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Contraceptive Needs, Availability and Utilization among Married Women in Rural Areas in Guinea

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ABSTRACT

Background: Family planning (FP) encompasses services that enable individuals to anticipate and attain their desired family size by a better timing of pregnancies. Despite the benefits of FP, the uptake of the services has been very low. This study aimed to identify the needs and barriers to the use of modern family planning among married women aged 15-49 years in rural areas, Guinea.

Methodology: A mixed method of study design was carried out using a descriptive and cross-sectional study (quantitative aspect) and an in-depth interview method (qualitative aspect). A multistage random sampling method was used to select study participants. Data were collected using a structured interviewer questionnaire and an in-depth interview guide structured interviewer questionnaire and an in-depth interview guide. The data were analyzed by specific statistical tests accepting a probability $p < 0.05$.

Results: A total of 349 people were questioned, the modal age group: 15-24 years and 33.6% at least secondary education. The majority were housewives (67.2%) and Islam the mainstream religion (98.5%). The Peulh is the dominant ethnic group (96.5%). Contraceptive uptake was (22.6%) and unmet need (75.8%). The availability of contraceptives was low (12.5%). Factors influencing contraceptive use included: low education, availability of contraceptives, husband's support, and religious beliefs. The use of contraception was low among rural women compared to expected values (2 to 2.5% annual increase). The qualitative results of the respondents support: "Not all who want to use it, some are ashamed to buy or even ask questions about it, others are afraid of their husbands."

Conclusion: Adequate advocacy on the benefits of contraceptives may improve their uptake and continued use of contraceptives. Male involvement in family planning may positively impact on health indices especially in the rural communities in Africa where decisions on health issues are influenced by many socio-cultural factors.

Introduction
Family planning (FP) is defined as a set of services that enable individuals and couples to anticipate and attain their desired number of children by better spacing and timing of pregnancies [1]. Millenium Development Goals (MDG's) 5a and 5b aimed to reduce the maternal mortality ratio by three-quarters and to achieve universal access to reproductive health, including family planning between 1990 and 2015 [2]. According to the World Health Organization, satisfying the unmet need for family planning alone could reduce the number of maternal deaths by

almost a third. However, an estimated 215 million women who would prefer to delay or avoid pregnancy continue to lack access to safe and effective contraception [3]. Thus, along with providing skilled maternal care, offering FP is crucial to averting maternal deaths [3].

Many countries, particularly those in the developed world have strong family planning programs however, this is not the case in sub-Saharan Africa, where despite a rise in contraceptive prevalence, many women continue to have unmet need for contraception [4,5]. The resultant high fertility is associated with high levels of maternal mortality, especially among the poorest communities.

Contraceptives are used by the majority of married or in-union women in almost all regions of the world. In 2015, 64 per cent of married or in-union women of reproductive age worldwide were using some form of contraception. However, contraceptive use was much lower in the least developed countries (40%) and was particularly low in Africa (33%)..[6]. Contraceptive use and unmet need for family planning levels vary widely across countries. Within Africa, countries or areas with contraceptive prevalence of 50 per cent or more are mainly islands (Cape Verde, Mauritius and Reunion), or located in the north of the continent along the Mediterranean coast (Algeria, Egypt, Morocco and Tunisia) and in Southern Africa (Botswana, Lesotho, Namibia, South Africa and Swaziland). Five countries in Eastern Africa (Kenya, Malawi, Rwanda, Zambia and Zimbabwe) also had contraceptive prevalence levels of 50 per cent or more in 2015. In contrast, 17 countries of Africa had contraceptive prevalence levels below 20 per cent. This group includes Nigeria, where contraceptive use was at less than half the level in Ethiopia (16% and 36%, respectively). Less than 10 per cent of married or in-union women of reproductive age were using contraception in Guinea, Tchad and South Sudan in 2015 [6].

In Guinea, comparable data have been available since 1992 to trace trends in contraceptive prevalence. A comparison of the results of the 1999 and 2005 surveys shows that modern contraceptive prevalence among women in union increased between these two dates (4.2% to 5.7%), this increase did not continue and the proportion of users even decreased slightly from 5.7% in 2005 to 4.6% in 2012. The decline was greatest in urban areas from 11.4% in 2005 to 7.4% in 2012. However, in rural areas, the prevalence remained almost stable 5.7% in 2005 against 3.5% in 2012 [7]. Guinea is characterized by rapid population growth, with population growth rate at 3.1% per year, a total fertility rate of 5.8 children per woman, and contraceptive prevalence of 4.6% in 2012 for modern methods. FP is an appropriate strategy for improving the indicators of socio-economic development in Guinea (reducing maternal mortality and child-adolescent mortality, greater investment in the education of children, improvement in GDP per capita) [8]. It is with this aim in mind that Guinea set itself the goal of improving the demand and supply of FP services [9]. This study assessed FP uptake, the unmet need for FP, the availability of contraceptives and identified factors that limit the use of contraceptive methods by married women in Hafia.

