

Uptake of contraception and associated factors among adolescents and young women aged between (15-24) years using the 2019-2020 Rwanda Demographic and Health Survey Data.

by Jana Publication & Research

Submission date: 20-Jun-2025 12:46PM (UTC+0700)

Submission ID: 2692516671

File name: IJAR-52352.docx (75.33K)

Word count: 4794

Character count: 29044

Uptake of contraception and associated factors among adolescents and young women aged between (15-24) years using the 2019-2020 Rwanda Demographic and Health Survey Data.

ABSTRACT

Background:

Globally, contraceptive uptake among married women was estimated at 65% in 2024, with modern methods accounting for 58.7% (Hellwig & Barros, 2022). In sub-Saharan African countries the uptake remained suboptimal, with considerable variation in the usage of modern contraceptive methods. Adolescents and young women aged 15–24 years present a critical demographic group for reproductive health interventions, yet they often face barriers to accessing contraceptive services. In many low- and middle-income countries, including Rwanda, the uptake of contraception among this age group remains low, contributing to high rates of unintended pregnancies, early childbearing, and associated health risks.

Objectives

To assess contraception uptake and identify associated factors among Rwandan adolescents and young women aged 15-24.

Methods

The study analyzed secondary data from the 2019/20 Rwanda Demographic and Health Survey. The research employed a cross-sectional quantitative method approach. A representative sample of adolescents and young women aged 15-24 years were selected, and data were collected and analyzed on socio-demographic factors, maternal knowledge and attitudes towards contraceptive use, access to healthcare services, and cultural influences. Data analysis involved descriptive statistics summarized to categorical data with frequencies and percentages, continuous in mean and standard deviation. Bivariate relationship assessed using chi-square test with significance set at p-value less than 0.05, significant variable in bivariate were processed to multivariate analysis via logistic regression and the degree of association was reported using the adjusted odds ratio and 95% confidence interval.

Results

The study found that 14.17% of adolescents and young women aged 15-24 years were using contraception. Those aged 20-24 years were 4.5 times more likely, women with two or more children were 2 times more likely to use contraception. Higher education level had 3.5 times greater likelihood to those with no education. Catholic women were 4 times more likely to Protestants. Lastly, those who heard about contraceptive use at health facilities were 5 times more likely to use contraception.

Conclusions

Age, education, parity, religion, and information received at health facilities significantly influenced contraceptive use.

Keywords: Contraception, adolescents, Rwanda, reproductive health, contraceptive uptake.

INTRODUCTION

Contraceptive uptake, particularly among young women aged 15 to 24 years, was a critical societal concern rooted in reproductive health and contraceptive use practices (Bhatt et al., 2021). This age group represented a pivotal stage in a woman's life concerning reproductive decisions and contraception

choices (Wulifan et al., 2015). The role of contraceptive use in achieving sustainable development goals and promoting overall well-being could not be understated (McCleary-Sills et al., 2014). Globally, the rate of contraceptive uptake was estimated at 65% in 2022, with modern methods accounting for 58.7% among married women (Hellwig & Barros, 2022). However, contraception uptake in sub-Saharan African countries remained suboptimal, with considerable variation in the usage of modern contraceptive methods.

Central African Republic, only 3.5% of women of reproductive age used contemporary contraceptives, while Namibia had a greater prevalence, with 49.7% of the population using modern contraception (Castro Torres et al., 2022).

Infants born within two years of an older sibling were found to have a 60% higher likelihood of experiencing infant mortality. Similarly, infants born within a 2-3-year interval had a 10% greater risk compared to those born after a gap of three years or more (Celik & Hotchkiss, 2015).

In Rwanda, despite significant progress in improving its healthcare system, including reproductive health services, challenges persisted in ensuring universal access to contraception, especially among young women (Cleland, 2012). The Rwanda Demographic and Health Survey (RDHS) 2019-2020 revealed a disparity in contraceptive usage across age groups. Among young women aged 15-24, the contraceptive usage rate was 66.3%, the lowest across age groups. This rate increased to 77.6% for women aged 25-29, peaked at 83% for those aged 35-39, and then declined to 60.8% for the 45-49 age group (NISR, 2021). These statistics underscored the importance of a detailed examination of the factors associated with contraceptive uptake among young women aged 15-24 (NISR, 2021).

METHODS

Study design

This study employed a retrospective cross-sectional design using secondary data from the 2019-2020 Rwanda Demographic and Health Survey (RDHS). A cross-sectional approach was appropriate, as it enabled the analysis of data collected at a single point in time to assess contraceptive uptake and its associated factors among adolescent and young women aged 15 to 24 years.

Setting and Intervention

The study focuses on Rwanda, a landlocked country in East-Central Africa that shares borders with Uganda to the north, Burundi to the south, the Democratic Republic of the Congo to the west, and Tanzania to the east. Rwanda's topography is diversified, with mountains, savannahs, and a large

number of lakes. The country is organized into administrative provinces, districts, sectors, and cells. Rwanda's population is relatively youthful, with a considerable proportion falling between the ages of 15 and 24, making it an appropriate target for our study

Study population

The target population for this study comprised women aged 15 to 24 years, as identified in the 2019–2020 Rwanda Demographic and Health Survey (RDHS) dataset.

