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Predictors of intention to use contraceptives among married and cohabiting women in Ghana: A cross-sectional study

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Abstract

Background Contraceptive use is a cost-effective intervention for reducing unintended pregnancies and sexually transmitted infections and their negative consequences. It is vital to increase contraceptive use among women to improve their reproductive health outcomes. This study examines the factors associated with contraceptive use intention among married and cohabiting women in Ghana.

Methods We analysed data from the 2022 Ghana Demographic and Health Survey. A total of 5,846 married and cohabiting women were included in the study. A multivariable binary logistic regression analysis was used to examine the factors associated with the intention to use contraceptives. The regression results were presented using an adjusted odds ratio (aOR) with 95% confidence intervals (CIs).

Results The proportion of intention to use contraceptives among married and cohabiting women was 33.0% [31.1, 35.0]. Compared to women living in the Greater Accra, those living in Central (aOR = 1.69; 95% CI = 1.06, 2.69), Bono East (aOR = 1.63; 95% CI = 1.02, 2.61), Oti (aOR = 2.68; 95% CI = 1.63, 4.40), and Upper West Regions (aOR = 4.48; 95% CI = 2.68, 7.48) were more likely to have contraceptive use intention. The odds of intention to use contraceptives increased with increasing parity, with the highest odds among women with four or more births (aOR = 2.41; 95% CI: 1.66, 3.51). The intention to use contraceptives decreased with increasing age, with the lowest odds among those aged 45–49 (aOR = 0.04, 95% CI = 0.25, 0.07). Women with no education (aOR = 0.42, 95% CI = 0.28, 0.63), primary education (aOR = 0.56, 95% CI = 0.37, 0.86), and secondary education (aOR = 0.65, 95% CI = 0.45, 0.92) had lower odds of intention to use contraceptives compared to those with higher education. Married women (aOR = 0.61, 95% CI = 0.49, 0.76) had lower odds of contraceptive use intention relative to cohabiting women.

Conclusion Our study revealed a low contraceptive use intention among women, signalling a barrier in access to family planning services in the country. Various factors, including age, region, marital status, parity, and educational level play a role in determining the intention to use contraceptives. These findings underscore the importance of implementing policy changes and enhancing existing programmes to improve the availability of information, contraceptive education, and family planning services, especially for younger women, those living in rural areas, and those with lower levels of education. Additionally, it is vital to address socio-cultural barriers and empower women to address the factors associated with intention to use contraceptives.

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Introduction

Intention to use contraceptive methods is important for understanding a woman's future needs and increasing the chances of using contraception [1–3]. Evidence has shown that intentions predict actions, and in many interventions aimed at changing behaviour, including those focusing on contraceptive use, behavioural intentions are used to evaluate programme effectiveness [4, 5]. However, there is limited evidence regarding intentions to use modern contraception in high-fertility sub-Saharan African countries [6–14].

Contraception plays a crucial role in reducing maternal morbidity and mortality by preventing unplanned pregnancies [15, 16]. This aligns with the Sustainable Development Goal (SDG) 3, which aims to ensure good health and wellbeing for all individuals, regardless of age [16–18]. Out of a total of 1.9 billion global population of women aged 15–49, approximately 1.1 billion needed access to family planning services [19]. These figures reveal two groups of women: those who are currently using contraceptives, with 842 million using modern methods and 80 million using traditional methods, and those who desire to avoid pregnancy but are not using any form of contraception, totalling 190 million women [19]. In 2019, the proportion of women whose family planning needs were met by modern methods, as measured by SDG indicator 3.7.1, was 76% [19].

Ghana's population has consistently experienced significant growth [20, 21]. In 1969, the Government of Ghana implemented the National Population Policy to effectively control the country's population, address potential limitations on future economic development, and promote economic stability [21]. This policy was revised in 1994 to reduce the country's total fertility rate to three by 2020 [22]. One strategy to help achieve this goal was ensuring that the contraceptive use rate reached 50% by 2020 [22, 23]. However, evidence of the success of this achievement is scarce.

Evidence from the 2022 Ghana Demographic and Health Survey (GDHS) report showed that 36% of married women aged 15–49 use family planning methods. Of this proportion, 28% choose modern methods while 9% opt for traditional methods. The most commonly used modern contraceptive methods among married women are implants and injectables, each representing approximately 8% [24]. Compared to several other sub-Saharan African countries, the prevalence of contraceptive use in Ghana is extremely low [25, 26]. However, the rate of modern contraceptive use among women of reproductive age is approximately one-third, which is lower than the global prevalence of 63% [24].

