Unmet Need for Contraception and Unintended Pregnancies Among Pregnant Women Attending Antenatal Clinic at A Tertiary Healthcare Facility in Port Harcourt

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Abstract

Background: Promoting family planning has long been recognised as a viable technique for minimising the risk of unplanned pregnancies, unsafe abortion, and maternal death. Due to Nigeria's low contraceptive prevalence of 17%, a wide variety of women are susceptible to unmet need for contraception and an elevated risk of unwanted births.

Aim: To determine the rate of unmet need and unintended pregnancies among women attending antenatal clinic at the University of Port Harcourt Teaching Hospital (UPTH).

Materials and Methods: This was a descriptive cross-sectional study that involved 529 women via a systematic sampling technique. Data was collected with the aid of a semi-structured interviewer-administered questionnaire and analysed using Statistical Product and Service Solutions (SPSS) version 25.

Results: According to the findings, the rates of unintended pregnancies and unmet need for contraception were 22.5% and 31.4% respectively. Education, marital status, residence, early sexual debut, parity and abortion were significantly associated with unmet need.

Conclusion: The study showed high rate of unmet need and unwanted pregnancies. Hence, health workers should intensify efforts in creating awareness and sensitizing the populace in order to address the identified barriers to contraceptive use.

Keywords: Unintended pregnancy; Contraception; Unmet need; Family planning

Introduction

Pregnancy and subsequently birth are considered to be one of the most crucial events in a woman's reproductive life cycle, but could sometimes be unintended or unwanted [1,2]. This kind of pregnancy results from unmet need for contraception, improper use or failure of a method [3], as reports show that there are around 885 million women of reproductive age (15–49 years) in developing nations who desire to postpone having a child but do not currently use a Modern Contraceptive (MC) technique [4]. Apart from intended pregnancies, mistimed and unintended pregnancies may end up being aborted, usually in an unsafe manner. This is disturbing since 25% of unplanned pregnancies result in abortions, and three out of four abortions in Sub Saharan Africa (SSA) are carried out covertly in unsafe conditions thereby predisposing the women to life-threatening conditions which often lead to maternal death [5-7]. This is because strict abortion regulations exist in several SSA nations, including Nigeria, where abortion is only medically indicated to save a mother's life [8].

Further report also shows that some women choose abortion over contraception as a method of child spacing [9]. This might be one of the reasons why the country has such a low contraceptive prevalence rate [9]. According to Ajayi, Adeniyi and Akpan [10], though there has been global increase in the usage

of contraceptives among women aged 15 to 49 years from 55% in 1990 to 64% in 2015, there are still considerable differences between nations, with poorer countries lagging far behind. This lag is more predominant in SSA where there is the greatest rate of non-use of MCs, contributing for 21% of the global unmet demand for MC [11]. Hence, the need to investigate the unmet contraceptive need, and unwanted pregnancy among women from various socioeconomic backgrounds in Port Harcourt, Rivers State, Nigeria.

Materials and Methods

Study Design and setting

This research was conducted at the Department of Obstetrics and Gynaecology of the University of Port Harcourt Teaching Hospital in Rivers State, Nigeria, from July 1, 2021 to August 31, 2021. It used the descriptive cross-sectional survey method.

Study Population and Sample size determination

The participants in this study were pregnant women who attended the UPTH antenatal clinic (ANC) during the study period as they represent significant target group for post-partum contraceptive counselling and treatment [12]. The study employed the single proportion formula (n = pq*z²/d²) and the systematic sampling method in recruiting a total of 529 consenting respondents for the study, with the confidence interval set as 95%, degree of accuracy/precision set at 0.05, percentage of married women with unmet need for family planning (19%) [13], considering 10% non-response rate and applying the design effect of 2The minimum sample size was 520. However, 529 participants were recruited for the study.

Study Instrument

The study made use of a semi-structured interviewer-administered questionnaire which was adapted from the Nigeria Demographic and Health survey (NDHS) questionnaire [13]. The questionnaire was made to suit the scope of this study and used to collect data on the sociodemographic characteristics and reproductive history of the respondents, as well as their use of modern contraceptives and occurrence of unintended pregnancy.

