

Desired family size, sexual activity, fertility, and contraceptive intention among young women in Uganda

Paulino Ariho^{1,2} **Allen Kabagenyi**¹

Addresses

¹Makerere University, Department of Population Studies, School of Statistics and Planning, Kampala, Uganda.

²Kyambogo University, Department of Sociology, Anthropology and Population studies

Abstract

Unintended pregnancies and high fertility continue to be problems in Uganda despite nearly universal knowledge about family planning among women in Uganda. Using, the 2016 Uganda Demographic and Health Survey (UDHS), this study examines the desired family size,

reproductive health behaviors and their association with contraceptive intentions of young people in Uganda. Analysis was done on a weighted sample of 8,086 women aged 15-24 years.

Among the young women, 38% had ever used family planning, 60% desired 3-4 children while 28% desired at least 5 children. About 38% of the young women were sexually active in the 4 weeks before the survey, 32% had never had sex, 54% had never given birth, 36% had 1-2 children while 9% reported having at least 3 children. The findings also indicate that 8% of the young women had ever had a terminated pregnancy. A quarter (25%) of the young women did not intend to use family planning in future. A binary logistic regression model of intention to use family planning in future among the young women was associated with; education, religion, region of residence, preference of 3-4 children, being sexually active in last 4 weeks, ever use of family planning, having ever given birth and pregnancy termination. The study confirms that sexual and reproductive behaviors and desired family size have a significant association with young women's future demand for family planning. Investment in young people's sexual and reproductive health will lead to better maternal health in future and also accelerate reduction in fertility for harnessing the demographic dividend in Uganda.

Introduction

Sub-Saharan Africa (SSA) has both the world's highest fertility rate and unmet need for family planning (Gahungu et al., 2021). Unmet contraception needs affect 10% of women worldwide, with higher rates in SSA (Kraft et al., 2022). Increasing access to family planning services may increase contraceptive use and decrease fertility (Karra et al., 2022). Modern contraception methods have a significant impact on the health of mothers and their children (Alenezi & Haridi, 2021; Gilano & Hailegebreal, 2021; Tetui et al., 2021). Contraception is used to limit family size and avoid unplanned pregnancies (Gilano & Hailegebreal, 2021). By lowering the risk of maternal mortality and increasing infant and child survival as a result of birth spacing, the use of contraceptives is a well-known intervention for enhancing the health of women, children, and families (Makumbi et al., 2023).

The importance of sexual and reproductive health in harnessing the demographic dividend is well documented. Increased use of family planning methods provides enormous economic benefits, such as aiding in the achievement of the demographic dividend (Pattnaik et al., 2021). Meeting the demand for family planning is critical for the advancement toward all of the major Sustainable

Development Goals (SDGs) of the United Nations, including people, planet, prosperity, peace, and partnership (Goodkind et al., 2018). Africa's young population offers SSA countries an opportunity to transform their economies (Rusatira et al., 2023). With a growing population of young workers, Africa has the chance to benefit from a demographic dividend that could boost prosperity and economic growth (Kayizzi-Mugerwa, 2019). Assessment of contraceptive behavioral intentions of women may help in developing targeted interventions that will improve use of family planning methods for fertility regulation (Murphy, 2004) and enable developing countries benefit from the socioeconomic advantages of modern contraceptive method advancements (Goodkind et al., 2018). It is thus important to identify the predictors of intentions to use contraception which are considered to be the key predictors of future contraception practices (Abraha et al., 2018).

In SSA's high fertility countries, the proportion of women intending to use contraception is low (Negash et al., 2023). Demand is typically cited as the primary motivator for contraceptive use in the determinants of fertility literature (Sarnak et al., 2023). Intentions are widely thought to predict behavior (Negash et al., 2023). Strong practice intentions, the absence of environmental barriers, and possession of the necessary skills and abilities increase the likelihood that a given behavior will be carried out (Tegegne et al., 2022). The intention to use contraceptive methods is critical for better visualizing women's future needs and making it more likely to translate into actual behavior (Negash et al., 2023). Even though there may be many obstacles, a woman may be inclined to use contraceptive methods in future (Gilano & Hailegebreal, 2021). Generally, sociodemographic factors such as age, place of residence, marital status, education, religion, employment, frequency of visits to health facilities, and awareness of the ovulation cycle are related to the intention to use contraceptive methods (Gilano & Hailegebreal, 2021).

In spite of nearly universal knowledge about family planning among women in Uganda, the use of family planning methods remains low (UBOS & ICF, 2018; UBOS & ICF International Inc., 2012). This points to evidence of delayed adoption of family planning but there is some limited information on future demand for family planning. According to the 2016 Uganda Demographic and Health Survey (UDHS) report, total demand for family planning increased from 54% in 2000-01 to 67% in 2016 (UBOS & ICF, 2018). There is however limited information on factors associated with the family planning intentions among young women in Uganda.