Sampling technique

The RDHS for 2019/20 used a two-stage stratified cluster sampling design to select a nationally representative sample of households and persons. The sampling frame was constructed using enumeration areas (EAs) from the 2012 Population and Housing Census. The EAs were classified by province and urban-rural habitation, followed by district, sector, cell, and hamlet within each stratum. A total of 500 EAs were chosen, with a probability proportionate to size. Households in each selected EA were listed, and 26 households were selected at random for the survey

Data Collection Instruments

Data extraction method utilizing the DHS data extraction form was employed. This form served as a comprehensive tool to gather relevant information pertaining to contraception uptake and associated factors among adolescents and young women (15–24 years) in Rwanda.

Data analysis

The secondary data extracted from the 2019–2020 Rwanda Demographic and Health Survey (RDHS) were cleaned to identify and address inconsistencies, missing values, outliers, and potential input errors. The cleaned dataset was initially coded in Microsoft Excel and subsequently imported into SPSS version 25 for statistical analysis. Descriptive statistics were conducted to summarize key variables. Categorical variables were presented using frequencies and percentages, while continuous variables were summarized using means and standard deviations. Bivariate analyses, including cross-tabulations and chi-square tests, were performed to assess associations between contraceptive use and various socio-demographic and economic factors. A significance level of $p < 0.05$ was used to determine statistical significance. Variables that showed significant associations in the bivariate analysis were included in a multivariate logistic regression model to identify factors independently associated with contraceptive uptake, while adjusting for potential confounding variables. The strength and direction of these associations were reported using adjusted odds ratios (aOR) with corresponding 95% confidence intervals.

Ethics

Ethical approval for this study was obtained from the Mount Kenya University Rwanda Ethical Review Board. Permission to access and use secondary data was granted by the National Institute of Statistics of Rwanda (NISR). The dataset utilized was fully de-identified, and no direct contact with human participants was involved; therefore, informed consent was not required for this secondary analysis. However, the original data collection adhered to strict ethical standards, including the acquisition of informed consent from all participants at the time of primary data collection. The Rwanda Demographic and Health Survey (RDHS) 2019/20 employed a standardized and methodologically rigorous approach to data collection, ensuring comprehensive coverage of key demographic and health indicators. The DHS used a structured, pre-tested questionnaire designed to collect reliable data on reproductive health, contraceptive use, maternal and child health, nutrition, and socioeconomic status. The questionnaire was carefully validated to ensure cultural sensitivity, clarity, and the ability to capture context-specific information accurately.

RESULTS

Socio-demographic and socio-economic characteristics of respondents

Study variables	Frequency (N)	Percent (%)
Age (years)		
15–19	1675	59.36
20–24	1147	40.64
Marital status		
Single	2,383	84.44
Married	89	15.56
Level of education		
No education	38	1.35
Primary	1,370	48.55
Secondary	1,349	47.8
Higher	65	2.3
Type of place of residence		
Urban	721	25.55
Rural	2,101	74.45
Region in Rwanda		
Kigali	360	12.76
South	655	23.21
West	650	23.03
North	439	15.23
East	718	25.44

Table 1: Socio-demographic characteristics of the study participants

Regarding the socio-economic characteristics as presented in table 2, the study shows that about wealth index, the majority of respondents were in the middle wealth category 1771(62.76%), with most having fewer than two children 2273(80.55%) and living in male-headed households 1872(66.34%). Catholics 1428(50.9%) and Protestants 1277(45.25%) dominated religious affiliations. Awareness of contraceptive

use through media was low, but health facilities served as the main source of FP information 1492(52.87%). Most respondents had limited interaction with health facilities 2453(86.92% no visits in the past year) and were unemployed 1971(69.84%). Contraceptive use was minimal, with only 400(14.17%) using contraceptive.

Socio-economic characteristics of the study participants.

Study variables	Frequency (N)	Percent (%)
Wealth index categorized		
Poor	794	28.14
Middle	1771	62.76
Rich	257	9.1
Number of children ever born		
< two	2273	80.55
>= two	549	19.45
Household head		
Male	1872	66.34
Female	950	33.66
Religion		
Catholic	1,428	50.9
Protestant	1,277	45.25
Muslim	69	2.45
Others	48	1.7
Heard about FP On Television		
No	2139	75.8
Yes	683	24.2
Visit health facility in the last 12 months		
No	2453	86.92
Yes	369	13.8
Work status		
Not-working	1971	69.84
Working	851	30.16
Heard about FP On Radio		
No	2219	78.63
Yes	603	21.73
Heard about FP on Newspaper/Magazine		
No	2462	87.24
Yes	360	12.76
History of Terminating Pregnancy		
No	1969	69.77
Yes	853	30.23
Heard about FP at health facilities		
No	1330	47.13
Yes	1492	52.87
Contraceptive use		
No	2422	85.83
Yes	400	14.17

Table 2:Socio-economic characteristics of the study participants.

