

## Original Research Article

# PREVALENCE AND DETERMINANTS OF MODERN CONTRACEPTIVE UTILIZATION IN THE MPOHOR DISTRICT OF GHANA

### *Abstract*

**Introduction:** Modern contraceptive use is considered a reliable tool for birth spacing, prevention of unwanted pregnancies and reducing the spread of sexually transmitted diseases. Quite an appreciable number of young women in Mpohor District of Ghana do not use contraception despite its known benefits, resulting in unwanted pregnancies, unsafe abortions, and sometimes death. This study was therefore aimed at identifying the determinants of modern contraceptive use among women in the Mpohor District of Ghana.

**Methods:** This study is a household cross-sectional survey and structured questionnaire was used to obtain data from 202 women between the ages of 18-48 years in the district. Data was analysed using Statistical Package for Social Science (SPSS) version 22. Also, chi-square test and logistic regression analysis were conducted to interpret the data. Descriptive statistics was used to present findings of the study.

**Results:** The results of the study revealed that there is a universal knowledge (100%) on modern contraceptives and prevalence of modern contraceptive use was (59.9%) among respondents. The determinants of modern contraceptive were age ( $p=0.033$ ), educational level ( $p=0.002$ ), marital status ( $p=0.043$ ), number of children ( $p=0.042$ ), contraceptive availability ( $p=0.001$ ) and contraceptive accessibility ( $p=0.000$ )

**Conclusion:** *There is the need to ensure equitable distribution of family planning facilities all over the country, and healthcare providers should be trained and equipped with the needed resources to provide quality services.*

**Key Words:** Prevalence, Determinants, Utilization, Modern Contraceptive, Mpohor District

## **Introduction**

Huge benefits have been attributed to the use of modern contraceptive methods, such as preventing unplanned pregnancies and improving proper spacing of preferred number of children. These benefits make contraceptive usage well appreciated in many parts of the world but relatively low among residents of sub-Saharan Africa (1).

In sub-Saharan Africa, including Ghana, a number of maternal deaths, unsafe abortions, and unintended pregnancies have occurred due to the low use of modern contraceptives (2). Out of the estimated 210 million pregnancies that occur every year around the world, 80 million (38%) are unplanned and 46 million (22%) end up as abortions. The use of modern contraceptive methods, when properly utilized, is expected to overcome this public health problem (3). Ghana and some other countries in the sub-Saharan African region have reported low prevalence of modern contraception usage possibly because of the difficulty in convincing members on the overall benefit and removing the misconceptions on its utilization (4).

In the Mpohor district of Ghana, there is a general fertility rate of 125.8 births per 1000 women aged 15-49 years which is the second highest in the western region of Ghana (GSS, 2018). According to a 2019 report by the Health Directorate of the Western Region, there is a high rate of abortions and unplanned pregnancies among women in Mpohor district which may clearly be

highlights of the fact that a lot of women in the district are likely not into the use of modern contraceptive methods (Western Regional Health Directorate, 2019). The reason to patronize the methods or not, and the basis for the choice of a particular method may all play a role in this public health chancre. Therefore, this study seeks to fill this gap by identifying the determinants of the use of modern contraceptives among women in Mpohor district of the Western Region of Ghana.

## **Methods**

This descriptive, cross-sectional study took place in five communities in Mpohor, the capital of Mpohor District of Ghana. The communities were Ohiawa-Menwu, Gargo Road, Zongo, Akutuo-Ase and Stephen-Kraku. Introductory letter was obtained from the Department of Health Administration and Education of the University of Education, Winneba to undertake the study. Authorization was obtained from various Chiefs, Assembly men of the communities and District Chief Executive of the district. No incentives were given to participants. Consenting young and adult women numbering 202 were sampled for the study. These women were between the ages of 18 to 48yrs and were questioned on their knowledge on modern contraceptives. The study solicited for information on the knowledge of participants on the methods in order to determine the prevalence and predictors of modern contraceptive method use. Data collection started in May 2, 2021 and ended in June, 20, 2021.