Methodology
Study area
This study was conducted in rural areas of Hafia, Labe region in Guinea, located in the northern part of Guinea. The total population of Hafia is 14262 with 5814 males and 8448 females. Fulani is the dominant ethnic group in the region of Labe. Hafia is divided in to eight [8] districts or villages known as rural areas [10].

Study design
A mixed method of study design was conducted using both: descriptive, cross-sectional study (quantitative aspect) and in depth interview (qualitative aspect). The design was selected for this study as it was intended to establish the prevalence of contraceptive methods use, the needs and factors associated with the use.

Sample size determination
A sample size of 349 was derived using sample size formula for a single population and non-response rate was adjusted by adding 10% of the calculated size. The assumptions were made at 95% confidence interval, 3% margin of error and 8% national expected proportion of uptake of family planning service among women in fertility age (Apanga 2015, Kothari 2004).

$$n = \frac{Z\alpha 2P\,(1-P)}{(d)2} \quad \text{(Kothari, 2004) and} \quad q = \frac{1}{(1-f)} * SS$$

Sampling technique
A multistage random sampling method was used to select the study participants. Simple random sampling technique was used to obtain three (3) districts out of eight (8) districts by balloting. Houses were selected from each of the selected district by systematic random sampling and all households in the selected houses were enumerated. Finally, only one eligible married woman (15-49 years) was interviewed from each selected household by ballot when two or more were encountered in one household. When there was no woman in the selected house, the next house was enumerated.

To obtain the sample for in-depth interviews, households were selected purposively from each selected district in the first stage. Balloting was used for selecting eligible respondents from each enumerated household and interviewed until saturation was obtained.

Data collection instruments
The data were collected using structured interviewer questionnaire and in-depth interview guide. The questionnaire was divided into four (4) sections to collect information on socio-demographic characteristics, knowledge about contraceptives, use of contraceptives and factors influencing the use of modern contraceptive methods. The questionnaire and the in-depth

interview guide were first prepared in English and translated to French by language expert and back to English to check consistency with the English version. The French versions were used to collect data.

The in-depth interview guide was divided into nine (9) questions and used to collect more information on knowledge, methods used, availability, contraceptive desire, additional factors influencing contraceptives use, type of contraceptives needed and how to improve contraceptive uptake.

Prior to data collection, the questionnaire was pre-tested in Gonkou on 35 respondents (10%) of the calculated sample size to assess appropriateness, content, clarity, comprehensiveness of the questions and time needed to complete an interview.

Methods of data collection
The Principal Investigator (PI) trained six (6) females research assistants who were health professionals for data collection in two (2) days. The quantitative data was collected using structured interviewer- administered questionnaire. The questionnaire was adapted considering the local situation of the study area. The data were collected using the French version by the assistants and the Principal Investigator (PI) for five (5) days.

Qualitatives data were collected in local language by using a digital audiotape machine and notebooks. The investigator asked permission from participants for tape recording before starting the interview and participants were encouraged to express themselves freely. The purpose of the audio-recording was to accurately record the information from the participants and only the Principal Investigator (PI) had listened and transcribed it for confidentiality purpose. Extra time was given to participants who needed to ask questions, to explain, reframe and repeat confusing questions.

Data analysis
Quantitative data was entered into EPI INFO, cleaned and analyzed. The P-value of 0.05 was used for statistical significance. The association between the binary outcomes, usage of family planning services (yes or no) with independent variables was investigated using chi-square test. Binary logistic regression model was used to determine the influence of significant independent variables such as spouse approval, discussion with husband about contraceptive, knowledge about contraceptive, religion and education on the uptake of family planning services.

For the qualitative data, the recorded audio interviews were transcribed (converting audio data to texts), then the transcribed texts were translated from French to English for analysis and categorized accordingly to main thematic areas manually. The findings were presented in narratives in triangulation with the quantitative results using the well said verbatim as illustrations.