Prevalence of Contraceptive use.

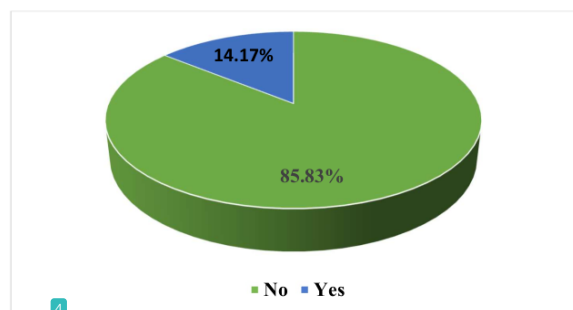


Figure 1: Prevalence of contraceptive use among the adolescents and young women aged between 15-24 years in Rwanda DHS2019/20.:

The figure 2 presents the prevalence of contraceptive use among the adolescents and young women aged between 15-24 years in Rwanda using DHS2019/20. The results show that 14.17 percent among them use contraception while a very big percentage 85.83 percent do not use contraception.

Bivariate analysis of the association between sociodemographic and contraceptive use

Study variables	Contraceptive use		x ²	P-value
	Yes n (%)	No n (%)		
Age (years)				
15-19	27(52.94)	1648(59.47)	81.62	<0.001
20-24	24(47.06)	1123(40.53)		
Number of children ever born				
< two	21(61.76)	2252(80.77)	9.31	0.013
>= two	13(38.24)	536(19.23)		
Level of education				
No education	9(15.00)	29(1.05)	36.18	<0.001
Primary	24(40.00)	1346(48.73)		
Secondary	24(40.00)	1325(47.97)		
Higher	3(5.00)	62(2.24)		
Type of place of residence				
Urban	23(65.71)	698(25.04)	3.08	0.079
Rural	12(34.29)	2089(74.96)		
Region in Rwanda				
Kigali	12(31.58)	348(12.50)	12.22	0.016
South	10(26.32)	645(23.17)		
West	6(15.79)	644(23.13)		
North	5(13.16)	434(15.59)		
East	5(13.13)	713(25.61)		
Wealth index categorized				
Poor	7(25.93)	787(28.16)	2.17	0.27
Middle	9(33.33)	1762(63.04)		
Rich	11(40.74)	2468(80.80)		
Marital status				

Single	11(78.57)	2372(96.50)	32.67	<0.001
Married	3(21.43)	86(3.50)		
Household head				
Male	5(41.67)	1867(66.56)	3.61	0.057
Female	7(58.33)	943(33.56)		
Religion				
Catholic	17(60.71)	1411(50.50)		
Protestant	2(7.14)	1275(45.63)	7.19	0.033
Muslim	4(14.29)	65(2.33)		
Others	5(17.86)	43(1.54)		
Heard about FP On Television				
No	3(18.75)	2136(76.12)	2.83	0.673
Yes	13(81.25)	670(23.88)		
Visit health facility in the last 12 months				
No	7(38.89)	2446(87.23)	1.83	0.873
Yes	11(61.11)	358(12.77)		
Work status				
Not-working	6(33.33)	1965(70.08)	4.52	0.0583
Working	12(66.67)	839(29.92)		
Heard about FP On Radio				
No	4(33.33)	2215(78.83)	7.94	0.049
Yes	8(66.67)	595(21.17)		
Heard about FP on Newspaper/Magazine				
No	3(30.00)	2459(87.45)	2.86	0.731
Yes	7(70.00)	353(12.55)		
History of Terminating Pregnancy				
No	14(87.50)	1955(69.67)	12.37	0.018
Yes	2(12.50)	851(30.33)		
Heard about FP at health facilities				
No	4(36.36)	1326(47.17)	8.26	0.041
Yes	7(63.64)	1485(52.83)		

Table 3: Factors associated with contraceptive use among adolescents and young women

During bivariate analysis, chi-square test was used to test if there is an association between sociodemographic and contraceptive use. The results show that, Age ($P<0.001$), Number of children ever born ($P=0.013$), Level of education ($P<0.001$), Region in Rwanda ($P=0.016$), Marital status ($P<0.001$), Religion ($P=0.033$), Heard about FP On Radio ($P=0.049$), History of Terminating Pregnancy ($P=0.018$), and heard about FP at health facilities ($P=0.041$), were significantly associated with contraceptive use.

Binary logistic regression to determine factors associated with contraception uptake

Univariate and Multivariate Analysis for factors associated with contraceptive use, RDHS 2019/2020.