Previous studies [13, 27–36] have identified various factors that influence contraceptive usage. These factors include knowledge about contraceptive methods, sociodemographic characteristics (such as age, education, religion, income, marital status, and employment), parity, access to reproductive health information, frequency of antenatal visits, history of terminated pregnancies, previous HIV testing, place of residence (rural or urban), literacy, sexual activity, and communication and agreement with one's partner [13, 15, 19–29].

The theory of planned behaviour (TPB) posits that the strength of perceived behavioural intentions plays a crucial role in explaining differences in behavioural intentions, which in turn are influenced by three tenets: attitudes, subjective norms, and behavioural control [37]. An individual's attitude, subjective norms, and perceived behavioural control can affect the person's intention to adopt and practice a new behaviour or not [37]. In this study, women's attitudes and subjective norms concerning contraceptives coupled with their perceived control on contraceptives is likely to influence their intention to use any method of contraception. Either of the three tenets can influence the intention to use and subsequently adopt a new behaviour such as contraceptive use. However, attitude towards a behaviour can have an effect on a person's behavioural control towards contraceptives and vice versa. Also, perceived behavioural control can directly influence an individual's adoption of a new behaviour. For the intention to use contraception, elements such as self-efficacy, barriers, and facilitators can either hinder or encourage the desired action [38].

Previous studies conducted in Ghana [12, 13, 30, 35, 39, 40] have investigated contraceptive use intentions and the factors that affect its usage. Findings from these studies indicate that factors such as age, level of education, religion, employment status, pregnancy status, male partner approval, previous contraceptive use experience, desire to space children, discussions about family planning during antenatal care, and behavioral control are associated with the intention to use contraceptives. These factors can act as both barriers and facilitators to contraceptive use intention, enhancing women's self-efficacy in using contraceptives. However, there is a notable gap in research specifically focused on the factors influencing contraceptive use intentions among married and cohabiting women. This demographic typically engages in sexual activity more frequently than individuals who are not in sexual relationships, yet their unique circumstances and needs have been underexplored in the existing literature. By concentrating on married and cohabiting individuals, this study aims to establish a baseline for comparison

with other groups, such as never married women. Furthermore, while the TPB has been widely applied in understanding contraceptive behaviours, the nuances of how these factors interact within the context of marriage and cohabitation remain inadequately addressed. This study seeks to fill this empirical gap by examining the specific factors that influence the intention to use contraceptives among married and cohabiting women in Ghana. Understanding the factors that influence the intention of married and cohabiting women in Ghana to use contraceptives is crucial for developing targeted interventions. Our study provides practical insights for policymakers and healthcare providers aimed at promoting contraceptive uptake and reducing unmet family planning needs. Also, this study not only enriches the existing body of knowledge but also highlights the importance of context-specific research in addressing reproductive health challenges.

Methods

Data source and design

We used data from the 2022 GDHS [41]. The DHS is a nationally representative survey implemented to gather data on health and demographic issues affecting women, men, and children in over 90 low-and middle-income countries, with over 350 surveys conducted in these countries [42]. The 2022 GDHS is Ghana's eighth standard DHS since the survey's first administration in 1988 [24]. A cross-sectional design was adopted for the GDHS, and the respondents were sampled using a multistage sampling method, with the detailed sampling methodology highlighted in the literature [24]. A pretested and validated structured questionnaire was used to collect data from the respondents [42]. The GDHS study included 15,014 women aged 15 to 49. In the survey, 8,811 women were married and cohabiting. This study included 5,846 married and cohabiting women with complete observations on variables of interest in the final analysis. The study followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines [43].

Variables

Outcome variable

The outcome variable was the intention to use contraceptives. This variable quantifies the degree to which women who were not using contraceptives intend to use any modern method in the future. Intention to use contraceptives was assessed using 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'. Women whose response option was "intend to use" was coded as "1", otherwise coded as "0". Previous studies [27–29] that utilised the DHS datasets employed the same coding.

Explanatory variables

Fourteen [14] explanatory variables were included in the study. These included the age of the women, place of residence, region, religion, educational level of women and their partners, wealth index, marital status, employment status of women and their partners, parity, and exposure to media (newspapers/magazines, radio, and television). These variables were selected based on their association with the intention to use contraceptives from previous studies [27–29] and their availability in the GDHS. Table 1 shows the coding of the variables included in the study.

