

URBAN-RURAL DIFFERENTIALS OF UNMET NEED FOR FAMILY PLANNING PREDICTORS AMONG EVER-MARRIED AND COHABITING CHILDBEARING WOMEN IN NIGERIA

Chukwuechefulam Kingsley IMO

Adekunle Ajasin University, Akoko-Akungba, Ondo State, Nigeria

Correspondence: Chukwuechefulam Kingsley IMO, Department of Sociology, Adekunle Ajasin University, Akungba-Akoko, Ondo State, Nigeria, E-mail: imochuksco@yahoo.com, Phone: +2348069226978

ABSTRACT

Unintended pregnancy related to unmet need for Family Planning (FP) in the context of health priority, is a worldwide problem with health implications. This study examined urban-rural differentials of unmet need for FP predictors in Nigeria, using a sample of 18,125 women drawn from the 2018 Nigeria Demographic and Health Survey. Descriptive and statistical analyses were carried out, including multivariate binary logistic regression. The study established that urban-rural differentials of unmet need for FP are driven by distance to the health facility. Lack of women's healthcare decision-making autonomy was found to be associated with unmet need for FP. Given that unmet need for FP increased among women with at least a living child, whose husbands wanted more children and who experienced a son's death, there is the need to re-addressing some cultural practices relating to sexual and reproductive health to achieve sustainable development in a patriarchal Nigeria.

Keywords: Unmet need, family planning, urban-rural differentials, women, Nigeria

INTRODUCTION

Unintended pregnancy related to unmet need for Family Planning (FP) in the context of health priority is a worldwide problem that affects women and their families. Globally, there has been an increase in the use of modern FP among married women of reproductive age which stands at 56%, with sub-Saharan Africa having some of the lowest levels with fewer than 25% (PRB, 2019). The global campaign for the use of contraceptive methods is geared towards the adoption of FP to improve sexual and reproductive health which includes delaying or avoiding pregnancy and impacting positively on child survival (Adebowale, Fagbamigbe, & Bamgboye, 2011; Ezire, Oluigbo, Archilong, Ifeanyi, & Anyanti, 2013). The existing gaps between the women's desire to delay or stop childbearing and their actual use of contraception have remained unchecked and resulted in the largest proportion of women dying from causes related to pregnancy and childbirth in sub-Saharan Africa (Cohen, 2014). In Nigeria, the prevalence rate of knowledge of modern contraceptive methods among currently married women is 94%, with about 12% of those using contraception adopting a modern method and men report wanting more children than women (Cleland, Ndugwa, & Zulu, 2011; NPC & ICF International, 2019). Therefore, encouraging the use of modern contraceptive methods to avoid having an unmet need for FP is an important aspect of

achieving the Sustainable Development Goals (SDGs) targets of ending Sexually Transmitted Infections (STIs) that contribute to maternal mortality ratio and burden of babies born with infections from STIs by 2030 (Epub, 2018).

Unmet need for FP reveals the existing gap between some women's reproductive intentions and use of contraceptive methods for FP, including women who want to postpone their next birth or stop childbearing altogether, but are not using a contraceptive method (Genet, Abeje, & Ejigu, 2015; NPC & ICF International, 2019). This is assumed to reduce poverty, maternal and child mortality by maintaining health spacing; empowers women by lightening the burden of excessive childbearing, as well as reduces environmental degradation by stabilizing the world population (Genet, Abeje, & Ejigu, 2015; Robinson, Stoffel, & Haider, 2015; Singh, Darroch, & Ashford, 2014). Also, these gains could contribute to other development objectives, such as curbing poverty and slowing population growth (Moreland & Talbird, 2006). But if the level of unmet need for FP among currently married and cohabiting women justifies the huge investments in FP by stakeholders and indicates an improvement in the sexual and reproductive health rights becomes important in Nigeria.