Study variables	Contraceptive use
-----------------	-------------------

	² COR (95%CI)	p-value	AOR (95%CI)	p-value
Maternal age				
15–19	1.00		1.00	
20–24	3.507(2.17-9.63)	0.001	4.88(1.27-18.77)	0.034
Region in Rwanda				
Kigali	1.00		1.00	
South	0.153(0.03-0.793)	0.025	0.164(0.017-1.588)	0.118
West	0.056(0.007-0.48)	0.009	0.117(0.008-1.688)	0.115
North	0.392(0.104-1.474)	0.166	2.348(0.279-19.781)	0.432
East	0.4(0.122-1.314)	0.131	1.499(0.195-11.501)	0.697
Marital status				
Single	0.145(0.056-0.375)	<0.001	0.162(0.035-0.758)	0.021
Married	1.00		1.00	
Number of children ever born				
< two	1.00		1.00	
>= two ³⁰	1.453(1.561-3.753)	0.041	2.162(3.325-7.358)	0.021
Maternal education level				
No education	1.00		1.00	
Primary	1.141(0.42-3.097)	0.796	2.83(0.57-14.099)	0.203
Secondary	0.14(0.036-0.545)	0.501	0.55(0.063-4.874)	0.595
Higher	4.32(1.59-6.94)	<0.001	3.77(3.22-9.71)	0.002
Religion				
Catholic	1.69(0.60-4.77)	0.323	3.97(1.06-14.91)	0.041
Protestant	1.00		1.00	
Muslim	2.66(1.09-6.48)	0.031	3.04(0.79-11.70)	0.105
Others	0.84(0.27-2.61)	0.768	5.23(0.93-28.55)	0.056
Heard about FP On Radio				
No	1.00		1.00	
Yes	2.10(3.033-8.32)	0.005	0.86(0.076-9.814)	0.905
History of Terminating Pregnancy				
No	1.514(1.054-3.844)	0.028	1.85(0.234-14.634)	0.559
Yes ⁶	1.00		1.00	
Heard about FP at health facilities				
No	0.409(0.161-1.039)	0.06	4.86(1.36-7.33)	0.026
Yes	1.00		1.00	

¹ P-value<= 0.05: Significant level

¹ 95% C.I: Confidence interval ¹ COR: Crude Odd Ratio, AOR: Adjusted Odd Ratio, Ref: Reference category

Table 4:Multivariate analysis examining the association between study variables and contraceptive use among adolescents' young women aged between 15-24 years.

¹ The table 3 presents the results of univariate and multivariate analyses examining the association between study variables and contraceptive use among adolescents' young women aged between 15-24 years in Rwanda. The analysis with multivariate model, some variables did not show the significant association with contraceptive use, however the respondents aged between 20-24 years old (AOR: 4.88, 95% CI: 1.27-18.77) were 4.5 times more likely to use contraception compared to those aged between 20-24 years old. The respondents who were single in marital status (AOR: 0.162, 95% CI: 0.035-0.758) were less likely to use contraception compared to the young women who were married. The respondent who had greater or equal to two children (AOR: 2.162, 95% CI: 3.325-7.358) were 2 times more likely

to use contraception compared to those who had less than two children. Moreover, the respondents who had higher education level (AOR: 3.77, 95% CI: 3.22-9.71) were 3.5 times more likely to use contraception compared to those with no education. Additionally, the respondents whose religion was catholic (AOR: 3.97, 95% CI: 1.06-14.91) also were found to be 4 times more likely to use contraception compared to those who were protestants. Furthermore, the participants who have ever heard about contraceptive use at health facilities (AOR:4.86, 95% CI: 1.36-7.33) were 5 times more likely to use contraception compared to those who has ever heard about contraceptive use at the health facilities

DISCUSSION

This study, titled *Contraception Uptake and Associated Factors Among Adolescents and Young Women in Rwanda Using 2019/20 Demographic and Health Survey Data*, revealed a low contraceptive prevalence rate of 14.17% among adolescents and young women aged 15–24 years. This finding aligns with previous studies while also highlighting context-specific factors influencing contraceptive uptake.

The low prevalence of contraceptive use in Rwanda is consistent with a study by Alhassan et al. (2019) in Ghana, which reported an 18% prevalence among women in the same age group. Both studies identified sociocultural barriers—such as stigma, limited access to contraceptive services, and inadequate knowledge—as major contributors to low uptake. However, the Rwandan study emphasized rural-urban disparities, with lower contraceptive use observed in rural provinces (Southern and Western) compared to urban centers like Kigali. In contrast, Alhassan et al. (2019) found that urban residents in Ghana had higher contraceptive uptake, likely due to better access to healthcare and contraceptive education. These differences may stem from varying levels of healthcare infrastructure, public health outreach efforts, and cultural attitudes toward contraception in each country.

Education was a key determinant of contraceptive use. The Rwandan study found that women with higher education levels were significantly more likely to use contraception, a finding supported by Eliason et al. (2022) in Kenya. The Kenyan study further highlighted that male partners' education played a crucial role in contraceptive decisions—an aspect not explicitly explored in the Rwandan study. This discrepancy may reflect cultural differences in male involvement in reproductive health, as Kenya has actively promoted male participation in family planning campaigns.