Statistical analyses

We analysed the data using Statistical Package for Social Sciences (SPSS) version 28. We utilised the complex sampling command in SPSS to account for weighting and the complex sampling design in the GDHS. Percentages were employed to present the proportion of intention to use contraceptives among the women and how they were distributed across the explanatory variables. A chi-square test of independence was conducted to determine the variables significantly associated with the intention to use contraceptives at a significance level of $p<0.05$. The variance inflation factor (VIF) was employed to test for evidence of collinearity among the variables under study. The results indicated that the highest and lowest VIF were 3.03 and 1.03, respectively, suggesting that there was no strong evidence of collinearity among the variables. Subsequently, a binary logistic regression analysis was performed to examine the factors associated with the intention to use contraceptives. The results were presented using adjusted odds ratio (aOR) with their respective 95% confidence intervals (CI). Statistical significance was set at $p<0.05$.

Results

Proportion and distribution of intention to use contraceptives

Table 2 shows results of the proportion of intention to use contraceptives and its distribution across the background characteristics of women in Ghana. The results showed that 33.0% [31.1, 35.0] of married and cohabiting women intended to use contraceptives. Women aged 25–29 had the highest intention to use contraceptives (24.1%), while those aged 45–49 (2.8%) had the least intention to use contraceptives. The proportion of intention to use contraceptives was highest among women living in rural areas (54.4%), those with secondary level education (51.6%), those who were married (67.2%), and those who were Christians (70.2%). Women with four or

Table 1 Coding scheme for outcome and explanatory variables

Variable	Survey question	Original response options	Recoded
Outcome Variable (Intention to use Contraceptives)			
Intention to use Contraceptives	*'Do you intend to use a method to delay or avoid pregnancy at any time in the future?'.*	2 = Use later 4 = Unsure about use 5 = Does not intend to use'	0 = Unsure about use and does not intend to use (Does not intend to use) 1 = Use later (intend to use)
Independent variables			
Women's age	Women's age?	1 = 15–19 2 = 20–24 3 = 25–29 4 = 30–34 5 = 35–39 6 = 40–44 7 = 45–49	1 = 15–19 2 = 20–24 3 = 25–29 4 = 30–34 5 = 35–39 6 = 40–44 7 = 45–49
Place of residence	Place of residence	1 = Urban; 2 = Rural	1 = Urban; 2 = Rural
Region	Region	Western Central Greater Accra Volta Eastern Ashanti Western North Ahafo Bono Bono East Oti Northern Savannah North East Upper East Upper West	1 = Western 2 = Central 3 = Greater Accra 4 = Volta 5 = Eastern 6 = Ashanti 7 = Western North 8 = Ahafo 9 = Bono 10 = Bono East 11 = Oti 12 = Northern 13 = Savannah 14 = North East 15 = Upper East 16 = Upper West
Women's educational level	Highest level of education	1 = No education 2 = Primary 3 = Secondary 4 = Higher	1 = No education 2 = Primary 3 = Secondary 4 = Higher
Religion	Religion	1 = Catholic 2 = Anglican 3 = Methodist 4 = Presbyterian 5 = Pentecostal/charismatic 6 = Other Christian 7 = Islam 8 = Traditional/spiritualist 95 = No religion 96 = Other	1–6 = Christian 7 = Islam 8 = traditional/spiritualist 95/96 = No religion
Wealth index	Wealth index	1 = Poorest 2 = Poorer 3 = Middle 4 = Richer 5 = Richest	1 = Poorest 2 = Poorer 3 = Middle 4 = Richer 5 = Richest
Marital status	Marital status	1 = Married 2 = Cohabiting	1 = Married 2 = Cohabiting
Women's occupational status	Currently working?	1 = No 2 = Yes	1 = Unemployed and 2 = Employed
Frequency of reading newspaper or magazine	Frequency of reading newspaper or magazine	1 = Not at all 2 = Less than once a week 3 = At least once a week	1 = Not at all 2 = Less than once a week 3 = At least once a week

Table 1 (continued)

