
Yes	48(34.3)	92(65.7)	1.837	0.075	1.649	0.383	0.536 - 5.072
Confident in the knowledge and skills of health workers who provide contraceptive services							
No (Ref)	16(43.2)	21(56.76	1.000	-			
Yes	55(36.7)	95(63.3)	1.316	0.461			
Satisfied with the range of contraceptive methods available							
No (Ref)	18(50)	18(50)	1.000	-	1.000	-	-

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Table 9b) Health facility factors associated with contraceptive uptake among female adolescents.

Yes	53(35.1)	98(64.9)	1.849	0.101	2.411	0.184	0.659 - 8.825
Satisfied with the quality of care received when accessing contraceptive services							
No (Ref)	16(47.1)	18(52.9)	1.000	-			
Yes	55(36.0)	98(64.0)	1.584	0.229			
A place where contraceptives are obtained when needed							
Government health facility (Ref)	63(38.4)	101(61.6)	1.000	-			
Private facilities	8(34.8)	15(65.2)	1.170	0.737			
Ever experienced stigma for using contraceptives							
No (Ref)	56(41.2)	80(58.8)	1.000	-	1.000	-	-
Yes	15(29.4)	36(70.6)	1.680	0.142	2.265	0.131	0.785 - 6.536
Societal stigma makes it difficult to access contraceptives.							
No (Ref)	57(39.9)	86(60.1)	1.000	-			
Yes	14(31.8)	30(68.2)	1.420	0.338			

Ref=Reference Category, COR=Crude Odds Ratio, AOR=Adjusted Odds Ratio

Qualitative findings

The qualitative findings from the key informant interviews revealed multiple social, cultural, economic, and health system factors influencing contraceptive use among female adolescents in Katwe–Butego Division, Masaka District.

Social and Psychological Barrier

Many respondents indicated the psychosocial barriers that discourage adolescents from seeking contraceptives. These included fear of judgment, stigma, and low self-esteem. Adolescents often feel that contraceptive services are intended only for older or married women.

"Some of them fear how people will see them. They think the services are meant for mature people, not for someone their age." – Respondent 1

"Some adolescents lack self-esteem, others are stigmatized, and health workers sometimes don't prioritize them." – Respondent 1

Cultural and religious influences

Cultural norms and religious teachings were cited as major determinants of adolescents' contraceptive decisions. Certain communities view contraceptive use among unmarried adolescents as inappropriate or sinful, which reinforces silence and misinformation.

"Social and cultural factors go hand in hand... Myths and misconceptions vary from culture to culture. Some religions even consider family planning a sin." – Respondent 2

"Culturally, some girls respect their parents by waiting until marriage before even thinking about family planning." – Respondent 6

Economic constraints

Economic hardship was consistently mentioned as a barrier to contraceptive use. Transport costs, affordability of contraceptives, and language barriers to health information

Student's Journal of Health Research Africa
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further marginalize adolescents from lower-income households.

"People with poor economic status find it hard to access family planning. They can't afford transport or the methods, and sometimes they can't read the information provided." – Respondent 3

"Some adolescents live in remote areas where health facilities are too far and transport is expensive." – Respondent 1

Health system factors

Several respondents noted that health facility-related issues, such as long waiting times, lack of trained personnel, and negative attitudes from some providers, deter adolescents from accessing services. However, others noted that recent improvements, such as youth-friendly services and peer-supported access, are starting to make a difference.

"Some health workers don't prioritize adolescents, and the long waiting times scare them away." – Respondent 1

"There is now trained personnel and availability of family planning commodities. The positive attitude of health workers makes adolescents more comfortable." – Respondent 6

"Services are now brought nearer through AGYW peers at the village level." – Respondent 6

Parental and Community Influence

Community perceptions and parental attitudes toward adolescent contraceptive use play a crucial role. Ignorance among parents and a lack of open communication further limit adolescents' access to services.