Marital status also influenced contraceptive use, with married women in Rwanda ³⁵ more likely to use contraception than their single counterparts. This finding aligns with Mekonnen and Worku (2015) in Ethiopia, where married women exhibited higher contraceptive uptake due to societal acceptance of contraception within marriage. Additionally, the Ethiopian study emphasized the role of spousal communication in contraceptive decisions, an aspect not covered in the Rwandan study. This gap may suggest differences in data collection or cultural norms regarding marital discussions on contraception.

Religion emerged as a significant factor influencing contraceptive use. In Rwanda, Catholics had higher contraceptive uptake compared to Protestants, contrasting with Gebre et al. (2019) in Uganda, where Catholic women reported lower contraceptive use due to religious opposition to modern contraceptive methods. This difference may be attributed to the Catholic Church's relative flexibility in Rwanda, where some religious leaders support contraceptive use in alignment with public health goals, whereas in Uganda, stricter doctrinal adherence might discourage contraceptive use.

Exposure to contraceptive information significantly increased contraceptive uptake. In Rwanda, women who received contraceptive information at health facilities were five ⁴⁵ times more likely to use contraception. This finding is consistent with OlaOlorun et al. (2021) in Nigeria, which emphasized the role of healthcare settings as trusted sources of contraceptive education. The similarity suggests that across different regions, health facilities ⁸ play a crucial role in raising awareness and counseling women on contraception.

¹³ Overall, the findings of this study align with previous research on education, marital status, access to information, and religious influence on contraceptive uptake. However, variations in the strength and direction of these associations underscore the importance of context-specific interventions. Differences in sociocultural norms, healthcare infrastructure, public health policies, and community attitudes contribute to these variations. Addressing these factors is essential for designing effective, tailored contraceptive programs.

² Despite its contributions, this study has several limitations. First, the reliance on secondary data from the ²⁴ 2019/20 Demographic and Health Survey (DHS) restricts the ability to explore certain variables, such as male partner involvement and spousal communication, which have been highlighted in other studies (Eliason et al., 2022; Mekonnen & Worku, 2015). Second, the cross-sectional nature of the data limits

the ability to establish causal relationships between factors and contraceptive use. Third, self-reported responses may introduce recall or social desirability bias, particularly on sensitive topics like contraceptive use. Fourth, while the study identifies key determinants, it does not explore deeper sociocultural beliefs and norms influencing contraceptive decisions, which qualitative studies could better address. Lastly, the findings may not be fully generalizable to all Rwandan adolescents and young women, as the study does not account for variations in socioeconomic status beyond the rural-urban divide

Conclusion

This study revealed that contraceptive uptake among adolescents and young women aged 15–24 years in Rwanda remains low, with only 14.17% currently using contraception. Several socio-demographic and economic factors significantly influence contraceptive use, including age, marital status, number of children, education level, religion, and access to contraceptive use information.

The socio-economic characteristics of adolescents and young women aged 15–24 years reveal key demographic and social trends. Most respondents (59.36%) were aged 15–19 years, and the majority (80.55%) had fewer than two children.

In terms of education, nearly half had completed primary (48.55%) or secondary (47.8%) education, while very few had attained higher education (2.3%) or had no formal education (1.35%). Rural residency was predominant (74.45%), and most participants fell into the middle wealth index category (62.76%). Regionally, most participants came from the East (25.44%), South (23.21%), and West (23.03%) regions, while Kigali had the lowest representation (12.76%). A significant majority were single (84.44%), and most lived in male-headed households (66.34%). Catholics formed the largest religious group (50.9%), followed by Protestants (45.25%), while Muslims and other religions were minimally represented.

Awareness of contraceptive use was limited, with most respondents not exposed to FP information via television (75.8%), radio (78.63%), or newspapers/magazines (87.24%). However, health facilities were the primary source of FP information, with 52.87% of respondents hearing about FP through this channel. Despite this, health facility visits were infrequent, as 86.92% reported no visits in the last 12 months. Most respondents (69.84%) were unemployed, and 30.23% had a history of terminating pregnancy. Contraceptive use was notably low, with only 14.17% using contraception, while 85.83% were not using any

Acknowledgements

This research would not have been completed without the efforts and diverse contributions of many people. First and foremost, I extend my deepest gratitude to the Almighty God for granting me the opportunity and strength to pursue my master's degree in Public Health. I am profoundly grateful to my supervisors Dr Michael Habtu and Dr Monica Mochama for their invaluable guidance and unwavering support throughout this project. I would also like to thank my lecturers, whose knowledge and dedication have greatly enriched my academic experience. My heartfelt thanks go to my husband and parents for their constant encouragement and patience. My parents' support and my husband's understanding and patience during this demanding period have been crucial to my success. I am also deeply thankful to my fellow classmates and friends. The shared experiences and mutual encouragement have made this journey enjoyable and fulfilling. Finally, I extend my sincere appreciation to my workmates for their support and understanding when I had to miss work for school purposes. To everyone who has contributed to this research in one way or another, thank you. Your support has been invaluable and deeply appreciated.