Despite the importance of both intentions to use and actual use of family planning for maternal and child health, unintended pregnancies and high fertility continue to be problems in Uganda. Analysis of future demand for family planning is important for forecasting future fertility among others. The intention to use contraception in the future forecasts potential demand for family planning services and serves as a summary indicator of contraception mindsets. There is however paucity of research on the contraceptive intentions of nonusers of contraception and the factors associated with such intentions. Studies in Uganda have explored contraceptive use (Andi et al., 2014; Anita et al., 2020; Kabagenyi et al., 2015; Namasivayam et al., 2020; Ndugga, 2019; Wamala et al., 2017) and contraceptive nonuse among women (Otim, 2020). For the purpose of developing and assessing family planning programs, it is essential to quantify the prevalence of intention for contraception. This paper examined the factors associated with contraceptive non-intention among young women in Uganda. The results of this study could assist family planning planners and service providers in gaining a thorough understanding of the predictors of intention to adopt contraceptives and in determining the appropriate interventions to increase contraceptive uptake for accelerating the fertility transition required to harness the demographic dividend.

Data and Methods

This study was based on secondary data from the 2016 Uganda Demographic and Health Survey (UDHS). The survey was conducted by the Uganda Bureau of Statistics (UBOS) with technical support from ICF International and collected data on demographic and health indicators. The UDHS collected data from women, children, men and couples. This study used the women's dataset. Information on marriage and sexual activity, and the contraceptive behavior of women aged 15-49 years was collected during the survey. The UDHS was a nationally representative cross-sectional survey of all women aged 15-49 years. A total of 18,506 women aged 15-49 years were interviewed during the 2016 UDHS. The samples were obtained using a two-stage cluster sampling process beginning with the selection of clusters or enumeration areas followed by the selection of households from each cluster. This study was conducted on a sample of women who were aged 15-24 years at the time of the survey. The authors sought and obtained permission from Measure DHS to access and use the dataset for this study reference to the letter. The measure DHS website provides an easier, quicker and flexible way of accessing and utilizing the demographic and health survey data by researchers <https://dhsprogram.com/methodology/Survey-Types/DHS.cfm>.

Variables

The dependent variable was intention to use family planning and was derived from the question on contraceptive use and intention. The variable was recoded on a binary scale of 0= Intends to use family planning in future and 1= Does not intend to use family planning. The independent variables for this study include; age, education, residence, place of residence, region of residence, marital status, number of children ever born, preferred number of children, recent sexual activity, ever use of family planning, and pregnancy termination. Selection of the independent variables was based on previous studies and the hypothetical relationships they have with behavioral intention to use family planning.

Data Analysis

Statistical analysis was done using STATA (Version 15). A descriptive summary indicating the frequency distribution of women by socio-demographic characteristics was performed. Secondly, a Pearson chi square test was used to analyze the association of non-intention to use family planning in future with each explanatory variable. At the multivariate level, the binary logistic regression model was used to determine the predictors of non-intention to use family planning among young people. All statistical tests were conducted at a 5% level of significance. Due to the complexity of the sampling design used in DHS, some areas were more likely to be under sampled or over sampled. The data were weighted to cater for this complex nature of the sampling design using the “svy” command. The linktest was used to test for correct model specification of the selected model.

Results

Description of the sample

The results in Table 1 indicate that slightly more than half (53%) of the women were aged 15-19 years, while 47% were aged 20-24 years. The table also shows that; majority (73%) of the young women were from rural areas and more than half (58%) had attained primary education. In terms of religion, the table indicates 39% of the women were Catholics, 31% were Anglicans, 16% were Pentecostals while 14% were Muslims. The study also shows that 13% of the women were from South Buganda, 10% from North Buganda, 9% from Busoga, 7% from Bukedi. In addition, an

equal proportion (7%) of the young women were from West Nile and Tooro regions. The table shows further details.

Table 1: Distribution of respondents by selected sociodemographic characteristics

Characteristic	Frequency	Percent
Age		
15-19	4,264	52.7
20-24	3,822	47.3
Place of residence		
Urban	2,178	26.9
Rural	5,908	73.1
Education level		
No education	202	2.5
Primary	4,706	58.2
Secondary+	3,178	39.3
Religion		
Anglican	2,480	30.7
Catholic	3,123	38.6
Muslim	1,146	14.2
Pentecostal	1,267	15.7
Other	69	0.9
Region		
Kampala	460	5.7
South Buganda	1,087	13.4
North Buganda	844	10.4
Busoga	728	9.0
Bukedi	564	7.0
Bugisu	410	5.1
Teso	529	6.5
Karamoja	145	1.8
Lango	448	5.5
Acholi	429	5.3
West Nile	559	6.9
Bunyoro	464	5.7
Tooro	593	7.3
Ankole	533	6.6
Kigezi	294	3.6
Total	8,086	100.0

Sexual and Reproductive health practices of young people

Table 2 shows that 38% of the young women were sexually active in the 4 weeks before the survey, 32% had never had sex while 30% were not sexually active in the 4 weeks that preceded the survey. The results also indicate that 38% of the young women had ever used family planning, 53% were never married, while 41% were currently married. The table also shows that more than half (55%) of the young women had never given birth whereas 36% had ever given birth to 1-2 children while 9% had ever given birth to at least 3 children. About 8% of the young women had ever had a terminated pregnancy.

