Assessing Unmet Need for Contraception Between Never Married, Married and Cohabiting Women in Ghana

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Abstract

This study investigated the level of unmet need for contraception between never married, married, and cohabiting women in Ghana. Also examined were the differences in unmet need for contraception for these women by their characteristics, using the 2022 Ghana Demographic and Health Survey data. The sample size was 13,472 participants, made up of 5,268 never married, 6,008 married, and 2,196 cohabiting, women. A quantitative approach using SPSS (V20) was employed for the data analyses, which consisted of bivariate and multivariate analyses. The results revealed that the total unmet need for contraception was mainly made up of spacing for all women irrespective of their marital statuses. The characteristics of the women — such as age, education, occupation, wealth index, religion, and region of residence — were significantly related to unmet need for contraception. Hence, the study concluded that all women — irrespective of their marital statuses — have a higher need for spacing than limiting births. Thus, policies aimed at addressing the increase in uptake of particularly modern contraceptives should be inclusive of all women. This is expected to reduce the unmet need for contraception in the long-run. Also, reducing unmet need for contraception in Ghana requires strategies that empower women to align fertility intentions with consistent contraceptive use, thereby advancing reproductive autonomy and national family planning goals.

Keywords: *unmet need, never married women, married women, cohabiting women, Ghana*

Introduction

The term 'unmet need for contraception' was first coined in the 1970s to describe the discrepant behaviour of women who wanted to avoid pregnancy but were not using any contraceptives. At that time, questions on spacing were not available (Bradley et al., 2012). In the original definition, calendar data were used. Subsequently, since calendar data were not available in all countries, some revisions had to be made. In the revised definition, therefore, calendar was removed to enable standardisation across countries (ibid.).

The definition and measurement of unmet need for contraception have faced many criticisms. One of the issues raised is the heavy burden of data it imposes, and its reliance on women's stated fertility preferences and wantedness of a birth. It has therefore been proposed that a method that is free from biases, and

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is rather based on observable variables, among others, should be used (Karra, 2022). Others are of the view that a point prevalence measure is more appropriate by linking contraceptive behaviour to pregnancy exposure, and women's future contraceptive intentions (Moreau, 2019). For them, point prevalence can inform family planning service providers about the number of women with unmet need for contraception at a particular time and place. There are also others who are of the view that there is a need to include satisfaction in the measurement (Rominski & Stephenson, 2019). This is because the 'traditional' method of measurement assumes that women who are using a method do not have unmet need. However, they may not be satisfied with the method due to issues such as side effects.

In the 2022 Ghana Demographic and Health Survey (GDHS), unmet need for contraception was defined as follows:

> Unmet need for spacing included pregnant women whose pregnancy was mistimed, postpartum amenorrheic women whose last birth was mistimed, and fecund women who were neither pregnant nor postpartum amenorrheic and who were not using any method of family planning and said they wanted to wait two or more years for their next birth, were undecided about the timing of the next birth, or were undecided whether to have another child.

> Unmet need for limiting included pregnant women whose pregnancy was unwanted, postpartum amenorrheic women whose last birth was unwanted and fecund women who were neither pregnant nor postpartum amenorrheic and who were not using any method of family planning and who wanted no more children (GSS, 2023).

These definitions were used to estimate unmet need for spacing, unmet need for limiting and total unmet need for contraception. In this current study, these estimates were used.

The use of contraceptives has been considered worldwide as a means of regulating fertility. It helps to reduce unintended pregnancies that could result in unintended births, which in turn could also lead to unplanned health and socio-economic consequences. Contraceptive use also improves the reproductive rights of women, which generally improves their lives, that of children, and ultimately, that of families. It is in this regard that Target 3.7 of the Sustainable Development Goal (SDG) 3 seeks to ensure universal access to sexual and reproductive healthcare services, including family planning, information and education; and the integration of reproductive health into national strategies and programmes.

Some studies on the usage of contraceptives indicate that many people are aware of contraceptives, but few actually use any (Ukoji et al., 2022; Singh et al., 2016). This is in spite of the fact that women want to either space or limit their births. However, it must be noted that low usage or discontinuation of use may be attributed to women's desire for children (Maning et al., 2024).

Ghana was one of the first countries in sub-Saharan Africa to adopt a population policy in 1969. The aim of that policy was to reduce the birth rate because it was too high, and could impact negatively on future generations. Two decades after its implementation, it was realised that though the objectives of the policy were still relevant, there were other issues that had to be considered to achieve those goals (Government of Ghana, 1994a). Subsequently, several measures were put in place to achieve them. Key among them was the setting up of the National Population Council (NPC) to co-ordinate all population activities in the country (Government of Ghana, 1994b). To incorporate population issues into all planning activities, the NPC collaborated with the planning unit of the Kwame Nkrumah University of Science and Technology (KNUST) to prepare modules to facilitate the integration of population variables into the development planning process (Kwankye & Cofie, 2015).

