





BMJ Open Intention to use contraceptives among married and cohabiting women in sub-Saharan Africa: a multilevel analysis of cross-sectional data

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ABSTRACT

Objective To examine the factors associated with intention to use contraceptives among married and cohabiting women in sub-Saharan Africa (SSA).

Design Data for the study were extracted from the most recent Demographic and Health Surveys of 29 countries in SSA conducted from 2010 to 2020. We included a total of 180 682 women who were married or cohabiting. Multilevel regression analysis was carried out and the results were presented as adjusted odds ratio (AOR), with 95% confidence interval (CI).

Setting 29 countries in SSA.

Participants Women aged 15–49 years in sexual unions.

Outcome measure Intention to use contraceptives.

Results The pooled prevalence of intention to use contraceptives among married and cohabiting women in the 29 countries was 41.46%. The prevalence ranged from 18.28% in Comoros to 71.39% in Rwanda. Intention to use contraceptives was lower among women aged 45–49 (AOR=0.06, 95% CI= 0.05 to 0.07), those with no education (AOR=0.60, 95% CI= 0.58 to 0.61), and primary education (AOR=0.90, 95% CI 0.88 to 0.93), married women (AOR=0.81, 95% CI= 0.79 to 0.84), those of the poorest wealth quintile (AOR=0.78, 95% CI= 0.75 to 0.82), and women who were not exposed to mass media (AOR=0.87, 95% CI= 0.86 to 0.90). Women with four or more births (AOR=2.09, 95% CI= 1.99 to 2.19) had greater likelihood of contraceptive use intention compared to those with no birth. Women in rural settings were found to have greater likelihood of intention to use contraceptives compared to those in urban settings (AOR=1.10, 95% CI= 1.07 to 1.14).

Conclusion There is a low prevalence of contraceptive use intention among married and cohabiting women in SSA with differences between countries. It is imperative for policymakers to consider these factors when developing and executing contraceptive programmes or policies to enhance contraceptive intents and use among married and cohabiting women. To resolve discrepancies and increase contraceptive intention among women, policymakers and other key stakeholders should expand public health education programmes.

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ Our findings are generalisable and replicable in the 29 countries studied because we used nationally representative data.
- ⇒ Our findings contribute to bridging the gaps in factors associated with contraceptive use intentions in sub-Saharan African countries.
- ⇒ The study relied on secondary data and the analysis was limited to the variables found in the dataset. As a result, the study's interpretation and inference should be limited to the variables that were used.
- ⇒ Demographic and Health Surveys employ a cross-sectional design and this limits causal inferences.
- ⇒ The outcome variable of interest in this study was obtained through women's self-report, which is likely to increase the occurrence of recall bias and other social desirability biases.

INTRODUCTION

Contraceptives are considered as the means to promote the health of couples, families and communities through healthy birth spacing, and reducing unintended pregnancies and maternal and child deaths.^{1–3} Contraceptives that have been developed for both males and females include condoms, oral hormonal pills, intrauterine devices, implants, vasectomy, tubal ligation, injectables, and emergency contraceptives.¹

It is estimated that the population of the world will increase by almost 40% from 7.6 billion in 2018 to almost 10 billion in the next three decades.^{4,5} More than half of the additional 3 billion will be in developing regions including sub-Saharan Africa (SSA) and Asia, which are considered to have much of the population growth.^{5,6}

Although there is a decline in fertility in SSA, the annual population growth (3%) is still alarming.⁴ The total fertility rates among countries in SSA are as high as 7.2 in Niger

to as low as 2.9 in Botswana.^{4 7–9} This high population growth rate coupled with a slow pace in the decline of fertility rate can be attributed to the persistently high unmet need for contraceptive use among different age groups and marital status.^{4 10}

Scholarly information reveals that most regions of the world have seen a massive decline in the rate of unmet needs for contraceptives.¹¹ However, SSA has witnessed a slow decline and unmet needs remain at 26% among married or cohabiting women who are in their reproductive years and do not want to become pregnant.^{9 12} This has implications on the socioeconomic and health status of the individual and/or society.⁴