"Parents' attitudes toward contraceptive use are mostly negative, and this ignorance keeps adolescents from seeking help." – Respondent 4

"There is a lack of adolescent-specific specialists, and the community still has biased views on family planning methods." – Respondent 4

Discussion

The study tested three hypotheses, including that socioeconomic factors are significantly associated with the uptake of contraceptives among female adolescents living in Katwe–Butego Division, Masaka District; cultural and health facility-related factors were significantly associated with the uptake of contraceptives among female adolescents living in Katwe–Butego Division, Masaka.

The study found that 62% of the adolescents in Katwe–Butego Division were using contraceptives, while 38% were not. The findings are in agreement with Uganda's family planning (FP) 2015-2020 mission to achieve universal access to family planning for married women and those in union to 50% by 2020 [10]. Similarly, the findings are consistent with the Government of Uganda's commitment to increase the modern contraceptive prevalence rate (mCPR) for all women from 30.4% in 2020 to 39.6% by 2025. The contraceptive prevalence in this study is above that of Chad (4%) and Namibia (60.5%) [3].

The study found that married female adolescents were more likely to use contraceptives compared to those who were single. These findings contradict those of Appiah et al (2020), who reported that married adolescents were less likely to use contraception than their unmarried counterparts [5]. Similarly, the results differ from those of Michael et al (2024), who found that in sub-Saharan African countries, married adolescent girls were less likely to use contraceptives compared to their single peers [3]. The findings also contradict those of Ojanduru et al. (2025), who reported in a study conducted in Karamoja, Uganda, that never-married adolescent females were more likely to use contraceptives than their married counterparts [2]. Two perspectives can explain these findings: firstly, marriage often involves regular sexual activity, which increases the risk of unintended pregnancies. As a result, married adolescents may be more motivated to use contraceptives to delay, space, or limit childbearing [11], [12]. Secondly, married adolescents may have better access to reproductive health services through antenatal care or family planning programs that specifically target married women, thereby increasing their exposure to contraceptive options and counseling [13].

The study found that adolescents who expressed concern about the potential health risks associated with contraceptive methods were significantly less likely to use contraceptives compared to those who were not concerned. These findings are consistent with those of Lebese et al. (2013), who found in South Africa that fear of health risks associated with contraceptive use reduced uptake among adolescents [14]. Similarly, the results align with those of Kawuma et al. (2023), who found that among female adolescents in Kampala, fear of health risks negatively affected contraceptive use [15]. Many adolescent females reported believing that using contraception could "spoil their eggs (ova)," making them unable to bear children in the future. The findings also support those of Dioubaté et al. (2021), who identified several barriers to adolescent

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e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 9 (2025): September 2025 Issue
https://doi.org/10.51168/sjhrafrica.v6i9.2133
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contraceptive access and use in Guinea, including individual fears of side effects [16]. We advance two perspectives that can be used to explain these results. Firstly, many adolescents associate contraceptive methods with harmful side effects such as infertility, irregular menstruation, weight gain, or long-term reproductive damage. These fears, often based on myths or isolated cases, can discourage them from using any contraceptive method, especially in the absence of proper counseling or accurate information [17]. Secondly, cultural beliefs such as the idea that contraceptives "spoil the womb" or "burn the eggs" can reinforce fears. In some communities, it is widely believed that contraceptive use before childbirth can lead to permanent infertility, which is a strong deterrent for adolescents who hope to have children in the future [18], [19].

The study found that adolescents who had ever faced challenges in affording contraceptives had significantly higher odds of contraceptive use compared to those who had never faced such challenges. These findings contradict those of Ezenwaka et al, who reported that the high cost of contraceptives was a major barrier to uptake among adolescents [20]. The findings also contradict those of Moyo and Rusinga (2017), who found that limited contraceptive use among adolescents in Zimbabwe was linked to the high cost of affordability [21]. One perspective can be used to explain these results. Adolescents who face cost challenges but still attempt to access contraceptives may be more motivated and determined to prevent pregnancy. Their experience overcoming cost-related obstacles could reflect a strong intention to use contraception, which increases actual uptake despite difficulties. Similarly, adolescents who report cost-related challenges may be more likely to engage with health services, indicating higher levels of health-seeking behavior. They might explore multiple sources (e.g., free clinics, NGOs) or be more informed about their options, resulting in higher contraceptive use despite financial barriers [22, [23].