Table 2: Distribution of respondents by selected sexual and reproductive health practices

SRH practice	Frequency (n)	Percent (%)
Sexual activity		
Never had sex	2,615	32.3
Active in last 4 weeks	3,038	37.6
Not active in last 4 weeks	2,431	30.1
Ever use of family planning		
Never used	5,009	62.0
Ever used	3,077	38.0
Marital status		
Never	4,266	52.8
Currently	3,294	40.7
Formerly	525	6.5
Number of children ever born		
Never given birth	4,429	54.8
1-2 children	2,928	36.2
3+ children	729	9.0
Pregnancy termination		
Never had a terminated pregnancy	7,472	92.4
Ever had a terminated pregnancy	614	7.6
Total	8,086	100.0

Fertility preferences

The fertility preferences were assessed based on the ideal number of children that the woman would choose to have. The findings in Figure 1 show that 6 in 10 of the young women said that they desired to have 3-4 children while 28% stated their ideal number of children as at least 5 children.

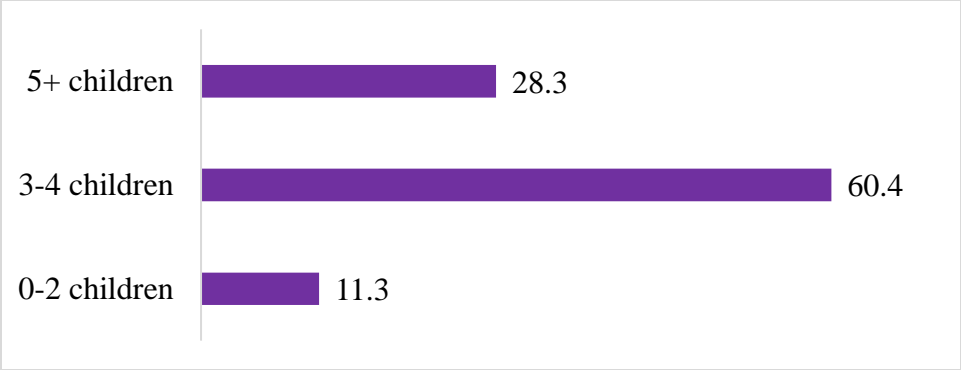


Figure 1: Desired family size among young women aged 15-24 in Uganda

Intention to use family planning in future

The results in the figure 2 indicate that of the 8,086 young women, 25% had no intention to use family planning in future while 75% had intention to use.

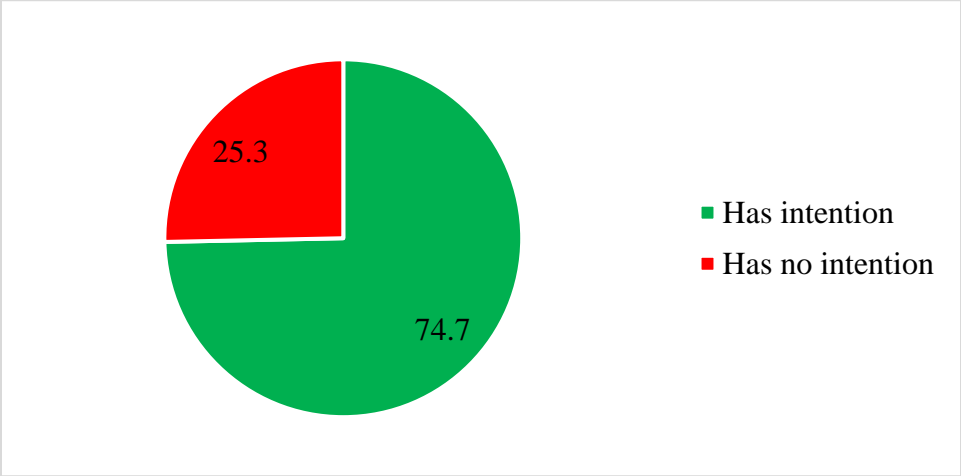


Figure 2: Family planning intention among young women aged 15-24 in Uganda

Differentials in intention to use family planning in future

The findings in the Table 3 shows that most (67%) of the young women who had no intention to use family planning were aged 15-19 years. The association between age and intention to use family planning in future was statistically significant at the 5% level of significance ($p < 0.001$). Although the results show that three quarters (75%) of the young women who said they had no intention to use family planning in future resided in rural areas, the relationship between place of residence and intention to use family planning was not significant at the 5% level of significance ($p = 0.150$). The results in the table also indicate that education level attained by the young women was associated with intention to use family planning ($p < 0.001$). The results reveal that 64% of the

young women who had no intention to use family planning in future had attained primary education while 32% had attained at least secondary education. Religion showed a significant association with intention to use family planning at the 5% level of significance ($p=0.001$). The results reveal that 38% of the young women who said they had no intention to use family planning were Catholics, 28% were Anglicans, 19% were Pentecostals while 15% were Muslims. Of the respondents who had no intention to use family planning in future, 13% were from South Buganda, 10% from Busoga, 10% from North Buganda, 9% from Teso, and other as presented in the table. Region of residence was significantly associated with intention to use family planning ($p<0.001$).

