

## Promoting Maternal and Child Health Outcomes through Patronage of Family Planning Services: Evidence from Ghanaian Rural Women of Fertility Age

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### Abstract

**Introduction:** Family planning services (FPS) are widely acknowledged as an important intervention to reduce maternal and child mortality. Patronising family planning services has gone up over the past few years in Ghana. However, patronage of the service still remains low to attain the target set by the country's Ministry of Health and global partners by 2030. Therefore, this study assessed the promotion of maternal and child health (MCH) outcomes through the patronage of FPS among rural women of fertility age (WiFA) at Sunyani West Municipality, Ghana.

**Methods:** The study was a retrospective cross-sectional study conducted among rural WiFA. A multistage sampling technique was used to recruit a sample of 413 participants. Descriptive statistics and related Pearson bivariate correlation and linear multiple regression were deployed in making meanings from the data collected at a significance level of 0.05.

**Results:** Results indicated that of all the FPS, it was contraceptive services (94.9%) and pregnancy testing and counseling (80.1%) that were frequently available. A larger number (71.0%) of respondents preferred taking FPS at the pharmacy/chemical shops, indicating a positive high correlation between pharmacy/drug shop and availability of FPS (.81). In the study, respondents have several perceived benefits of FPS on MCH outcomes; however, the most perceived benefits were the prevention of unwanted pregnancies (86.4%) and maternal and child mortality (84.5%). The multiple linear regression analysis established that cultural factors were significant predictors of patronage of FPS [ $F(9, 404) = 11.160, p = 0.000$ ], explaining the variability of FPS ( $R^2 = 0.741$ ).

**Conclusion:** Family planning services could be an effective way of ensuring better MCH outcomes. Commitment via ensuring the availability of FPS, its accessibility at effective outlets, and efforts towards removing cultural barriers and education could enhance its successful implementation in Ghana and close geopolitical region.

**Keywords:** Family Planning Services; Geopolitical; Maternal and Child Health; Multi-Stage; Women in Fertility Age

### Abbreviations

CHPS: Community-Based Health Planning Services; FPS: Family Planning Services; LMIC: Low- and Lower-Income Countries; LMICs: Low- and Middle-Income Countries; MCH: Maternal and Child Health; NHIS: National Health Insurance Scheme; NSFG: National Survey

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of Family Growth; PHC: Primary Health Care; SPSS: Statistical Package for Service Solution; STD: Sexually Transmitted Disease; STIs: Sexually Transmitted Infections; WHO: World Health Organization; WiFA: Women in their Fertility Age

## **Introduction**

Promotion of maternal and child health (MCH) outcomes via patronage of family planning services (FPS) has become a worldwide focus, with considerable emphasis on low- and lower-income countries (LMIC), including Ghana. Family planning services have proven to play a significant role in obtaining better MCH outcomes, and they are widely acknowledged as important interventions used to reduce maternal and child morbidity and mortality [1], which is a major developmental burden in low and middle-income countries (LMICs). In the Ghanaian healthcare system, FPS involves contraceptive services, fertility services, basic infertility services, pregnancy testing and counselling services, pre-conceptional health services, and sexually transmitted disease (STD) services. These services are delivered through educational, comprehensive medical care, and social services. Family planning services aid clients in attaining their desired family size by preventing unwanted pregnancies, deciding when to give birth, and spacing births. Generally, the FPS mitigates against pregnancy-related morbidity and mortality, prevents foetal mortality, reduces the risk of abnormal foetus development, and reduces the risk of developing reproductive cancers and menstrual-related symptoms and disorders [2,3].

Consequently, FPS have seen an incredible progression since its inception in 1969 [4]. Improvement in services has resulted in rise in contraceptive prevalence rate and reduction in unmet needs for family planning. Evidence show that the trend in use, need and demand for family planning shows that unmet need declined from 37% in 1993 to 23% in 2022, as well as, women currently using modern contraceptive method (met need) increased from 10% in 1993 to 28% in 2022 [5]. In addition, the Ghanaian healthcare system continues to expand family planning services. In 2022, clinical family planning services have been integrated into the national health insurance scheme (NHIS), making the FPS more accessible and affordable [6].

According to the World Health Organisation (WHO), modern contraceptive use has increased in many parts of the world, especially in Asia and Latin America, but continues to be low in sub-Saharan Africa (SSA). Research shows that women in their fertility age (WiFA) in Ghana display a high propensity to abstain from modern family planning methods, use methods inconsistently, and discontinue rapidly, making method failure quite common [7,8]. As such, uptake still remains relatively low [9,10], creating persistently high rates of unmet needs for family planning and modern contraceptive use [11,12]. Subsequent to that, Ghana is highly unlikely to achieve its family planning objectives for 2020 - 2025 and commitment for family planning in 2030 [6]. The commitment is to ensure equitable and timely access to quality family planning information, commodities, and services for all persons of reproductive age in Ghana by the end of 2025. The attainment of the goal is far from reach; that is, the goal of reducing the unmet need for modern contraceptives among women in unions and married women from 32% in 2018 to 16% in 2025 still remains at 30.2% as of 2023. In addition, the objective of increasing demand for modern contraceptives and subsequently increasing the modern contraceptive prevalence rate among married women and women in union from 25% in 2018 to 30% by 2025 and 44.4% by 2030 seems threatened, with a rate of 31.2% as of 2023. Family planning services are crucial to national development since the welfare of WiFA continues to be threatened by high maternal and infant morbidity and mortality rates, as well as a high fertility rate, which have made the attainment of the national development goals more difficult to achieve.