Results
The study revealed that (48.7%) of married women in Hafia district were relatively using family planning methods (modern and natural), while (22.6%) used modern contraceptive methods and 26.1 for natural methods.
The total number of women surveyed was 349, the predominant

Socio-demographics characteristics of respondents	Frequency N=349	Total (%)
Age 15-24	110	31.7
25-34	106	30.5
35-44	96	27.7
≥45	35	10.1
Non response	2	
Education Primary level	37	18.3
Secondary school and above	68	33.7
Others	97	48
Non response	147	
Occupation House women	236	67.2
Private sector	39	8.1
Farmer	31	8.9
Others	42	15.8
Non response	1	
Religion Christian	5	1.4
Muslim	344	98.6
Non response	0	
Ethnicity Peulh (Fulani)	337	96.5
Others	12	3.5
Non response	0	

Table 1: Socio-demographic characteristics of the respondents.

age group was 15 to 24 years (31.7%) 25-34 year olds (30.5%) and all respondents were married, women's education levels were the same: 37 (18.3%) respondent had a primary grade and 68 (33.7%) were at secondary and higher level, roommates were predominant (67.2%) and Islam was the most widely practiced religion (98.5%). Peul (Peul) was the dominant ethnic group (96.5%).

Socio-demographic characteristics	Use of contraceptive Method N=349		Total (%)	P-value
	No (%)	Yes (%)		
Age				0,4524
15-24	56 (31.8)	53 (31.4)	109 (31.9)	
25-34	50 (28.4)	56 (33.1)	106 (30.7)	
35-44	48 (27.3)	47 (27.8)	95 (27.4)	
≥ 45	22 (12.5)	13 (7.7)	35 (10.0)	
Non response			4	
Education				P<0.0001
Primary level	46 (51.7)	46 (41.4)	92 (46.0)	
Secondary level and above	15 (16.8)	52 (46.9)	67 (33.5)	
Others	28 (31.5)	13 (11.7)	41 (20.5)	
Non response			149	
Occupation				P<0,0001
House wives	130 (73.5)	104 (61.6)	234 (67.6)	
Farmers	17 (9.6)	14 (8.3)	31 (9.0)	
Private	24 (13.3)	15 (8.8)	39 (11,2)	
Others	6 (3.4)	36 (21.3)	42 (12.2)	
Non response			3	
Religion				
Chistian	0	5 (3.0)	5 (1.4)	
Muslim	177 (100)	165 (97.0)	342 (98.6)	
Non response			2	
Ethnicity				P=0.09
Fulani (Peulh)	176 (99.4)	160 (94.1)	336 (96.8)	
Others	1 (0.6)	10 (5.9)	2 (0.6)	
Non response			12	

Table 2: Sociodemographics factors associated with the use of contraceptives

The use of contraceptive methods among those with primary 46 (41.4%) and secondary levels 52 (46.9%) was higher than others 13 (11.7%): those who did not attend any school (1.8%), those who attended koranic school (9.9%).

Predictors of FP use	Ref C.	OR	[95% Conf. Interval]		P-value
			Lower	Upper	
Spouse approval	0.0001 0.0001	37.47	12.67	110.79	0.0001
Education	0.0085 0.0083	1.78	1.15	2.75	0.0085
Discussion with husband on contraceptives	0.0001 0.0001	21.97	9.73	49.57	0.0001
Knowledge about contraceptives	0.0001 0.0001	67.52	28.08	162.35	0.0001

Table 3: Logistic regression model of factors predicting family planning use.

Discussion

In this study, it was observed that more than two –third of non-users need a contraceptive method but are not using due either to the husband's disapproval or other factors such as the availability which was also found to be a hindrance factor. Despite the high perceived need for contraception and generally positive attitudes toward family planning among married women in Hafia, the proportion of women who had sought family planning services and used effective modern contraceptive method was low when refered to an appropriate family planning programme (2 to 2.5% of annual increase). The unmet need for family planning in this sample was considerably higher than the 2012 and 2018 DHS estimates (24% and 22% respectively) of the national unmet need for family planning [7,11].

One explanation of this high unmet need might be due to the raising awareness on the benefits of contraception, another might be due to the fact that most women in Africa relies on their husbands for key decision-making including healthcare utilization while they (men) do not approve and support women for contraceptive use. Overall availability of contraceptive commodities was measured through availability of at least three modern methods of contraception referred to as the [appropriate method mix]. This allows women to choose the most preferable and appropriate method based on individual preferences and circumstances. Throughout the eight health centers and health posts participated in the survey, only one had the appropriate method mix available. Hafia health center had the highest availability and all others health posts had only two (2) methods of modern contraceptive.