Empirical data from SSA suggest that almost a quarter of married or cohabiting women in SSA were projected to have had an unmet need for contraception.^{10 13 14} This is translated into nearly 200 million women who are married or cohabiting and are in their reproductive years (15–49).⁴ This could be attributed to the low uptake of contraceptives among married or cohabiting women.^{10 13 14}

A large body of literature in SSA have identified several factors influencing the use of contraceptives including educational level, fear of side effects, mental health concern, place of residence, occupation, wealth, husband approval, and discussion with health workers.^{4 10 12 15–17} Other studies have looked at the influence of decision-making power on contraceptive use,¹⁸ predictors of modern contraceptive use,¹⁹ contraceptive use among women with no fertility intention,²⁰ trends and determinants of contraceptive use,²¹ sexual autonomy and contraceptive use²² and unmet need for contraceptive.²³

However, little is known about intention to use contraceptives among married and cohabiting women in SSA. Therefore, this study sought to examine the factors influencing the intention to use contraceptives among married and cohabiting women in SSA. The findings of the study will be used by policymakers and programme managers to understand the factors associated with the intention to use contraceptives among married or cohabiting women in SSA.

MATERIALS AND METHODS

Data source and study design

Data for the study were extracted from the most recent Demographic and Health Surveys (DHS) of 29 countries in SSA conducted from 2010 to 2020. We pooled the data from the women's recode files in each of the 29 countries. The DHS is a comparatively nationally representative survey conducted in over 85 low-income and middle-income countries worldwide.²⁴ DHS employed a descriptive cross-sectional design. Respondents for the survey were recruited using a two-stage cluster sampling method. Detailed sampling technique has been highlighted in the literature.²⁵ Standardised structured questionnaires were used to collect data from the respondents on health indicators including contraceptive use.²⁴ We include a total of 180 682 women who were married or cohabiting. Only

Table 1 Description of study sample

Country	Survey year	Weighted N	Weighted %
Angola	2015–2016	7027	3.9
Burkina Faso	2010	11 513	6.4
Benin	2017–2018	9682	5.4
Burundi	2016–2017	7172	4.0
Congo DR	2013–2014	9753	5.4
Congo	2011–2012	3456	1.9
Cote d'Ivoire	2011–2012	5190	2.9
Cameroon	2018	6393	3.5
Ethiopia	2016	6667	3.7
Gabon	2012	3008	1.7
Ghana	2014	3967	2.2
Gambia	2019–2020	6260	3.5
Guinea	2018	7067	3.9
Kenya	2014	3632	2.0
Comoros	2012	2520	1.4
Liberia	2019–2020	3237	1.8
Lesotho	2014	488	0.3
Mali	2018	7269	4.0
Malawi	2015–2016	6734	3.7
Nigeria	2018	17 809	9.8
Namibia	2013	967	0.5
Rwanda	2019–2020	3334	1.8
Sierra Leone	2019	7850	4.3
Senegal	2010–2011	9222	5.1
Chad	2014–2015	12 413	6.9
Togo	2013–2014	5139	2.8
Uganda	2016	6937	3.8
Zambia	2018	3892	2.1
Zimbabwe	2015	2083	1.2
All countries	2010–2020	180 682	100.0

the women with complete cases on variables of interest were included in the study (table 1). The dataset used is freely available at <https://dhsprogram.com/data/available-datasets.cfm>.²⁶ This manuscript was drafted with reference to the Strengthening the Reporting of Observational Studies in Epidemiology statement guidelines (online supplemental table S1).²⁷

Variables

Outcome variable

Intention to use contraceptives was the outcome variable in this study. This variable measures the extent to which non-users of contraceptives plan to use any modern method in the future. The variable was derived from the question, 'Do you intend to use a method to delay or avoid pregnancy at any time in the future?'. Response options to this question were 'use later', 'unsure about use' and 'does not intend to use'. For this study, the

response options were recoded into; '0'=do not intend to use, which included unsure about the use and does not intend to use and '1'=intend to use. Studies that used the DHS dataset employed similar coding.^{28–30}