The results also show that slightly more than half (51%), 35% and 14% of the young women who had no intention to use family planning in future preferred 3-4 children, 5+ children and 0-2 children respectively. The association between family size preference and intention to use family planning was significant at the 5% level of significance ($p<0.001$).

Table 3: Intention to use family planning by selected sociodemographic characteristics

Characteristic	Intention to use family planning in future		P-value
	Has intention (%)	Has no intention (%)	
Age			
15-19	47.4	68.6	0.000
20-24	52.7	31.4	
Place of residence			
Urban	27.5	25.2	0.150
Rural	72.5	74.8	
Education level			
No education	2.0	3.9	0.000
Primary	56.1	64.4	
Secondary+	41.9	31.7	
Religion			
Anglican	31.7	27.7	0.001
Catholic	39.0	37.6	
Muslim	14.0	14.6	
Pentecostal	14.5	19.1	
Other	0.8	1.0	
Region			
Kampala	5.9	5.0	0.000
South Buganda	13.5	13.3	

North Buganda	10.6	9.9	
Busoga	8.6	10.1	
Bukedi	7.1	6.7	
Bugisu	5.9	2.6	
Teso	5.6	9.4	
Karamoja	1.3	3.3	
Lango	5.6	5.3	
Acholi	5.6	4.4	
West Nile	6.8	7.3	
Bunyoro	5.5	6.4	
Tooro	7.7	6.3	
Ankole	6.6	6.6	
Kigezi	3.8	3.3	
Ideal number of children			
0-2 children	10.5	13.7	0.000
3-4 children	63.5	51.3	
5+ children	26.0	35.0	

The sexual and reproductive factors assessed included sexual activity, ever use of family planning, marriage, number of children ever born, and pregnancy termination. The results in the table indicate that, at the 5% level of significance, all these were significantly associated with intention to use family planning in future ($p < 0.001$).

Table 4: Intention to use family planning by selected Sexual and Reproductive health factors

SRH variable	Intention to use family planning in future		P-value
	Has intention (%)	Has no intention (%)	
Sexual activity			
Never had sex	25.0	54.2	0.000
Active in last 4 weeks	43.1	21.2	
Not active in last 4 weeks	31.9	24.6	
Ever use of family planning			
Never used	52.8	88.9	0.000
Ever used	47.2	11.1	
Marital status			

Never married	46.6	71.1	0.000
Currently married	46.3	24.3	
Formerly married	7.1	4.7	
Number of children ever born			
Never given birth	48.2	74.2	0.000
1-2 children	41.3	21.2	
3+ children	10.5	4.6	
Pregnancy termination			
Never had a terminated pregnancy	91.8	94.3	0.002
Ever had a terminated pregnancy	8.2	5.7	

Predictors of non-intention to use family planning in future

The binary logistic regression model indicates that young women's non-intention to use family planning in future was associated with education level attained, religion, region of residence, ideal number of children, sexual activity, ever use of family planning, number of children ever born and pregnancy termination. The findings in Table 5 indicate that compared with women who had not attained any level of education, women who reported having primary education (OR=0.671, 95% CI=0.454-0.991), and secondary education (OR=0.430, 95% CI=0.288-0.642) were less likely to have no intention to use family planning. The results also indicate that young women who reported that they belonged to the Muslim religion were 1.4 times (OR=1.445, 95% CI=1.181-1.767) likely to have no intention to use family planning in future compared to their counterparts who belonged to the Anglican religion. Similarly, women who said that they were Pentecostals were 1.5 times (OR=1.482, 95% CI=1.229-1.786) likely to have no intention to use family planning in future compared to their Anglican counterparts. The findings also indicate that women from Bugisu region were less likely (OR=0.437, 95% CI=0.293-0.651) to have no intention to use family planning in future compared to those from Kampala whereas those from Teso region were almost 2 times likely (OR=1.851, 95% CI=1.342-2.553) to have no intention to use family planning in future.

Family size preference was significantly associated with young women's non-intention to use family planning. The findings show that young women who stated their preferred number of children as 3-4 children were less likely (OR=0.693, 95% CI=0.569-0.846) to have no intention to use family planning in future compared to those whose preferred number was 0-2 children.