Variable	Survey question	Original response options	Recoded
Frequency of listening to radio	Frequency of listening to radio	1 = Not at all 2 = Less than once a week 3 = At least once a week	1 = Not at all 2 = Less than once a week 3 = At least once a week
Frequency of watching television	Frequency of watching television	1 = Not at all 2 = Less than once a week 3 = At least once a week	1 = Not at all 2 = Less than once a week 3 = At least once a week
Parity	Total children ever born	0-13	0 = No birth 1 = One birth 2 = Two birth 3 = Three births 4 = Four or more births
Husband/partner's educational level	Husband/partner's highest educational level	1 = No education 2 = Primary 3 = Secondary 4 = Higher	1 = No education 2 = Primary 3 = Secondary 4 = Higher
Husband/partner's occupational status	Husband/partner's occupational status	1 = No 2 = Yes	1 = Unemployed 2 = Employed

more births had the highest intention to use contraceptives (34.2%), while those with no birth (9.5%) had the least intention to use contraceptives. Except for women's occupational status, frequency of listening to the radio, and frequency of watching television, all the remaining explanatory variables were significantly associated with the intention to use contraceptives at $p<0.05$.

Factors associated with the intention to use contraceptives among women in Ghana

Table 3 shows the results of the factors associated with the intention to use contraceptives. Compared to women living in the Greater Accra, those living in Central (aOR=1.69; 95% CI=1.06, 2.69), Bono East (aOR=1.63; 95% CI=1.02, 2.61), Oti (aOR=2.68; 95% CI=1.63, 4.40), and Upper West (aOR=4.48; 95% CI=2.68, 7.48) Regions were more likely to have intention to use contraceptives. The odds of intention to use contraceptives increased as parity increases, with the highest odds among women with four or more births (aOR=2.41; 95% CI: 1.66, 3.51). The intention to use contraceptives decreased with increasing age, with the lowest odds among women aged 45–49 (aOR=0.04, 95% CI=0.25, 0.07). Women with no education (aOR=0.42, 95% CI=0.28, 0.63), primary education (aOR=0.56, 95% CI=0.37, 0.86), and secondary education (aOR=0.65, 95% CI=0.45, 0.92) had lower odds of intention to use contraceptives than those with higher education. Married women (aOR=0.61, 95% CI=0.49, 0.76) had lower odds of contraceptive use intention than cohabiting women.

Discussion

Our study examined the intention to use contraceptives among married and cohabiting women in Ghana, as well as the factors associated with that intention. Women's age, educational level, region of residence, parity, and marital status were the factors significantly associated with the intention to use contraceptives in Ghana. These factors identified in our study can be barriers and facilitators or can enhance women's self-efficacy in contraceptive intention as explained in the [37].

About one-third (33.0%) of married and cohabiting women intended to use contraceptives in the future in our study. Compared to other studies, the intention to use contraceptives among married and cohabiting women in Ghana was lower. For example, in Rwanda, Malawi, Ethiopia, and Sierra Leone, the intention ranged from 46 to 71% [27]. Additionally, a study among secondary school students in Ghana reported a 69% intention [35]. A study conducted among women in rural Ghana found a 70% intention to use a family planning method [30]. The lower intention in Ghana may be attributed to a lack of accurate and comprehensive knowledge about contraceptive methods, their effectiveness, and potential side effects. A lack of open communication, disapproval, or pressure from partners may also influence it. Furthermore, socio-cultural norms and beliefs that prioritise high fertility discourage family planning and stigmatise contraceptive use [36].

The likelihood of contraceptive use intention decreased with increasing age, implying that women's increasing age can serve as a barrier to future use of contraceptives. This was particularly evident among women aged 45–49, who showed the lowest intention to use contraceptives. This finding is consistent with results from studies conducted in Malawi, Nigeria, and other sub-Saharan African countries, which found that older women were less likely to have contraceptive use intention [27, 28, 44]. As women approach menopause, their fertility declines significantly, reducing the need for contraception [28, 44]. Older women may also experience health difficulties or adverse reactions to previous contraceptive methods, leading to a

Table 2 Bivariate analysis of intention to use contraceptives ($n = 5846$)

