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Determinants of Unintended Pregnancy and Unmet Need for Contraception among Reproductive-Age Women in Nigeria

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ABSTRACT

Background: Globally, a quarter of unintended pregnancies end in unsafe abortions which is one of the leading causes of maternal mortality. This study aimed to investigate the determinants of unintended pregnancy and the unmet need for contraception among reproductive-age women in Nigeria.

Methods: Data were obtained from the 2018 Nigerian Demographic and Health Survey. A total of 20,655 women of reproductive age were included. Unmet need for contraception was the main outcome variable. Bivariate and multiple logistic regressions were carried out to predict the determinants. SPSS version 27.0 was used for data analysis. Statistical significance was set at $p < 0.05$.

Results: The respondents' mean age was 29.7±7.1years, 36.7% had their first child before 18years, and 93.9% were married. 18.5% desired no more children and only 17.5% were currently using contraceptives. 11.8% admitted to having unintended pregnancy and 74.2% reported no unmet need for contraception. Respondents who were 18years and above at first birth were 14.7% less likely to have unintended pregnancy compared with those who were below 18years at their first birth (OR=0.853, CI=0.764–0.952). Respondents who had ever terminated a pregnancy were 1.3 times more likely to have an unintended pregnancy than those who had never terminated a pregnancy (OR=1.251, CI=1.101–1.422).

Conclusion: Many women reported unmet contraceptive needs, with some admitting to having unintended pregnancies. Addressing this is vital for reducing unintended pregnancies, which will contribute to improved health status for mothers and their babies and facilitate the attainment of maternal and child health-related sustainable development goals.

Introduction

Unintended pregnancy is identified as pregnancy either mistimed or unwanted at the time of conception regardless of women's contraceptive use (1). A pregnancy is assumed to be mistimed if a woman became pregnant at a time when she did not want to (2). On the other hand, pregnancy is assumed unwanted if the woman did not intend to ever become pregnant, or if the pregnancy occurred when she wanted to have no more children (3). Unintended pregnancy has been a major public health and

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reproductive health issue with severe adverse consequences, particularly to the mother, child, and the public in general (4). Between 2015 and 2019, there were 121 million unintended pregnancies, with a global average of 64 unintended pregnancies per 1000 women aged 15 to 49 years (5). About 61% of unintended pregnancies end in abortion with a global rate of 39 abortions per 1,000 women aged 15 to 49 (5). In Sub-Saharan Africa (SSA), the unintended pregnancy rate stands at 33.9% (6). In 2012, Nigeria reported 59 unintended pregnancies and 33 induced abortions per 1,000 women, with 56% of unintended pregnancies ending in abortion, while over 200,000 women suffered complications from unsafe abortion procedures (7).

Many sexually active women would prefer to avoid becoming pregnant but are not using any method of contraception (8). These women are considered to have an unmet need for family planning (9). Unmet need for family planning refers to the percentage of women who do not want to be pregnant but are not using contraceptives, highlighting the gap between reproductive desire and contraceptive use (10-11). The unmet need for family planning remains a major concern in developing countries, where high unmet needs could decrease with increased public spending on family planning and improved access to modern contraceptives (12-13). In 2019, of the 1.9 billion women of the reproductive age group (15 – 49 years) worldwide, an alarming 1.1 billion had a need for family planning; of these, 842 million used contraceptives, while 270 million had an unmet need (14). The 2013 Nigerian Demographic Health Survey revealed a 16% unmet need for family planning, highlighting a significant gap in access and uptake of family planning (15-16).

Several determinants predict the occurrence of unintended pregnancies and induced abortion including socio-demographic and economic factors, early sexual debut, accessibility to healthcare services, unmet need for family planning, higher parity, history of unintended pregnancy, contraception failure, partner's desire for children and domestic violence (17-18). Addressing the high unmet contraceptive need in developing countries is crucial, as it increases unintended pregnancies, high-risk births, unsafe abortions, and limits women's economic productivity, potentially hindering the achievement of the sustainable development goals (SDG)post-2015 development agenda (19). This study aims to explore the factors contributing to unintended pregnancies and the unmet need for contraception among reproductive-age women in Nigeria.