Statistical Analysis

The data analysis was performed using Microsoft Excel 2019 and IBM Statistical Product and Service Solutions (SPSS) version 25.0 (Chicago, IL, USA). Microsoft Excel was used for data cleaning, editing, sorting, and coding the data before importing it into SPSS software for onward analysis. Data on sociodemographic characteristics, reproductive health history and practice of contraception by the participants were summarized as frequency counts and percentages. The association between unmet need for contraception and unwanted pregnancies was investigated using Chi-square and regression analysis. All tests were regarded statistically significant at p<0.05.

The socio-demographic detail of the respondents is presented in Table 1. The result showed that majority of the respondents, 310 (58.6%), were aged between 21 to 30 years while their mean age was 30.18 ± 4.64. Majority of them also reported that they were married (94.5%), Christians (98.3%), completed tertiary education (78.1%), resided in an urban area (86.6%), were of the Igbo tribe (49.9%) and earned less than N30,000 a month (48.8%).

Table 1: Social demographic characteristics of the respondents.

Variable	Frequency (n = 529)	Percent
Age Group		
≤ 20	3	0.6
21 – 30	310	58.6
31 – 40	209	39.5
> 40	7	1.3
Mean±SD	30.18±4.64	
Marital status		
Married	500	94.5
Single	26	4.9
Cohabiting	3	0.6
Religion		
Christian	520	98.3
Islam	9	1.7
Education		
No formal education	6	1.1
Primary	4	0.8
Secondary	106	20

Tertiary	413	78.1
Residential Area		
Rural	71	13.4
Urban	458	86.6
Tribe		
Hausa	8	1.5
Igbo	264	49.9
Yoruba	31	5.9
Others	226	42.7
Monthly Income		
<30000	258	48.8
30000-59999	142	26.8
60000-89999	65	12.3
90000 and above	64	12.1

The study also investigated the sexual and reproductive history of the women and presented the result in table 2. According to the finding, age at menarche for majority of the respondents was 11 to 15 years (83.7%), while majority had their first sexual intercourse when they were over 16 years (95.1%). Over half of the respondents reported that they had given birth (58.2%), while 78.2% of them had 1 to 2 births of which 81.2% had 1 to 2 live births. Also, 30.8% reported that they have had a miscarriage, while 29.7% have had an abortion, of which 72.6% reported that the type of most recent abortion they had was an intentional (induced) abortion. Only 20 (3.8%) reported that they have had a still birth.

Table 2: Sexual and Reproductive History.

Variable	Frequency (n=529)	Percent
Age at Menarche		
≤10 years	28	5.3
11-15 years	443	83.7
Over 15 years	58	11
Age at Coitarche		
≤16 years	26	4.9
Over 16 years	503	95.1
Given Birth		
Yes	308	58.2
No	221	41.8
No of Births (n=308)		
2-1	241	78.2
4-3	64	20.8
Over 4	3	1
Mean ± SD	3.70 ± 1.20	
Live Birth (n=308)		
2-1	250	81.2
4-3	55	17.9
Over 4	3	0.9
Experiences of Miscarriage		
Yes	163	30.8
No	366	69.2
Experiences of Abortion		

Yes	157	29.7
No	372	70.3
Type of Most Recent Abortion Experienced (n=157)		
Missed abortion	34	21.7
Intentional (induced) abortion	114	72.6
Unsafe abortion	9	5.7
Experiences of still birth		
Yes	20	3.8
No	509	96.2