Regarding the sexual and reproductive health behaviors, the findings show that compared to women who had never had sex at the time of the surveys, those who were sexually active in the 4 weeks before the survey (OR=0.546, 95% CI=0.430-0.693) as well as those that had ever had sex but were not sexually active in the 4 weeks that preceded the survey (OR=0.684, 95% CI=0.568-0.824) were less likely to have no intention to use family planning in future. The findings also indicate that young women who reported that they had ever used family planning were less likely (OR=0.207, 95% CI=0.169-0.253) to have no intention to use family planning in future relative to those who had never used family planning. Relatedly, women who reported that they had ever given birth to 1-2 children were less likely (OR=0.780, 95% CI=0.632-0.963) to have no intention to use family planning in future compared to those who had never given birth. Relatedly, the young women who had ever given birth to at least 3 children were less likely (OR=0.692, 95% CI=0.488-0.981) to have no intention to use family planning in future compared to their counterparts who said that they had never given birth. The study also shows that women who had ever had a terminated pregnancy were almost 1.4 times likely (OR=1.389, 95% CI=1.034-1.867) to have no intention to use family planning compared to their counterparts who had never had a terminated pregnancy.

Table 5: Factors associated with young women’s intention to use family planning in future

Variable	Odds ratio	P-value	95% CI
Age			
15-19 years	1.000		
20-24 years	1.065	0.493	0.889-1.275
Education level			
No education	1.000		
Primary	0.671	0.045	0.454-0.991
Secondary+	0.430	0.000	0.288-0.642
Religion			
Anglican	1.000		
Catholic	1.106	0.222	0.941-1.299
Muslim	1.445	0.000	1.181-1.767
Pentecostal	1.482	0.000	1.229-1.786
Other	1.630	0.112	0.892-2.977
Region			
Kampala	1.000		
South Buganda	1.195	0.355	0.819-1.744

North Buganda	1.127	0.536	0.771-1.649
Busoga	1.242	0.228	0.873-1.769
Bukedi	0.994	0.973	0.691-1.429
Bugisu	0.437	0.000	0.293-0.651
Teso	1.851	0.000	1.342-2.553
Karamoja	1.527	0.103	0.917-2.542
Lango	0.902	0.597	0.615-1.323
Acholi	0.727	0.100	0.497-1.063
West Nile	0.775	0.147	0.549-1.094
Bunyoro	1.178	0.413	0.796-1.742
Tooro	0.895	0.558	0.618-1.297
Ankole	1.012	0.948	0.700-1.463
Kigezi	0.726	0.101	0.496-1.065
Ideal number of children			
0-2 children	1.000		
3-4 children	0.693	0.000	0.569-0.846
5+ children	1.006	0.953	0.818-1.238
Sexual activity			
Never had sex	1.000		
Active in last 4 weeks	0.546	0.000	0.430-0.693
Not active in last 4 weeks	0.684	0.000	0.568-0.824
Ever use of family planning			
Never used	1.000		
Ever used	0.207	0.000	0.169-0.253
Marital status			
Never married	1.000		
Currently married	0.859	0.220	0.673-1.096
Formerly married	1.247	0.226	0.872-1.784
Number of children ever born			
Never given birth	1.000		
1-2 children	0.780	0.021	0.632-0.963
3+ children	0.692	0.039	0.488-0.981
Pregnancy termination			
Never had a terminated pregnancy	1.000		
Ever had a terminated pregnancy	1.389	0.029	1.034-1.867

Discussion

The binary logistic regression model indicates that young women's non-intention to use family planning in future was associated with attained primary and higher education level, being muslim,

being Pentecostal, residing in Bugisu and Teso regions, preferring 3-4 children as family size, being sexually active, having ever used family planning methods, having ever given birth, and having ever had a terminated pregnancy.

This paper finds that compared with women who had not attained any level of education, women who reported having attained primary education, and secondary education were less likely to have no intention to use family planning. This finding implies that higher education attainment by women plays a critical role in the demand and use of family planning and other health services. The findings corroborate other studies; on contraceptive intention and choice in selected high fertility countries of SSA (Negash et al., 2023), intention to use family planning in Ethiopia (Gebeyehu et al., 2020), contraceptive intention in Ghana (Ahuja et al., 2020), use of contraceptives in Uganda and contraceptive non-use among women in Uganda (Otim, 2020) which all reported that education is an important factor for contraceptive intentions and actual use. Education attainment is considered to be protective against non-intention to use family planning (Ahuja et al., 2020; Gebeyehu et al., 2020; Negash et al., 2023). It is important to continue promoting and supporting the completion of at least a secondary level of education by women in Uganda because of its important links to family planning use and fertility reduction. Government efforts to increase in enrollment in secondary schools by both boys and girls are highly appreciated but there is need to focus on retention of the girl child in secondary school as previous studies have documented high secondary school dropout rates by young girls. As research shows that education delays marriage and first pregnancies, investing in girls' education is essential for achieving lower family size and fertility decline (Bongaarts & Hodgson, 2022) but also drives the demographic dividend (Lutz et al., 2019). Indeed, it has been argued that the true demographic dividend is a human capital dividend (Lutz et al., 2019). Women's completion of lower secondary education is critical to hastening fertility decline and increasing contraceptive prevalence for modern methods (Liu & Raftery, 2020).