Methods

Data Source and Study Design

This cross-sectional study utilized data from the Nigerian Demographic and Health Survey (NDHS) conducted from August 14 to December 29, 2018. The Demographic and Health Survey (DHS) is a nationwide survey conducted every five years in low- and middle-income countries, focusing on women aged 15 to 49. It targets key maternal and child health indicators, including unintended pregnancies, contraceptive use, skilled birth attendance, immunization for children under five, and intimate partner violence. DHS reports are publicly available; datasets are accessible upon application including study aim and analytical plans from DHS MEASURE (https://www.dhsprogram.com/).

Study Population and Sampling Method

Nigeria comprises 36 states and the Federal Capital Territory, each subdivided into local government areas (LGAs) and wards. The 2018 NDHS used a stratified two-stage sampling method. Stratification was achieved by separating each of the 36 states and the Federal Capital Territory into urban and rural areas resulting in 74 strata based on urban and rural classifications. A total of 1,400 enumeration areas (EAs) were selected proportionally to their size, and 30 households were sampled in each EA, yielding approximately 42,000 households. Interviews were conducted with 20,655 women aged 15-49, including permanent residents and visitors who stayed overnight before the survey.

Measurement of the Variables

Outcome Variable

The outcome variable for this study was "unintended pregnancy". Respondents were asked if they wanted their current pregnancy, with three response options: "then," "later," and "not at all." Following the Centers for Disease Control and Prevention definition of unintended pregnancy as

pregnancies that are either mistimed or unwanted (20), responses were categorized as "No" if the mother indicated the pregnancy was intended later or not at all, and "Yes" if it was intended at that time.

Independent Variable

For "unmet need for contraception," (women who wish to delay or stop having children but are not using contraception (21), women were asked if they were using any contraceptive method at the time of the study. Respondents indicated their unmet need for contraception with five options: “unmet need for spacing,” “unmet need for limiting,” “using for spacing,” “using for limiting,” and “no unmet need.” Responses were coded as "Yes" for "unmet need for spacing" and "unmet need for limiting," while "No" was assigned to those using contraception or stating no unmet need.

The socio-demographic variables included women's age, age at first birth, current marital status, educational attainment, wealth index, employment status, region of residence, place of residence, and sex of household head. Reproductive-related variables included parity, ever had a terminated pregnancy, currently using any contraception, current use of contraception by method type, desire for more children, births in last five years, wanted last-child, unmet need for contraception, current pregnancy wanted, unintended pregnancy and unmet contraceptives need.

Data Analysis

Data recoding and analysis were conducted after thoroughly reviewing the detailed datasets and coding. Statistical package for social sciences (SPSS) version 26.0 was used for descriptive analysis (frequency and percentage) and bivariate analysis (Pearson’s $\chi 2$ tests and cross-tabulation). All variables with statistically significant differences ($p < 0.05$) were selected and included in the multiple logistic regression analysis to identify determinants of unintended pregnancy and unmet needs among respondents of the study. The level of statistical significance was set at $p<0.05$.

Ethical Approval

This research was based on an examination of population-based data which is publicly available online. Ethical guidelines were duly followed in the collection of the original NDHS data. Permission was obtained after registering with the DHS website to use the 2018 NDHS data for this study.

Results

Respondents’ Socio-Demographic Characteristics and Unmet Contraceptive Need

Almost half of the respondents (47.9%) were between 25 – 34 years. Some (36.7%) had their first child before age 18, and the majority (93.9%) were married. Some of the respondents (22.4%) had no education and some (23.4%) belonged to the poorest wealth index. Many of the respondents (67.9%) were currently working, a few (9.7%) were from the South-South region and many (65.0%) lived in rural areas. The majority (91.1%) had male heads of household and many (55.9%) had between 1 – 3 children. Most of the respondents 86.2%) had never terminated a pregnancy, while some (17.5%) were currently using any contraception with very few (0.5%) using the folkloric method of contraception. Some of the respondents (37.1%) wanted more children after 2 years and above. A little above half of the respondents (50.8%) had 1 birth within the last five years, and the majority (88.2%) wanted their last child at the time of their birth. Some of the respondent (17.4%) had an unmet need for spacing while the majority (85.6%) wanted their current pregnancy. Some (11.8%) admitted to having unintended pregnancy and many (74.2%) reported no unmet need for contraception.