The prevalence of unintended pregnancies and unmet need for contraception (UNC) among the respondents is seen in figure 1. The prevalence of unwanted pregnancy was 22.5% according to the desire for number of children, child spacing, and current pregnancy, as indicated in the chart. On the other hand, 31.4% of the women in this research had unmet need for contraception.
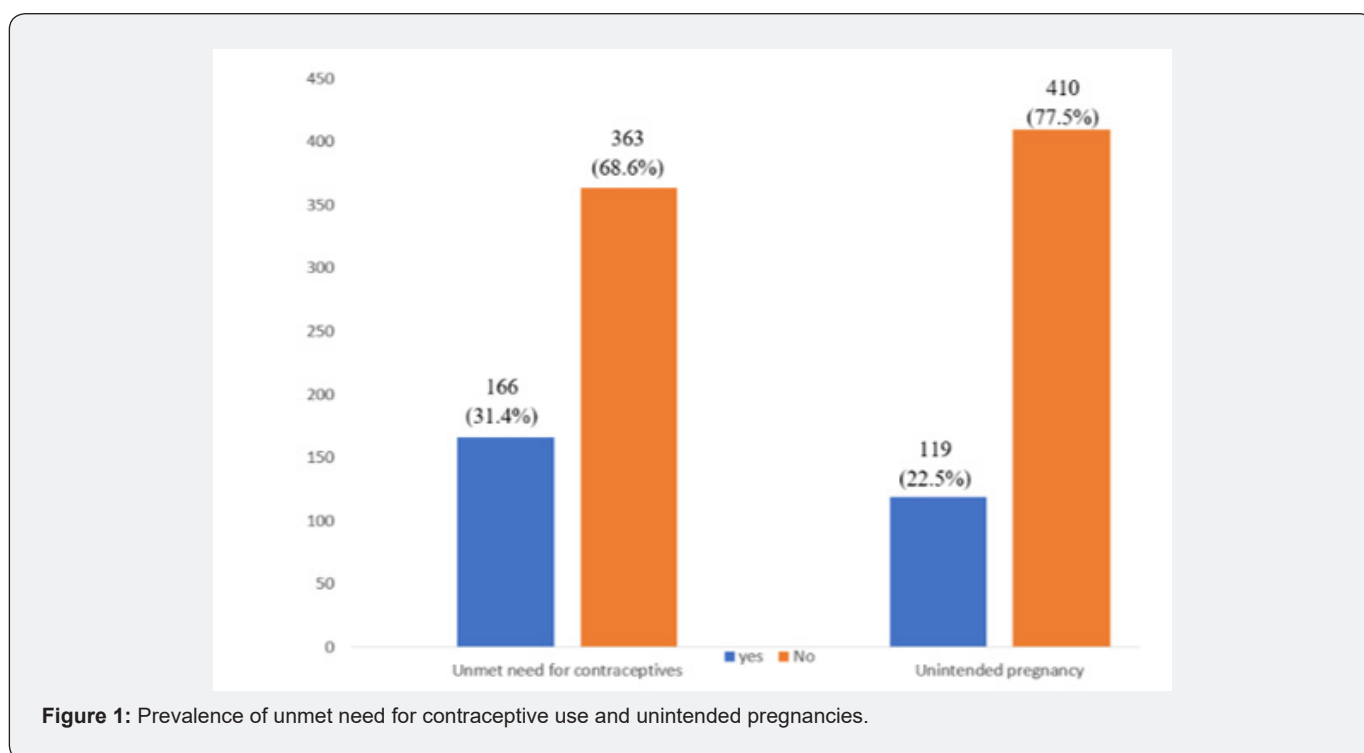

Figure 1: Prevalence of unmet need for contraceptive use and unintended pregnancies.

The study also looked into the variables that contributed to unmet need for contraception (UNC). The result as presented in table 3 shows that the respondents' educational status (completed primary or secondary education), marital status (single), and area of residence (rural) all had a negative statistically significant (p<0.05) relationship with unmet need for contraception. Also, age of sexual debut (≤ 19 years), parity and ever had an abortion were seen to have a negative statistically significant (p<0.05) relationship with unmet need for contraception.