Explanatory variables

The explanatory variables considered in this study were selected based on their association with intention to use contraceptives from literature^{20 28–30} and also their availability in the DHS dataset. A total of 12 variables were included in the study. These variables were grouped as individual and community level factors. The individual level factors were women's age (15–19, 20–24, 25–29, 30–34, 35–39, 40–44 and 45–49), educational level (no education, primary, secondary/higher), marital status (married, cohabiting), religious affiliation (Christianity, Islam, traditionalist, no religion), occupational status (not working, working), parity (no birth, one birth, two births, three births, four or more births), wealth index (poorest, poorer, middle, richer, richest), partner's occupational status (not working, working), partner's educational level (no education, primary, secondary/higher) and exposure to mass media (no, yes). The community level factors were type of place of residence (urban, rural) and subregion (west, east, central, south). The categories of each of the variables are shown in [table 2](#).

Statistical analyses

Data for the study were analysed using Stata V.16. First, a bar chart was used to show the prevalence of intention to use contraceptives across the 29 countries. Next, weighted frequencies and percentages for the explanatory variables were presented. Then, we presented the bivariate results on the distribution of intention to use contraceptive across the explanatory variables using chi-square (χ^2) test of independence ([table 2](#)). After this, we checked for a high correlation among the explanatory variables using the variance inflation factor (VIF) and the results showed no evidence of high collinearity (maximum VIF=1.82, minimum VIF=1.02 and mean VIF=1.39). Finally, a four modelling multilevel binary logistic regression (Model O–III) was used to examine the factors associated with intention to use contraceptives. Model O was an empty model, where no explanatory variable was used and the result indicated the variation in the intention to use contraceptives attributable to the primary sampling units. Model I had only the individual level variables. Model II had only the community level variables while Model III, which was considered the complete model had both the individual and community level variables. The results were presented as adjusted odds ratio (AOR), with their respective 95% confidence interval (CI). All frequency distributions were weighted while the survey command (svy) in Stata was used to adjust for the complex sampling structure of the data in the regression analyses.

Patient and public involvement

Patients and the public were not included in the design and conduct of this research.

RESULTS

Prevalence of intention to use contraceptives in SSA

[Figure 1](#) shows the prevalence of intention to use contraceptives among married and cohabiting women in SSA. The pooled prevalence of intention to use contraceptives among married and cohabiting women in the 29 countries was 41.46%. The prevalence was lowest in Comoros (18.28%) and highest in Rwanda (71.39%).

Distribution of intention to use contraceptives across the explanatory variables

[Table 2](#) presents the results of the distribution of intention to use contraceptives among women in SSA across the explanatory variables. The study revealed the highest prevalence of contraceptive use intention among women aged 20–24 (53.4%), those with secondary/higher education (50.8%), cohabiting women (49.1%), Christians (48.5%), those working (42.6%), and women with one birth (48.2%). Regarding wealth status, the highest proportion was found among women in the richest wealth quintile (44.0%) while the lowest was found among the poorest (38.3%). Highest proportion of contraceptive use intention was recorded among working partners (41.8%) and partners with primary level education (49.3%). It was found that women who experienced mass media exposure had the greatest proportion of intention to use contraceptives (44.7%). With the place of residence, the highest prevalence was found among urban dwellers (42.2%). In terms of subregion, women in Southern were found to have the highest intention to use contraceptives (61.5%) whereas those in the Central Africa had the lowest (31.6%). The χ^2 test analysis indicated a statistically substantial association between all the explanatory variables and contraceptive use intention ([table 2](#)).