Table 1. Respondents' Socio-Demographics Characteristics and Unmet Contraceptive Need

Variable	Frequency (%)
Age	
15 – 24	5066 (24.5)
25 – 34	9885 (47.9)
35 – 44	5110 (24.7)
45 and above	594 (2.9)
Age at first birth	
Less than 18	7578 (36.7)
18 and above	13077 (63.3)
Current marital status	
Never in union	319 (1.5)
Married	19388 (93.9)
Living with partner	683 (3.3)
Widowed	91 (0.4)
Divorced	76 (0.4)
No longer living together/separated	98 (0.5)
Highest level of education	
No education	9174 (44.4)
Primary	3196 (15.5)
Secondary	6571 (31.8)
Higher	1714 (8.3)
Wealth index	
Poorest	4830 (23.4)
Poorer	4640 (22.5)
Middle	4297 (20.8)
Richer	3789 (18.3)
Richest	3099 (18.3)
Currently working	
No	6640 (32.1)
Yes	14015 (67.9)
Region	
North Central (ref)	3686 (17.8)
North East	4260 (20.6)
North West	6106 (29.6)
South East	2177 (10.5)
South South	1997 (9.7)
South West	2429 (11.8)
Place of residence	
Urban	7227 (35.0)
Rural	13428 (65.0)
Sex of household head	
Male	18814 (91.1)
Female	1841 (8.9)
Parity	
1 – 3	11555 (55.9)
4 and above	9100 (44.1)
Ever had a terminated pregnancy	
No	17805 (86.2)
Yes	2850 (13.8)
Currently using any contraception	
No	17046 (82.5)
Yes	3609 (17.5)

Table 1. Respondents' Socio-Demographics Characteristics and Unmet Contraceptive Need *(continued)*

Variable	Frequency (%)
Current use by method type	
No method	17046 (82.5)
Folkloric method	110 (0.5)
Traditional method	774 (3.7)
Modern method	2725 (13.2)
Desire for more children	
Wants within 2 years	6538 (31.7)
Wants after 2+ years	7662 (37.1)
Wants, unsure timing	1155 (5.6)
Undecided	1400 (6.8)
Wants no more	3830 (18.5)
Sterilized (respondent or partner)	27 (0.1)
Declared infecund	43 (0.2)
Births in last five years	
1	10490 (50.8)
2	8620 (41.7)
3	1431 (6.9)
4	106 (0.5)
5	6 (0.1)
6	2 (0.1)
Wanted last child	
Wanted then	18214 (88.2)
Wanted later	1732 (8.4)
Wanted no more	709 (3.4)
Unmet need for contraception	
Unmet need for spacing	3598 (17.4)
Unmet need for limiting	1726 (8.4)
Using for spacing	2387 (11.6)
Using for limiting	1222 (5.9)
No unmet need	11722 (56.8)
Current pregnancy wanted	
Then	2698 (85.8)
Later	351 (11.2)
Not at all	95 (3.0)
Unintended pregnancy	
No	18214 (88.2)
Yes	2441 (11.8)
Unmet Contraceptives Need	
No	15331 (74.2)
Yes	5324 (25.8)

