Predictors of family planning usage among multiparous women in the Nkwanta-South Municipality of Ghana

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Abstract

Background: Family planning use is one of the most cost-effective public health interventions; averting unplanned pregnancies, reducing maternal deaths, and helps individuals and couples to decide freely and responsibly when to have children. Despite these benefits, several research findings have reported low levels of family planning usage hence the need to determine factors influencing family planning usage among multiparous women in the Nkwanta South Municipality.

Methods: A descriptive cross-sectional study was done using a structured questionnaire to collect data from 328 selected multiparous women living in the Nkwanta south municipality. Data were analyzed using STATA 16. Descriptive statistics were performed to determine the levels of knowledge, acceptance, and family planning usage, while multivariate analysis was done to determine the factors influencing family planning usage.

Results: The findings of this study show that 318 (96.9%) of the multiparous women had already heard of family planning. Most of the respondents, 204 (62.6%) had good knowledge of family planning, however, a little above average 172 (52.4%) accepted family planning. The proportion currently using some form of family planning was 75 (22.9%), of which 31 (41.3%) were using Jadelle. Multiparous women with good knowledge of family planning were 4.5 (95% CI: 2.30-8.89) times more likely to use family planning compared to those with poor knowledge, while multiparous women with poor acceptance of family planning were 0.43 (95% CI: 0.25-0.75) times less likely to use family planning compared to those with good acceptance of family planning.

Conclusions: The result of the study shows low levels of knowledge, acceptance, and usage of family planning among multiparous women. Thus, there is a need to improve health promotion activities in the municipality to increase knowledge, acceptance, and usage of family planning among multiparous women.

Background

Increased birth rates have been identified by many people including community health workers and the staff at the Nkwanta South Municipal Health Directorate as one major health and social problem in the municipality, and most of these births are as a result of unintended pregnancies. High incidence of unintended pregnancies can be attributed to low usage of available family planning methods, resulting in unsafe abortions, pregnancy complications, and maternal deaths (1).

The districts' total fertility rate is 4.0 whilst the general fertility rate is 121.4 births per 1000 women aged 15-49 years, and this is higher than the regional average. This means that on average, a woman in the Nkwanta South municipality would have four children in her lifetime. These women are referred to as being multiparous. The proportion of children below five years of age is 17%, and the population below 15 years (0-14) is 45%. This was higher than the proportion of children below 15 years for the then Volta region (36.3%) (2). These occurrences of the high number of births could be due to low usage of family

planning and could burden the country and obstruct the efforts of the Ghana Health Service and other stakeholders in achieving the Sustainable Development Goal 3, which focuses on good health and wellbeing.

Also, the inadequate availability of data on family planning in district health information management system (DHIMS) from the municipality means that the prevalence and acceptor rates of family planning usage could not be determined. There is also no information in DHIMS on the number of children family planning users have. These situations cause a large number of multiparous women in the municipality who are not using family planning and they keep giving birth more than they could cater for. The inadequacy of data could limit the implementation of an intervention to increase family planning usage (3), reported that the district still had very low use of modern family planning despite the efforts being made to improve family planning usage in the country.

Additionally, a study conducted by (4) to determine the prevalence of contraceptive methods accessed by person, place, and time in the Volta Region of Ghana, between 2009-2014 found that in 2016, Volta Region was one of the two regions in Ghana that recorded a high prevalence of teenage pregnancy due to the non-use of modern contraceptives, accounting for 15.5% of all adolescent pregnancies in the country. They recommended research to ascertain factors influencing uptake of contraceptive use in all the districts in the Volta region.

Based on the findings of the studies above, it has become necessary to conduct a study on the factors influencing family planning usage among multiparous women in the Nkwanta south municipality of Ghana.

Methods

Study design and settings

A cross sectional study was conducted in the Nkwanta south municipality in the Oti region in Ghana, between August 2021 to November 2021. Nkwanta municipality was purposely selected because it was among districts and municipalities with low family planning acceptors in the region (5).

Study Population

The sample for the study comprised selected multiparous women living in the Nkwanta South municipality during the period of data collection.

Inclusion and exclusion criteria

The study included selected multiparous women who were residing in the Nkwanta-South municipality during the period of data collection and consented to participate in the study. On the other hand, multiparous women who were seriously sick, in their menopausal stage and require medical attention were excluded from the study.