While overall availability of the appropriate method mix is relatively low in all types of facilities either for sale or free distribution, pharmacies were not involved because there is not appropriate pharmacy in rural areas, so only the health facilities were surveyed. Health posts are staffed with only a nurse or technical health officer and do not have skills to provide implants and Intra Uterine Devices (IUD's). According to them, they are not allowed to provide such contraceptives without skills because they are not trained. However, their skills allow them to provide oral pills, injectable, family planning information and refer clients to the high level where a trained person can provide such contraceptives methods [12].

The study revealed that almost half of the sample of married women in Hafia district were relatively using family planning methods (modern and traditional) while one third of overall users used modern contraceptive methods and the others used natural methods. This is not consistent with the national average 7.8% [11]. This difference might be due to the fact that they used only the hospital record when they do the Demographic Health Survey (DHS). A significant percentage of women said they were using natural method. This finding is consistent with others studies, in Tanzania [13], in Ghana [14]. Although the largest proportion of women was not using modern contraceptive methods across the study period, the proportion of those using almost tripled when compared to the figure of Guinean DHS in 2018 [11]: 7.8%.

Certainly, progress has been made in enhancing access to and utilization of family planning services in general and modern contraceptives particularly [3,15,16].

It was observed in this study that there was no significant association between age and contraceptive method use among married women in Hafia Labe region in Guinea. This is consistent with those results obtained in Tanzania by Michael, in 2012 [12] where it was found that there was no significant association between age and contraceptive method use among women in stable marital relations. Results in other studies showed that the use of contraception was significantly associated with age of the women. Most of the women used contraception for the first time after the birth of first child as a spacing method [17].

The use of contraceptive methods among those with primary and secondary levels and above was higher than those who did not attend school or those who attended Koranic School. There is a significant association between contraceptive methods use and level of education; in particular, contraceptives methods use increases with increasing level of education. These findings are consistent with other studies [13,14,18,19]. Which showed strong association between education level and contraceptive use. This is also supported by the findings of Guinean demographic health survey (DHS) in 2018 [11] where only 8% of women with primary or no formal education were using modern methods of contraception as compared to 13% of women with some secondary education. With formal education, it is easy to understand issues related to health as compared with those without formal education.

More than half of contraceptive methods users reported that refusal by husband/partner is one of the factors that hindered the use of contraceptive methods although they were using it secretly, while all non-users reported that it was because of husband refusal that prevented them. Religious beliefs in this sample was the second reported factor that hindered the use of contraceptives. These findings are consistent with other studies [19,20] where respondents' marital status, religion and level of education were found to be significantly associated with uptake of contraception.

Limitations of the study
- Religious barriers to discussion on family planning (FP). However, these shortfalls were minimized by recruiting female assistants for data collection and by providing adequate information on the importance of the study and reassurance on confidentiality.
- Self-reports by study participants are associated with response bias, where a participant's response may not necessarily be their true opinion for various reasons such as fear of victimization, however this was addressed by training research assistants to improve questioning techniques. Also, the use of additional in-depth data collection methods to compliment the quantitative method helped to address this form of information bias.
- EPI INFO takes only dichotomous variables such as Yes/No or those which are coded such as 0/1 while computing logistic regression, so that did not allow to compute more independent variables such as level of education, age groups.

Conclusion
This study has been useful in identifying some of the factors which hinder some married women not to use contraceptive methods. Socio-demographic factors like education level, the availability of method mix was found to influence the use of contraceptive methods among rural married women in Hafia. Moreover, Socio-cultural factors like husband support and religious beliefs were crucial in influencing the use of contraceptive methods.

Contraceptive uptake was found to be low among the rural women when compared to an appropriate family planning programme. Adequate advocacy on the benefits of contraceptive may improve uptake of contraceptive.

Males involvement in FP, may positively impact on health indices especially in the rural communities in Africa where decisions affecting health issues are influenced by many sociocultural factors as shown in this study.

Ethical Approval and Consent to Participate
Ethical approval for the study was obtained from the University of Ibadan/University College Hospital, Ibadan Ethical Review Board, and Nigeria. Permission to conduct the research in Hafia, Labé region in Guinea was sought and obtained from the regional and local health officers. Informed consent was obtained from the participants after the purpose of the research was explained to them. Anonymity and confidentiality of the respondents' responses were ensured and guaranteed.

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