The study was conducted in the homes of the participants. Systematic random sampling technique was employed to select the total number of respondents. This method gave an equal chance to any female who was 18years and above and was willing to take part in the study. The women were sampled from household to household. In a situation where the selected house had no eligible respondent, or where the house had eligible respondents but they were unwilling to

take part in the study, the researchers moved to the next house. This process continued until the required sample size was obtained from the study population.

The measurement tool for the research was self-administered questionnaire in English language. After getting approval from the participants through informed consent, the questionnaires were administered, one at a time, face to face and to be completed in English language. For those respondents who could not read and/or write in English, the researcher translated the questions into local dialect (Twi) for them.

Participants were made to understand that participation in the study was voluntary and that they could leave at any time without any consequence. Assurance was given of the confidentiality of the information they provide. Moreover, each participant gave verbal or written consent before partaking in the study.

The structured questionnaire comprised of open and close ended questions. The items for the instruments were derived from the literature in accordance with the purpose of the study (5). The questionnaire was structured in five parts. The first part solicited information on knowledge and awareness of contraceptives while the second part sought information on prevalence of contraceptive use. Meanwhile, the third and fourth part collected information on preferred method of modern contraceptive and factors that determine modern contraceptive use respectively. The final part collected participants' demographic information such as age, marital status, religion and number of children. To ensure validity and reliability of the instrument, pre-testing was embarked using a total of 10 women between the ages of 18years to 48years from Edum Bansa also in the same district.

Data from the questionnaire were analyzed using IBM Statistical Package for Social Sciences (SPSS) version 22 software. Also, chi-square test and logistic regression analysis were conducted to interpret the data. Descriptive statistics was used to present findings of the study.

## Results

### Socio-demographic characteristics of the respondents

A total of 202 young and adult women from Mpohor were recruited in the study. A higher proportion of respondents (46.5%) were between the ages of 28-38years. A higher percentage were identified to be (53.5%) single and many were Christians (90.1%). Majority of the respondents (35.1%) had attained vocational skills as their highest educational level with only one respondent (0.5%) having no formal education. More than half of the respondents (54.0%) had no child/children while (35.6%) of them had only one child (See Table 1)

**Table 1: Socio-demographic characteristics of respondents**

Variable	Frequency (N=202)	Percentage (%)
<b>Age</b>		
18-27	92	45.5
28-38	94	46.5
39-48	16	7.9
<b>Education level</b>		
No formal education	1	0.5

JHS	31	15.3
Secondary	39	19.3
Vocational	71	35.1
Tertiary	60	29.7
<b>Religion</b>		
Christianity	182	90.1
Islam	20	9.9
<b>Marital status</b>		
Single	108	53.5
Married	91	45.0
Divorced	3	1.5
<b>Number of children</b>		
None	109	54.0
1 Child	72	35.6
2 Children	17	8.4
3 Children	1	0.5
4+ Children	3	1.5

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**Source: Field Survey, 2021**

### **Knowledge on modern contraceptives**

All the respondents (100%) had knowledge on modern contraceptives and almost all of them knew at least one method of modern contraceptives. Among the modern contraceptive methods identified were the pills (24.8%), male condom (19.8%), injectable (18.6%), implants (17.4%),

female condom (6.2%), male sterilization (2.2%), female sterilization (1.8%), diaphragm (1.2%) and foam/jelly (0.4%). Respondent's main sources of information on modern contraceptives were from television (40.9%), radio (26.2%), hospital/clinic (18.5%), friends (8.0%), posters/banners (4.0%), family/relatives (1.5%) and newspaper/magazine (0.9%) (See Table 2).

**Table 2: Knowledge on modern contraceptives**

<b>Statement</b>	<b>Frequency (N=202)</b>	<b>Percentage (%)</b>
<b>Heard about modern contraceptives</b>		
Yes	202	100.0
<b>Source of information*</b>		
Radio	85	26.2
Television	133	40.9
Hospital/clinic	60	18.5
Friends	26	8.0
Posters/banners	13	4.0
Newspapers/magazines	3	0.9
Family/relatives	5	1.5
<b>What is a contraceptive method?</b>		
It's a of method preventing unwanted pregnancy and spacing birth.	202	100.0
<b>Methods known *</b>		
Female sterilization	9	1.8
Male sterilization	11	2.2
Pills	124	24.8
Injectable	93	18.6
Male condom	99	19.8
Female condom	31	6.2
Diaphragm	6	1.2
IUD	38	7.6