Variables	Category	Intend to use contraceptives		*P*-value
		No (67.0%) *n* (%)	Yes (33.0%) *n* (%)	
Age (years)				< 0.001
	15–19	97 (3.8)	100 (1.8)	
	20–24	378 (17.2)	415 (9.6)	
	25–29	475 (24.1)	571 (14.3)	
	30–34	470 (23.9)	700 (18.5)	
	35–39	362 (19.1)	715 (19.0)	
	40–44	208 (9.1)	661 (18.4)	
	45–49	58 (2.8)	636 (18.4)	
Place of residence				< 0.001
	Urban	797 (45.6)	1714 (53.9)	
	Rural	1251 (54.4)	2084 (46.1)	
Region				< 0.001
	Western	80 (5.5)	141 (5.0)	
	Central	91 (9.0)	138 (7.0)	
	Greater Accra	78 (11.4)	250 (16.6)	
	Volta	111 (5.5)	117 (4.2)	
	Eastern	89 (7.4)	201 (8.0)	
	Ashanti	100 (15.0)	205 (15.3)	
	Western North	90 (2.9)	179 (2.6)	
	Ahafo	91 (1.9)	198 (2.0)	
	Bono	85 (3.3)	178 (3.4)	
	Bono East	152 (6.1)	278 (5.4)	
	Oti	187 (4.9)	180 (2.4)	
	Northern	185 (10.6)	489 (13.5)	
	Savannah	185 (3.2)	310 (3.2)	
	North East	196 (3.4)	407 (3.8)	
	Upper East	127 (4.6)	283 (5.6)	
	Upper West	201 (5.2)	184 (2.1)	
Women's Education Level				< 0.001
	No education	612 (22.4)	1536 (31.2)	
	Primary	361 (15.7)	596 (14.9)	
	Secondary	919 (51.6)	1426 (45.2)	
	Higher	156 (10.3)	267 (8.7)	
Religion				
	Christian	1269 (70.2)	2194 (66.1)	0.032
	Islam	654 (23.9)	1396 (28.2)	
	African traditionist	74 (3.9)	120 (3.1)	
	No religion or others	51 (2.1)	88 (2.6)	
Wealth index				0.017
	Poorest	673 (24.6)	1207 (22.3)	
	Poorer	503 (19.8)	813 (17.9)	
	Middle	360 (19.2)	641 (16.4)	
	Richer	287 (18.1)	602 (21.4)	
	Richest	225 (18.4)	535 (22.0)	
Marital status				< 0.001
	Married	1511 (67.2)	3160 (80.0)	
	Cohabiting	537 (32.8)	638 (20.0)	
Women's occupational status				0.320
	Unemployed	412 (18.5)	718 (17.0)	
	Employed	1636 (81.5)	3080 (83.0)	
Frequency of reading newspaper or magazine				0.049

Table 2 (continued)

Variables	Category	Intend to use contraceptives		*P*-value
		No (67.0%) *n* (%)	Yes (33.0%) *n* (%)	
	Not at all	1905 (91.1)	3603 (93.4)	
	Less than once a week	102 (6.6)	135 (4.5)	
	At least once a week	41 (2.3)	60 (2.2)	
Frequency of listening to radio				0.532
	Not at all	842 (35.2)	1621 (36.9)	
	Less than once a week	466 (23.5)	777 (21.9)	
	At least once a week	740 (41.2)	1400 (41.2)	
Frequency of watching television				0.476
	Not at all	734 (28.5)	1415 (29.2)	
	Less than once a week	283 (12.6)	550 (13.9)	
	At least once a week	1031 (58.9)	1833 (56.9)	
Parity				< 0.001
	No birth	178 (9.5)	324 (8.1)	
	One birth	394 (19.6)	600 (17.2)	
	Two births	406 (21.3)	604 (17.3)	
	Three births	334 (15.4)	609 (16.7)	
	Four or more births	736 (34.2)	1661 (40.7)	
Husband/partner's education level				0.005
	No education	604 (22.2)	1415 (27.7)	
	Primary	234 (9.6)	320 (8.0)	
	Secondary	941 (53.7)	1573 (50.0)	
	Higher	269 (14.4)	490 (14.4)	
Husband/partner's occupational status				0.005
	Unemployed	44 (1.5)	135 (2.8)	
	Employed	2004 (98.5)	3663 (97.2)	

decrease in their intention to use them. Additionally, outdated beliefs about the safety or efficacy of contraceptives may discourage older women from utilising them [44].

Our study found that married and cohabiting women in Central, Bono East, Oti, and Upper West Regions were more likely to have contraceptive use intentions compared to women in the Greater Accra Region. These regions have lower average wealth and education levels, which may contribute to a greater desire to limit family size due to financial strain and concerns about providing for children [45]. Additionally, these regions have fewer healthcare facilities and qualified professionals compared to regions such as Greater Accra, which could increase the perceived need for family planning methods to avoid unintended pregnancies [46].