Table 4 shows the multivariate logistic regression analysis for predictors of unmet need for contraception. Single women, rural residence, knowledge of contraception and those that had given birth were all significantly associated with unmet need for contraception. According to the result, single women were 4.79 times at odds of having unmet contraceptive needs compared with women that were either married or cohabiting (aOR = 4.79; 95% CI: 1.95-11.77; p = 0.001). Respondents in rural settlements were 2 times more likely to have unmet need for contraception compared to those residing in urban areas (aOR = 2.00, 95% CI: 1.21 – 3.04; p = 0.001). Similarly, Respondents who had given birth were 2.46 times more likely to have unmet contraceptive needs compared to respondents who had not given birth (aOR = 2.46; 95% CI: 1.59 – 3.81; p < 0.001). However, there was no statistically significant relationship between education and age at sexual debut with unmet need for contraception after adjusting for confounders.

Table 3: Relationship between sociodemographic characteristics and unmet need for contraception.

Variable	Unmet need		x2	P-value
	No n (%)	Yes n (%)		
Education				
Primary/Secondary	66 (56.9)	50 (43.1)		
Tertiary	297 (71.9)	116 (28.1)	9.484	0.002*
Age Group				
≤ 30	209 (66.8)	104 (33.2)		
>30	154 (71.3)	62 (28.7)	1.214	0.27
Income (N)				
< 30000	176 (68.2)	82 (31.8)		
30000 – 59999	95 (66.9)	47 (33.1)		
60000 – 89999	43 (66.2)	22 (33.8)		
≤ 90000	49 (76.6)	15 (23.4)	2.273	0.518
Marital Status				
Married/cohabiting	354 (70.4)	149 (29.6)		
Single	9 (34.6)	17 (65.4)	14.684	<0.001*
Religion				
Christian	358(68.8)	162 (31.2)		
Others	5 (55.6)	4 (44.4)	0.726	0.394
Residential Area				
Rural	34 (47.9)	37 (52.1)		
Urban	329 (71.8)	129 (28.2)	16.37	<0.001*
Tribe				
Hausa	6 (75.0)	2 (25.0)		
Igbo	179 (67.8)	85 (32.2)		
Yoruba	19 (61.3)	12 (38.7)		
Others	159 (70.4)	67 (29.6)	1.355	0.736
First Menstruation				
≤ 12 years	141 (71.6)	56 (28.4)		
> 12 years	222 (66.9)	110 (33.1)	1.272	0.259
Age of First Sex				
≤ 19 years	68 (59.1)	47 (40.9)	6.145	0.013*
> 19 years	295 (71.3)	119 (28.7)		
Given Birth				
Yes	195 (63.3)	113 (36.7)		
No	168 (76.0)	53 (24.0)	9.648	0.002*
Had Miscarriage				
Yes	106 (65.0)	57 (35.0)		
No	257 (70.2)	109 (29.8)	1.41	0.235
Had Abortion				
Yes	87 (55.4)	70 (44.6)		
No	276 (74.2)	96 (25.8)	18.082	<0.001*
Had Still Birth				
Yes	12 (60.0)	8 (40.0)		
No	351 (69.0)	158 (31.0)	0.717	0.397

*Statistically significant (*p<0.05*)

Table 4: Predictors of Unmet contraceptive need among pregnant women attending ANC in UPTH.

Variable	cOR (95%C.I.)	P-value	aOR (95% C.I.)	P-Value
Education				
None/Primary/Sec.	1.94 (1.27 – 2.97)	0.002	1.30 (0.81 – 2.08)	0.27
Tertiary R	-	-	-	-
Marital status				
Single	4.49 (1.96 – 10.30)	<0.001	4.79 (1.95 – 11.77)	0.001*
Married/cohabiting R	-	-	-	-
Residence				
Rural	2.78 (1.67 – 4.61)	<0.001	2.00 (1.21 – 3.04)	0.001*
Urban R	-	-	-	-
Age of First Sex				
≤19 years	1.71 (1.12 – 2.63)	0.014	1.29 (0.80 – 2.07)	0.292
>19 years R	-	-	-	-
Given Birth				
Yes	1.83 (1.25 – 2.70)	<0.001	2.46 (1.59 – 3.81)	<0.001*
No R	=	-	-	-