Sampling and sample size determination

Using systematic probability sampling techniques, participants for this study were selected from all the six (6) sub-districts that make up the Nkwanta south municipality. This was to ensure that different population characteristics were captured representatively in the study. The sample size for this study was determined using the single proportion formula by (6), with 95% confidence level, precision of 5%, based on a 27% prevalence of family planning in Ghana among married women according to the (7). Adding an anticipated non-response rate of 5%, the calculated overall sample size was 328 multiparous women.

The existing six sub-districts in the municipality were marked as clusters (i.e., six clusters), and the study community within each cluster (sub-district) was chosen using a simple random sampling technique. Community entry and sampling of participants were done with the help of community health volunteers within each selected community. Secondly, deploying the systematic sampling technique; the households within each selected community were numbered, the first household selected at random and subsequent ones selected at a suitable interval, (1, 2, 3, ...), that corresponded to the number of households in that community. Participants in each selected household were chosen using a simple random sampling method. In all, 53 participants were selected from each sub-district, to get the required minimum sample size of 318 participants. However, an additional 10 were added, making a total of 328 participants.

Data collection and quality management

A structured questionnaire deployed on the Kobo collect tool kit was used to collect data from the study participants. The questionnaire was adapted based on the review of literature from previous studies. Two data collectors were recruited and trained by the principal investigator for 2 days on the various sections of the questionnaires and also on some ethical issues bothering the research. A simulation exercise was conducted among the data collectors. The questionnaire was pretested among 10 multiparous women before the actual data collection.

Data analysis

The collected data were extracted in Microsoft Excel 2016 and exported into STATA version 16.0 for cleaning and analysis. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize the data. Inferential statistics (logistic regression) were used to find the associations between demographic variables, level of knowledge, acceptance, and family planning usage. A test of probability value less than 5% was considered statistically significant at a 95% confidence interval. The logistic regression model was used to test the significance of associations. Findings were presented in tables, graphs, and charts.

Ethical approval and consent to participate

Ethical approval was obtained from the University of Health and Allied Sciences Research Ethics Committee (**UHAS-REC A.9 [32] 20-21**). Permission was also obtained from the Municipal Director of Health Services of the Nkwanta South Municipality and also from the chiefs of the study communities. The content or subject matter of this study was disclosed and explained to participants in the language they best understood and their consent obtained before commencement of the study. Participants who agreed to partake in the study were required to sign the informed consent form, while with regards to participants less than 18 years of age, permission was sought from their parents or guardians and they were required to sign the parental consent form while the participants signed the child assent form. There were no expected risks associated with this study. The researcher ensured that participants put on their nose masks and also kept a social distance of two (2) meters before and during the entire period of administration of the questionnaire. However, participants without nose masks were provided with one (1) disposable surgical nose mask before the commencement of the administration of the questionnaire.

Limitations of the study

The interpretation of the results of this study must be done with caution since not all the multiparous women in the municipality were used in the study. Recruitment of participants was done with the help of community health volunteers, and data collection was conducted by individuals recruited by the researcher. However, data collectors were adequately trained and simulation exercises were organized to enable them to understand the need, and how to collect data appropriately.

Results

Socio-demographic characteristics of multiparous women

Table 1 below depicts the socio-demographic characteristics of the respondents. Out of the 328 multiparous women surveyed, the mean age was 30.5 . The majority, 155 (47.3%) were between the ages of 25 and 34; 268 (81.7%) were married; 256 (78.1%) were Christians and 298 (90.8%) were working. Almost half, 134 (40.9%) had no education; 133 (40.6%) were Guans and 139 (42.4%) of the multiparous women at the time of the survey had two children. More than half of the multiparous women, 180 (54.9%) had an average monthly income between GHC 100 and 499.