Ghana has since then seen improvements in various reproductive health indicators over the past decades. These include the following: 93% of all healthcare facilities types offer at least some preventive and curative services for children under five, 96% of district hospitals offer abortion care, and 97% of government hospitals provide family planning services (GHS, 2023).

Furthermore, the government of Ghana has a National Health Insurance Scheme that covers some contraceptive services (MSI Reproductive choices, 2021). Also, together with its international partners, Ghana has implemented various programmes to increase the use of contraceptives and address unmet need for contraception. One of such programmes was the Family Planning 2020 (FP2020) initiative, which was aimed at expanding access to contraceptives and reducing unmet need for contraception (UNFPA, 2018).

However, the rate of contraceptive use among reproductive age women (15–49 years) remains low. According to the latest Ghana Demographic and Health Survey, only 36% of currently married women use any type of contraceptive. This same survey estimates unmet need for contraception at 23% among currently married women (Ghana Statistical Service, 2023). This figure suggests that there are some women who want to avoid or delay pregnancy, but are not using any method of contraception.

This study applied the theory of planned behaviour (TPB) by Ajzen (1991) to explain the behaviour of women with regards to contraceptive use. The theory states that an individual's intention to perform a behaviour is shaped by three key determinants: *attitudes, subjective norms*, and *perceived behavioural control*.

Attitudes refer to an individual's positive or negative feelings toward performing a specific behaviour. This is influenced by one's behavioural beliefs, which are the perceptions of the likely outcomes and consequences of that behaviour. *Subjective norms* are the perceived social pressure to engage in or abstain from a behaviour. This is determined by normative beliefs, or the perceived expectations of important social groups and individuals, like friends and family; and the individual's motivation to comply with those expectations. *Perceived*

behavioural control is an individual's perception of how easy or difficult it is to perform the behaviour. This is based on control beliefs—the perceived factors that may facilitate or hinder the behaviour—and the perceived power of those factors.

In the context of contraceptive use, attitudes reflect women's personal evaluations of family planning, including perceived health benefits or fear of side effects. Subjective norms relate to perceived social pressure from partners, family members, or religious communities; which are particularly influential in settings where reproductive behaviour is culturally regulated. Perceived behavioural control involves the extent to which women feel they can access and effectively use contraceptives, which is often shaped by the availability of services, financial constraints, and autonomy in decision-making.

Applying the TPB in this study makes it possible to examine how women's marital statuses influence their reproductive intentions and decisions regarding contraceptive use. This is relevant when comparing never married, married, and cohabiting women; as their social contexts and perceived control over reproductive decisions may differ significantly. While the TPB is a useful theory, it has faced some criticisms; such as the theory exclusively focusing on rational reasoning and excluding unconscious influences on behaviour (Sheeran, Gollwitzer & Bargh, 2013).

This current study is unique in the sense that most studies on unmet need for contraception have focused on only married women, probably because data on such women are readily available unlike that of women with other marital statuses. Therefore, this study fills that gap by comparing unmet need for contraception between never married, married and cohabiting women. This is because women—no matter their marital statuses—may be sexually active, although they may not be ready to have children. Furthermore, as has been observed elsewhere, being married may not necessarily mean cohabiting as the number of couples who are not cohabiting seems to be on the rise (Rebière et al., 2023). This means that being married may not imply having frequent sex. In the light of these, the objectives of the study were to examine the level of unmet need for contraception for never married, married and cohabiting women; and investigate the differences in the relationship between the characteristics of these women and unmet need for contraception.

2. Methodology

2.1 Research Design and Study Area

The study adopted the quantitative approach by examining the relationship between variables. These variables were measured with a questionnaire, and produced numerical data that were used in the statistical analyses (Creswell, 2009). The adoption of this method enabled the researcher to examine the relationship not only between marital status and unmet need for contraception, but also the relationship between the characteristics of women of different marital statuses, and the unmet need for contraception.

The study took place in Ghana, which is on the West Coast of Africa. It has an estimated population of 33m people, made up of more than one hundred ethnic groups, each with its own unique language. For administrative purposes, the country has been divided into 16 regions.