Unintended pregnancy and Unmet Contraceptive Need

Unintended Pregnancy

Respondents between 25 – 34 and 35 – 44 years of age were 41.7% and 37.1% less likely to have unintended pregnancy compared to those between 15 – 24 years of age (OR =0.583, CI = 0.510 – 0.668; OR = 0.629, CI = 0.531 – 0.745) respectively. Respondents 18 years and above at first birth were 14.7% less likely to have unintended pregnancy compared with those who were below 18 years of age at their first birth (OR = 0.853, CI = 0.764 – 0.952). Those who were married, living with partner, widowed, divorced, and no longer living together/separated were 88.4%, 78.9%, 86.8%, 79.6%, and 70.1% less likely to have unintended pregnancy compared to those never in union (OR = 0.116, CI = 0.090 – 0.150; OR = 0.211, CI = 0.156 – 0.286; OR = 0.132, CI = 0.071 – 0.244; OR = 0.204, CI = 0.100 – 0.418; OR = 0.299, CI = 0.181 – 0.492) respectively. Respondents who had primary, secondary and higher education were 1.7, 2.2 and 1.9 times more likely to have unintended pregnancy than those who had no education (OR = 1.731, CI = 1.485 – 2.017; OR = 2.150, CI = 1.847 – 2.502; OR = 1.968, 1.585 – 2.442) respectively. Respondents who were in the middle and richer wealth index were 1.2 times more likely to have an unintended pregnancy than those in the poorest wealth index (OR = 1.230, CI = 1.041 – 1.454; OR = 1.222, CI = 1.021 – 1.462) respectively. Those who were currently working were 15% less likely to have unintended pregnancy compared to those who were not working (OR = 0.848, CI = 0.761 – 0.944). Respondents in North East, North West were 29.7% and 49.7% less likely to have unintended pregnancy compared to those in North Central (OR =0.703, CI = 0.595 – 0.830; OR = 0.503, CI = 0.425 – 0.596) respectively. While those in South East, South-South, and South West were 1.3, 2.9 and 1.4 times more likely to have unintended pregnancy (OR = 1.331, CI = 1.131 – 1.568; OR = 2.908, CI = 2.494 – 3.391, OR = 1.448, CI = 1.229 – 1.707) respectively. Respondents who had 4 children and above were 2.4 times more likely to have unintended pregnancy than those who had between 1 – 3 children (OR = 2.401, CI = 2.125 – 2.713). Respondents who had ever terminated a pregnancy were 1.3 times more likely to have an unintended pregnancy compared to those who had never terminated a pregnancy (OR = 1.251, CI = 1.101 – 1.422). Those who were currently using contraceptives were 1.6 times more likely to have an unintended pregnancy compared to those who were not using a contraceptive (OR = 1.586, CI = 1.425 – 1.765). (Table 2).

Unmet Contraceptive Need

Respondents between 25 – 34 years were 15.2% less likely to have unmet contraceptive needs compared to those between 15 – 24 years of age (OR = 0.848, CI = 0.765 – 0.940). While those 25 – 34 years and 45 years and above were 1.4 and 3.7 times more likely to have unmet contraceptive needs compared to those between 15 – 24 years of age (OR = 1.441, CI = 1.268 – 1.637; OR = 3.696, CI = 2.959 – 4.618) respectively. Those who were married, living with partner, widowed, divorced, and no longer living together/separated were 78.3%, 72.8%, 91.2%, 97. 0 and 59.6% less likely to have unmet contraceptive need compared to those never in union (OR = 0.217, CI = 0.161 – 0.294; OR = 0.272, CI = 0.192 – 0.386; OR = 0.088, CI = 0.045 – 0.173; OR = 0.300, CI = 0.154 – 0.585; OR = 0.404, CI = 0.214 – 0.764) respectively. Respondents who had primary and secondary education were 1.2 and 1.3 times more likely to have an unmet contraceptive need compared to those with no education (OR = 1.179, OR = 1.056 – 1.317; OR = 1.281, CI = 1.146 – 1.433) respectively. Respondents who were in the middle, richer and richest wealth index were 1.2, 1.4 and 1.3 times more likely to have an unmet contraceptive need compared with those in the poorest wealth index (OR = 1.271, CI = 1.134 – 1.423; OR = 1.440, CI = 1.264 – 1.640; OR = 1.321, CI = 1.126 – 1.549) respectively. Respondents in North East and North West were 25.1% and 53.6% less likely to have unmet contraceptive needs compared to those in the North Central (OR = 0.749, CI = 0.668 – 0.839; OR = 0.464, CI = 0.415 – 0.518) respectively. While those in the South-South and South West were 1.9 and 1.8 times more likely compared to those in the North Central (OR = 1.935, CI = 1.684 – 2.223; OR = 1.770, CI = 1.540 – 2.034) respectively. Respondents who had a male household head were 1.3 times more likely to have unmet contraceptive need compared to those who did not have a male head of household (OR = 1.275, CI = 1.125 – 1.445). Respondents who had 4 children and above were 2.3 times more likely to have an unmet contraceptive need compared to