Predictors of intention to use contraceptives in SSA

Model III of [table 3](#) presents the results of the multilevel logistic regression analysis on the individual and community level predictors of intention to use contraceptives among women in SSA. With regards to age, the odds of contraceptive use intention reduced with increasing age. Particularly, women aged 45–49 exhibited the lowest odds of contraceptive use intention (AOR=0.06, 95% CI= 0.05 to 0.06) relative to women aged 15–19. Regarding educational level, women with no education (AOR=0.60, 95% CI= 0.58 to 0.61), and those with primary level of education (AOR=0.90, 95% CI= 0.88 to 0.93) had lower odds of contraceptives use intention relative to those with secondary/higher educational level. Compared to cohabiting women, those married had a lower probability of intention to use contraceptives (AOR=0.81, 95% CI= 0.79 to 0.84). The likelihood of contraceptive use intention was higher among Christians (AOR=1.26, 95% CI=

Table 2 Distribution of intention to use contraceptives among women in sub-Saharan Africa across the explanatory variables (n=180 682)

Variables	Weighted N	Weighted %	Intention to use contraceptive		P value*
			No (%)	Yes (%)	
Women's age (years)					<0.001
15–19	13 230	7.3	52.3	47.7	
20–24	31 069	17.2	46.6	53.4	
25–29	38 185	21.1	49.8	50.2	
30–34	32 811	17.8	52.8	47.2	
35–39	27 811	15.4	61.3	38.7	
40–44	20 381	11.3	75.0	25.0	
45–49	17 745	9.8	89.9	10.1	
Women's educational level					<0.001
No education	87 750	48.6	67.6	32.4	
Primary	49 931	27.6	50.6	49.3	
Secondary/higher	43 001	23.8	49.2	50.8	
Marital status					<0.001
Married	147 568	81.7	60.3	39.7	
Cohabiting	33 114	18.3	50.9	49.1	
Religious affiliation					<0.001
Christianity	94 191	52.4	51.5	48.5	
Islam	78 363	43.3	66.8	33.2	
Traditionalist	4012	2.2	59.9	40.1	
No religion	4115	2.3	60.5	39.5	
Women's occupational status					<0.001
Not working	46 702	25.9	61.6	38.3	
Working	133 980	74.1	57.4	42.6	
Parity					<0.001
No birth	15 189	8.4	55.3	44.6	
One birth	26 317	14.6	51.8	48.2	
Two births	27 760	15.4	52.9	47.1	
Three births	25 630	14.2	55.8	44.2	
Four or more births	85 785	47.4	63.8	36.2	
Wealth index					<0.001
Poorest	39 022	21.6	61.6	38.3	
Poorer	38 653	21.4	59.2	40.8	
Middle	36 519	20.2	58.0	42.0	
Richer	34 976	19.4	57.0	42.9	
Richest	31 510	17.4	56.0	44.0	
Partner's occupational status					<0.001
Not working	7349	4.1	65.2	34.8	
Working	173 333	95.9	58.2	41.8	
Partner's educational status					<0.001
No education	78 707	43.5	67.3	32.7	
Primary	41 697	23.1	50.7	49.3	
Secondary/higher	60 278	33.4	52.4	47.6	
Exposure to mass media					<0.001

Continued

Table 2 Continued

Variables	Weighted N	Weighted %	Intention to use contraceptive		P value*
			No (%)	Yes (%)	
No	127 657	70.5	59.8	40.2	
Yes	53 045	29.4	55.3	44.7	
Place of residence					<0.001
Urban	59 994	33.2	57.8	42.2	
Rural	120 688	66.8	58.8	41.2	
Subregion					<0.001
West Africa	90 970	50.3	61.8	38.2	
East Africa	52 371	29.0	46.6	53.4	
Central Africa	35 886	19.9	68.4	31.6	
Southern Africa	1455	0.8	38.5	61.5	

*P values were generated from the χ^2 test.