The 2022 Ghana Demographic and Health Survey (GDHS) was carried out by the Ghana Statistical Service (GSS) in collaboration with the National Public Health Reference laboratory, Ghana Health Service, and Inner City Fund (IFC) (GSS, 2023). The GSS submitted the survey protocol to the Ethical Review Committee (ERC) of the Ghana Health Service to ensure that the survey procedures were in accordance with Ghana's ethical research standards. The ERC granted ethical clearance for the survey. Also the ICF submitted the GDHS survey protocol to the ICF Institutional Review Board (IRB) to obtain an ethical clearance, and ensure that the survey procedures were in accordance with the US and international ethical research standards. The IRB provided ethical clearance for the survey (GSS, 2023).

2.2 Sample
Since 1988, Ghana has been involved in the global demographic and health survey programmes. The last survey—which is the seventh in the series—was conducted in 2022. It was this data set that was used in this current study.

The 2022 GDHS was a nationally representative survey of approximately 18,540 households from all the 16 regions of the country. The survey interviewed 15,014 women of reproductive age (15–49 years). The sampling frame used for the 2022 GDHS was the updated frame prepared by the GSS, based on the 2021 Population and Housing Census. The sampling procedure used in the 2022 GDHS was a stratified two-stage cluster sampling, designed to yield representative results at the national level, for urban and rural areas, and for each of the 16 regions. In the first stage, 618 target clusters were selected from the sampling frame using probability proportional to size (PPS) for urban and rural areas in each region. In the second stage, a household listing was carried out in all the selected clusters to develop a list of all the households in the cluster (GSS, 2023). The sample size for this paper was 13,472 women, between the ages of 15–49 years, who were classified in the data as never married, married, or living together (referred to as cohabiting in this current study).

2.3 Data Collection
Three questionnaires were used in the GDHS: household, woman, and man questionnaires. For the purpose of this study, it was the woman's questionnaire that was used. The data collected from women included, among others, fertility levels and preferences, and contraceptive use. The questionnaire was divided into 13 sections: respondent's background, reproduction, contraception, pregnancy and post-natal care, child immunisation, child health and nutrition, marriage and sexual activity, fertility preferences, husband's background and woman's work,

HIV/AIDS, other health issues, malaria knowledge and beliefs, and domestic violence. The sections that were of interest to this study were: respondent's background, contraception, marriage and sexual activity, and fertility preferences.

2.4 Data Analysis

The data were weighted using the sample weights provided by the Demographic and Health Survey (DHS); and SPSS (V20) was used to analyse the data. Dummy variables were created and used in the multivariate analysis, which was binomial logistic regression. The dependent variable was a dichotomous variable, that is, 'has unmet need' and 'does not have unmet need' for contraception.

The independent variables used in the analysis are described as follows:

Age: current age in five-year age groups.

Education: This refers to the highest education attained, but not necessarily completed. It had been categorised as No Education, Primary, Secondary and Higher in the data set, and this was maintained.

Occupation: Refers to employment in the 12 months preceding the survey. This was grouped as Not working; Professional, Technical, Managerial, Clerical, Sales, Agriculture Self Employed, Agriculture employee, Services, Skilled Manual, Unskilled Manual, and Other in the data set. This was also maintained.

Religion: This was regrouped as follows: Catholics, Orthodox (Presbyterian, Methodist, and Anglican), Other Christian (made up of mainly charismatics), Islam, Traditionalists, No Religion, and Other.

Wealth index: This is an index calculated using household ownership of a number of consumer items. The sample was then divided into population quintiles—five groups with the same number of individuals to create the break points that defined wealth quintiles as: lowest, second, middle, fourth and highest. These were referred to as poorest, poor, middle, richer and richest, respectively.

Place of residence: In Ghana, a place is designated as urban if it has a population of at least 5,000; otherwise it is designated as a rural area.

Region of residence: Ghana has been divided into 16 administrative regions, and this was maintained.

Used emergency contraceptives (EC) in the last 12 months: The response to this question was either Yes or No.

Ever terminated a pregnancy: This was a dichotomous variable, Yes or No.

These variables and the estimated unmet need for contraception were then used in producing frequencies and percentages, and also in the bivariate and multivariate analyses.

3. Results and Discussion
3.1 Characteristics of Respondents
In order that the bivariate and multivariate analyses be placed in better perspectives, the characteristics of the respondents are presented in Table 1 for the different categories of women.

As has been the norm, the chances of being married or cohabiting increased with age. A larger portion of the never married (47%) were between the ages of 15 and 19 years, with less than 1% (0.6%) being between 45–49 years. For the married, the highest proportion of respondents fell between the age bracket of 30–39 years (about 44%). Respondents who were cohabiting tended to be younger, i.e., about 45% were between the ages of 20 and 29 years.