Socio-demographic and economic factors have been identified to contribute to unmet need for FP such as women's age (Hailemariam & Haddis, 2011; Ojaka, 2008), educational attainment (Acacio-Claro & Borja, 2010; Ali & Okud, 2013; Khola, Kausar, Naeem, Shahzad, & Nadia, 2018; Westoff, 2012), occupation (Ali & Okud, 2013; Ojaka, 2008), inequalities and household wealth (Mills, Bos, & Suzuki, 2010; Westoff, 2012). Studies have shown that unmet needs for FP are higher among women with primary education and below, but those with better education are more likely to use FP (Ali & Okud, 2013; Khola *et al.*, 2018). In addition to women's level of education, income was found to have significantly increased uptake of FP (Tekelab, Melka, & Wirtu, 2015). Women's economic independence increases their power in sexual and reproductive decisions including the use of FP and protects them from exposure to sexually transmitted infections (Haberland, 2015; Osuafor & Mturi, 2014). A study of many countries including Nigeria revealed that women in the wealthiest quintile households had higher unmet needs for FP than those in the lower quintile households, with reversed patterns in countries such as Bolivia, Ghana, Togo, and Zimbabwe (Mills *et al.*, 2010).

Unmet needs for FP have been related to visiting health facility and intra-familial factors. In Ethiopia, women with unmet need for both spacing and limiting reported not visiting health facilities or being visited by a health worker (Hailemariam & Haddis, 2011). Having contact with healthcare providers could encourage the demand for FP, but it might not necessarily meet the demand (Ojaka, 2008). Additionally, distance to health facility has been documented to be one of the reasons for unmet need for FP (Cleland, Harbison & Shah, 2014). Previous studies have shown that women with decision-making power and autonomy are more likely to meet their reproductive health goals by contraceptive usage and not having an unmet need for contraception (Blackstone & Iwelunmor, 2017; Upadhyay & Karasek, 2010; Wado, 2018). However, the influence of men on female partners' decision-making regarding FP uptake has been documented (Tilahun, Coene, Temmerman & Degomme, 2014), while decision-making

roles and power dynamics among couples are important predictors of FP (Blackstone & Iwelunmor, 2017). The number of ever-born children is a critical predictor of unmet need for FP (Beguy, Ezeh, Mberu & Emina, 2017; Oginni, Adebajo & Ahonsi, 2015; Wulifan, Brenner, Jahn & De-Allegri, 2016). A study in Burundi found that the experience of the loss of a boy child was found to be significantly associated with unmet need (Nzokirishaka & Itua, 2018). It is evident from the reviewed studies that predictors of unmet need for FP vary across countries, hence the need to investigate the relative importance of a visit to the health facility and selected intra-familial factors which are lacking in literature in a patriarchal country like Nigeria.

Despite that the total fertility rate of 5.3 children per woman and high maternal mortality (512 maternal deaths per 100,000 live births), the contraceptive prevalence rate among currently married women is 17% in Nigeria, which is an increase of 2% from 2013 Nigeria Demographic and Health Survey (NDHS) and lower than the current sub-Saharan Africa average of fewer than 25%, while the unmet need for FP among this category of women in Nigeria stands at 19% (NPC & ICF International, 2019; PRB, 2019). With the low level of married women of childbearing age using modern contraceptive methods in Nigeria, it is questionable that the country's maternal and child health, as well as fertility situations would improve significantly in the near future. This research hypothesizes that unmet need for FP among married and cohabiting women is associated with visits to health facilities and intra-familial measures. Therefore, this study aims at examining urban-rural differentials of unmet need for FP predictors including a visit to the health facility and intra-familial factors among currently married and cohabiting childbearing women in Nigeria. Adopting the recommendations of this study will help facilitate the achievement of SDGs targets of ending STIs, universal access to sexual and reproductive healthcare services, gender equality and empowerment of all women that contribute to maternal and child health outcome.