## **Present study**

The study focused on assessing the promotion of maternal and child health (MCH) outcomes through patronage of family planning services among rural women of fertility age. In the Sunyani West Municipality, patronising family planning services is low; this might have contributed to the high prevalence of teenage pregnancy and unsafe abortions in the municipality [13]. The municipality is dominated by farmers, who are relatively primitive, less formally educated, and poverty-stricken. Anecdotal evidence from municipality suggest that there is a belief that family planning is not effective to prevent pregnancy, and when used, it leads to infertility, thereby harbouring

fears that contraceptive use may lead to infertility and childbirth complications. Cultural barriers have become a major issue influencing accessibility to FPS [14]. This discourages the use of FPS, contributing to unintended pregnancies and its adverse effects. Poor FPS patronage has a considerable influence on MCH outcomes. For instance, more than 800 women die during pregnancy, delivery, or within 42 days following termination of pregnancy per day in SSA due to unwanted pregnancies, unsafe abortions, and obstetric problems [15]. Enabling access to effective FPS may bridge the gaps in unmet needs, reduce unintended pregnancies, curb maternal and infant mortality, and empower women to make informed decisions. Therefore, in helping to gain nuanced and deeper insights about FPS and related ill behaviours in the Bono region of Ghana, the present study specifically sought to: 1) assess the availability and outlets for sourcing FPS; 2) examine the perceived benefits of family planning services; and 3) determine the cultural factors influencing patronage of family planning services.

## **Materials and Methods**

### **Study design and setting**

A retrospective cross-sectional study was applied to assess patronage of FPS among WiFA at community-based health planning services (CHPS) between May to June, 2023. The study was carried out in Sunyani West Municipality, a district in the Bono region, Ghana. The municipality was established in November 2007 through LI 1881, 2007, and inaugurated in February, 2008. The population is estimated at 105,680, of which WiFA population is 24.8%. It has 5 sub-municipalities, with a population growth rate of 2.3%, and expected pregnancy rate of 4%.

### **Population**

The study population comprised all women of fertility age (WiFA) from 15 to 44 who resided in rural communities in the municipality and patronised family planning services in any of the Community Health Planning and Services (CHPS) healthcare facilities. The CHPS were selected because they are basically found in the rural community, and they offer FPS at the doorstep of the rural WiFA. WiFA population was targeted because of their high reproductive and sexual activity levels and the associated complications of the age cohort. The included WiFA have stayed in the Sunyani West municipality for the past 6 months and have ever used family planning services in the CHPS between May and July 2023. Participants also speak English and/or Twi. However, women with mental conditions who were terminally ill were excluded from the study, and those who refused to sign consent forms were excluded.

### **Sample size**

Although Women of Fertility Age (WiFA) constitute 24.8% of the total population of 105,680 in the municipality, the accessible population of WiFA utilizing family planning services is estimated to be 683, as indicated by available district records. To ensure a 5% margin of error and considering the national expected proportion of 23.3% for the uptake of family planning services among women of fertility age range, the study employed Yamane's (1967) sampling formula to calculate the required sample size. This calculation aimed to achieve a statistical power of 0.9 and a 95% confidence interval, resulting in a determined sample size of 413. See table 1 for the breakdown of sample size allocation at each CHPS.

### **Sampling technique**

The study used multistage sampling technique. In this sampling technique, which offered the opportunity to use several sampling techniques. In the first place, the population was clustered per sub-municipalities. In each cluster, all the CHPS were used since population was relatively smaller in the sub-municipalities. Again, a proportionate sampling technique was used to proportionally select participants based on the population size. Lastly, participants were selected from each CHPS using consecutive sampling technique since the population was relatively smaller and the study targeted to use 413 clients patronizing FPS.

Sub-municipality	WiFA Population (%)	CHPS	Target population	Sample size
Chiraa	5,718 (23.6)		185	97
		Kobedi CHPS	59	31
		Asuakwa CHPS	46	22
		Tanom CHPS	51	25
		Timbernk-wanta CHPS	29	19
Odumase	5,177 (21.4)		156	88
		Obiri Yeboah CHPS	33	15
		Adantia CHPS	48	34
		Yooyoso CHPS	23	10
		Addoe CHPS	38	15
		Gubre CHPS	14	14
Nsoatre	6,927 (28.6)		227	118
		Adounya CHPS	44	21
		Ayakomaso CHPS	64	39
		Amanfoso CHPS	43	23
		Boreso CHPS	20	7
		Twumasikrom CHPS	22	10
		Kwabena-kuma CHPS	34	18
Fiapre	3,840 (15.8)		103	66
		Dumasua CHPS	38	25
		Fiapre Zongo CHPS	52	34
		Mantukwa CHPS	13	7
Bofourkrom	2,577 (10.6)		12	44
		Abronye CHPS	12	44
Total	24,239 (100.0)		683	413

**Table 1:** Breakdown of sample size allocation at each CHPS facility.

### **Instrument**

A structured questionnaire developed from the literature was used to collect data. Items were adapted from pre-existing instruments for the current study [16-18]. The items were modified to answer the research questions. The draft questionnaire was in four parts: socio-demographics; availability and outlets for sourcing FPS; perceived benefits of FPS; and cultural factors influencing patronage of FPS. The questionnaires were drafted in English; however, they were translated into Twi (the local language) by a professional translator from a local university in the region. Each question is scored on a Likert scale ranging from 1 to 4, depending on the possible responses. Each question that has a possible response is coded as 1: strongly disagree; 2: disagree; 3: agree; 4: strongly agree. To ensure its appropriateness and validity, the instrument was subjected to semantic analysis to verify the understanding of the items. Two WiFA with different levels of education and age were made to assess the instruments for their clarity and understanding. Changes were made to the phrasing and modifications of some items to improve their clarity and understanding. Also, the instrument was assessed by a local expert, and further changes were made to its conceptual pertinence. The pre-testing exercise carried out after yielded Cronbach Alpha values of 0.82, 0.79, and 0.95 for availability and outlets for sourcing FPS, perceived benefits of FPS, and cultural factors influencing patronage of FPS, respectively (refer to Appendix 1 for the complete list of the items).

### **Procedure**

Prior to data collection, six research assistants (RAs), first-degree holders, were recruited and trained. As part of the training, they were taught about the significance of the study, ethical procedures, and data collection techniques. At each CHPS, the principal investigator (PI) and the RAs were introduced to the authorities of the district and the hospital management to gain entry permission. Data collection began at Chiraa and ended at Fiapre. Data collection was done at the Family Planning Unit, and each prospective participant was approached individually. Permission was sought, and if agreed, an informed consent form was signed before they were made to respond to the instrument. All completed questionnaires were collected soon after administration. To ensure anonymity, there were no names or identifying information of the participants on the questionnaire collected. After the data was collected, it was kept in a secure envelope for data entry and analysis. A period of three months (May to June, 2023) was used to complete the entire data collection and entry.