The educational attainment of the respondents indicates that the highest percentage of women in all the three categories of marital status had attained secondary education; that is, 75%, 46% and 65% respectively for the never married, married and cohabiting women. It is worth noting that there was not much difference between the never married and married in terms of achieving education beyond the secondary school level (12.6% and 12.0%, respectively). For those who were cohabiting, the percentage was quite low (3.0%).

For women who had never been married, a high proportion (41%) was not working unlike their counterparts who were married or cohabiting (11% and 15%, respectively). For those who were working, a higher proportion was into services. While about half (54% and 52%) of the married and cohabiting women, respectively, were in this category; there were only a quarter (25.0%) for the never married. With regards to religion, most of the respondents were Christians, and largely made up of charismatics. Nearly half (49%) of cohabiting women, and slightly more than two-fifths (43%) of the never married women, were charismatics. For the married women, however, a little more than a third (36%) were in this category. The next category after Christians were those who belonged to the Islamic religion. There were more married women (about 30%) in this category, compared to the never married (16%), and cohabiting women (6%).

There were differences in the distribution of wealth among the women. For the never married, they were somehow evenly distributed between middle, richer and richest. For the married, it was between poor, middle and richer; while for those cohabiting, it was also between poor, middle and richer. The distribution of the women by place of residence showed that the married and those cohabiting were quite similar to one another: i.e., slightly more than half lived in urban areas. However, in the case of the never married, close to two-thirds (64%) lived in urban areas. Until 2018, Ghana was divided into 10 administrative regions. Currently, it has 16 administrative regions as shown in Table 1. About a third of the women lived in either the Ashanti or Greater Accra regions, with the rest being distributed among the 14 other regions.

Table 1: Distribution of Selected Characteristics of Women by Marital Status

Characteristics	Marital Status		
	Never Married	*Married*	*Cohabiting*
Age			
15–19	46.9	1.4	5.1
20–24	29.7	8.4	23.2
25–29	13.6	16.2	22.1
30–34	5.5	21.9	18.5
35–39	2.6	21.9	14.7
40–44	1.1	17.2	9.4
45–49	0.6	13.1	7.1
N	**5,267**	**6,008**	**2,196**
Education			
No Education	2.8	28.8	13.0
Primary	9.8	13.5	19.3
Secondary	74.9	45.8	64.8
Higher	12.6	12.0	3.0
N	**5,268**	**6,008**	**2,196**
Occupation			
Not working	41.3	11.1	14.6
Prof/Tech/Manag	6.5	8.8	2.6
Clerical	2.4	1.1	0.8
Sales	7.9	9.2	13.1
Agriculture (self-employed)	0.0	0.4	0.0
Agriculture (employee)	5.2	4.3	2.9
Services	25.0	54.4	51.5
Skilled manual	9.6	10.2	13.0
Unskilled manual	0.6	0.2	1.1
Other	1.4	0.4	0.3
N	**5,267**	**6,007**	**2,197**
Religion			
Catholic	10.0	8.9	8.4
Orthodox	13.5	8.9	11.9
Charismatic	43.4	35.6	49.4
Other Christian	14.7	12.0	19.2
Islam	16.2	29.8	6.1
Traditionalist	0.6	2.9	2.0
No Religion	1.5	1.8	2.9
Other Religion	0.1	0.2	0.2
N	**5,267**	**6,008**	**2,197**
Wealth Index			
Poorest	11.6	22.8	13.4
Poor	16.5	16.9	22.5
Middle	22.5	16.2	26.1
Richer	24.1	19.2	26.9
Richest	25.4	24.9	11.1
N	**5,268**	**6,007**	**2,198**

Place of residence			
Rural	35.8	47.7	49.7
Urban	64.2	52.3	50.3
N	**5,267**	**6,007**	**2,197**
Region of residence			
Western	7.1	6.0	5.8
Central	12.4	7.1	17.8
Greater Accra	17.6	14.4	12.8
Volta	5.0	3.8	6.6
Eastern	8.3	7.1	9.2
Ashanti	21.0	14.6	25.0
Western North	2.5	2.6	3.5
Ahafo	2.2	2.2	2.3
Bono	4.2	3.4	3.5
Bono East	4.5	5.3	2.7
Oti	2.3	2.5	4.4
Northern	4.8	13.4	2.9
Savannah	1.7	3.2	1.0
North East	1.0	3.7	0.3
Upper East	3.2	6.7	1.2
Upper West	2.2	3.9	1.0
N	**5,267**	**6,008**	**2,197**
Used EC in the past 12 months			
No	86.7	93.8	87.9
Yes	13.3	6.2	12.1
N	**5,184**	**5,768**	**2,124**
Ever terminated a pregnancy			
No	89.8	69.1	65.2
Yes	10.2	30.9	34.8
N	5,267	6,007	2,197

Note: The totals are not the same due to missing cases

Source: Computed from the 2022 Ghana Demographic and Health Survey

Although most respondents had not used EC in the 12 months preceding the survey, the never married and cohabiting respondents were more likely to have used some compared to the married (13%, 12% and 6%, respectively). When asked whether they had ever terminated a pregnancy, it can be observed from Table 1 that about a third of the married and cohabiting women had ever done so. However, only a tenth of the never married women had ever terminated a pregnancy.