Implants	87	17.4
Foam/jelly	2	0.4

**\*Multiple responses provided**

**Source: Field Survey, 202**

### **Contraceptive prevalence and sources**

A greater percentage (93.1%) of the respondents have ever used at least one modern contraceptive method while 6.9% of the respondents have never used any modern contraceptive method before. On the other hand, contraceptive prevalence among the respondents was 59.9% but 40.1% of the respondents are no more on any modern contraceptive. Main sources of respondent's contraceptives were from the pharmacy (78.1%), chemical shop (15.8%) and hospital (6.1%) (See Table 3).

**Table 3: Contraceptive prevalence and sources**

<b>Statement</b>	<b>Frequency (N=202)</b>	<b>Percentage (%)</b>
<b>Ever used contraceptives</b>		
Yes	188	93.1
No	14	6.9
<b>Currently on contraceptives</b>		
Yes	121	59.9
No	81	40.1
<b>Source of contraceptives*</b>		
Hospital	14	6.1
Pharmacy	178	78.1
Chemical shop	36	15.8

**\*multiple responses provided**

**Source: Field Survey, 2021**

### **Preferred modern contraceptive method**

With respect to the choices of the contraceptive methods among the respondents, the preferred methods were the pills (63.4%), the female condom (1.5%) and the injectable (1.5%). A relatively high percentage of respondents (34.7%) were actually not on any modern contraceptives. Reasons stated for the preferred methods were, easy to get and use (42%), safe to use (9%), reliable (16%), give no complication (18%) and cheaper (10%) (See Table 4).

**Table 4: Preferred method of contraceptives**

<b>Statement</b>	<b>Frequency (N=202)</b>	<b>Percentage (%)</b>
<b>Preferred method</b>		
Pills	128	63.4
Injectable	1	0.5
Female condom	3	1.5
None	70	34.7

**Source: Field Survey, 2021**

### **Socio-demographic characteristics associated with the use of modern contraceptives among respondents**

A Chi-square test was conducted to examine the association between the various socio-demographic variables and the respondents who have ever used modern contraceptive methods among the women of Mpohor. The result shows that there was no significant relationship between religion and the use of modern contraceptives among the respondents (p-value 0.199). However, there were significant relationships between age (p=0.033), education (p=0.002), marital status (p=0.043), number of children (p=0.042) and the use of modern contraceptives (See Table 5).

**Table 5: Socio-demographic characteristics associated with the use of modern contraceptive**

Variable	Contraceptives use n (%)		Chi-square Phi p-value
	Yes	No	
<b>Age</b>			
18-27	81(88.0)	11(12.0)	
28-38	91(96.8)	3(3.2)	0.033*
39-48	16(100.0)	0(0.0)	
<b>Educational level</b>			
No formal education	1(100.0)	0(0.0)	
JHS	30(96.8)	1(3.2)	
Secondary	38(97.4)	1(2.6)	0.002*
Vocational	70(98.6)	1(1.4)	
Tertiary	49(81.7)	11(18.3)	
<b>Religion</b>			
Christianity	168(92.3)	14(7.7)	0.199
Islam	20(100)	0(0.0)	
<b>Marital status</b>			
Single	96(88.9)	12(11.1)	
Married	89(97.8)	2(2.2)	0.043*
Divorced	3(100)	0(0.0)	
<b>Number of children</b>			
None	96(88.1)	13(11.9)	
1 Child	72(100)	0(0.0)	

2 Children	16(94.1)	1(5.9)	0.042*
3 Children	1(100)	0(0.0)	
4+ Children	3(100)	0(0.0)	

Statistical Significance was accepted at 95% confidence interval \*p<0.05

### **Logistic regression of the factors associated with contraceptive use among respondents.**

A simple binary logistic regression analysis was performed on the factors that were found to be significantly associated with modern contraceptive use in the crosstabs analysis to further investigate the strength of these associations. The crude odds ratio (OR), the p-values as well as confidence intervals are presented. According to the binary logistic regression, all the factors that were proven to have significant association in the crosstabs analysis were confirmed to be significantly associated with contraceptive use in the binary logistic regression analysis. It was also noticed that contraceptive availability was 15.5 times odd of contraceptive accessibility among the respondents. The educational level of respondents has a higher odd (3.053) of contraceptive use than the age category of respondents (0.222). The marital status of respondents is at a reduced odd (0.177) of contraceptive use as compared to the number of children of respondents (0.207) (See Table 6).