### **Statistical analysis**

The collected data was checked for completeness and numbered serially; it was then entered into Statistical Package for Service Solution (SPSS) version 24.0 for statistical analysis. Data were screened for missing values for continuous and string variables, and univariate and multivariate outliers were checked using frequency distributions and box plots. The data was normally distributed, and box plots revealed that the data was homogenous with few outliers. Descriptive statistics were used to assess the availability of FPS and the perceived benefits of FPS.

In determining the availability of FPS, a cut percentage of 80 was set to determine the adequacy of FPS [19]. Therefore, the closer the percentage score to the cutoff (80%), the better its availability. A 4-point Likert scale ranging from not available at all (1) to always available (4) was used in assessing availability of FPS. The scale was categorized into 2 responses: "not available" and "available". The means score of both not available at all and not available represented "not available", whereas the mean of available and always available denoted "available". In addition, same computation was made to get "agree" and "disagree" to measure perceived benefits of FPS. A Pearson correlation was used to determine the relationship between the best outlets for sourcing family planning services. A multiple linear regression was calculated to determine the extent to which cultural factors influence patronage of family planning services.

### **Ethical consideration**

The Ghana Health Service's Ethics Review Committee approved the study to be conducted. This was before the commencement of the data collection. Informed consent was sought from eligible participants before carrying out the study. The respondents received an

in-depth explanation of the entire study before they agreed to participate. Privacy and confidentiality were given utmost priority, as the identities of respondents were kept anonymous during data collection and analysis. Precise, well-elaborate information was given to participants on the reasons for the study and how it was conducted. Information about voluntary withdrawal was clearly spelled out. Participants were given the right to voluntarily withdraw from the study at any time they so wished, without any penalty. This study posed no risk to the participant. The data from the study has a long-term benefit to the institutions, district, and nation as a whole.

## Results and Discussions

### Socio-demographic characteristics of respondents

A total of 413 respondents participated in the study. Table 2 shows that most of the respondents (64.4%) were between the ages of 20 and 35 years, a few (24.7%) were between the ages of 15 and 19 years, and 20.5% were between 36 and 44 years and older. In all, the average age was 26.8 years. Most of the participants were Christians (72.9%) by religion and married (72.9%). Furthermore, the bulk of the respondents (40.4%) had a basic education, followed by those with secondary education (24.7%) and 20.6% with no formal education. With regards to their insurance status, most (64.9%) of them were insured.

Item		Frequency	Percent
Age	15 - 19 years	102	24.7
	20 - 35 years	266	64.4
	36 - 44 years	45	10.9
Mean age	26.8		
Marital status	Unmarried	112	27.1
	Married	301	72.9
Religion	Christianity	287	69.6
	Islam	111	26.8
	Traditional religion	15	3.6
Educational level	No formal education	85	20.6
	Basic education	167	40.4
	Secondary	102	24.7
	Tertiary	59	14.3
Insurance status	Insured	268	64.9
	Uninsured	145	35.1
Parity	0	78	18.9
	1 child	142	34.4
	2-3 children	102	24.7
	3+ Children	91	22.0
Employment status	Unemployed	31	7.5
	Housewife	56	13.6
	Farming	217	52.5
	Trading/business	109	26.4
Estimated income per month	< 100GHS	11	2.7
	100 - 499 GHS	117	28.3
	500 - 999 GHS	231	55.9
	1000+GHS	54	13.1

**Table 2:** Socio-demographic characteristics.

In relation to the respondent’s parity, a larger portion (34.4%) had given birth once, whereas the rest had 2 - 3 children (24.7%), > 3 children (18.9%), and 22.0% had no child. In terms of employment status, most of them (52.5%) were farmers, and in determining the estimated income per month, more than half of the respondents had 500-999 GHS Cedi.

**Availability of family planning services**

This section provides analysis of the availability of family planning services using descriptive statistics. In addition, a cut off percentage of 80% was used to determine the adequacy of availability of FPS. The summary is presented in table 3.

<b>Family planning services</b>	<b>Available</b>	<b>Not Available</b>	<b>M</b>	<b>SD</b>
	<b>Freq. (%)</b>	<b>Freq. (%)</b>		
Contraceptive services	392 (94.9)	21 (5.1)	1.89	0.41
Sexual transmitted disease services	214 (51.8)	199 (48.2)	1.68	0.52
Basic fertility services	145 (35.1)	268 (64.9)	1.27	0.33
Basic infertility services	113 (27.4)	300 (72.6)	1.73	0.71
Pre-conceptional health services	58 (14.0)	355 (86.0)	0.99	0.60
Pregnancy testing and counseling services	331 (80.1)	82 (19.9)	1.09	0.42

**Table 3:** Availability of family planning services at CHPS.

*Freq. = Frequency; M = Mean; SD = Standard Deviation.*

Table 3 demonstrates the availability of family planning services at CHPS among rural WiFA in Sunyani West municipality. The services included contraceptive services, fertility services, pregnancy testing and counselling services, basic infertility services, pre-conceptional health services, and sexually transmitted disease services. Of all the FPS, it was contraceptive services that respondents agreed to have a cumulative total percentage of 94.9%, and pregnancy testing and counselling, with a cumulative total of 80.1%, being frequently available services of FPS. The other services were not adequately available based on the cut-off percentage set by the study. However, only a cumulative total of 51.5% of the respondents agreed that sexually transmitted disease services were available at CHPS in the municipality, whereas 48.2% disagreed with that assertion. The least available service was pre-conceptional services, which recorded a cumulative total of 86.0% disagreeing with its availability at CHPS.