METHODS

Data for this study were obtained from the individual recode data file of the 2018 NDHS. The NDHS is a cross-sectional study and the sixth survey of its kind to be implemented by the National Population Commission. The survey used standardized interviewer-administered questionnaires to provide up-to-date information on demographic and health indicators in Nigeria. A detailed report of the data collection methods and procedures for 2018 NDHS has been published elsewhere (NPC & ICF International, 2019). The analyses for this study covered a weighted sample of 18,125 childbearing women (urban – 6,255 and rural – 11,830) who were currently married and cohabiting with partners during the survey but reported to have given birth to at least a child in the last five years that preceded the survey. This is to improve the representativeness of the data from the group of women interviewed in the survey (i.e. 2013-2018).

The outcome variable was unmet need for FP, an indication that women who either reported wanting more children (limiters) or wanting to wait for two or more years before having another child (spacers), but are not using contraception were

categorized as having an unmet need for FP. The possible answers to unmet need question were categorized into three including unmet need for spacing, unmet need for limiting and no unmet need. These were collapsed into a binary outcome as 'unmet need' coded as 1 if a woman had an unmet need for contraception and otherwise 'no unmet need' coded as 0. The explanatory variables in this study were 1) visited a health facility in the last 12 months, 2) distance to the health facility, 3) person who usually decides on respondent's healthcare, 4) the number of living children, 5) husband's desire for children, and 6) sons who have died. These variables are considered be important predictors of unmet need for FP in a patriarchal society like Nigeria, where children, especially males are required to maintain the family lineage. The categories of some variables were re-grouped from their original categories in the datasets. Additionally, selected co-variables included in the analysis were age, marital status, educational attainment, employment status, wealth quintile and region. To make interpretation simpler and more meaningful, some variables were also regrouped from their original categories in the datasets. The selection of the explanatory variables was informed by their documented significant association with unmet need for FP and other related aspects of life in the literature and availability in the dataset.

Two levels of analyses (univariate and multivariate) were employed in this study. At the multivariate level, the Pearson chi-square test and binary logistic regression analysis were used to measure the odds ratios (OR) of the association between outcome variable (unmet need for FP) and explanatory variables (predictors of unmet need for FP). Measures of association between the outcome variable and explanatory variables were expressed as OR with 95% confidence intervals (CI). A variable with OR greater than 1.00 implied that the variable increases the likelihood of the outcome (unmet need for family planning), while it is the opposite when the OR is less than 1.00. All the analyses were conducted using STATA software (version 14). Svy command in Stata was used to adjust for the complex survey design of the DHS data.

Ethical consideration

This study utilized a secondary dataset with all personally identifiable information removed. Hence, confidentiality and anonymity are guaranteed. This paper was extracted from a large study for which permission to download and use the NDHS data was obtained from Measure DHS/ICF International, USA. Therefore, no further ethics approval was required.

RESULTS

Socio-demographic characteristics of the sample population by place of residence

The distribution of the sample population among urban and rural women is presented in Table 1. All the respondents' characteristics varied with the exception of mothers' age and employment status by place of residence. The result on age showed that the majority of the women were within the normal age of 25-34 years, while the mean age of the general sampled population was 30 years; with 31 years and 29 years for urban and rural women, respectively. A large proportion of the women reported not

to have formal education (45.4%), with a variation among urban and rural women. With respect to employment status, over one-half of the women reported being employed, even across the place of residence. The largest proportion of urban women was found in the highest wealth quintile households (65.4%), compared to 63.4% of their counterparts in the lowest category resident in the rural area. Also, the sample of women ranged from 30.3% in the North-west to 8.9% in the South-south. The largest proportion of the women in the urban area (22.6%) was found in the South-west, while 35.3% in the rural area was found in the North-west.