Competing interests: The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Author Contributions

Lyse Yvannie Girinka led the study design, conducted the literature review, managed the acquisition and analysis of secondary data, interpreted the findings, and wrote the manuscript for publication. Michael Habtu and Monica Mochama provided critical supervision throughout the research process, supported the refinement of the literature review, and contributed to ensuring that the data analysis and interpretation were aligned with the study's objectives and the context of the original data collection.

Funding information

For the purpose of conducting the research, writing, and publishing this paper, the author received no funding.

Data availability statement

Upon reasonable request, the corresponding author will provide the data that supports this study's findings.

Disclaims

The writers' personal beliefs and viewpoints are reflected in this article, do not necessarily reflect the official policy or position of any affiliated agency of the authors.

LIST OF TABLE

Table 1:Socio-demographic characteristics of the study participants	4
Table 2:Socio-economic characteristics of the study participants.	5
Table 3:Factors associated with contraceptive use among adolescents and young women.....	7

1

Table 4:Multivariate analysis examining the association between study variables and contraceptive use among adolescents' young women aged between 15-24 years.	8
---	---

REFERENCES

- Ajani, B. M. O. (2021). A comparative analysis of factors associated with modern contraceptive use among youth (15–24 years) in Northern and Southern Nigeria.
- Alhassan, R. K., Adjetey, A., & Aberese-Ako, M. (2019). Factors influencing contraceptive use among women in Ghana: A multilevel analysis of the Ghana Demographic and Health Survey data. *Reproductive Health*, 16(1), 1-12.
- Bearak, J., Popinchalk, A., Alkema, L., & Sedgh, G. (2020). Global, regional, and subregional trends in unintended pregnancy and its outcomes from 1990 to 2014: Estimates from a Bayesian hierarchical model. *The Lancet Global Health*, 8(3), e299-e305.
- Berman, S. M., et al. (2009). Sexual and reproductive health of persons aged 10-24 years–United States, 2002-2007.
- Bhatt, N., et al. (2021). Perceptions of contraceptive use services and its key barriers among adolescents and young people in Eastern Nepal: A qualitative study. *PLoS One*, 16, e0252184.
- Bongaarts, J. (2017). Africa's unique fertility transition. *Population and Development Review*, 43(Suppl 1), 39-58.
- Bongaarts, J., & Casterline, J. (2013). Fertility transition: Is sub-Saharan Africa different? *Population and Development Review*, 38(Suppl 1), 153-168.
- Buse, K., & Hawkes, S. (2015). Health in the sustainable development goals: Ready for a paradigm shift? *Globalization and Health*, 11, 1-8.
- Castro Torres, A. F., Pesando, L. M., Kohler, H.-P., & Furstenberg, F. (2022). Family change and variation through the lens of family configurations in low-and middle-income countries. *Population, Space and Place*, 28, e2531.
- Celik, Y., & Hotchkiss, D. R. (2015). The socio-economic determinants of maternal health care utilization in Turkey. *Social Science & Medicine*, 50, 1797–1806.
- Chandra-Mouli, V., et al. (2019). The political, research, programmatic, and social responses to adolescent sexual and reproductive health and rights in the 25 years since the International Conference on Population and Development. *Journal of Adolescent Health*, 65, S16–S40.
- Cleland, J., et al. (2012). Family planning 2: Contraception and health. *The Lancet*, 380, 149-156.
- Cleland, J., Harbison, S., & Shah, I. H. (2014). Unmet need for contraception: Issues and challenges. *Studies in Family Planning*, 45, 105–122.
- Eliason, S., Baiden, F., Yankson, A., & Bawah, A. (2022). The role of education in contraceptive use among Kenyan women: A demographic and health survey analysis. *PLOS ONE*, 17(5), e0267234.
- Ewerling, F., Victora, C. G., Raj, A., Coll, C. V. N., Hellwig, F., & Barros, A. J. D. (2020). Demand for family planning satisfied with modern methods and its associated factors among sexually active women in low- and middle-income countries: Results from a cross-sectional analysis of DHS data. *Reproductive Health*, 17, 10.