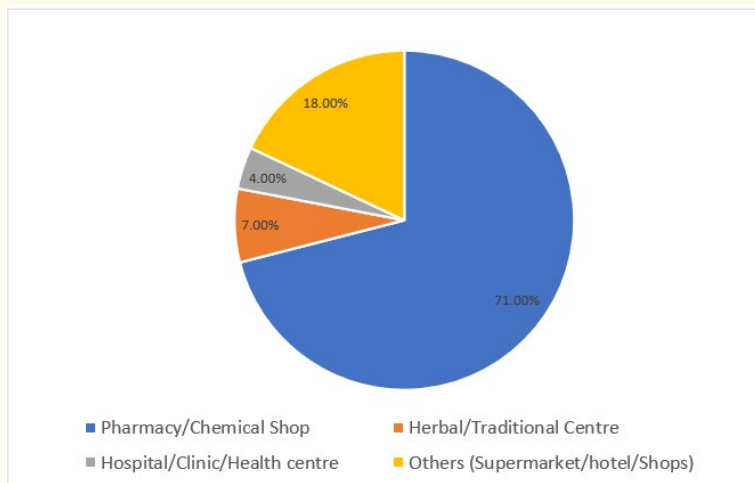
**Preferred outlet for sourcing family planning services**

In determining the respondent’s preferred outlet for obtaining FPS, a larger number (71.0%) of them preferred taking FPS at the pharmacy or chemical shops. It was followed by a few (18.0%) who preferred obtaining it from other places, such as supermarkets, hotels, and shops. Unfortunately, a limited number of the respondents preferred sourcing it from either the herbal or traditional centre (7.0%) or the hospital, clinic, or health centre (4.0%).

**Relationship between preferred outlet and availability of family planning services**

Pearson bivariate correlation analysis was used to establish the relationship between the preferred outlet for sourcing FPS and the availability of FPS. The results from table 4 revealed that there was a high positive correlation between pharmacy/drug shop availability





**Figure 1:** Preferred outlet for sourcing family planning services.

and FPS availability (.81). Moreover, the correlation between other sources (supermarkets, hotels, shops, etc.) and the availability of FPS was positive and moderately high (.68). Furthermore, hospital/clinic/health centre availability of FPS was positively correlated (.25). On the other hand, there was a weak negative relationship between traditional or herbal centres and the availability of FPS. Therefore, there is a positive relationship between the preferred outlet for obtaining FPS and the availability of FPS at CHPS.

Preferred Outlets	Availability of family planning services (r)	R <sup>2</sup>
Pharmacy/chemical shop	0.81	.71
Others (supermarket, hotel, shops, etc)	0.68	.37
Hospital/clinic/health centre	0.25	.05
Traditional/Herbal centre	-0.11	.02

**Table 4:** Correlational between preferred outlet and availability of FPS.

*P* < 0.05; *N* = 413.

The correlation analysis indicates that pharmacy/drug shops made the most substantial contribution, demonstrating a coefficient of determination of  $R^2 = .71$ . This result implies that the pharmacy/drug shop has the strongest association with participants' ratings of the availability of Family Planning Services (FPS) among Women in Fertility Age (WiFA) at Community-based Health Planning and Services (CHPS) facilities. In simpler terms, the pharmacy/drug shop exhibits the highest level of correlation among all the outlets considered in relation to the availability of FPS.

### Perceived benefits of family planning services on maternal and child health

The study found respondents to have several perceived benefits of FPS on MCH outcomes. However, the utmost perceived benefit of FPS on MCH outcomes among rural WiFA was a cumulative total of 86.4% who agreed that FPS prevents unwanted pregnancies, with a mean score of 1.09 and a standard deviation value of 0.41, while a cumulative total of 13.6% disagreed with that perception. This was followed closely by a cumulative total of 84.5% who also agreed that FPS prevents maternal and child morbidity and mortality, with a



mean score of 1.14 and a standard deviation score of 0.44, whereas a cumulative total of 15.5% had a contrasting view. On the issue of regulated intervals, a cumulative total of 71.4% of the respondents agreed that FPS regulated intervals between births, while 28.6% of them disagreed.

Also, most of the respondents (69.8%) perceived family planning services to contribute to a reduction in sexually transmitted infections, while a cumulative total of 30.2% disagreed. Most of the respondents (62.1%) held the view that family planning helps them attain their desired number of children, while 37.9% disagreed. Similarly, the majority of the respondents (59.1%) agreed that FPS corrects menstrual disorders, while 40.9% of them held a contrary view.

However, a cumulative total of 55.9% disagreed with the assertion that FPS helps in the treatment of infertility, while 44.1% agreed with that effect. Likewise, a cumulative total of 56.7% disagree that FPS helps in achieving pregnancy, whereas 43.3% of the respondents had established that.

Perceived benefits of FPS	Agree Freq. (%)	Disagree Freq. (%)	M	SD
It prevents unwanted pregnancies	357 (86.4)	38 (13.6)	1.09	0.41
It prevents maternal and child health morbidity and mortality	349 (84.5)	64 (15.5)	1.14	0.44
It regulates intervals between births	295 (71.4)	118 (28.6)	1.28	0.56
It prevents sexually transmitted infections	288 (69.8)	125 (30.2)	1.33	0.50
It helps to attain desired number of children	256 (62.1)	157 (37.9)	1.35	0.49
It corrects menstrual disorder	244 (59.1)	169 (40.9)	1.40	0.55
It helps in treatment of infertility	182 (44.1)	231 (55.9)	1.59	0.47
It helps to achieve pregnancy	179 (43.3)	234 (56.7)	1.55	0.49

**Table 5:** Perceived benefits of family planning on maternal and child health.

These findings, with their respective levels of agreement, clearly show that the probability of preventing pregnancy, improving maternal and child health, regulating birth intervals, reducing sexually transmitted infections, providing the desired number of children, correcting menstrual disorders, treating infertility, and achieving pregnancy is high. Family planning services are a crucial component of primary health care, which the general population must be informed about.

**Influence of cultural factors on patronage of family planning services**

Table 6 demonstrates the impact of cultural factors on the utilisation of Family Planning Services (FPS) through a multiple linear regression analysis. The R<sup>2</sup> value of 0.741 signifies that 74.1% of the standardised variations in the dependent variable (FPS) can be accounted for by the independent variables. These independent variables include husband willingness and approval, family support, cultural beliefs and practices, women’s limited control over their reproductive health, and cultural preferences.