Table 1: Socio-demographic characteristics of the sample by place of residence

Characteristics	Urban & Rural N (%)	Urban N (%)	Rural N (%)
Age (Mean)	30 years	31 years	29 years
15 – 24	4,246(23.4)	1,062(16.9)	3,184(26.9)
25 – 34	8,743(48.2)	3,283(52.1)	5,460(46.2)
35 and above	5,136(28.3)	1,950(31.0)	3,186(26.9)
Educational attainment			
No education	8,231(45.4)	1,357(21.6)	6,874(58.1)
Primary	2,746(15.2)	941(15.0)	1,805(15.3)
Secondary/tertiary	7,148(39.4)	3,997(63.4)	3,151(26.6)
Employment status			
Not working	5,795(32.0)	1,674(26.6)	4,121(34.8)
Working	12,330(68.0)	4,621(73.4)	7,709(65.2)
Wealth Quintile			
Lowest	8,841(46.0)	846(13.4)	7,495(63.4)
Middle	3,714(20.5)	1,331(21.1)	2,383(20.1)
Highest	6,070(33.5)	4,118(65.4)	1,952(16.5)
Region			
North-central	3,119(17.2)	952(15.1)	2,167(18.3)
North-east	3,930(21.7)	780(12.4)	3,150(26.6)
North-west	5,493(30.3)	1,318(20.9)	4,175(35.3)
South-east	1,956(10.8)	1,253(19.9)	703(5.9)
South-south	1,618(8.9)	569(9.0)	1,049(8.9)
South-west	2,009(11.1)	1,423(22.6)	586(5.0)

Source: NDHS 2018

Visit to health facility, selected intra-familial factors and unmet need for FP of the sample by place of residence

Table 2 shows the distribution of selected health facility and intra-familial factors of the sample by place of residence. The results indicate that 1 in 2 women visited the health facility, even in urban and rural areas in the last 12 months before the survey. Generally, about 70% of the sampled women, with slightly more urban women than their urban counterparts reported that distance to the health facility was not a big problem (83.4% and 63.4%, respectively). Women having autonomy in healthcare decision was low. The largest proportion of women had at most 4 children (68.4%),

slightly higher among urban women (72.1%) than their rural counterparts (66.4%). More than one-half of the women reported that their husbands wanted more children, but higher among rural women compared to those in the urban area. The experience of a son's death was low, even among urban and rural women. Concerning having an unmet need for FP, about 15% of the women had unmet need for spacing, 8% had unmet need for limiting, while over two-third reported having no unmet need for FP.

Table 2: Percentage distribution of visit to health facility, selected intra-familial factors and unmet need for FP of the sample by place of residence

Characteristics	Urban & Rural N (%)	Urban N (%)	Rural N (%)
Visited health facility in the last 12 months			
No	8,442(46.6)	2,609(41.5)	5,833(49.3)
Yes	9,683(53.4)	3,686(58.5)	5,997(50.7)
Distance to health facility			
Big problem	5,377(29.7)	1,046(16.6)	4,331(36.6)
Not a big problem	12,748(70.3)	5,249(83.4)	7,499(63.4)
Decision on respondent's healthcare			
Alone	1,534(8.5)	739(11.7)	795(6.7)
Jointly	5,864(32.4)	2,676(42.5)	3,188(27.0)
Husband/partner alone and other	10,727(59.1)	2,880(45.8)	7,847(66.3)
No of living children			
No living child	211(1.1)	56(0.9)	155(1.3)
At most 4 children	12,393(68.4)	4,541(72.1)	7,852(66.4)
More than 4 children	5,521(30.5)	1,698(27.0)	3,823(32.3)
Husband's desire for children			
Both want same	7,808(43.1)	3,331(53.0)	4,477(37.9)
Husband wants more	10,290(56.9)	2,954(47.0)	7,336(62.1)
Son's death			
No	14,115(77.9)	5,342(84.9)	8,773(74.2)
Yes	4,010(22.1)	953(15.1)	3,057(25.8)
Unmet need for FP			
Unmet need for spacing	2,655(14.7)	952(15.2)	1,703(14.5)
Unmet need for limiting	1,405(7.8)	516(8.2)	889(7.5)
No unmet need	13,986(77.5)	4,811(76.6)	9,175(78.0)

Source: NDHS 2018

Unadjusted and adjusted analyses of predictors of unmet need for FP by place of residence