respondents with 1 – 3 children (OR = 2.267, CI= 2.064 – 2.490). Those who ever terminated pregnancy were 13.3% less likely to have an unmet contraceptive need compared to those who never terminated a pregnancy (OR = 0.867, CI = 0.782 – 0.961). Respondents who were currently using contraceptives were 99.9% less likely to have an unmet contraceptive need compared to those who were not currently using contraceptives (OR = 0. 001, CI = 0.001). (Table 2).

Table 2. Unintended pregnancy and Unmet Contraceptive Need of Respondents

Variable	Sub-categories	Unintended pregnancy		Unmet contraceptive need	
		aOR	95% CI	aOR	95% CI
Age	15 – 24 (ref)	-	-	-	-
	25 - 34	0.583***	0.510 – 0.668	0.848**	0.765 – 0.940
	35 - 44	0.629***	0.531 – 0.745	1.441***	1.268 – 1.637
	45 and above	1.168	0.891 – 1.532	3.696***	2.959 – 4.618
Age at first birth	Less than 18 (ref)	-	-		
	18 and above	0.853**	0.764 – 0.952	0.931	0.858 – 1.010
Current marital status	Never in union (ref)	-	-	-	-
	Married	0.116***	0.090 – 0.150	0.217***	0.161 – 0.294
	Living with partner	0.211***	0.156 – 0.286	0.272***	0.192 – 0.386
	Widowed	0.132***	0.071 – 0.244	0.088***	0.045 – 0.173
	Divorced	0.204***	0.100 – 0.418	0.300***	0.154 – 0.585
	No longer living together/separated	0.299***	0.181 – 0.492	0.404**	0.214 – 0.764
Highest level of education	No education (ref)	-	-	-	-
	Primary	1.731***	1.485 – 2.017	1.179**	1.056 – 1.317
	Secondary	2.150***	1.847 – 2.502	1.281***	1.146 – 1.433
	Higher	1.968***	1.585 – 2.442	1.106	0.927 – 1.320
Wealth index	Poorest (ref)	-	-	-	-
	Poorer	1.062	0.899 – 1.254	1.104	0.994 – 1.225
	Middle	1.230*	1.041 – 1.454	1.271***	1.134 – 1.423
	Richer	1.222*	1.021 – 1.462	1.440***	1.264 – 1.640
	Richest	0.843	0.685 – 1.038	1.321**	1.126 – 1.549
Currently working	No (ref)	-	-	-	-
	Yes	0.848**	0.761 – 0.944	0.992	0.916 – 1.074
Region	North Central (ref)	-	-	-	-
	North East	0.703***	0.595 – 0.830	0.749***	0.668 – 0.839
	North West	0.503***	0.425 – 0.596	0.464***	0.415 – 0.518
	South East	1.331**	1.131 – 1.568	0.986	0.857 – 1.135
	South South	2.908***	2.494 – 3.391	1.935***	1.684 – 2.223
	South West	1.448***	1.229 – 1.707	1.770***	1.540 – 2.034
Place of residence	Urban (ref)	-	-		
	Rural	0.933	0.838 – 1.039	0.953	0.873 – 1.040
Sex of household head	Male (ref)	-	-	-	-
	Female	1.116	0.966 – 1.289	1.275***	1.125 – 1.445
Parity	1 – 3 (ref)	-	-	-	-
	4 and above	2.401***	2.125 – 2.713	2.267***	2.064 – 2.490
Ever terminated pregnancy	No (ref)				
	Yes	1.251**	1.101 – 1.422	0.867**	0.782 – 0.961
Currently using contraceptive	No (ref)	-	-	-	-
	Yes	1.586***	1.425 – 1.765	0.001***	0.001