More noteworthy, the results indicate that husband willingness and approval exert a positive and statistically significant impact on the utilization of family planning services (FPS). Controlling for other variables, a one-unit percentage change in husband willingness and approval is associated with an average 5.2-fold increase in the likelihood of FPS utilization. This underscores the crucial role of male involvement in influencing the patronage of FPS. Limitations in their involvement may contribute to reduced service usage, method discontinuance, and, ultimately, service collapse.

Variables	Coefficient	Std. Err.	T	P> t
Constant	82.546	4.036	20.451	0.000
Husband willingness and approval	5.201	1.505	7.235	0.001
Family support	11.073	2.248	6.927	0.003
Cultural belief and practices	11.004	2.031	6.120	0.023
Women little control over their reproductive health	-4.023	1.756	-4.326	0.041
Cultural preference	-4.321	2.342	-5.031	0.003
R <sup>2</sup> =	0.741			
Adj R-squared	0.661			
F	11.160			
PROB>F=	0.008			
Breusch-Pagan test (Chi <sup>2</sup> )	4.77			
Prob>Chi <sup>2</sup>	0.016			
Mean VIF	1.49			
Durbin-Watson	1.445			

**Table 6:** Influence of cultural factors on patronage of family planning services.

\*\*\*Significance at 1% level. \*\*Significance at 5% level. \*Significance at 10% level.

More importantly, the coefficients associated with family support and cultural beliefs and practices are approximately double those of husband willingness ( $t = 11.073$  and  $t = 11.04$  respectively all at  $p < 0.05$ ). This signifies that, for every unit change in these variables, the expected change in the patronage of FPS is twice as pronounced compared to a unit change in husband willingness. This observation emphasises the unique and substantial impact of family support and cultural beliefs and practices on the utilisation of FPS. In practical terms, these cultural factors play a crucial role in influencing individuals' decisions regarding family planning services, surpassing the influence exerted by husband's willingness alone.

On the other hand, Women control over their reproductive health ( $t = -4.023$  and  $p = 0.041$ ) and cultural preference ( $t = -5.031$  and  $p = 0.003$ ) variables showed statistically significant negative associations with the patronage of family planning services. This suggests that, when women perceive having limited control over their reproductive health or when there is a strong cultural preference against family planning, there is a corresponding decrease in the utilisation of FPS. These findings emphasise the importance of addressing women's agency and cultural considerations in promoting the uptake of family planning services.

Assessing model fitness, the Breusch-Pagan test yielding a value of 4.77 indicates the absence of heteroscedasticity concerns ( $P < 0.05$ ). Further, the mean Variance Inflation Factor (VIF) score of 1.49 suggests an absence of serial correlation in the error term, and finally, the Durbin-Watson score, estimated at 1.554, signifies the absence of autocorrelation in the model. These diagnostic tests collectively validate the model's reliability and fitness.

## Discussion

Family planning services play a critical role in promoting maternal and child health outcomes; however, there are several factors that mitigate against their full patronage. It is in this regard that the study assessed the promotion of maternal and child health (MCH) outcomes through patronage of family planning services among rural women of fertility age. Specifically, the study sought to 1) assess

the availability and outlets for sourcing FPS; 2) examine the perceived benefits of family planning services; and 3) determine the cultural factors influencing patronage of family planning services. The discussion of the study had been structured based on the specific objectives of the study.

### **Availability and outlets for sourcing family planning services**

Family planning services are usually made available via the public health system. The essence is to make the services more accessible, which is in fulfilment of achieving universal coverage for FPS as required by the primary health care (PHC) policy and as stipulated in the 1992 Constitution of Ghana. This occasioned the creation of the Community-Based Health Prevention System (CHPS), which has improved the provision of FPS in rural communities. The CHPS strategy was perceived as very helpful, with full community participation at all levels of the implementation process for family planning programmes (Adongo., *et al.* 2013). CHPS offers several services, including FPS, which delivers integrated services to improve MCH outcomes. Of all the FPS delivered at CHPS, the study found only contraceptive services and pregnancy testing and counselling services as the most frequently available services known among rural WiFA. However, sexually transmitted disease services were averagely available, whereas the other services-basic fertility services, basic infertility services, and pre-conceptional health services-were rarely known to be available at CHPS. The study findings suggest that little is known about FPS, aside from prevention of unwanted birth, treating STDs, and pregnancy testing and counselling, confirming the results of the Thongmixay., *et al.* [20] study in the Lao People’s Democratic Republic.

Traditionally, clients seek FPS to prevent unwanted pregnancy and space birth, and as part of assessing the client for the method, it is requisite to test for pregnancy. This might explain why those services were known to be available in the study area. Equally, results from the 2006 - 2010 National Survey of Family Growth (NSFG) established that almost 25 million women received contraceptive service each year, with birth control prescriptions being the most common service, at 20.6 million women [21]. This could mean that although FPS has improved over the years, there is a limited number of services, especially in rural areas. This could probably be due to nonexistent specialised staff, service unavailability, low awareness, and/or poor utilisation of the service [22,23]. Likewise, it confirms what Wani., *et al.* [24] found that most women in their reproductive age group know little or have incorrect information about family planning methods. Meanwhile, FPS goes beyond contraceptive services to include fertility issues such as giving assistance to become pregnant; basic infertility services such as identifying abnormalities of the reproductive system and reproductive system disease; STDs diseases services such as treating gonorrhoea and HIV/AIDS; and other pre-conceptional health services involving screening for obesity, smoking, and mental health. All these are equally important services since they improve MCH health status and determine the woman’s ability to conceive and have a healthy birth outcome [25].

The availability of FPS varies considerably between countries and communities. Availability has been found to be greatest at the highest level of the health system (hospitals) and decrease incrementally with each health system level, with disparities between provinces and urban and rural areas [26]. Thus, the availability of FPS remains low and inconsistent [16,26,27]. In response to this, Ghana is making strides to ensure service availability through the PHC system. The effective ways of ensuring the availability of FPS are to intensify education programmes and improve materials, logistics, and human sources. The availability of FPS is an important determination of contraceptive use, and it is embedded within a broader framework of preventive health services and a critical piece of the nation’s reproductive health status.