- Fotso, J. C., et al. (2011). Family planning and reproductive health in urban Nigeria: Levels, trends and differentials. *Measurement, Learning & Evaluation (MLE) Project [UNC, USA] and National Population Commission (NPC)[Nigeria]*.
- Gebre, G., Birhan, T., & Workneh, B. (2019). Religious influences on contraceptive use: Evidence from Uganda. *International Journal of Public Health*, 64(7), 897-905.
- Guttmacher Institute. (2020). Adding it up: Costs and benefits of meeting the contraceptive needs of adolescents. Guttmacher Institute. Retrieved from <https://www.guttmacher.org/report/adding-it-up-investing-in-sexual-reproductive-health>
- Hellwig, F., & Barros, A. J. D. (2022). Learning from success cases: Ecological analysis of pathways to universal access to family planning care in low-and middle-income countries. *Gates Open Research*, 6, 59.
- McCleary-Sills, A. W., Stoebeu, K., Hollingworth, G., & others. (2014). Understanding the adolescent family planning evidence base. *International Center for Research on Women (ICRW)*.
- Mekonnen, W., & Worku, A. (2015). Determinants of low family planning use and high unmet need among married women in rural Ethiopia. *BMC Public Health*, 15(1), 1-10.
- Moges, Y., et al. (2018). Factors associated with uptake of post-abortion family planning in Shire town, Tigray, Ethiopia. *BMC Research Notes*, 11, 1-6.
- Molina, R. C., Roca, C. G., Zamorano, J. S., & Araya, E. G. (2010). Family planning and adolescent pregnancy. *Best Practice & Research Clinical Obstetrics & Gynaecology*, 24, 209-222.
- Moreau, C., Shankar, M., Helleringer, S., & Becker, S. (2019). Measuring unmet need for contraception as a point prevalence. *BMJ Global Health*, 4(4).
- National Institute of Statistics of Rwanda (NISR). (2021). Rwanda 2019-20 Demographic and Health Survey. Kigali: NISR.
- Nkenguye, W., Ismail, H., Urassa, E. P., Yongolo, N. M., Kagoye, S., & Msuya, S. E. (2023). Factors associated with modern contraceptive use among out of school adolescent girls in Majengo and Njoro Wards of Moshi Municipality, Tanzania. *The East African Health Research Journal*, 7(1), 32.
- Nutbeam, D., & Muscat, D. M. (2021). Health promotion glossary 2021. *Health Promotion International*, 36(6), 1578-1598.
- OlaOlorun, F., White, T., & Afolabi, M. (2021). Exposure to family planning messages and contraceptive use in Nigeria: Evidence from a cross-sectional survey. *BMC Women's Health*, 21(1), 1-10.
- Puri, M., Singh, S., Sundaram, A., Hussain, R., & Tamang, A. (2019). Abortion incidence and unintended pregnancy in Nepal. *International Perspectives on Sexual and Reproductive Health*, 45, 1-12.
- Sarnak, D., et al. (2023). Stop or switch: Correlates of stopping use or switching contraceptive methods while wanting to avoid pregnancy in 48 low-and middle-income countries. *Studies in Family Planning*.

- Sileo, K. M., Wanyenze, R. K., Lule, H., & Kiene, S. M. (2015). Determinants of family planning service uptake and use of contraceptives among postpartum women in rural Uganda. *International Journal of Public Health, 60*, 987-997.
- Starbird, E., Norton, M., & Marcus, R. (2016). Investing in family planning: Key to achieving the sustainable development goals. *Global Health: Science and Practice, 4*(2), 191-210.
- Tilahun, C. I. F. W. T., & Dimbuene, J. A.-A. Z. T. (2018). Family planning in East Africa: Trends and dynamics.
- Tsui, A. O., McDonald-Mosley, R., & Burke, A. E. (2017). Family planning and the burden of unintended pregnancies. *Epidemiologic Reviews, 32*(1), 152-174.
- World Health Organization. (2020). Adolescent pregnancy. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy>
- Wulifan, J. K., Brenner, S., Jahn, A., & De Allegri, M. (2015). A scoping review on determinants of unmet need for family planning among women of reproductive age in low- and middle-income countries. *BMC Women's Health, 16*, 1-15.

Uptake of contraception and associated factors among adolescents and young women aged between (15-24) years using the 2019-2020 Rwanda Demographic and Health Survey Data.

ORIGINALITY REPORT

29%

SIMILARITY INDEX

22%

INTERNET SOURCES

17%

PUBLICATIONS

14%

STUDENT PAPERS

PRIMARY SOURCES

1

Submitted to Mount Kenya University

Student Paper

8%

2

www.researchsquare.com

Internet Source

2%

3

bmcpublichealth.biomedcentral.com

Internet Source

1%

4

contraceptionmedicine.biomedcentral.com

Internet Source

1%

5

www.researchgate.net

Internet Source

1%

6

Raissa Umunyana, Amanuel Kidane Andegiorgish, Ogendi Japheths, Monica Mochama, Amos Habinmana, Michael Habtu. "Discontinuation of family planning use among women of reproductive age in Rwanda: analysis from three Rwandan Demographic Health Survey (RDHS) 2010–2020", BMC Women's Health, 2024

Publication

1%

7

Clifford O. Odimegwu, Yemi Adewoyin. "The Routledge Handbook of African Demography", Routledge, 2022

Publication

1%

8

Tadele Biresaw Belachew, Wubshet Debebe Negash, Desale Bihonegn Asmamaw, Samrawit Mihret Fetene et al. "Prevalence and

1%

predictors of post-abortion modern
contraceptive utilization among reproductive
age women in Ethiopia", Scientific Reports,
2023