1.17 to 1.35) and lower among Muslims (AOR=0.65, 95% CI= 0.61 to 0.70) relative to traditionalists. Women who were working were more likely to have the intention to use contraceptives (AOR=1.36, 95% CI= 1.33 to 1.39) compared to those who were not working. In terms of parity, the probability of contraceptive use intention among women increased with an increase in parity. Particularly, women with four or more births (AOR=2.09, 95% CI= 1.99 to 2.19) had a greater likelihood of contraceptive use intention relative to women with no birth. The odds of contraceptive use intention decreased among women

in the poorest wealth quintile (AOR=0.78, 95% CI= 0.75 to 0.82) relative to those in the richest wealth quintile. It was found that women whose partners were working were more likely to have intention to use contraceptives (AOR=1.23, 95% CI= 1.23 to 1.30) compared to those whose partners were not working. Compared to women whose partners had no education, those whose partners had primary education (AOR=1.25, 95% CI= 1.22 to 1.29), those with secondary/higher (AOR=1.22, 95% CI= 1.19 to 1.26) had higher odds of intention to use contraceptives. Regarding exposure to mass media, women who had no mass media exposure were less likely to have contraceptive use intention (AOR=0.87, 95% CI= 0.86 to 0.90) relative to those with mass media exposure. Women in rural settings were found to have a greater likelihood of intention to use contraceptives (AOR=1.10, 95% CI= 1.07 to 1.14) compared to those in urban settings. For subregion, women in Central Africa recorded the lowest odds of intention to use contraceptives (AOR=0.21, 95% CI= 0.19 to 0.24) compared with those in the Southern Africa.

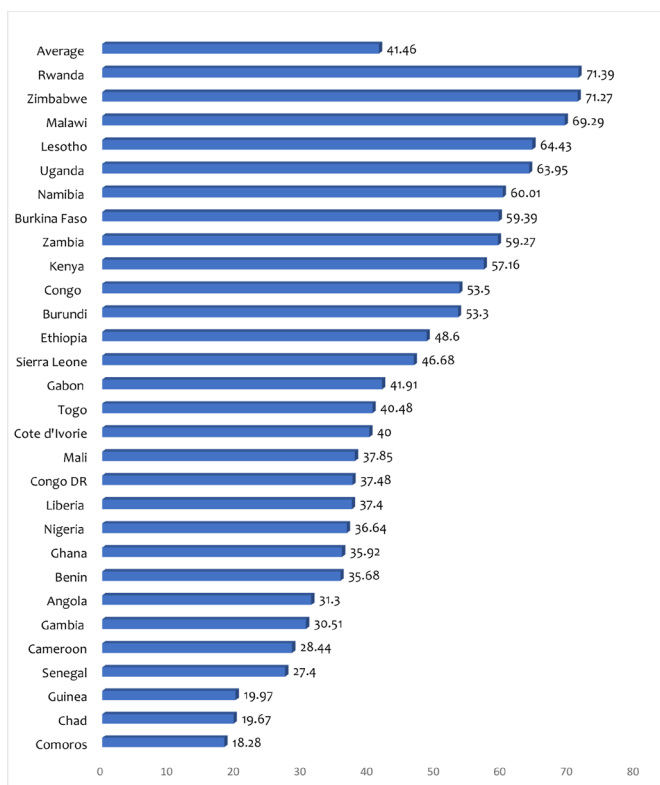


Figure 1 Prevalence of intention to use contraceptives among married and cohabiting women in sub-Saharan Africa.

DISCUSSION

This study assessed the prevalence and predictors of intention to use contraceptives among married and cohabiting women in 29 countries in SSA. Our study revealed the overall prevalence of contraceptive use intention among married and cohabiting women to be 41.46%. Additionally, the study results revealed a substantial association between age, educational level, marital status, religious affiliation, occupational status, parity, wealth index, partner's occupational status, partner's educational level, mass media exposure, place of residence, and subregion and intention to use contraceptives.