Women's level of education was also associated with the intention to use contraceptives, with women who had no education being the least likely to intend to use contraceptives. This finding aligns with a previous study in sub-Saharan Africa [27]. Women with no education may have limited access to accurate information about contraceptive methods, effectiveness, and potential side effects, leading to fear, misconceptions, and hesitancy towards their use [27]. The financial limitations faced by women with no education may also make it difficult to afford the cost of contraceptives and associated healthcare services. Lower educational attainment can also contribute to lower self-esteem and limited belief in one's ability to make informed decisions about reproductive health, further discouraging contraceptive use.

Furthermore, our study found that married women had lower odds of contraceptive use compared to cohabiting women in Ghana, consistent with a previous study in sub-Saharan Africa [27]. This may be due to married women expressing a stronger desire for larger families, reflecting cultural expectations or personal preferences [47]. In married couples, the husband's decision-making power regarding family planning may play a role, potentially opposing or discouraging contraceptive use based on personal beliefs or cultural norms [48]. Additionally, financial dependence on husbands may create challenges for married women in accessing and affording contraceptives without their approval or support [48]. In contrast, cohabiting women may face fewer barriers in accessing family planning services due to less social stigma compared to married women seeking services outside of marriage [47].

The findings of our study showed an association between parity and the intention to use contraceptives. Specifically, married and cohabiting women with four

Table 3 Factors associated with the intention to use contraceptives among women in Ghana

Variables	Category	Intention to use contraceptives
		aOR 95% CI
Women's age (years)		
	15–19	**Ref.**
	20–24	0.75 [0.49, 1.15]
	25–29	0.66 [0.42, 1.05]
	30–34	0.43*** [0.27, 0.68]
	35–39	0.30*** [0.18, 0.50]
	40–44	0.14*** [0.85, 0.23]
	45–49	0.04*** [0.25, 0.07]
Place of residence		
	Urban	**Ref.**
	Rural	1.19 [0.94, 1.51]
Region		
	Western	1.43 [0.84, 2.43]
	Central	1.69*** [1.06, 2.69]
	Greater Accra	**Ref.**
	Volta	1.69 [0.98, 2.90]
	Eastern	1.17 [0.76, 1.78]
	Ashanti	1.31 [0.79, 2.17]
	Western North	1.31 [0.79, 2.17]
	Ahafo	1.19 [0.73, 1.95]
	Bono	1.21 [0.74, 1.97]
	Bono East	1.63*** [1.02, 2.61]
	Oti	2.68*** [1.63, 4.40]
	Northern	1.24 [0.73, 2.09]
	Savannah	1.55 [0.85, 2.80]
	North East	1.33 [0.79, 2.26]
	Upper East	1.00 [0.59, 1.71]
	Upper West	4.48*** [2.68, 7.48]
Women's Education Level		
	No education	0.42*** [0.28, 0.63]
	Primary	0.56*** [0.37, 0.86]
	Secondary	0.65** [0.45, 0.92]
	Higher	**Ref.**
Religion		
	Christian	**Ref.**
	Islam	0.89 [0.69, 1.15]
	African traditionist	1.38 [0.90, 2.12]
	No religion or others	0.90 [0.51, 1.58]
Wealth index		
	Poorest	1.29 [0.87, 1.92]
	Poorer	1.16 [0.81, 1.67]
	Middle	1.25 [0.90, 1.72]
	Richer	0.94 [0.69, 1.28]
	Richest	**Ref.**
Marital status		
	Married	0.61*** [0.49, 0.76]
	Cohabiting	**Ref.**
Women's occupational status		
	Unemployed	**Ref.**
	Employed	1.18 [0.96, 1.47]
Frequency of reading newspaper or magazine		
	Not at all	**Ref.**

Table 3 (continued)