The results also indicate that young women who reported that they belonged to the Muslim and Pentecostal religions were more likely to have no intention to use family planning in future compared to their counterparts who belonged to the Anglican religion. This points to the radical and conservative teachings and beliefs about family planning promoted by some Islamic teachings and the Pentecostal movements. Related findings were reported in a study of regional differentials

in non-use of contraceptive among women in Uganda (Otim, 2020). The study by Otim (2020) revealed religion predicted contraceptive nonuse in Eastern, Northern and Western region with variations (Otim, 2020). This findings is partly in line with those of a study conducted in Ghana which found Islam religion to be positively associated with non-intention to use contraceptives (Ahuja et al., 2020). Religions usually have teachings that in many ways shape beliefs and behaviors of believers. Religious groups should thus be targeted as important stakeholders and partners in demographic and reproductive health matters that are key for harnessing economic progress from changing age structure.

The findings indicate regional variation in young women's non-intention to use family planning in future. While the study reveals that women from Bugisu region were less likely to have no intention to use family planning in future compared to those from Kampala, their counterparts from Teso region were about 2 times as likely to have no intention to use family planning in future. Regional variations in demand to use family planning might be linked to the cultural beliefs and practices in the regions. This requires more in-depth studies across the regions.

Family size preference was significantly associated with young women's non-intention to use family planning. The findings reveal that, generally, compared to those whose preferred number of children was 2 children and fewer, young women who stated that they preferred to have 3-4 children were less likely to have no intention to use family planning in future. This may partly be because the young women may desire to use family planning in future after attaining their desired family size which is largely due to the general preference of higher fertility. Contraceptive use among Ugandan women has been reported to be hampered in part by patriarchal family units that place a high value on children and encourage large family sizes (Kabagenyi et al., 2014). The low level of investment in family planning in SSA has been attributed to the belief that such investments will fail due to Africa's cultural preference for large families (Bongaarts, 2011). The paper does not specify the intentions to use specific family planning methods. This would help to isolate demand for family planning into the demand for purposes of limiting the number of children or for spacing. In a study of women's intentions to use long-acting reversible and permanent contraceptive methods, women with lower ideal desired number of children were reported to have high intention to use LAPMs (Tegegne et al., 2022).

The findings revealed that compared to women who had never had sex at the time of the survey, those who were sexually active in the 4 weeks before the survey as well as those that had ever had sex but were not sexually active in the 4 weeks that preceded the survey were less likely to have no intention to use family planning in future. Sexual activity exposes individuals and couples to risks of unintended pregnancies especially among young people.

The findings also indicate that young women who reported that they had ever used family planning were less likely to have an intention to use family planning in future relative to those who had never used family planning. This could be because these women have previous experience with the methods and so are more informed about the methods. It is also possible that these women were planning to conceive or were afraid of side effects of contraceptive methods. The women who have never used family planning methods may have some misconceptions and misinformation about family planning which thus may affect future use of family planning for birth spacing and fertility limitation. This finding is partly in line with those of a study done in Ethiopia on women's intention to use long acting and permanent contraceptive methods which revealed that past users of contraception were more likely to have intention to use family planning compared to those who did not use previously (Tegegne et al., 2022)

The paper shows that women who reported that they had ever given birth were less likely to have no intention to were less likely to intend to use family planning in future compared to those who had never given birth. Intention to use family planning is enhanced with the number of children that a woman has ever given birth. In selected high fertility countries of SSA, women who had more children were more likely than their counterparts who had never given birth to intend to use contraception (Negash et al., 2023). A study conducted in Ethiopia reported that Women with a higher number of children showed more tendencies to use contraceptive methods (Gilano & Hailegebreal, 2021).

Pregnancy termination was found to be associated with non-intention to use family planning in future. Women who had ever had a terminated pregnancy were almost 1.4 times likely to have no intention to use family planning compared to their counterparts who had never had a terminated pregnancy. The findings of this study are partly in disagreement with those of a study that examined reproductive age women's intentions to use family planning in selected high fertility SSA countries that also reported that women who had ever terminated a pregnancy had a 1.13

times higher likelihood of intending to use contraception than their counterparts (Negash et al., 2023).

This study relied on nationally representative study that were collected from the major regions in Uganda. The data are reliable as they were collected by a national reputable organization that conducts large surveys and censuses. However, like other cross sectional studies, the study cannot determine a causal inference about non-intention to use family planning in future. The study was only limited to assessing associations between selected factors and non-intention to use family planning.

Conclusion and policy implications

The paper finds that although majority of the young women in Uganda had ever had sex with 38% being sexually active in the 4 weeks preceding the survey; 60% desired to have 3-4 children, 28% desired at least 5 children; 1 in 4 of these young women reported have no intention to use family planning in future. This has implications on future fertility as well as the health of the mothers and their children. The study has further highlighted the importance of family size preference and sexual and reproductive behaviors on the future demand for family planning which is critical for sustainable realization of the demographic dividend. Investment in young people's sexual and reproductive health will lead to better maternal health in future and also accelerate reduction in fertility. Efforts geared towards sexual and reproductive health education among young people of various religious and cultural groups but most especially Muslim and Pentecostal groups need to be strengthened such that in future, women and their children, families and society can have better health.