3.2 Distribution of unmet need for contraception by marital status
Figure 1 displays the distribution of unmet need for contraception by marital status. Total unmet need for contraception was higher among cohabiting, followed by married women (27% and 22%, respectively). Total unmet need for contraception was mainly made up of unmet need for spacing. With regards to unmet need for limiting, married women had the highest percentage followed by cohabiting women (10% and 8%, respectively).
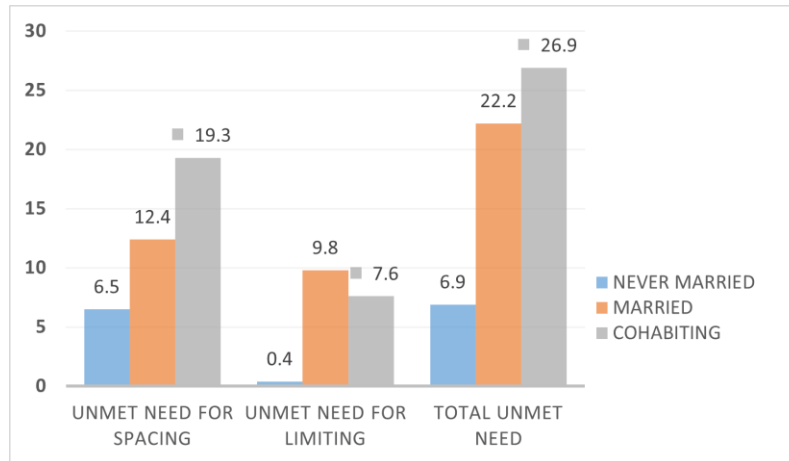
Figure 1: Unmet Need for Spacing, Limiting and Total by Marital Status
Source: 2022 GDHS; Author's calculations

For the never married women, less than 1% had a need for limiting. As has been the general pattern in many countries, all women—irrespective of their marital statuses—had a higher unmet need for spacing than for limiting. This means that the pioneering study by Westoff (1978) on unmet need for contraception is still being corroborated. This implies that more attention should be focused on spacing; especially by dealing with myths and misconceptions surrounding the various contraceptive methods, which may be influencing their use (Cordero et al., 2019). This may hopefully deal with some of the needs of these women such that their demand for contraception can be met.

3.3 Bivariate Analysis
In the bivariate analysis, presented in Table 2, the selected characteristics of women and their relationship with unmet need for contraception were analysed using chi square. For the never married, the variables that were highly significantly associated with unmet need for contraception were age, education, occupation, wealth index and ever terminated a pregnancy (P<0.001). For example, 77% of the respondents with secondary education, and 80% of those who had never terminated a pregnancy, had unmet need for contraception.

In the case of married women, the variables that were very significantly associated with unmet need for contraception were occupation and region of residence. With regards to occupation, slightly more than half (55%) of the women who were engaged in services had unmet need for contraception. Regarding region of residence, Greater Accra, Ashanti and Northern regions had double digit percentages (P<0.001).

Among women who were cohabiting, religion was the variable that had a very high significant relationship with unmet need for contraception. Close to half (46%) of these women had unmet need for contraception (P<0.001).