Table 1: Socio-demographic characteristics of multiparous women (n=328)

Variable	Frequency	Percentage (%)
Mean age (S.D) [Years]		
Age		
15-19	18	5.5
20-24	55	16.8
25-29	75	22.9
30-34	80	24.4
35-39	56	17.1
40+	44	13.4
Marital status		
Never in union	18	5.5
Married	268	81.7
Divorced/Separated/Widow	19	5.8
Cohabiting	23	7.0
Religion		
Christianity	256	78.1
Islamic	36	10.9
African Traditional	18	5.5
Others	18	5.5
Occupation		
Not working	30	9.2
Working	298	90.8
Education		
None	134	40.9
Primary	59	17.9
JHS	105	32.0
SHS and above	30	9.2
Ethnicity		
Ewe	36	10.9
Guan	133	40.6

Konkomba/Basare	107	32.6
Others	52	15.9
Income		
None	46	14.0
< 100	80	24.4
100 – 499	180	54.9
500+	22	6.7
Number of children		
Two	139	42.4
Three	68	20.7
Four	47	14.3
Five or more	74	22.6

Level of knowledge of multiparous women on family planning

Three hundred and eighteen (96.9%) had heard of family planning and out of this number 286 (89.9%) had heard of family planning for three or more years. Most of the multiparous women, 249 (78.3%) had ever heard of the Pill, 287 (90.2%) had heard of Depo-Provera or Norigynon, while 282 (88.7%) had heard of Jadelle. Of the 328 multiparous women surveyed, 204 (62.6%) had good knowledge of family planning. Most, 298 (93.7%) of the multiparous women had heard of family planning from a health worker as shown in the Table 2 below.

Table 2: Level of knowledge of Multiparous Women on Family Planning (n=328)

Variable	Frequency	Percentage (%)
Heard of family planning before?		
Yes	318	96.9
No	10	3.1
Duration heard of family planning		
Less than 1 year	7	2.2
1-2 years	25	7.9
3 or more years	286	89.9
If yes, which methods have you heard of before?		
Withdrawal		
No	303	95.3
Yes	15	4.7
The pill		
No	69	21.7
Yes	249	78.3
Male condom		
No	200	62.9
Yes	118	37.1
Female condom		
No	222	69.8
Yes	96	30.2
Emergency contraception		
No	210	66.0
Yes	108	34.0
Tubal ligation		
No	302	95.0
Yes	16	5.0
Vasectomy		
No	298	93.7
Yes	20	6.3

IUD		
No	270	84.9
Yes	48	15.1
Depo-Provera/Norigynon		
No	31	9.8
Yes	287	90.2
Jadelle		
No	36	11.3
Yes	282	88.7
Diaphragm		
No	313	98.4
Yes	5	1.6
Form/jelly		
No	308	96.9
Yes	10	3.1
Lactational amenorrhea method		
No	307	96.5
Yes	11	3.5
Rhythm/calendar method		
No	290	91.2
Yes	28	8.8
Sources of information		
Health worker	298	93.7
Media (TV, Radio & Newspaper)	78	24.5
Books and magazines	19	6
Internet and social media	11	3.5
Friends and relatives	100	31.4
Level of knowledge		
Good knowledge	204	62.6
Poor knowledge	124	37.8

Level of acceptance of family planning by multiparous women

The majority (99.4%) were not accepting family planning because family planning uses conflicts with their ethnic beliefs (56.4%) were not accepting family planning because of the fear of family planning side effects, while most (52.4%) were not accepting it because they want to have another child. The majority (52.4%) had poor acceptance of family planning, while almost half (47.6%) had good acceptance of family planning as shown in the table 3 below:

Table 3: Acceptance of family planning among multiparous women

Variables	Frequency	Percentage (%)
Bad attitude of health workers		
Disagree	315	96.0
Agree	13	4.0
Health facilities providing FP are not friendly		
Disagree	321	97.9
Agree	7	2.1
Stigmatization against FP contraceptive users		
Disagree	312	95.1
Agree	16	4.9
Disapproval or opposition from my husband		
Disagree	261	79.6
Agree	67	20.4
Fear of FP side effect		
Disagree	143	43.6
Agree	185	56.4
The use of FP causes infertility		
Disagree	267	81.4
Agree	61	18.6
FP use conflicts with my religion		
Disagree	310	94.5
Agree	18	5.5
Inadequate knowledge on the effectiveness of FP		
Disagree	304	92.7
Agree	24	7.3
Cost of FP service		
Disagree	311	94.8
Agree	17	5.2
Non-availability of FP services		
Disagree	326	99.4