### **Preferred outlet for sourcing FPS**

One of the greatest achievements of family planning programmes in recent years has been its ability to make information widespread and accessible to those who need the services. As a result, several outlets have been provided for people to easily obtain the services. The outlets and centres included the health facility (hospital, clinic, health centre, or CHPs centre), pharmacy shops, stalls, or supermarkets;

commercial retail centres, such as DKT Ghana; and health education programmes. The services are usually delivered via either an outreach programme where the services are carried to the doorstep of the people or via stationary health facilities, which require clients to go in search of the services. However, since the Ghanaian healthcare system predominantly offers stationary facility-based services, the focus of this study was on the clients who accessed the service at CHPS. Generally, effective delivery of most FPS requires more sophisticated facility-based services and specialised staff, which can only be offered at the healthcare facility. However, the healthcare facilities are concentrated in urban centres, making their availability difficult to reach in rural areas. It was among the reasons why the study assessed the outlets for sourcing FPS.

The study found numerous FPS outlets; however, a larger portion of clients preferred the pharmacy/chemical shops. Therefore, there was a positive relationship between the preferred outlet and the availability of FPS at CHPS. Similar to the study finding, a survey of public and private FPS outlets in Nigeria, Ethiopia, and the Democratic Republic of the Congo found pharmacies in all three countries to have higher availability of oral contraception, condoms, and especially emergency contraceptives than public health facilities since it was a preferred outlet for accessing FPS [28]. Also, data from 57 LMICs found that, depending on the region, 37 - 41% of modern contraception users obtain their contraception from a private sector provider. Thus, in 22 sub-Saharan African countries, between 38% and 45% of clients were reported to have gone to a private specialised drug seller for FPS [29]. Another study [30] also found that pharmacy and drug stores were reported to be the most popular suppliers of contraceptives, followed by family planning clinics. By virtue of the type of contraceptive used, participants still preferred a pharmacy or chemical store due to its availability, thus confirming the established relationship between preferred outlet and availability of FPS.

The clients might have chosen a pharmacy shop to procure their contraceptive services, probably due to the easy accessibility, proximity, comfort, and stigma attached to health facilities. In addition, a pharmacy or chemical store is preferred because it is deemed eligible to offer a variety of modern contraception services, including FPS [31]. Interestingly, most pharmacies are reliable sources of contraceptives when they become scarce or unavailable at health facilities, thereby becoming a dependable outlet for obtaining FPS.

The findings of the study implied that rural WiFA might have inadequate service benefits since FPS are best delivered at the health facility (CHPS). The health facilities have purposely been designed to offer all FPS based on the cadre of staff specialists and the nature of some procedures for FPS. For instance, long-term family planning methods (tubal ligation, IUD insertion, and vasectomy) are provider-oriented since some of the services required are delivered through surgical procedures. However, in contexts where multilevel barriers (inside and outside facilities) make people unwilling and unable to visit health facilities for contraception services, pharmacies have become an appealing alternative option. The role of the pharmacist within the broader health system is rapidly evolving as pharmacies provide needed access to medicine and care in LMICs [32]. WHO has developed recommendations on task sharing to improve access to contraception, which specifically include both cadres of pharmacy personnel: pharmacists and pharmacy workers [31]. The training requirements and competencies of pharmacists and pharmacy workers are country-specific. Pharmacists are generally university-educated, and the International Pharmaceutical Federation's (FIP) definition indicates that pharmacists are "scientifically trained graduate healthcare professionals who are experts in all aspects of the supply and use of medicines" [33]. Therefore, they are fit to deliver family planning services.

### **Perceived benefits of family planning on maternal and child health**

Family planning services are a crucial component of PHC, which the general population must be informed about. The study indicated that family planning services have the benefit of preventing pregnancy. The study found respondents to have several perceived benefits of FPS on MCH outcomes; however, the utmost perceived benefit among rural WiFA was the prevention of unwanted pregnancies and maternal and child morbidity, as well as mortality. This conforms to WHO [34] findings that FPS are preventive services to assist women in avoiding unwanted pregnancies and taking good care of their children. According to the authors, it also aids in spacing the children after each pregnancy.

FPS offers effective ways of ensuring MCH [35], and it allows women whose infants are prone to higher mortality to delay childbearing until a later age. This supports the current findings that FPS prevents maternal and child morbidity [36]. It could, therefore, be deduced that family planning helps promote both maternal and child health. The study also shows that FPS has the benefit of reducing sexually transmitted infections (STIs), though few people perceived that in the study. Findings from previous studies [16,22] supported the present study, indicating that FPS prevents pregnancy and addresses the problems of STIs by providing comprehensive treatment, information, and education, as well as controlling the population.

Increased use of modern contraception reduces the number of births that would otherwise occur. Therefore, Ajayi and colleagues [37] indicated that it reduces the number of child deaths [38]. The study also shows that family planning helps to provide the desired number of children, spacing pregnancies, and treatment of infertility. This confirms a publication by WHO [39] that FPS allows people to attain their desired number of children and determine the spacing of pregnancies, mainly through the use of contraceptive methods and the treatment of infertility. Given the enormous contribution of FPS to improving the living conditions of mothers and children, having adequate knowledge of and access to family planning practices is not just an option but a human right that must be respected.

Therefore, perceiving FPS to be beneficial for MCH outcomes means that more rural WiFA have recognised the importance of FPS, and they are, thus, more likely to patronise the services to reap its full benefits. Promoting high-quality FPS is likely to reduce unintended pregnancy and abortion rates, as well as improve birth outcomes. With a reduced risk of unintended pregnancy, women can easily pursue their professional career, increase their earning power, gain social status to be part of decision-making, and alleviate some of the gender wage gap [21]. Family planning services can help address public health challenges by improving MCH by providing education, counselling, and medical services.