**Table 2: The Relationship Between Selected Characteristics of Women
and Unmet Need for Contraception**

Characteristics	Never Married			Married			Cohabiting		
	%	χ	P value	%	χ	P value	%	χ	P value
Age		26.871	0.000		19.486	0.003		18.863	0.004
15–19	39.6			1.5			6.8		
20–24	34.1			9.8			24.9		
25–29	19.9			15.3			22.9		
30–34	3.6			22.4			15.9		
35–39	1.4			24.1			14.2		
40–44	0.3			16.5			10.8		
45–49	1.1			10.4			4.4		
Education		33.462	0.000		10.614	0.014		3.580	0.311
No Education	3.9			29.5			13.4		
Primary	14.7			14.9			20.0		
Secondary	77.3			46.1			64.8		
Occupation		40.857	0.000		32.758	0.000		15.487	0.078
Not working	34.3			12.2			17.9		
Prof/Tech/Manag	3.0			5.4			1.9		
Clerical	2.2			1.4			0.8		
Sales	8.6			10.5			14.7		
Agriculture (self-employed)	0.3			0.3			0.0		
Agriculture (employee)	4.4			4.4			2.7		
Services	33.0			54.8			48.7		
Skilled manual	12.2			10.5			12.5		
Unskilled manual	1.1			0.4			0.3		
Other	0.8			0.2			0.3		
Religion		14.653	0.041		21.269	0.003		26.763	0.000
Catholic	7.5			7.4			7.6		
Orthodox	11.1			7.7			10.2		
Charismatic	43.1			35.7			46.0		
Other Christian	18.9			11.4			22.7		
Islam	15.8			30.9			8.1		
Traditionalist	0.6			4.4			3.4		
No Religion	3.1			2.2			2.0		
Other	0.0			0.2			0.0		
Wealth Index		75.664	0.000		17.669	0.001		15.497	0.004
Poorest	19.7			25.1			16.4		
Poor	23.1			17.1			25.4		
Middle	25.8			17.8			25.9		
Richer	22.7			19.0			22.7		
Richest	8.9			21.0			9.6		
Place of residence		9.215	0.002		1.531	0.216		5.504	0.01 0.019
Rural	43.2			49.2			53.8		
Urban	56.8			50.8			46.2		

Region of residence	38.442 0.001		44.964 0.000		14.543 0.485
Western	7.5		5.0		4.1
Central	12.5		5.4		17.3
Greater Accra	9.5		16.6		13.0
Volta	5.0		4.8		7.1
Eastern	7.8		8.5		10.2
Ashanti	21.2		14.7		22.2
Western North	3.1		2.2		4.1
Ahafo	2.8		2.2		2.5
Bono	4.7		3.1		4.4
Bono East	9.2		6.9		3.4
Oti	3.1		2.6		4.9
Northern	3.9		13.1		3.2
Savannah	2.2		2.9		1.2
North East	1.1		3.8		0.3
Upper East	4.2		5.0		1.5
Upper West	2.2		3.2		0.7
Used EC in the past 12 months	0.962 0.327		10.993 0.001		7.755 0.005
No	80.5		95.7		91.0
Yes	15.0		4.3		9.0
Ever terminated a pregnancy	37.977 0.000		5.076 0.024		7.582 0.006
No	80.3		71.7		69.9
Yes	19.7		28.3		30.1

Source: 2022 GDHS; Author's calculations

3.4 Multivariate Analysis

In the multivariate analysis (Table 3), all the variables—except place of residence—had significant relationships with unmet need for contraception. Age had a strong relationship with unmet need for contraception for the married and cohabiting women, as quite a number of these age groups had significant relationships with unmet need for contraception. In the case of the never married, however, it was only women who were in the age group 35–39 years who were significantly more likely to have unmet need for contraception than their 45–49 year-old counterparts. A plausible explanation for the never married women is that they were not in stable relationships, and therefore wanted to protect themselves from unwanted pregnancies; although their behaviour was inconsistent with what they wanted. For married and cohabiting women, being in a stable relationship may have made them more willing and ready to have children. However, it must be noted that although in the past childbearing was sanctioned only in marriages, the situation seems to be changing such that childbearing is increasing in consensual unions (Laplante et al., 2016).

Table 3: Logistic Regression of Unmet Need for Contraception for Selected Characteristics of Women by Marital Status

Characteristics	Never Married			Married			Cohabiting		
	%	*χ*	*P value*	*%*	*χ*	*P value*	*%*	*χ*	*P value*
Age		26.871	0.000		19.486	0.003		18.863	0.004
15–19	39.6			1.5			6.8		
20–24	34.1			9.8			24.9		
25–29	19.9			15.3			22.9		
30–34	3.6			22.4			15.9		
35–39	1.4			24.1			14.2		
40–44	0.3			16.5			10.8		
45–49	1.1			10.4			4.4		
Education		33.462	0.000		10.614	0.014		3.580	0.311
No Education	3.9			29.5			13.4		
Primary	14.7			14.9			20.0		
Secondary	77.3			46.1			64.8		
Occupation		40.857	0.000		32.758	0.000		15.487	0.078
Not working	34.3			12.2			17.9		
Prof/Tech/Manag	3.0			5.4			1.9		
Clerical	2.2			1.4			0.8		
Sales	8.6			10.5			14.7		
Agriculture (self-employed)	0.3			0.3			0.0		
Agriculture (employee)	4.4			4.4			2.7		
Services	33.0			54.8			48.7		
Skilled manual	12.2			10.5			12.5		
Unskilled manual	1.1			0.4			0.3		
Other	0.8			0.2			0.3		
Religion		14.653	0.041		21.269	0.003		26.763	0.000
Catholic	7.5			7.4			7.6		
Orthodox	11.1			7.7			10.2		
Charismatic	43.1			35.7			46.0		
Other Christian	18.9			11.4			22.7		
Islam	15.8			30.9			8.1		
Traditionalist	0.6			4.4			3.4		
No Religion	3.1			2.2			2.0		
Other	0.0			0.2			0.0		
Wealth Index		75.664	0.000		17.669	0.001		15.497	0.004
Poorest	19.7			25.1			16.4		
Poor	23.1			17.1			25.4		
Middle	25.8			17.8			25.9		
Richer	22.7			19.0			22.7		
Richest	8.9			21.0			9.6		
Place of residence		9.215	0.002		1.531	0.216		5.504	0.01 0.019
Rural	43.2			49.2			53.8		
Urban	56.8			50.8			46.2		