Generalizability

The findings are specific to Katwe–Butego Division in Masaka District and may not be generalizable to adolescents in other areas with different socio-cultural and economic contexts.

Conclusion

Marital status, concerns about potential health risks associated with contraceptive methods, and whether adolescents had ever faced challenges in affording contraceptives were key factors associated with contraceptive uptake among female adolescents living in Katwe–Butego Division, Masaka District. The risk of low contraceptive uptake was higher among single adolescents compared to their married counterparts, among those who expressed concerns about potential health risks compared to those who did not, and among those who had never faced affordability challenges compared to those who had. Therefore, further investigation is needed to explore how these factors can be effectively addressed through targeted healthcare programs.

Study strengths and limitations

The study employed both quantitative and qualitative methods, allowing for a comprehensive exploration of the factors influencing contraceptive use. This enhanced the depth and breadth of the findings and enabled triangulation for more reliable conclusions.

The study's design does not allow for causal inferences. While associations between factors and contraceptive use were established, causality cannot be determined due to the one-time data collection.

Recommendations

- Masaka should strengthen the availability of adolescent-friendly services that provide accurate information, counseling, and a variety of contraceptive options in a non-judgmental and supportive environment.
- Since single adolescents were less likely to use contraceptives, targeted outreach programs through communities, youth clubs, and social media should focus on educating and encouraging this group to seek reproductive health services.
- Public health campaigns should actively dismiss myths and misinformation about contraceptives, especially concerns about infertility and other health risks, through peer educators, community health workers, and trusted media platforms.
- While cost was a barrier for some, those who faced affordability challenges were more likely to

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use contraceptives, suggesting prior engagement. Government and NGO programs should expand free or subsidized contraceptive distribution points, especially in low-income communities.

Abbreviations

PHWS: Public Health Workers
FP: Family Planning
YCC: Young Child Clinics
ANC: Antenatal Clinic
SSA: Sub-Saharan Africa
STDs: Sexually transmitted diseases
STIs: Sexually transmitted infections
WHO: World Health Organization
BSU: Bishop Stuart University
REC: Research Ethics Committee
AGYW: Adolescent Girls and Young Women
NMS: National Medical Stores

Availability of data materials

The dataset that was used and analyzed in this study is publicly available from the library of BSU. Upon reasonable request, the Dataset used is also available to all authors (email: edwardnabimanya@gmail.com).

Contributions of authors

Nabimanya Edward developed the proposal, participated in data collection, and conducted data analysis.
Musinguzi Ronard had a significant contribution in data collection, analysis, and drafting of the manuscript.
Dr Anne Otwine Tweheyo and Dr. Gladys Nakidde participated in making corrections to the proposal and analysis process. Happy Tukirinawe and Elioba Luate John had contributed to data collection, entry, analysis, and revision of the manuscript.
All authors read and approved the final manuscript.

Funding

The study received no funding.

Acknowledgements

I acknowledge my supervisors, Dr Anne Otwine Tweheyo and Dr Gladys Nakidde, for their time and interest towards improving my research work and all efforts to make it better, the Department of Public Health, especially the head of department, Mr Waswa Bright, all BSU faculty staff members, and lastly to my fellow students who have helped me to become better in attaining this academic level.

Competing interests

The author declares no competing interests.

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Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 9 (2025): September 2025 Issue
https://doi.org/10.51168/sjhrafrica.v6i9.2133
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Student's Journal of Health Research Africa
e-ISSN: 2709-9997, p-ISSN: 3006-1059
Vol.6 No. 9 (2025): September 2025 Issue
https://doi.org/10.51168/sjhrafrica.v6i9.2133
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Publisher details

Student's Journal of Health Research (SJHR)
(ISSN 2709-9997) Online
(ISSN 3006-1059) Print
Category: Non-Governmental & Non-profit Organization
Email: studentsjournal2020@gmail.com
WhatsApp: +256 775 434 261
Location: Scholar's Summit Nakigalala, P. O. Box 701432, Entebbe Uganda, East Africa