Agree	2	0.6
Distance of facility from the community		
Disagree	310	94.5
Agree	18	5.5
Want to have another child		
Disagree	156	47.6
Agree	172	52.4
FP use conflicts with my ethnicity		
Disagree	2	0.6
Agree	326	99.4
Because the method failed		
Disagree	318	96.9
Agree	10	3.1
Because of divorced/separate/widow		
Disagree	318	96.9
Agree	10	3.1

Factors associated with family planning usage among multiparous women

From table 4 below, socio-demographic characteristics were not associated with family planning usage. However, levels of knowledge and acceptance were associated with family planning usage. Adjusted logistic regression was conducted to determine the strength of association between factors influencing family planning usage (knowledge and acceptance) and their use. Multiparous women who had good knowledge of family planning were 4.5 times more likely to use family planning (AOR=4.5(95% CI: 2.30-8.89); $p<0.001$) compared to those with poor knowledge, while multiparous women with poor acceptance of family planning were 0.43 times less likely to use family planning (AOR=0.43(95% CI: 0.25-0.75); $p=0.003$) compared to those with good acceptance of family planning.

Table 4: Factors influencing family planning usage among multiparous women

Variable	Family Planning Practice		Chi-square	P-value	COR (95% ci), p-value	AOR (95% ci), p-value
	Non-Usage (253)	Usage (75)				
	N (%)	N (%)				
Sociodemographic information						
Age			9.84	0.080		
15-19	17 (6.7)	1 (1.3)				
20-24	42 (16.6)	13 (17.3)				
25-29	50 (19.8)	25 (33.3)				
30-34	61 (24.1)	19 (25.3)				
35-39	45 (17.8)	11 (14.7)				
40+	38 (15.0)	6 (8.0)				
Marital status			8.89	0.064		
Never in union	18 (7.1)	0 (0.0)				
Married	202 (79.8)	66 (88.0)				
Divorced/Separate/widow	17 (6.7)	2 (2.7)				
Cohabiting	16 (6.3)	7 (9.3)				
Religion			6.12	0.106		
Christianity	196 (77.5)	60 (80.0)				
Islamic	26 (10.3)	10 (13.3)				
African Traditional	13 (5.1)	5 (6.7)				
Others	18 (7.1)	0 (0.00)				

Occupation			9.96	0.126
Not working	22 (8.7)	8 (10.7)		
Working	231 (91.3)	67 (89.3)		
Education			2.69	0.611
None	109 (43.1)	25 (33.3)		
Primary	44 (17.4)	15 (20.0)		
JHS	79 (31.2)	26 (34.7)		
SHS and above	21 (8.3)	9 (12.0)		
Ethnicity			4.49	0.344
Ewe	26 (10.3)	10 (13.3)		
Guan	99 (39.1)	34 (45.3)		
Konkomba/ Basare	90 (35.6)	17 (22.7)		
Others	38 (15.0)	14 (18.7)		
Income			2.64	0.620
None	37 (14.6)	9 (12.0)		
< 100	65 (25.7)	15 (20.0)		
100 – 499	136 (53.8)	44 (58.7)		
500+	15 (3.9)	7 (9.3)		
Number of children			3.74	0.291
Two	104 (41.1)	35 (46.7)		
Three	52 (20.6)	16 (21.3)		
Four	34 (13.4)	13 (17.3)		
Five or more	63 (24.9)			

11
(14.7)

Knowledge					
Knowledge		19.66		<0.001*	
Poor knowledge	112 (44.3)	12 (16.0)		Ref	Ref
Good knowledge	141 (55.7)	63 (84.0)		4.17 [2.14– 8.11], <0.001*	4.52 [2.30– 8.89], <0.001*
Acceptance					
Acceptance		7.39		0.007*	
Good acceptance	110 (43.5)	46 (61.3)		Ref	Ref
Poor acceptance	143 (56.5)	29 (38.7)		0.48 [0.29– 0.82], 0.007*	0.43 [0.25– 0.75], 0.003*

Discussion

Level of Knowledge of family planning

In this current study, 96.9% of multiparous women had ever heard of family planning. This is similar to what was reported in LEKMA in Ghana where 98% of multiparous have heard of family planning (1). Reasons for the high number of multiparous women who had ever heard about family planning could be due to the education and sensitization campaigns on family planning across various platforms in the Nkwanta South municipality and the country. This recent finding is also similar to those of other countries, 96% in Mbouda District, Cameroon (8), and 88.9% in Tripura, India (9). The similarity could also be due to the availability of community health workers in the various communities, as most of the multiparous women surveyed heard about family planning from a health worker and also because of information from the media, friends, and relatives.