The low prevalence of intention to use contraceptives (41.46%) indicates that the majority of married and cohabiting women in SSA (58.54%) did not intend to use contraceptives. A likely explanation could be attributed

Table 3 Multilevel logistic regression results on the predictors of intention to use contraceptives among women in sub-Saharan Africa

Variable	Null model	Model I AOR (95% CI)	Model II AOR (95% CI)	Model III AOR (95% CI)
Women's age (years)				
15–19		1		1
20–24		1.06** (1.02 to 1.11)		0.99 (0.95 to 1.04)
25–29		0.82*** (0.78 to 0.86)		0.73*** (0.69 to 0.76)
30–34		0.67*** (0.63 to 0.70)		0.56*** (0.53 to 0.59)
35–39		0.46*** (0.44 to 0.49)		0.38*** (0.36 to 0.40)
40–44		0.23*** (0.22 to 0.25)		0.19*** (0.18 to 0.20)
45–49		0.08*** (0.007 to 0.08)		0.06*** (0.05 to 0.06)
Women's educational level				
No education		0.60*** (0.60 to 0.64)		0.60*** (0.58 to 0.61)
Primary		0.91*** (0.88 to 0.94)		0.90*** (0.88 to 0.93)
Secondary/higher		1		1
Marital status				
Married		1.00 (0.97 to 1.03)		0.81*** (0.79 to 0.84)
Cohabiting		1		1
Religious affiliation				
Christianity		1.06 (0.99 to 1.13)		1.26*** (1.17 to 1.35)
Islam		0.63*** (0.58 to 0.67)		0.65*** (0.61 to 0.70)
Traditionalist		1		1
No religion		0.84*** (0.77 to 0.92)		0.97 (0.88 to 1.07)
Women's occupational status				
Not working		1		1
Working		1.40*** (1.36 to 1.43)		1.36*** (1.33 to 1.39)
Parity				
No births		1		1
One birth		1.16*** (1.11 to 1.21)		1.21*** (1.16 to 1.26)
Two births		1.23*** (1.18 to 1.29)		1.35*** (1.29 to 1.41)
Three births		1.33*** (1.27 to 1.39)		1.52*** (1.44 to 1.59)
Four or more births		1.70*** (1.62 to 1.78)		2.09*** (1.99 to 2.19)
Wealth index				
Poorest		0.85*** (0.82 to 0.89)		0.78*** (0.75 to 0.82)
Poorer		0.91*** (0.87 to 0.94)		0.87*** (0.83 to 0.90)
Middle		0.93*** (0.90 to 0.97)		0.91*** (0.87 to 0.94)
Richer		0.97 (0.94 to 1.01)		0.96* (0.93 to 1.00)
Richest		1		1
Partner's occupational status				
Not working		1		1
Working		1.13*** (1.07 to 1.20)		1.23*** (1.17 to 1.30)
Partner's educational level				
No education		1		1
Primary		1.33*** (1.39 to 1.37)		1.25*** (1.22 to 1.29)
Secondary+		1.11*** (1.08 to 1.15)		1.22*** (1.19 to 1.26)
Exposure to mass media				

Continued

Table 3 Continued

Variable	Null model	Model I AOR (95% CI)	Model II AOR (95% CI)	Model III AOR (95% CI)
No		0.80*** (0.78 to 0.82)		0.87*** (0.86 to 0.90)
Yes		1		1
Place of residence				
Urban			1	1
Rural			0.93*** (0.91 to 0.95)	1.10*** (1.07 to 1.14)
Subregion				
West			0.36*** (0.32 to 0.40)	0.52*** (0.46 to 0.58)
East			0.63*** (0.57 to 0.71)	0.60*** (0.53 to 0.67)
Central			0.25*** (0.23 to 0.28)	0.21*** (0.19 to 0.24)
South			1	1
Random effect results				
PSU variance	0.05 (0.04–0.06)	0.05 (0.04 to 0.06)	0.04 (0.03 to 0.05)	0.05 (0.04 to 0.06)
ICC	0.0142688	0.0138433	0.0122885	0.0152122
LR test	617.16 (X=0.000)	506.80 (X=0.000)	545.96 (X=0.000)	538.75 (X=0.0000)
Wald χ^2	Reference	18 447.56***	4815.51***	21 755.41***
Model fitness				
Log-likelihood	–121193.8	–109314.74	–118735.59	–106810.26
AIC	242 391.6	218 683.5	237 483.2	213 682.5
Weighted sample (N)	180 682	180 682	180 682	180 682
Number of groups	1589	1589	1589	1589