The unadjusted and adjusted results of all the explanatory variables of unmet need for FP using multivariate analysis are presented in Table 3. The result showed that visit to the health facility was significantly associated with unmet need for FP. For instance, the odds of having an unmet need for FP were significantly reduced among

urban and rural women who visited a health facility in the last 12 months (aOR: 0.80; CI: 0.71-0.90 and aOR: 0.84; CI: 0.76-0.92, respectively). Though not significant, urban women who reported that distance to the health facility was not a big problem had lower odds of having unmet need for FP (OR: 0.87; CI: 0.75-1.02) compared to their counterparts in the reference category. Urban and rural women who had less autonomy in deciding their healthcare were less likely to have an unmet need for FP. For instance, the results were significant among rural women who made joint decisions and whose husbands/partners made independent decisions on their healthcare (aOR: 0.75; CI: 0.63-0.90 and aOR: 0.81; CI: 0.68-0.96, respectively). The result further revealed that the likelihood of having an unmet need for FP was significantly higher among urban and rural women who had at least a living child. Surprisingly, the odds of having an unmet need for FP was significantly higher among urban and rural women who reported having more than 4 children (aOR: 5.50; CI: 2.16-13.96 and aOR: 9.11; CI: 4.23-19.60, respectively) compared to those in the reference category. Similar results were observed among urban and rural women who reported experiencing a son's death (aOR: 1.31; CI: 1.11-1.55 and aOR: 1.12; CI: 1.01-1.25, respectively).

Additionally, the unadjusted results showed that all the selected co-variables were significantly associated with unmet need for FP. Surprisingly, the odds for having an unmet need for FP significantly increased for rural women with secondary or tertiary education (OR: 1.40; CI: 1.27-1.55), but though not significant, the odds decreased for urban women (OR: 0.91; CI: 0.79-1.06). Being employed significantly increased the women's odds of having unmet need for FP compared to those who were not working. Similar results were observed among urban and rural women found in middle and highest wealth quintile households. The adjusted results showed some regional variations of unmet need for FP among urban and rural women. The odds of having unmet need for FP significantly increased among urban women found in the South-south (aOR: 1.47; CI: 1.15-1.86), as well as rural women in the South-south and South-west (aOR: 1.86; CI: 1.57-2.21 and aOR: 1.86; CI: 1.52-2.28, respectively).

Table 3: Unadjusted and adjusted analysis of predictors of unmet need for family planning by place of residence