Publication

9	Submitted to Diplomatische Akademie Wien Student Paper	1 %
10	bmcwomenshealth.biomedcentral.com Internet Source	1 %
11	dspace.unza.zm Internet Source	1 %
12	etd.uwc.ac.za Internet Source	1 %
13	ijaeti.com Internet Source	1 %
14	adhlui.com.ui.edu.ng Internet Source	1 %
15	hts.org.za Internet Source	1 %
16	bora.uib.no Internet Source	<1 %
17	www.mdpi.com Internet Source	<1 %
18	bibalex.org Internet Source	<1 %
19	cris.brighton.ac.uk Internet Source	<1 %
20	sajhrm.co.za Internet Source	<1 %
21	www.edocs.maseno.ac.ke Internet Source	<1 %

22	Submitted to Imperial College of Science, Technology and Medicine Student Paper	<1 %
23	www.scielo.org.za Internet Source	<1 %
24	Immaculata P. Kessy, Elihuruma Eliufoo, Victoria Godfrey, Mussa Bago, Azan Nyundo, Mtoro J. Mtoro. "Predictors of modern contraceptive use among adolescent girls and young women in Tanzania: Insights from a nationwide survey", Discover Public Health, 2025 Publication	<1 %
25	Olaniyi Felix Sanni, Abike Elizabeth Sanni, Collins Isioma Onyeagwaibe, Tukwasi Ahamuefula, Oluwadare Peter Akeju. "A comparative analysis of factors associated with modern contraceptive use among youth in Northern and Southern Nigeria: A cross-sectional population-based survey (2011–2021)", PLOS Global Public Health, 2025 Publication	<1 %
26	www.frontiersin.org Internet Source	<1 %
27	latunisiemedicale.com Internet Source	<1 %
28	Submitted to Lingnan University Student Paper	<1 %
29	ieb.ub.edu Internet Source	<1 %
30	repository.library.brown.edu Internet Source	<1 %
31	bmcpsy psychiatry.biomedcentral.com Internet Source	<1 %

32	mdpi-res.com Internet Source	<1 %
33	open.uct.ac.za Internet Source	<1 %
34	rwandainspirer.com Internet Source	<1 %
35	tilksew ayalew, Tilahun Tewabe, Abdulhakim Abdanur, Demoze Jenbere, Mastewal Ayehu, Girma Talema. "Contraceptive use and associated factors among sexually active HIV positive women attending ART clinic in FHRH in Bahir Dar, north west, Ethiopia, 2018. Facility based cross-sectional study.", Research Square, 2019 Publication	<1 %
36	www.ajol.info Internet Source	<1 %
37	www.kcdf.or.ke Internet Source	<1 %
38	Submitted to University of Southampton Student Paper	<1 %
39	Yusuff Adebayo Adebisi, Theerapon Phungdee, Surasak Saokaew, Don Eliseo Lucero-Prisno. "Prevalence and Determinants of Current Cigarette Smoking Among Adolescents in Thailand: Evidence From 2021 Global School-Based Health Survey", Journal of Research in Health Sciences, 2024 Publication	<1 %
40	etd.library.emory.edu Internet Source	<1 %
41	journals.plos.org Internet Source	<1 %

42	Internet Source	<1 %
43	ugspace.ug.edu.gh Internet Source	<1 %
44	wiredspace.wits.ac.za Internet Source	<1 %
45	www.hindawi.com Internet Source	<1 %
46	www.occhealth.co.za Internet Source	<1 %
47	core.ac.uk Internet Source	<1 %
48	hsag.co.za Internet Source	<1 %
49	mail.fortunejournals.com Internet Source	<1 %
50	popline.org Internet Source	<1 %
51	ruor.uottawa.ca Internet Source	<1 %
52	www.aids2018.org Internet Source	<1 %
53	www.int-jecse.net Internet Source	<1 %
54	Frank Odame, Kareem Mumuni, Ali Samba, Kwaku Asah-Opoku, Jerry Sifa. "Factors Associated With Contraceptive Uptake After Elective Safe Abortion Care at Reproductive Health Care Centres in the Greater Accra Region of Ghana", Research Square Platform LLC, 2022 Publication	<1 %

55 Gizachew Worku Dagneu, Melash Belachew Asresie. "Post-abortion contraceptive uptake, choices, and factors associated with it among women seeking abortion services in Africa: a systematic review and meta-analysis", Frontiers in Global Women's Health, 2025

<1 %

Publication

56 Tilahun Tewabe, Tilksew Ayalew, Abdulhakim Abdanur, Demoze Jenbere, Mastewal Ayehu, Girma Talema, Eden Asmare. "Contraceptive use and associated factors among sexually active reproductive age HIV positive women attending ART clinic at Felege Hiwot Referral Hospital, Northwest Ethiopia: A cross-sectional study", Heliyon, 2020

<1 %

Publication

Exclude quotes On

Exclude matches Off

Exclude bibliography On