*p<0.05, **p<0.01, ***p<0.001.
 1, reference category; AIC, Akaike's Information Criterion; aOR, adjusted OR; ICC, intra-class correlation; LR test, likelihood ratio test; PSU, primary sampling unit.

to community norms, fear of side effects, as well as myths and misconceptions about contraceptive methods in SSA.^{10 16 31} The low prevalence of contraceptive use intention shows that the usage of contraceptives to avoid unintended pregnancies and high-danger fertility remains a major issue in SSA.¹⁹

With regards to country-specific analysis, Rwanda (71.39%) recorded the highest prevalence of intention to use contraceptives followed by Zimbabwe (71.27%), and then Malawi (69.29%) whereas the lowest was recorded in Comoros (18.28%). The highest intention to use contraceptives found in Rwanda is comparable to prior studies in rural Ghana³² and Malawi.³³ However, the lowest prevalence recorded in Comoros corroborates prior study in Ethiopia (18%)¹⁰ but is far lower than what was revealed in previous studies including 90% in the USA,³⁴ 69% in Nigeria,³¹ and 84% in Ethiopia.³⁵ It is not unexpected that Comoros had the lowest proportion of contraceptive intention in this study. As revealed by the 2012 Comoros DHS, up to 80% of reproductive-age women do not use contraceptives.³⁶ Also, according to Rai,³⁶ a larger number of Comorian women do not even plan to use contraceptives in the foreseeable future. As a result of this conclusion, more empirical investigations are needed to uncover the factors that contribute to poor contraceptive

intention and usage in Comoros, preferably using qualitative studies.

In this study, age was revealed to be significantly associated with the intention to use contraceptives. The odds of contraceptive intention reduced with an increase in the age of married and cohabiting women. Married and cohabiting women aged 45–49 showed lower probability of contraceptive use intention compared with women aged 15–19. Similar findings were observed in prior studies in other locations of the world including Nigeria,²⁸ Malawi^{33 37} and India.³⁸ Reduced coital frequency and menopausal-related symptoms may explain why older women have a lower likelihood of contraceptive use intention. Also, it could be that women aged 40 and 49 were not sexually active or had already finished childbirth due to menopause and would not require any type of contraception.^{28 33} Furthermore, the majority of these women could count on other conventional methods such as string ties, which they may be unwilling or uncomfortable discussing, resulting in a reduced contraceptive intention.³³

The marital status of married and cohabiting women was found to be a predictor of contraceptive use intention in this study. Compared to cohabiting women, married women were found to have a lower likelihood

of contraceptive intention. Women in SSA frequently rely on their husbands to decide whether or not to have children and whether or not to use contraception. In circumstances when males oppose contraception because they want more children, as is the case in many sub-Saharan African countries, these spouses become less likely to intend to use contraception.³⁹ It is worth noting that cohabiting women are more likely to have intention to use contraception since they are sexually active and wish to avoid undesired pregnancies in the future because they are not legally married.²⁰ Our findings, however, contradict a study conducted in Ethiopia by Mesfin and Kibret,⁴⁰ which found married women to be more probable to have contraceptive use intentions than cohabiting women.

We found that married and cohabiting women's contraceptive intentions were highly linked to their educational level. Married and cohabiting women with primary or no formal education reported lower likelihood of intending to take contraception in SSA than those with secondary/higher educational levels. Women's awareness of contraceptive use is normally improved by education, hence, contraceptive activity was favourably associated with education. The education of women could assist them in better understanding their fertility and sexual liberties and responsibilities. Educated women tend to receive health-related information from a variety of sources.^{10 41} Educational attainment of women can offer them proper information on contraception, contraceptive techniques and their merits, which can influence their contraceptive intentions in the near future to avoid unwanted births.⁴² This result is comparable with prior studies in Ethiopia,^{16 39} Malawi³³ and Pakistan⁴³ where majority of women with secondary/higher intended to use contraceptives.