### **Influence of cultural factors on patronage of family planning services**

Cultural factors play an important role in patronising FPS. The study established that cultural factors were significant predictors of patronage at FPS. Relationship quality depends on the couple's capacity to process and exchange information, opinions, and feelings as well as come to decisions about crucial matters, such as family planning, that safeguard the survival of the family [40]. The reasonable decision-making approach for fertility plans includes discussing family planning with the spouse, which is one of the aspects that contributes to the adoption of the plan [41]. One of the key elements in the use of FPS is the participation of males. Their limitations in the family planning programme result in a decline in service usage and method discontinuance, which ultimately causes the programme to collapse. From the study, husband willingness and approval have a positive and statistically significant influence on patronage of family planning. Instead of assuming that women's acceptance of family planning is what is causing societal change, the most effective methods of male partners willingness and approval support the study findings.

Family support has a positive and statistically significant correlation with patronage of family planning. This affirms the notion that, even in a collectivist culture where couples consult with their extended family, couples have the last say when it comes to family planning. Family harmony is improved if a woman's husband is in favour of family planning. Family planning is not culturally acceptable in Ghana since women are primarily viewed as child-givers. This affirms the current study that cultural beliefs and practices have an influence on the patronage of FPS. In a similar study, most women were using contraceptives, while others were not using contraceptives because of opposition from family and mother-in-laws as well as women's personal desire to have more children [42]. The society in which a woman is reared affects the family planning procedures she believes in. Preconception care is a primary care idea intended to decrease infant mortality and its related racial and ethnic disparities in Ghana. One crucial component of preconception care is involving women and their spouses in culturally appropriate family planning and contraceptive counselling.

Cultural practices have resulted in high fertility and women having very little control over reproductive decisions, being exposed to sexually transmitted diseases, and having unwanted pregnancies [43]. The study shows that women with little control over their

reproductive health have a negative and statistically significant impact on family planning. Women's agency and chances in life often stay connected with sexual and reproductive autonomy, having a significant impact on family planning decisions. The results of women's sexual and reproductive health are significantly influenced by their capacity to make decisions about their SRHR. These factors are directly related to unmet needs and lower chances of choosing and making decisions on what family planning method one desires [11].

Numerous cultural factors have caused women to show little patronage of FPS. In most cultures, women do not have the power to access FPS and use the method of their choice [44]. Cultural preferences have a negative and statistically significant influence on the patronage of FPS. The implementation of FPS is significantly impacted by cultural views that restrict women from making their own decisions. This is in line with Solanke's [45] findings that cultural norms and practices impacted childbearing and the reproductive attitude of women towards contraceptive uptake. Such practices include gender preference, widow inheritance, and childbirth by women who have advanced in age.

## **Conclusion**

Developing measures that can improve availability and access to family planning services needs to take into account the socio-cultural context of the country. There is not a single, straightforward solution to the patronage of FPS given the prevalence and complexity of influential factors including cultural belief, family support, husband willingness, and cultural views on sexuality, among others. However, it is plausible to conclude that addressing cultural concerns is necessary to achieve significant reductions in unwanted pregnancies and improve family planning services.

Understanding this hard-to-reach population necessitate engagement at the grassroots level within rural communities, coupled with a comprehensive grasp of local needs, social dynamics, and cultural intricacies. Effective policy implementation mandates the establishment of user-friendly reproductive health centres accessible to both educated and uneducated couples. This will facilitate informed decision-making regarding family planning options. Further, perceptions regarding the benefits of Family Planning Services (FPS) on Maternal and Child Health (MCH) outcomes can be positively influenced through targeted behaviour change and communication interventions. Rather than adhering to the prevalent practice of delaying contraceptive use until achieving the desired family size, proactive behaviour change campaigns should advocate for the adoption of healthy birth spacing practices early in marriage, involving both men and women in the process. This proactive approach can significantly contribute to improved reproductive health outcomes and overall well-being within communities.

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## **Conflict of Interest**

The author declares that there was no competing interest.

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## **Availability of Data and Material**

Data will be available based on request and for research purposes.



## Ethics Approval and Consent to Participate

Ethical approval was sought from Ghana Health Service Ethics Review Committee (ID: GHS-ERC: 046/03/22). All study participants signed a written consent form before participating in the study.

## Bibliography

1. Eliason S., *et al.* "Factors influencing the intention of women in rural Ghana to adopt postpartum family planning". *Reproductive Health* 10 (2013): 34.
2. Stover J and Winfrey W. "The effects of family planning and other factors on fertility, abortion, miscarriage, and stillbirths in the Spectrum model". *BMC Public Health* 17.4 (2017): 775.
3. Smith R., *et al.* "Family planning saves life". 4<sup>th</sup> Edition (2009).
4. Aliyu Alhaji A. "Family planning services in Africa: The successes and challenges". *Family Planning, InTech*, 13 (2018).
5. Ghana Demographic and Health Survey. "Ghana - Demographic and health survey 2022" (2022).
6. Alliance for Reproductive Health Rights. "The crucial role of family planning in advancing Ghana's nation development, 2023" (2023).
7. Compton SD., *et al.* "Give women what they want: contraceptive discontinuation and method preference in urban Ghana". *Contraception and Reproductive Medicine* 8.1 (2023): 5.
8. Bawah AA., *et al.* "Contraceptive method use, discontinuation and failure rates among women aged 15-49 years: evidence from selected low-income settings in Kumasi, Ghana". *Contraception and Reproductive Medicine* 6.1 (2021): 9.
9. Abrah Phyllis. "Contraceptives use among reproductive-age women in new juaben municipality, Ghana". Kwame Nkrumah University of Science and Technology, University of Ghana: MPH dissertation (2014).
10. Tampah-Naah AM., *et al.* "Residential status and household wealth disparities in modern contraceptives use among women in Ghana: a cross-sectional analysis". *BMC Womens Health* 23 (2023): 550.
11. Guure C., *et al.* "Factors influencing unmet need for family planning among Ghanaian married/union women: a multinomial mixed effects logistic regression modelling approach". *Archives of Public Health* 77 (2019): 11.
12. Wulifan JK., *et al.* "Prevalence and determinants of unmet need for family planning among married women in Ghana-a multinomial logistic regression analysis of the GDHS, 2014". *Contraception and Reproductive Medicine* 4 (2019): 2.
13. Sunyani West Municipal Health Directorate. "Annual report, 2022". Accra: Ghana Health Service (2022).
14. Schrupf LA., *et al.* "Side effect concerns and their impact on women's uptake of modern family planning methods in rural Ghana: a mixed methods study". *BMC Womens Health* 20.1 (2020): 57.
15. Apanga Paschal Awingura and Awoonor-Williams John Koku. "Maternal death in rural Ghana: A case study in the upper east region of Ghana". *Frontier Public Health* 6 (2018): 101.
16. Apanga Paschal A and Adam MA. "Factors influencing the uptake of family planning services in the Talensi District, Ghana". *Pan African Medical Journal* 20 (2015): 10.