Variables	Category	Intention to use contraceptives
		aOR 95% CI
	Less than once a week	1.27 [0.86, 1.88]
	At least once a week	1.17 [0.70, 1.97]
Frequency of listening to radio		
	Not at all	**Ref.**
	Less than once a week	1.26 [1.03, 1.55]
	At least once a week	1.16 [0.96, 1.41]
Frequency of watching television		
	Not at all	**Ref.**
	Less than once a week	1.01 [0.76, 1.32]
	At least once a week	1.13 [0.90, 1.41]
Parity		
	No birth	**Ref.**
	One birth	1.07 [0.77, 1.48]
	Two births	1.47*** [1.02, 2.12]
	Three births	1.57*** [1.11, 2.21]
	Four or more births	2.41*** [1.66, 3.51]
Husband/partner's education level		
	No education	**Ref.**
	Primary	1.12 [0.85, 1.48]
	Secondary and above	1.10 [0.87, 1.39]
	Higher	1.12 [0.79, 1.59]
Husband/partner's occupational status		
	Unemployed	**Ref.**
	Employed	1.53 [0.96, 2.43]

aOR: Adjusted Odds Ratio; CI: Confidence Interval; Ref: Reference Category; * $p<0.05$, ** $p<$; 0.01, *** $p<$; 0.001

or more children were more likely to use contraceptives compared to women with no previous births. These findings align with a previous study conducted in sub-Saharan Africa [27]. Women with four or more children may have already fulfilled their desired family size. As a result, they may turn to contraception to prevent further pregnancies. Additionally, having multiple children likely means more frequent contact with healthcare professionals. This can increase access to information and education regarding family planning options.

Policy and practice implications

Based on our findings, the government of Ghana and partner organisations should implement programmes to educate women about contraceptive methods, their effectiveness, and how to access them. These programmes could include targeted campaigns in specific regions, partnerships with community leaders and religious groups, and integration of information into school curriculums. It is also important to understand the reasons behind lower contraceptive intention among younger women and develop policies and programs tailored to their specific needs and concerns. This may involve creating youth-friendly health services, addressing misinformation, and promoting peer education initiatives. Additionally, allocating sufficient resources to expand access to affordable, high-quality family planning services nationwide is crucial, particularly in predominantly rural areas. Equipping healthcare providers with the knowledge and skills to effectively counsel women on contraceptive options, address their concerns, and provide accurate information is essential. Lastly, it is important to ensure that women have agency over their reproductive health and are free from coercion or pressure regarding contraceptive use. This involves promoting informed consent and respecting individual choices.

Strengths and limitations

Our study's major strength lies in the use of the recent 2022 GDHS to examine the factors associated with intention to use contraceptives among married and cohabiting women. This data is nationally representative, including information from a large and diverse sample of married and cohabiting women across Ghana. However, this study does have some limitations. Firstly, the GDHS is a cross-sectional survey, so we cannot draw causal inferences about the relationship between variables. Additionally, the GDHS relies on self-reported data, which is susceptible to recall bias and misreporting. This can potentially impact our findings' accuracy, especially regarding sensitive topics like contraception. Furthermore, the large size of the dataset and the risk of false-positive errors during

hypothesis testing are major limitations. Therefore, caution is required when interpreting the data.

Conclusion

The results of our study indicate that there is a significant unmet need for family planning services in Ghana, as married and cohabiting women have shown a low intention to use contraceptives. We also found that age, region, marital status, parity, and educational level are all factors associated with contraceptive use intention. This suggests that interventions should be tailored to specific population groups based on these factors. Further research is necessary to understand the reasons behind these associations and to develop targeted interventions that address the unique needs and barriers faced by different groups of women. These findings underscore the importance of policy changes and program improvements to enhance access to information, education, and family planning services, especially for younger women, those in rural areas, and those with lower levels of education. Additionally, it is crucial to address socio-cultural barriers and empower women to achieve SDG 3.

Abbreviations

aOR	Adjusted Odds Ratio
CI	Confidence Interval
GDHS	Ghana Demographic and Health Survey
SDG	Sustainable Development Goal
STROBE	Strengthening the Reporting of Observational Studies in Epidemiology
TPB	Theory of Planned Behvaiour
VIF	Variance Inflation Factor

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Author contributions

AO conceived the study, did the analysis, interpreted the results, and wrote the initial draft of the manuscript. RGA, CB, and BOA contributed to interpreting results and writing the initial draft. All authors read and approved the final manuscript.

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Data availability

The dataset used can be accessed via the MEASURE DHS repository https://dhsprogram.com/data/dataset/Ghana_Standard-DHS_2022.cfm?flag=1.

Declarations

Ethics approval and consent to participate

Ethical clearance was not sought for the current study since the GDHS is available in the public domain. The dataset was obtained from MEASURE DHS after registration and approval. More information about DHS data usage and ethical standards can be found at http://goo.gl/ny8T6X.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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