Also, from the current study, the average knowledge level among multiparous women was 62.6%. This is higher as compared with other studies from, 44% in Nigeria (10) and 40% to 45% in Lahore, Pakistan (11). This could be due to the difference in socio-demographic characteristics.

Level of acceptance of family planning

In this current study, the level of acceptance of family planning among multiparous women was 47.6%. This finding is lower compared to those of other countries reported by (12) (82.2%) in Ethiopia and (13) (62%) in Kenya. The difference in the level of acceptance of family planning between this study and that of the findings from other countries could be linked to several reasons for which women use family planning or factors that influence their acceptance of family planning, which includes, fear of family planning side effects, wanting to have another child, family planning use conflicts with their ethnicity, disapproval or opposition from husbands on family planning practice and the perception that the use of family planning causes infertility (Table 4.3). The difference could also be because the majority of the multiparous women (52.4%) surveyed in this study who had poor acceptance of family planning may be influenced by other confounding factors. The poor acceptance of family planning among multiparous women in this study because of the disapproval or opposition from their husbands was 20.4%. This is lower than what was reported in Ho West, Ghana (64.2%) by (14). The difference could be due to differences in healthcare services and socio-demographic characteristics of the locations of these two studies.

Factors influencing family planning usage

There was no association between socio-demographic characteristics of participants and family planning usage in this study. This is contrary to the finding of (3) in which some socio-demographic characteristics such as level of education and ethnicity were associated with family planning usage.

Knowledge and acceptance were factors influencing family planning usage in this current study. Multiparous women who had good knowledge of family planning were 4.5 times more likely to use family planning compared to those with poor knowledge. This is similar to the findings of other countries; (8) found lack of knowledge to be a reason precluding women from using family planning in Cameroon, while (13) similarly found knowledge to be a significant predictor to use family planning methods. The reason why knowledge is influencing the usage of family planning could be because, when women know about the various methods available, they may be more likely to use the methods which they prefer. Also, multiparous women with poor acceptance of family planning were 0.43 times less likely to use family planning compared to those with good acceptance of family planning. This could be due to several factors such as spousal approval, which influence family planning usage.

Conclusions

Variables capable of measuring the levels of knowledge, acceptance, and family planning usage were selected. The average of knowledge and acceptance was computed giving a score of 62.2% for good knowledge and 47.6% for a good acceptance. This shows an above-average level of knowledge and a below-average level of acceptance. The level of current family planning usage was 22.9%, which was

determined using the number of multiparous women who cited that they were currently using some form of family planning. The findings of this current study revealed that the current usage of family planning among multiparous women was low.

A Chi-square test was done to determine the factors associated with family planning usage. However, the results show that only the enabling and need factors (knowledge and acceptance) were associated with family planning usage. The logistic regression model was then used to determine the strength of associations. The model shows that multiparous women who had good knowledge of family planning were 4.5 times more likely to use some form of family planning. Also, multiparous women with poor acceptance of family planning were 0.43 times less likely to use family planning.

The findings of this study necessitate the implementation of health promotion interventions to increase family planning usage among multiparous women in the Nkwanta South Municipality of Ghana. Concentrating on increasing knowledge of multiparous women on family planning and addressing the factors that influence acceptance such as the fear of side effects of family planning, and confliction between ethnicity and family planning usage.

Declarations

Ethics approval and consent to participate

Ethical clearance for the study was obtained from the University of Health and Allied Science Ethical Review Committee (UHAS-ERC) with number (**UHAS-REC A.9 [32] 20-21**). Permission was sought from the MHD through an introductory letter.

Consent for publication

Not applicable

Availability of data and material

Available upon request

Competing interests

The authors declare that they have no competing interests

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None

Authors' contributions

LE and LA both conceived the study. LE collected and analyzed the data. Both LE and LA wrote and approved the final manuscript.

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Abbreviations

FP: Family Planning, MW: Multiparous women

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Figures

Figure 1

Level of acceptance of family planning among multiparous women