Characteristics/category	Urban OR(95% CI)	Rural OR(95% CI)	Urban aOR(95% CI)	Rural aOR(95% CI)
Visited health facility in the last 12 months				
No (RC)	1.00	1.00	1.00	1.00
Yes	0.78(0.69-0.87)***	0.82(0.75-0.89)***	0.80(0.71-0.90)***	0.84(0.76-0.92)***
Distance to health facility				
Big problem (RC)	1.00	1.00	1.00	1.00
Not a big problem	0.87(0.75-1.02)	1.01(0.92-1.10)	0.95(0.81-1.12)	1.06(0.96-1.18)
Decision on respondent's healthcare				
Alone (RC)	1.00	1.00	1.00	1.00
Jointly	0.82(0.68-0.99)*	0.85(0.72-1.02)	0.84(0.70-1.02)	0.75(0.63-0.90)**
Husband/partner alone and other	0.92(0.76-1.10)	0.64(0.54-0.75)***	0.98(0.80-1.19)	0.81(0.68-0.96)*
No of living children				
No living child (RC)	1.00	1.00	1.00	1.00
At most 4 children	2.63(1.05-6.60)*	4.57(2.13-9.77)***	2.90(1.14-7.35)*	3.80(1.77-8.17)**
More than 4 children	4.72(1.88-11.91)**	9.75(4.55-20.88)***	5.50(2.16-13.96)***	9.11(4.23-19.60)***
Husband's desire for children				
Both want same (RC)	1.00	1.00	1.00	1.00
Husband wants more	1.16(1.03-1.31)*	1.94(1.86-2.03)*	1.19(1.05-1.35)**	1.18(1.07-1.31)**
Son's death				
No (RC)	1.00	1.00	1.00	1.00
Yes	1.34(1.15-1.57)***	1.02(0.92-1.12)*	1.31(1.11-1.55)**	1.12(1.01-1.25)*
Age				
15 – 24 (RC)	1.00	1.00	-	-
25 – 34	1.04(0.87-1.23)	1.29(1.15-1.45)***	-	-
35 and above	1.73(1.45-2.07)***	2.70(2.39-3.05)***	-	-
Educational attainment				
No education (RC)	1.00	1.00	1.00	1.00
Primary	1.22(1.01-1.47)*	1.38(1.22-1.56)***	1.17(0.95-1.44)	1.03(0.96-1.24)
Secondary/tertiary	0.91(0.79-1.06)	1.40(1.27-1.55)***	0.96(0.84-1.11)	1.00(0.87-1.15)
Employment status				
Not working (RC)	1.00	1.00	1.00	1.00
Currently working	1.22(1.08-1.40)**	1.34(1.22-1.48)***	1.11(0.96-1.30)	0.97(0.88-1.08)
Wealth Quintile				
Lowest (RC)	1.00	1.00	-	-
Middle	1.10(0.89-1.34)	1.39(1.24-1.54)***	-	-
Highest	1.02(0.85-1.21)	1.55(1.38-1.74)***	-	-
Region				
North-central (RC)	1.00	1.00	1.00	1.00
North-east	0.87(0.70-1.09)	0.80(0.70-0.91)**	0.74(0.59-0.94)*	0.71(0.61-0.81)***
North-west	0.74(0.60-0.90)**	0.49(0.43-0.56)***	0.60(0.48-0.74)***	0.41(0.35-0.47)***
South-east	0.72(0.59-0.89)**	1.17(0.97-1.42)	0.71(0.57-0.88)**	1.23(1.00-1.51)
South-south	1.39(1.01-1.74)**	1.78(1.52-2.08)***	1.47(1.15-1.86)**	1.86(1.57-2.21)***
South-west	1.04(0.86-1.26)	1.69(1.39-2.05)***	1.09(0.89-1.33)	1.86(1.52-2.28)***

Note: *p < 0.05; **p < 0.01; ***p < 0.001; RC = Reference Category

DISCUSSION

This study revealed that unmet need for FP was significantly associated with a visit to health facility among urban and rural women. These findings corroborate a study that women with unmet need for both spacing and limiting visited health facilities (Hailemariam & Haddis, 2011). Plausibly, the advantage of such visits is that having contacts with health service providers could necessitate discussion on FP, hence allowing women to get counselling, information and encouragement for FP demand and usage (Ojaka, 2008). Also, the study revealed that having an unmet need for FP reduced among urban women who reported that distance to the health facility was not a big problem, but the reverse was the case among their rural counterparts. The findings of this study have some policy implications in the location of health facilities and initiation of strategies towards addressing the plight of unmet need for FP, especially the disadvantaged rural women in Nigeria.

The findings further revealed that having an unmet need for FP was associated with urban and rural women's lack of decision-making autonomy on their healthcare. In line with other studies, this study revealed that unmet need for FP significantly increased among rural women who made joint decisions and whose husbands/partners made independent decisions of their healthcare (Blackstone & Iwelunmor, 2017; Upadhyay & Karasek, 2010; Wado, 2018). Additionally, the findings further highlight the influence of decision-making roles and power dynamics among couples and cohabiting partners (Blackstone & Iwelunmor, 2017), as well as the influence of men on female partners' decision-making regarding FP uptake (Tilahun *et al.*, 2014). Also, the findings showed that unmet need for FP increased among rural and urban women with at least a living child, especially among women with more than 4 children. This is in tandem with previous observations that the number of ever-born children is a critical predictor of unmet need (Beguy *et al.*, 2017; Oginni, 2015; Wulifan *et al.*, 2016). This study further revealed that unmet need for FP among urban and rural women significantly increased with the husband's desire for children. This explains the persistence in desiring for social security by most couples which are hinged on illiteracy, thereby encouraging women not to use FP in order to display their fertility levels and maintain their marital positions in the society. Similarly, it was further revealed that unmet need for FP was significantly associated with experiencing the loss of a boy child corroborating a study in Burundi that the experience of losing a boy child was found significantly associated with unmet need for FP (Nzokirishaka & Itua, 2018). As expected in a patriarchal society like Nigeria, losing a boy child who is required to maintain the family lineage could deter women from seeking for FP and encourage them to resume reproduction as soon as possible for a replacement.