Region of residence	38.442 0.001		44.964 0.000		14.543 0.485	
Western	7.5		5.0		4.1	
Central	12.5		5.4		17.3	
Greater Accra	9.5		16.6		13.0	
Volta	5.0		4.8		7.1	
Eastern	7.8		8.5		10.2	
Ashanti	21.2		14.7		22.2	
Western North	3.1		2.2		4.1	
Ahafo	2.8		2.2		2.5	
Bono	4.7		3.1		4.4	
Bono East	9.2		6.9		3.4	
Oti	3.1		2.6		4.9	
Northern	3.9		13.1		3.2	
Savannah	2.2		2.9		1.2	
North East	1.1		3.8		0.3	
Upper East	4.2		5.0		1.5	
Upper West	2.2		3.2		0.7	
Used EC in the past 12 months	0.962 0.327		10.993 0.001		7.755 0.005	
No	80.5		95.7		91.0	
Yes	15.0		4.3		9.0	
Ever terminated a pregnancy	37.977 0.000		5.076 0.024		7.582 0.006	
No	80.3		71.7		69.9	
Yes	19.7		28.3		30.1	

Source: 2022 GDHS; Author's calculations

Unmet need for contraception has been found to be inversely related to education (Westoff, 1988; Pham et al., 2020; Fagbamigbe et al., 2018). In this study however, the situation was contrary. The educational level of the never married women had a significant relationship with the unmet need for contraception. The relationship was such that women with primary or secondary education were less likely to have unmet need for contraception compared to women whose educational level was beyond the secondary level. The plausible explanation could be that women with primary or secondary education in general may want to have more children than those with higher education. That being the case, they are more likely to welcome pregnancies even if they have not been planned for, more than women with education higher than secondary level. Gone are the days when women wanted to be married so that their husbands could take care of their financial needs. Currently, some women want to be financially independent, and are therefore marrying later in life. They may also want other forms of achievements in addition to marriage (Vampoet al., 2024; AbuSrihan & Anson, 2023). However, others have found the relationship between education and unmet need to be far from consistent (Bradley et al., 2012).

Religion can play an important role in the differences in unmet need for contraception (Wafula, 2015). Religion also correlates strongly with contraceptive

use as it provides the conditions necessary for availing and adhering to family planning services (Yaya & Ghose, 2018). In this study, cohabiting women who were either practising the Islamic religion, or were traditionalists, were less likely to have unmet need for contraception compared to women who did not have any religion. This finding could be interpreted this way: practitioners of Islamic religion and traditionalists usually believe in having many children; therefore, women who belong to these two religions tend to want to have many children. However, this result is contrary to those of previous studies done in Kenya and Ghana in this regard (Wafula, 2015; Wulifan et al., 2019).

Comparing women who were unskilled manual workers with other categories of occupation, it was observed that married women who were professional/ technical/managerial were almost five times significantly more likely to have unmet need for contraception than unskilled manual workers. However, among cohabiting women, those in sales and those not working were significantly less likely to have unmet need for contraception compared with their colleagues who were engaged in unskilled manual work. A likely explanation for this is that, for the married, combining marriage with work could be quite tedious such that having children may interfere with achieving their objective of moving up in their careers. Therefore, they would like to prevent any unwanted pregnancies; yet, they were not doing what was expected of them to achieve this, i.e., using contraceptives. A plausible explanation for cohabiting women could be that not working provides them more time to take care of their children since they may be 'housewives'. In the case of those engaged in sales, probably combining childcare with their jobs may not be a difficult task. That being the case, these women may not be seriously thinking about not having children; and thus there was no need to do anything to prevent pregnancies. These observations support previous studies, which found that occupation tends to be associated with unmet need for contraception (Wemakor et al., 2020; Ahinkorah et al., 2020).