*p<0.05; **p<0.01; ***p<0.001; ref – reference variable

Discussion

Unmet need for contraception and unintended pregnancy are important public health concerns both in developing and developed countries. This study aimed to assess the unmet need for contraceptives and its association with unintended pregnancy. In the current study, 22.4% of the respondents had no education. On the other hand, a study conducted among women in Bangladesh found that half of the respondents had secondary/higher education

qualifications (22). Although both studies were carried out in developing countries using the Demographic Health survey, over the years, Bangladesh has increasingly made access to education a priority which may have accounted for the disparity. The majority of the respondents of this study had male heads of household which was also reported in a previous study (22-23). This could be because most of the respondents in this study were married. Although in Nigeria contraceptives and family planning constitute part of the sexual and reproductive health services provided free of charge in public health facilities, some (17.5%) of the women were currently using any contraception as opposed to a similar study where about two-thirds of the women mentioned using any contraceptive (22). The low uptake of contraceptives might be due to personal choices and not necessarily availability as most women perceive contraceptives to be detrimental to reproductive health (24). The proportion of unmet contraceptive needs (25.8%) is similar to that reported by Yaha and Ghose (25) but far higher than the global estimate of 12.3% (12).

According to a study conducted across fifty-two (52) developing countries, reasons for unmet contraceptive needs were high cost, lack of awareness, sub-fecund/infecund, breastfeeding/post-partum amenorrhea, infrequent or no sex, side effects/health risk and lack of access (26). Evidence from previous studies suggests that non-use of whatever type of contraceptive (inadequate use of contraception, discontinuation, and contraceptive failure) is associated with an increased likelihood of unintended pregnancy (27). This is disturbing as unintended pregnancy is associated with an increased risk of abortion and maternal morbidity (28). This is particularly a concern for women's reproductive health in Nigeria since induced abortion is not yet legalized and the scope of safe abortion is highly limited. Although the majority of respondents (85.6%) wanted the pregnancy of their last child, two-fifths of the women in another study reported unwanted pregnancy for the last child (29). The unmet need for spacing (85.6%) was higher than the unmet need for contraceptives (25.8%). This is consistent with a similar study among women in India where the unmet need for spacing was more common than that for limiting further births (29). Controversies and misconceptions about the risks of pregnancy following childbirth are common as many women are not aware of the right time for restarting intercourse, and post-partum use of contraception. This could be the possible reason the prevalence of unmet need for spacing is comparatively higher.

This study showed that respondents between 25 – 34 and 35 – 44 years of age were less likely to have unintended pregnancy. Also, those between 25 – 34 years were less likely to have unmet contraceptives. Inadequate reproductive health care seeking and family planning knowledge are relatively more common among younger women (29), especially among those who are primiparous with no prior experience of appropriate timing and use of contraception methods (25). Respondents who were 18 years and above at their first birth were less likely to have unintended pregnancy. Contrary to this finding, a study reported that women who had their first birth below 18 years of age were more likely to experience unintended pregnancy (30). Studies have shown that adolescents might experience various barriers in terms of access to contraceptives ranging from stigma, cost, geographical area, shyness, and inadequate information on contraception (31). As a result, women who have an early sex debut have an increased risk of unintended pregnancy. Respondents who were married, living with a partner, widowed, divorced, and no longer living together/separated were less likely to have unintended pregnancy and unmet contraceptive needs. This finding contradicts results obtained in another study which showed that respondents who lived with a husband/partner were more likely to have unintended pregnancy (30). This is because some male partners can influence contraceptive use negatively by obstructing its use resulting in discontinuation thereby increasing the odds of unintended pregnancy. Future research may be conducted to further ascertain the direction of this association.