**Table 6: Logistic regression of the factors associated with contraceptive use among respondents.**

Factors	Crude Odds Ratio		95% CI
	OR	P-Value	Lower, Upper
<b>Contraceptive availability</b>			
Yes	15.500	0.009*	2.005, 119.80

No

**Contraceptive accessibility**

Difficult 0.380 0.019\* 0.170, 0.851

Very difficult

Easy

**Age**

18-27

28-38 0.222 0.018\* 0.64, 0.777

39-48

**Educational level**

No formal education

JHS 3.053 0.008\* 1.343, 6.941

Secondary

Vocational

Tertiary

**Marital status**

Single

Married 0.177 0.025\* 0.39, 0.806

Divorced

**Number of children**

None

1 Child

2 Children 0.207 0.032\* 0.49, 0.876

3 Children

4+ Children

\*P< 0.05      OR = Odd Ratio      CI = Confidence Interval (95%)

## **Discussions**

### **Knowledge on modern contraceptives**

The aim of the study was to identify the determinants of modern contraceptive use among women in the Mpohor District of Ghana. All the respondents had knowledge on modern contraceptives and almost all of them knew at least one method of modern contraceptives. This is affirmed by Humera and Parwez (6) who assessed the knowledge, attitude and practice of contraception in rural Kashmir, India. In the view of the authors, universal knowledge and awareness of modern contraceptives could be partly due to the various behaviour change through communication and social marketing strategies in the form of visual and audio advertisements and educational interventions put in place to promote contraceptive use (6). Meanwhile, Ghana Demographic Health Survey,(7) report also showed that 99% of women knew of a modern contraceptive method. A study in Ethiopia, reported that about 99% of women knew at least a modern method of contraceptives (8). Among the modern contraceptive methods identified were the pills (24.8%), male condom (19.8%), injectable (18.6%), implants (17.4%), female condom (6.2%), male sterilization (2.2%), female sterilization (1.8%), diaphragm (1.2%) and foam/jelly (0.4%). In a qualitative study assessing knowledge and perceptions regarding long-acting and permanent contraceptive methods in urban Ethiopia, women preferred methods that did not require any procedure.(9) This may support the reason why majority of the respondents knew a lot about the pills (24.8%) and male condom (19.8%) than the rest of the contraceptive method since they require no procedure. Respondent's main sources of information on modern

contraceptives were from television, radio, hospital/clinic, friends, posters/banners, family/relatives and newspaper/magazine. This study is in contrast with Eliason et al. (2) who revealed that the main source of family planning knowledge or information was health workers in the Nkwanta District, Ghana. The Nkwanta District compared with Mpohor District, generally has very poor television reception, hence, making it difficult to obtain regular family planning information through such a medium. However, this finding is consistent with that of Egede et al. (2015) (10). In 2013, Humera and Parwez (6) who reported that contraceptive information obtained through the television medium is more reliable and educative compared to information from friends, which is more likely to be incorrect and may contain a lot of misinformation, distortion, falsehoods, and misconception. Hence this study reveals that respondent's major source of information is from television and radio than hospital/clinic which may be as result of technological advancement and digital nature of the world.

### **Prevalence of modern contraceptive use**

The utilization of modern contraceptives is crucial since unprotected sex can result in an unplanned pregnancy or sexually transmitted diseases, or both (7). Therefore, the utilization of modern contraceptives is crucial. Contraceptive use is a critical strategy for reducing morbidity and mortality from abortion and ensuring prevention of pregnancy among women. In this study, the prevalence of modern contraceptive use was 59.9% among 202 respondents. This prevalence is higher than studies in other African countries, such as Tanzania, where a study by Somba et al. (11) found the prevalence rate of modern contraceptives to be 41.5% in 2014. It is also higher than the reported national prevalence of modern contraceptive use, which was 25 %.(12) This high prevalence of modern contraceptives may be due to an increase in knowledge and awareness of modern contraceptive use among the respondents, hence accounting for the reason

why the majority of the respondents (75.7%) suggested that use of modern contraceptive methods is good, especially since the sample size for this study may be smaller than that of the national prevalence, and also since most of the respondents (95.5%) are able to purchase contraceptives easily without any difficulties. This reveals the fact that the probability of knowledge and awareness resulting in contraceptive use is high.