Generally, richer people prefer to have fewer children than the less rich. Therefore, the former are more likely than the latter to use contraceptives. Similarly, in this study, wealth index was one variable that had a very high significant relationship with unmet need for contraception. For both the never married and the married, compared with the richest, women in all the other categories were less likely to have unmet need for contraception. The reason that could be attributed to the never married is that, as has already been observed in this study, they are young. Being young, they are likely to want to have children, thus, less likely to have unmet need for contraception. On the other hand, for the married women, they may be aspiring to have more children. A similar association between wealth index and unmet need for contraception has also been established in other studies (Wafula, 2015; Lutalo, 2018; Agyekum et al., 2022).

There were differences in the relationship between region of residence and unmet need for contraception, which has also been observed in other studies (Wafula, 2015; Yaya & Ghose, 2018; AbuSrihan & Anson, 2023). The significant

relationship between region of residence and unmet need for contraception was found among married women in the Greater Accra, Volta, Eastern, Ashanti and Bono East regions. In all these regions, these women were less likely to have unmet need for contraception than their counterparts in the Upper West region. This is consistent with previous studies elsewhere, where unmet need for contraception was higher in northern compared with southern regions (Wang & Cao, 2019). This could be attributed to regional differences in reproductive healthcare access, and views on contraception (AbuSrihan & Anson, 2023).

Emergency contraception (EC) is usually used after unprotected sex. It can also be used as a back-up method if a regular method, such as the condom, fails (WHO, 2021). We can therefore infer that if a woman uses EC, then she wants to avoid unwanted pregnancy (Merki-Feld et al., 2018). In this study, married and cohabiting women who had not used any EC in the 12 months preceding the survey, were 1.6 times significantly more likely to have unmet need for contraception than those who had used any. Probably, these two categories of women may prefer to use regular methods of contraceptives, even though they were not doing so.

If women terminate pregnancies, it can be inferred that those pregnancies were not wanted. Thus, such women can be said to have unmet need for contraception. In this study, married and cohabiting women who had never terminated a pregnancy were significantly less likely (0.8 for each category) than those who had ever terminated a pregnancy to have unmet need for contraception. The implication of this relationship is that these women, who had never terminated a pregnancy, do not have unmet need for contraception because they have not had to get rid of unwanted pregnancy (Wondie, 2021).

Using the theory of planned behaviour to explain the behaviour of women with different marital statuses with respect to unmet need for contraception, it can be said that married women may not use contraceptives even though they would like to avoid pregnancy because, apart from other considerations, they may need approval from their husbands to use contraceptives. In addition, their fertility intentions may not be the same as those of their husbands. In the case of the never married, although societies have become more liberal now and therefore do not frown so much on premarital sex, there may still be some unmarried women who may not be comfortable using contraceptives, especially the modern ones, due to the fear of health and other side effects. These women are likely to want to have children in the future; and may not be sure of any effects that the use of contraceptives may have on their ability to have children. Therefore, even though the intention to use contraceptives might be there, they may be hesitant to use them.

With regards to cohabiting women, the use or otherwise of contraceptives may be a mixed one in that, on one hand, some of these women may want to avoid pregnancy because of the unstable nature of their relationships, and so would not want to be burdened with children. On the other hand, they may also be thinking that having children may enable them concretise their relationships. In whichever

case they find themselves, they may not be able to translate their intentions into actions because their actions may not rest with them alone; but in consultation with their partners.

4. Conclusion and Recommendations

This study highlighted significant variations in unmet need for contraception among never married, married, and cohabiting women in Ghana. While unmet need for contraception was highest among cohabiting women, married women also reported considerable levels; with spacing emerging as the dominant form of unmet need for contraception. The characteristics of the women—such as age, education, occupation, wealth index, religion, and region of residence—played critical roles in unmet need for contraception.

To reduce unmet need for contraception, especially that for spacing, stakeholders in public and family health interventions should explore the reasons for non-use of contraceptives to delay pregnancies until they are wanted. There is also a need to expand access to contraceptive products and services in underserved areas in Ghana, particularly in the northern regions. Education on family planning and contraceptive use should be sent to the doorsteps of all categories of people—i.e., markets, churches, mosques, work places and other places—where people congregate. In all these places, leaders should be targeted first, as this will open the doors to the larger communities to accept contraceptive usage.

Ultimately, addressing unmet need requires shifting from the use of methods such as emergency contraception and pregnancy termination. According to the theory of planned behaviour, reducing unmet need for contraception in Ghana demands not only expanded access but also employing strategies that empower women to translate fertility intentions into consistent contraceptive practice, thereby advancing reproductive autonomy, and supporting national and global family planning goals.

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