Respondents' level of education was significantly associated with unintended pregnancy and unmet contraceptive needs. Those who had primary, secondary, and higher education were more likely to have unintended pregnancy and unmet contraceptive need. This is in tandem with the findings of previous studies (32-33). The possible reason for this

finding might be that young women who had attained a higher level of education have a higher likelihood of postponing marriage or childbearing. However, the findings of this study were different from those reported in studies in Mexico (34), Nigeria (35), Kenya (36), Pakistan (37), and Ghana (38) which showed an inverse relationship between educational level and unmet need for contraception. This may warrant further investigation with a qualitative study to understand the nuances.

Respondents who were in the middle and richer wealth index were more likely to have unintended pregnancy and unmet contraceptive needs. On the contrary, studies conducted in other countries have demonstrated that poverty is strongly correlated with both unmet need for contraception and unintended pregnancy (31-32,37,39-40). Women from poorer households are less likely to be able to spend on personal healthcare such as reproductive health services and more likely to experience unintended pregnancies. Another study found no significant association between household wealth status and unmet contraceptive need but there was a significant association between household wealth index and unintended pregnancy (29). This study also found regional differences in the prevalence of unmet need for contraceptives and unintended pregnancy as was also reported in Angola (29). This may signify the healthcare gaps in the provision of essential family planning services in different regions of Nigeria. Hence to safeguard the reproductive health needs of the regions with the highest rate of unmet contraceptive needs, more interventional programs need to be targeted towards this group.

Parity was significantly associated with both unmet contraceptive needs and unintended pregnancy. Respondents who had 4 children and above were more likely to have unintended pregnancy and unmet contraceptive needs. This is consistent with the findings of previous studies where unintended pregnancy increased with a corresponding increase in the number of children ever born (23,30). This finding suggests that unmet need for contraception is the major cause of unintended pregnancy. This could be related to the fact that the unmet need for contraception exposes women to the risks of unwanted pregnancy. Therefore, addressing the unmet need among multiparous women may provide an opportunity to reduce unintended pregnancy in the country. Respondents who had a male household were 1.3 times more likely to have unmet contraceptive needs. Some studies have shown that opposition from partners is the reason why cohabiting women have more unmet needs for contraception (41-42). Also, a previous study reported that young women in female-headed households had higher odds of unmet needs (32). In this study women who ever terminated a pregnancy were more likely to have an unmet contraceptive need and less likely to have an unintended pregnancy. Another study showed that women who had no history of pregnancy termination had lower odds of experiencing an unintended pregnancy (23). According to the author, in most instances, women with no history of pregnancy termination met their need for contraception and became less likely to experience unintended pregnancy and birth (23).

This study found a statistically significant association between unmet contraceptive needs and unintended pregnancy. This was in line with studies in Angola, Bangladesh, Zimbabwe, Democratic Republic of Congo (22,27-29,43-44). Particularly, some studies have shown that women who had an unmet need for contraceptives had thirty-two- and seven-times higher odds of experiencing unwanted pregnancy respectively (29-30). These findings suggest that both unintended pregnancy and the unmet need for contraception remain important public health concerns in Nigeria. Unintended pregnancy is a global problem and has serious repercussions on child and maternal health. Many adolescents with unintended and unwanted pregnancies end up choosing abortion without knowing the associated risks and health consequences (22). Addressing the causes of unintended pregnancies will not only contribute to improved health status for mothers and their babies but also facilitate the attainment of maternal and child health-related sustainable development goals.

Conclusion

This study revealed that many women have unmet needs for contraception with some admitting to having unintended pregnancy. Significant

determinants of unmet contraceptive needs were age at their first birth, abortion status, working status, wealth index as well as sex of the head of household. The findings highlight that addressing unmet contraceptive needs is vital for reducing unintended pregnancies, which can significantly impact women's health and well-being, as well as broader public health outcomes. It is recommended that targeted interventions and education programs be developed to address the specific barriers to contraceptive access and use, particularly for women in vulnerable socioeconomic situations.

Conflict of interest

The authors assert that there are no conflicts of interest to disclose.

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Author contributions

All of the authors contributed equally.

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