The intention to take contraceptives was found to be positively associated with wealth status. With an increase in a woman's wealth position, her chances of wanting to use contraception increase. In comparison to married and cohabiting women in the richest wealth quintile, those in the poorest wealth quintile had the lowest chances of contraceptive intention. The intention and use of contraception entail a financial cost. Married and cohabiting women in the greatest wealth quintile may be able to overcome any financial obstacles if they choose to use contraceptives, but impoverished women may not.^{19 20} Furthermore, impoverished women are typically less educated, which makes it difficult for them to find work, particularly well-paid work. As a result, they mostly rely on their husbands to make important decisions, such as whether or not to use contraception. If their spouses are opposed to contraception, such women will not intend to use contraceptives.³³ This result corroborates previous studies in Afghanistan,⁴⁴ Liberia⁴⁵ and Uganda⁴⁶ where poor women were reported to have lower probability of contraceptive use intention.

In terms of mass media exposure, our study revealed that married and cohabiting women who were not exposed to mass media were less likely to have contraceptive use

intention. This result shows the importance of the mass media in communicating family planning information. Prior studies in Ethiopia⁴⁷ and SSA⁴⁸ have demonstrated the impact of mass media messaging in encouraging contraceptive intention and usage. People are educated about the importance, health effects, and reasons for using family planning through media programmes. Awareness about this information could improve the contraceptive intention of women in SSA.^{49 50} This finding implies that governments and other key stakeholders in sub-Saharan African countries should use the media to convey information about family planning, including contraception. This has the potential to boost contraceptive intention among women in the region.²⁰ However, a study by Tiruneh *et al*³⁹ showed no substantial association between intention to use contraceptives and mass media exposure.

The present study showed the place of residence to be strongly associated with intention to use contraceptives. We found that married and cohabiting women residing in rural settings were more likely to have contraceptive use intentions than those residing in urban settings. This observation may be that rural married and cohabiting women have started to discuss contraceptive issues with their partners as well as receive contraceptive messages through the mass media.^{17 47} According to Tekelab *et al*,¹⁰ addressing reproductive issues with partners allows women to plan on using contraception. This finding is striking because most researches in sub-Saharan African countries have reported low contraceptive use among these women, hence, rural women were expected to have a lower likelihood of contraceptive intention.^{20 39 51} Further studies are needed to find out why high contraceptive intention among rural women does not result in its usage in SSA.

Strengths and limitations

The principal strength of this study is the use of nationally representative data from each of the countries included in the analysis. As a result, the findings can be applied to all women in the countries studied. Also, we used higher-order statistical methods, ensuring that the data was thoroughly examined to generate the results of the study. Despite these strengths, the study contains several flaws that must be recognised. First of all, we cannot establish causal effects between the variables examined because the DHS employed a cross-sectional design in to collect the data from the respondent. Furthermore, the data was collected retrospectively. Therefore, recall bias may exist and could lead to over or under reporting. Additionally, our study was limited to only the variables in the DHS dataset. Hence, the interpretation and inference made from the study should be limited to only the variables used.

CONCLUSION AND IMPLICATION

There is a relatively low prevalence of contraceptive use intention among married and cohabiting women in

SSA, with differences between countries. Women's age, educational level, marital status, religious affiliation, occupational status, parity, wealth index, partner's educational level, partner's occupational status, mass media exposure, place of residence and subregion were associated with contraceptive use intention. It is imperative for policymakers to take into account these factors when developing and executing contraceptive programmes or policies to enhance contraceptive intents among married and cohabiting women. To resolve discrepancies and increase contraceptive intention among women, policymakers and other key stakeholders should expand public health education programmes. Such health programmes should be aimed at old and married women, those with low socioeconomic status, as well as women in urban settings to improve their intention and use of contraceptives. Additionally, family planning professionals and programmers can use printed and electronic media much more effectively by taking the required precautions in order to change the behaviour of elderly women, those who live in urban areas, and those who are single. Furthermore, there should be programmes to promote husband/partner involvement and family planning information through mass media to boost contraceptive intention and usage.

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