The main sources of respondents' contraceptives were from the pharmacy, chemical shop and hospital. This may be due to the fact that respondents visiting the hospital for the service may be a huge task and time-waster for them, and therefore, they prefer using short-acting pills which can easily be purchased from the pharmacy and chemical shops, which may be closer to the respondents than the hospital.

### **Preferred method**

Out of the 202 respondents, about 65.4 % are currently using modern contraceptives. The preferred method was pills (63.4%). Some of the reasons given by the respondents for using the short acting method were that they are easy to get and use, safe to use, reliable, cause no complications and cheaper. In a qualitative study assessing knowledge and perceptions regarding long-acting and permanent contraceptive methods in urban Ethiopia, women preferred methods that did not require any procedure (9). This may support the reason why the respondents' preferred method of modern contraceptive was the pill, since it requires no procedure. Also, a relatively high percentage of the respondents (34.7%) were actually not on any modern contraceptives currently. This may be due to some factors preventing the use of modern contraceptives, like fear of side effects, cultural beliefs against the use of modern contraceptives, dissatisfaction with the service and also their opinion that modern contraceptive methods are bad.

## **Determinants of modern contraceptives use**

The main factors significantly associated with contraceptive use among the respondents were age ( $p=0.033$ ), educational level ( $p=0.002$ ), marital status ( $p=0.043$ ), number of children ( $p=0.042$ ), contraceptive availability ( $p=0.001$ ) and contraceptive accessibility ( $p=0.000$ ).

The marital status of women was found to be associated with modern contraceptive use in this study. This is similar to studies in Uganda, Nigeria and Bangladesh, where users of long-acting contraception were more likely to be married women (13). The reason may be that most women who use modern contraceptives do so for proper birth spacing in order to have a smaller family size. Also, researchers have reported an association between educational level, age, number of children, income, and religion of study participants and contraceptive use (8, 14, 15). However, this study found no association between religion ( $p=0.199$ ) and contraceptive use among respondents. The reason may be that the majority of the respondents in the Mpohor District were Christians.

Furthermore, the study found a strong association between contraceptive availability ( $p=0.001$ ) and contraceptive accessibility ( $p=0.000$ ). Majority of the women responded "yes" to accessing contraceptives in their area, while a greater percentage actually confirmed that it is easy for them to purchase contraceptives in their area. This may be due to the fact that hospitals are not the only source of accessing contraceptives. There are other sources, such as pharmacies and chemical shops, which might even be closer to the respondents than the hospital. Hence, they can access any contraceptive method of their choice without any difficulty. This may account for the reason why the two factors were significantly associated with contraceptive use, hence constituting some major determinant of contraceptive use by the respondents.

## **Conclusion**

The prevalence of contraceptive use among women of reproductive age in the Mpohor District was estimated to be 59.9 % even though all respondents had knowledge on at least one method of modern contraceptive. The utilization of the methods was influenced by accessibility, availability and socio-demographic factors such as age ( $p=0.033$ ), educational level ( $p=0.002$ ), marital status ( $p=0.043$ ), number of children ( $p=0.042$ ), etc. The most preferred method was the pills (63.4%). These outcomes suggests that while increasing the educational messages on the utilization of modern contraceptives through the various media platforms, more emphasis must be placed on their relevance and benefits.

## **Declarations**

### **Ethics approval and consent to participate**

During data collection, we collected written informed consent from the participants before participation, and at the same time, participants were made aware of their right to discontinue their participation from the study at any point should they wish to.

### **Consent for publication**

Not applicable.

### **Availability of data and materials**

Not applicable

### **Human and animal rights**

Not applicable.

### **COMPETING INTERESTS DISCLAIMER:**

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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