17. Demographic and Health Survey. "Comparative studies 7: Service availability" (1993).
18. Smith KG., *et al.* "Perceived benefits and barriers to family planning education among third year medical students". *Medical Education Online* 13 (2008): 4.
19. Nguyen TM., *et al.* "What are validated self-report adherence scales really measuring?: a systematic review". *British Journal of Clinical Pharmacology* 77.3 (2014): 427-445.
20. Thongmixay S., *et al.* "Quality of family planning services for women of reproductive age in Lao PDR". *Global Health Action* 13.2 (2020): 1788261.
21. Barry D and Esenstad A. "Ensuring access to family planning services for all". Centre for American Progress (2014).
22. Bhatt N., *et al.* "Perceptions of family planning services and its key barriers among adolescents and young people in Eastern Nepal: A qualitative study". *PLoS ONE* 16.5 (2021): e0252184.
23. Dobie SA., *et al.* "Family planning service provision in rural areas: a survey in Washington State". *Family Planning Perspective* 30.3 (1998): 139-142.
24. Wani RT., *et al.* "Knowledge, attitude, and practice of family planning services among healthcare workers in Kashmir - A cross-sectional study". *Journal of Family Medicine and Primary Care* 8.4 (2019): 1319-1325.
25. Gavin L., *et al.* "Centers for Disease Control and Prevention (CDC). Providing quality family planning services: Recommendations of CDC and the U.S. Office of Population Affairs". *MMWR Recommendation Report* 63.RR-04 (2014): 1-54.
26. Mpunga D., *et al.* "Availability and quality of family planning services in the democratic republic of the Congo: High potential for improvement". *Global Health Science and Practice* 5 (2017): 274-285.
27. Charles M., *et al.* "Availability and quality of family planning services in the city of Lubumbashi, democratic republic of Congo". *Open Access Library Journal* 6 (2019): 1-11.
28. Riley C., *et al.* "Getting to FP2020: Harnessing the private sector to increase modern contraceptive access and choice in Ethiopia, Nigeria, and DRC". *PLoS ONE* 13.2 (2018): e0192522.
29. Campbell M and R Oana. "Who, What, Where: an analysis of private sector family planning provision in 57 low- and middle-income countries". *Tropical Medicine and International Health* 20.12 (2015): 1639-1656.
30. Issah H., *et al.* "Knowledge of contraceptives, knowledge of types, and identified challenges to contraceptives use among undergraduate nursing students in the university for development studies". *Open Access Library Journal* 9.3 (2022): 1-15.
31. World Health Organization. "Family planning evidence brief - Partnering with the private sector to strengthen provision of contraception". Geneva, Switzerland: World Health Organization (2017).
32. Wafula FN and Goodman CA. "Are interventions for improving the quality of services provided by specialized drug shops effective in sub-Saharan Africa? A systematic review of the literature". *International Journal for Quality in Health Care: Journal of the International Society for Quality in Health Care* 22.4 (2010): 316-323.
33. Koduah A., *et al.* "Education of pharmacists in Ghana: evolving curriculum, context and practice in the journey from dispensing certificate to doctor of pharmacy certificate". *BMC Medical Education* 20.1 (2020): 475.
34. World Health Organization. "Family planning/contraception methods". WHO website (2022).

35. Omrana P., *et al.* "Postpartum contraceptive use and unmet need for family planning in five low-income countries". *Reproductive Health* 12.2 (2015): S11.
36. Aheto JMK. "Predictive model and determinants of under-five child mortality: evidence from the 2014 Ghana demographic and health survey". *BMC Public Health* 19.1 (2019): 64.
37. Ajayi AI., *et al.* "Use of traditional and modern contraceptives among childbearing women: findings from a mixed methods study in two southwestern Nigerian states". *BMC Public Health* 18.1 (2018): 604.
38. Stover J., *et al.* "Spectrum: a model platform for linking maternal and child survival interventions with AIDS, family planning and demographic projections". *International Journal of Epidemiology* 39.1 (2010): i7-i10.
39. World Health Organization. "Contraception". WHO website.
40. Koffi TB., *et al.* "Engaging men in family planning: Perspectives from married men in Lomé, Togo". *Global Health Science and Practice* 6.2 (2018): 317-329.
41. Dadi D., *et al.* "Decision-making power of married women on family planning use and associated factors in Dinsho Woreda, South East Ethiopia". *Open Access Journal of Contraception* 11 (2020): 15-23.
42. Pradhan MR and Mondal S. "Examining the influence of Mother-in-law on family planning use in South Asia: insights from Bangladesh, India, Nepal, and Pakistan". *BMC Women's Health* 23.1 (2023): 418.
43. Elmusharaf K., *et al.* "Social and traditional practices and their implications for family planning: a participatory ethnographic study in Renk, South Sudan". *Reproductive Health* 14.1 (2017): 10.
44. Abdulai M., *et al.* "Demographic and socio-cultural factors influencing contraceptive uptake among women of reproductive age in Tamale Metropolis, Northern Region, Ghana". *Ghana Medical Journal* 54.2 (2020): 64-72.
45. Solanke BL. "Factors influencing contraceptive use and non-use among women of advanced reproductive age in Nigeria". *Journal of Health Population Nutrition* 36.1 (2017): 1.

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