Government efforts to increase in enrollment in secondary schools by both boys and girls are highly appreciated but there is need to focus on retention of the girl child in secondary school as previous studies have documented high secondary school dropout rates by young girls.

References

- Abraha, T. H., Belay, H. S., & Welay, G. M. (2018). Intentions on contraception use and its associated factors among postpartum women in Aksum town, Tigray region, northern Ethiopia: A community-based cross-sectional study. *Reproductive Health, 15*(1), 1–8. <https://doi.org/10.1186/s12978-018-0632-2>
- Ahuja, M., Frimpong, E., Okoro, J., Wani, R., & Armel, S. (2020). Risk and protective factors for intention of contraception use among women in Ghana. *Health Psychology Open, 7*(2).

- <https://doi.org/10.1177/2055102920975975>
- Alenezi, G. G., & Haridi, H. K. (2021). Awareness and use of family planning methods among women in Northern Saudi Arabia. *Middle East Fertility Society Journal*, 26(1). <https://doi.org/10.1186/s43043-021-00053-8>
- Andi, J. R., Wamala, R., Ocaya, B., & Kabagenyi, A. (2014). Modern contraceptive use among women in Uganda: An analysis of trend and patterns (1995-2011). *Etude de La Population Africaine*, 28(2). <https://doi.org/10.11564/28-0-553>
- Anita, P., Nzabona, A., & Tuyiragize, R. (2020). Determinants of female sterilization method uptake among women of reproductive age group in Uganda. *Contraception and Reproductive Medicine*, 5(1), 1–10. <https://doi.org/10.1186/s40834-020-00131-8>
- Bongaarts, J. (2011). Can Family Planning Programs Reduce High Desired Family Size in Sub-Saharan Africa? *International Perspectives on Sexual and Reproductive Health*, 37(4), 209–216. <https://doi.org/10.1363/3720911>
- Bongaarts, J., & Hodgson, D. (2022). *Fertility Transition in the Developing World*. Springer International Publishing. <https://doi.org/10.1007/978-3-031-11840-1>
- Gahungu, J., Vahdaninia, M., & Regmi, P. R. (2021). The unmet needs for modern family planning methods among postpartum women in Sub-Saharan Africa: a systematic review of the literature. *Reproductive Health*, 18(1), 1–15. <https://doi.org/10.1186/s12978-021-01089-9>
- Gebeyehu, N. A., Lake, E. A., Gelaw, K. A., & Azeze, G. A. (2020). The Intention on Modern Contraceptive Use and Associated Factors among Postpartum Women in Public Health Institutions of Sodo Town, Southern Ethiopia 2019: An Institutional-Based Cross-Sectional Study. *BioMed Research International*, 2020, 1–9. <https://doi.org/10.1155/2020/9815465>
- Gilano, G., & Hailegebreal, S. (2021). Assessment of intention to use contraceptive methods with spatial distributions and associated factors among women in Ethiopia: evidence from EDHS 2016. *Archives of Public Health*, 79(1), 1–13. <https://doi.org/10.1186/s13690-021-00631-2>
- Goodkind, D., Lollock, L., Choi, Y., McDevitt, T., & West, L. (2018). The demographic impact and development benefits of meeting demand for family planning with modern contraceptive methods. *Global Health Action*, 11(1). <https://doi.org/10.1080/16549716.2018.1423861>
- Kabagenyi, A., Jennings, L., Reid, A., Nalwadda, G., Ntozi, J., & Atuyambe, L. (2014). Barriers to male involvement in contraceptive uptake and reproductive health services: a qualitative study of men and women's perceptions in two rural districts in Uganda. *Reproductive Health*, 11(1), 21. <https://doi.org/10.1186/1742-4755-11-21>
- Kabagenyi, A., Reid, A., Rutaremwa, G., Atuyambe, L. M., & Ntozi, J. P. M. (2015). Has Uganda experienced any stalled fertility transitions? Reflecting on the last four decades (1973–2011). *Fertility Research and Practice*, 1(1), 14. <https://doi.org/10.1186/s40738-015-0006-1>
- Karra, M., Maggio, D., Guo, M., Ngwira, B., & Canning, D. (2022). The causal effect of a family planning intervention on women's contraceptive use and birth spacing. *Proceedings of the National Academy of Sciences of the United States of America*, 119(22), 1–7. <https://doi.org/10.1073/pnas.2200279119>
- Kayizzi-Mugerwa, S. (2019). Youth in Africa : Between Marginalisation and Demographic Dividend Youth in Africa : Between Marginalisation and Demographic Dividend. *Southern African Journal of Policy and Development*, 4(2), 14–25.