This study established that becoming older increased the likelihood of having an unmet need for FP among urban and rural women. Surprisingly, unmet need for FP significantly increased among rural women with primary and secondary/tertiary education. This is in support of previous observation that women with primary and secondary education were more likely to have an unmet need for FP, especially for spacing (Oginni *et al.*, 2015), but in contrast to some studies' outcomes that women with

better education are more likely to use FP (Ali & Okud, 2013; Khola *et al.*, 2018). These findings have some policy implications considering the significant importance of education in providing women with better information on how to access family planning services. Additionally, the findings showed that the likelihood of having an unmet need for FP increased among women who were employed and found in middle and highest wealth quintile households. This could be attributed to the fact that women with some levels of economic independence might have false hope in making FP related decisions, thus supporting the previous observation that women found in the wealthiest quintile households had a higher unmet need for FP than those in the lower quintiles households (Mills *et al.*, 2010). The analysis on regional differentials of unmet need for FP among currently married and cohabiting women corroborate earlier establishment variations of unmet need for FP across regions in Nigeria (Anne, 2015). This could be attributed to differences in the women's socio-economic backgrounds, distance to the health facility and some cultural practices relating to sexual and reproductive health. Hence, lack of formal education, not being employed, coming from the lowest wealth quintile households and most disadvantaged geopolitical zone, as well as the distant location of health centres and patriarchal norms that insubordinate women in household decision-making processes might be constrained to not to visit health facility FP.

Conclusion

This study established that visiting health facility reduced unmet need for FP among urban and rural women, however, distance to the health facility was found to be predicting unmet need for FP, especially among rural women. Additionally, unmet need for FP was associated with urban and rural women's lack of decision-making autonomy on their healthcare, having at least a living child, husband's desire for children and experiencing the loss of a boy child. This explains a persistent desire for high fertility in a patriarchal society like Nigeria which is geared towards social security by most couples hinged on unhealthy cultural practices that become inimical to achieving SDGs targets of reducing maternal mortality ratio, ending preventable deaths of newborns and children under-5 years of age, and ensuring universal access to sexual and reproductive healthcare services by 2030 in Nigeria. Given that unmet need for FP was associated with having higher educational attainment, being employed and found in the middle and highest wealth quintile households, as well as regional variations among most women, there is the need to re-strategize on the location of health facilities in order to address the plight of unmet need for FP, especially the disadvantaged rural women. Undoubtedly, not doing these will have grave implications for achieving sustainable development in Nigeria.

The outcome of this study would be very helpful in improving women's adoption of FP towards reducing maternal mortality ratio, ending preventable deaths of newborns and children under-5 years of age, and ensuring universal access to sexual and reproductive healthcare services in a culturally diverse and patriarchal country like Nigeria.

Limitations

This study is not without some limitations which include that the present analyses were limited to currently married and cohabiting childbearing women who had

given birth to at least a child in the last five years that preceded the survey. This could have a strong potential toward reporting bias/discordance regarding a visit to the health facility and intra-familial measures influencing unmet need for FP, as the participants were only ever-married and cohabiting women. Despite these limitations, the findings are important for more strategic policies and programmes, especially for disadvantaged women with respect to visiting the health facility and intra-familial measures predicting unmet need for FP in Nigeria.

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