- Kraft, J. M., Serbanescu, F., Schmitz, M. M., Mwanshemele, Y., Ruiz C., A. G., Maro, G., & Chaote, P. (2022). Factors Associated with Contraceptive Use in Sub-Saharan Africa. *Journal of Women's Health, 31*(3), 447–457. <https://doi.org/10.1089/jwh.2020.8984>
- Liu, D. H., & Raftery, A. E. (2020). How Do Education and Family Planning Accelerate Fertility Decline? *Population and Development Review, 46*(3), 409–441. <https://doi.org/10.1111/padr.12347>
- Lutz, W., Crespo Cuaresma, J., Kebede, E., Prskawetz, A., Sanderson, W. C., & Striessnig, E. (2019). Education rather than age structure brings demographic dividend. *Proceedings of the National Academy of Sciences, 116*(26), 12798–12803. <https://doi.org/10.1073/pnas.1820362116>
- Makumbi, F. E., Nabukeera, S., Tumwesigye, N. M., Namanda, C., Atuyambe, L., Mukose, A., Ssali, S., Ssenyonga, R., Tweheyo, R., Gidudu, A., Sekimpi, C., Hashim, C. V., Nicholson, M., & Ddungu, P. (2023). Socio-economic and education related inequities in use of modern contraceptive in seven sub-regions in Uganda. *BMC Health Services Research, 23*(1), 201. <https://doi.org/10.1186/s12913-023-09150-y>
- Murphy, E. (2004). Diffusion of innovations: Family planning in developing countries. *Journal of Health Communication, 9*(sup1), 123–129. <https://doi.org/10.1080/10810730490271566>
- Namasivayam, A., Lovell, S., Namutamba, S., & Schluter, P. J. (2020). Predictors of modern contraceptive use among women and men in Uganda: A population-level analysis. *BMJ Open, 10*(2), 1–11. <https://doi.org/10.1136/bmjopen-2019-034675>
- Ndugga, P. (2019). Examining the Mismatch between Fertility Desire and Contraceptive Behaviour in the Extended Postpartum Period in Uganda. In *University of Southampton Research Repository* (Issue 1). University of Southampton.
- Negash, W. D., Eshetu, H. B., & Asmamaw, D. B. (2023). Intention to use contraceptives and its correlates among reproductive age women in selected high fertility sub-saharan Africa countries: a multilevel mixed effects analysis. *BMC Public Health, 23*(1), 257. <https://doi.org/10.1186/s12889-023-15187-9>
- Otim, J. (2020). Contraceptive nonuse among women in Uganda: a comparative assessment of predictors across regions. *BMC Women's Health, 20*(1), 1–14. <https://doi.org/10.1186/s12905-020-01148-6>
- Pattnaik, A., Mohan, D., Tsui, A., Chipokosa, S., Katengeza, H., Ndawala, J., & Marx, M. A. (2021). The aggregate effect of implementation strength of family planning programs on modern contraceptive use at the health systems level in rural Malawi. *PLOS ONE, 16*(11), e0232504. <https://doi.org/10.1371/journal.pone.0232504>
- Rusatira, J. C., Cardona, C., Martinez-Baack, M., Rimon, J. G., & Ahmed, S. (2023). Development of the Demographic Dividend Effort Index, a novel tool to measure existing efforts to create a favourable environment to harness a demographic dividend: results from an experts' survey from six sub-Saharan African countries. *BMJ Open, 13*(3), e059937. <https://doi.org/10.1136/bmjopen-2021-059937>
- Sarnak, D., Anglewicz, P., & Ahmed, S. (2023). Unmet need and intention to use as predictors of adoption of contraception in 10 Performance Monitoring for Action geographies. *SSM - Population Health, 22*, 101365. <https://doi.org/10.1016/j.ssmph.2023.101365>
- Tegegne, B. D., Belete, M. A., & Deressa, J. T. (2022). Women's intention to use long acting and permanent contraceptive methods and associated factors among family planning users in Addis Ababa, Ethiopia: A Cross sectional study. *African Journal of Reproductive Health, 26*(4), 22–31. <https://doi.org/10.29063/ajrh2022/v26i4.3>

- Tetui, M., Baroudi, M., Ssekamatte, T., Birabwa, C., Kibira, S. P., Atuyambe, L., Delamou, A., & Makumbi, F. E. (2021). Total Demand, Use and Unmet Need for Modern Contraceptives Among Women Living in Informal Settlements in Kira Municipality, Wakiso District, Uganda. Implications for Urban Health. *Frontiers in Global Women's Health*, 2(August). <https://doi.org/10.3389/fgwh.2021.655413>
- UBOS, & ICF. (2018). *Uganda Demographic and Health Survey 2016* (Issue August).
- UBOS, & ICF International Inc. (2012). Uganda Demographic and Health Survey 2011. In *UBOS and ICF International Inc.*
- Wamala, R., Kabagenyi, A., & Kasasa, S. (2017). Predictors of Time-to-Contraceptive Use from Resumption of Sexual Intercourse after Birth among Women in Uganda. *International Journal of Population Research*, 2017, 1–12. <https://doi.org/10.1155/2017/3875452>