*Statistically significant (p<0.05); R = reference

Discussion

Unmet Need for Contraception

The use of contraception, unmet need, and unwanted pregnancies among women have been considered as a global problem with major consequences for maternal health. Due to a lack of usage or high unmet need for contraception, there have been incidents of unexpected and undesired pregnancies, which are usually terminated without the women being aware of the health concerns. Addressing the causes of unwanted pregnancies and the barriers to contraceptive usage is a sure way of enhancing the health of mothers and their newborns. The prevalence of unmet need for contraceptives among the respondents in this study was 31.4%. The unmet need in this study was higher than that of the NDHS report of 2018 which puts it at 19% among married women [13], while Wang and Cao [11] did report lower prevalence rate of 13.5% among Nigerian women. Woldemicael [14] in Eritrea, Lata et al in India, Ajong et al in Cameroon, Bishwajit et al in Bangladesh and Habib et al in Pakistan [15-18] reported lower prevalence of unmet need for contraception (27%, 23.9%, 20.4%, 21.4% and 20.1% respectively), while Mekonnen and Worku in Ethiopia, Kande in Nepal, Ali and Okud in eastern Sudan, and Yaya and Ghose in Angola [2,19-21], reported higher rates (52.4%, 48%, 44.8% and 51.7% respectively). These differences in the rates of unmet need for contraception as seen in the various studies might be due to the socio-cultural differences, difference in health service provision and study population. Also, this high rate of unmet need for contraception can be implicated in increased rate of unwanted pregnancy as well as patronage of unsafe abortion and increased population growth in the state where the study was conducted.

Unintended pregnancy

Unintended pregnancy according to Nyarko [22], is seen as a key concept for a better understanding of fertility and the unmet need for contraception of populations. The prevalence of unintended pregnancy was also probed in this study and the result showed that it was 22.5%. Previously, Lamina [23] and Grindlay et al. [24]. reported a higher prevalence of unintended pregnancy (31.1% and 45% respectively) among women in South West, Nigeria and Ghana respectively. Again, Nyarko [22] reported a higher rate of unintended pregnancy in Ghana (40%), while Bishwajit et al in Bangladesh, Habib et al in Pakistan and Yaya and Ghose in Angola [2,17,18] also reported higher rates of unintended pregnancy (30%, 38.2% and 38.3 % respectively) in their studies. This discrepancy in rates of unintended pregnancy might be as a result of behavioural and socio-cultural differences, the difference in health service provision, study population, and level of government and non-governmental investments focus on maternal health, as well as advanced women empowerment on decision-making towards fertility goals and preferences. This depicts a poor outcome that contributes effectively toward the continuous increase in population growth.

Factors affecting the use of contraceptives

The factors significantly associated with the prevalence of unmet need for contraception in this study were identified to include; low educational status, being single, residing in rural area, early sexual debut, parity, and abortion. This is similar with the report of Olugbenga-Bello et al. [25] which showed that level of education, marital status, parity, and region of residence were the significant predictors of unmet need for contraception.

Campbell et al. [26] and Bishwajit et al. [17] also reported that poverty was significantly associated with unmet need as women from rich household were less likely to report unmet need for contraception. In another study, Alenoghena et al. [27] also discovered that marital status (single) and occupation of the respondents (unemployed) were significantly associated with unmet need.

Furthermore, Acharya [28] and Chanda et al. [29] stated that literate women had a better understanding of their rights and responsibilities and have more freedom, control and participation in decisions around contraceptive use and family planning, hence, the increased prevalence of contraceptive use among the educated. In addition, Habib et al. [18] found a link between living in a rural region and a higher risk of unmet need, owing to higher rates of poverty, illiteracy, low contraceptive knowledge, and limited access to modern contraceptive techniques and services. According to Ajayi et al [10], the high unmet need for contraception among rural respondents could be due to a high allocation of family planning resources favouring urban areas, while Alenoghena et al. [27] added that the influence of occupation on contraception uptake could be related to affordability and the resultant effect of occupation on individuals' socio-economic status.

Conclusion and Recommendation

According to the findings of this study, there was a significant unmet need for modern contraception among the respondents (31.4%) and high rate of unintended pregnancy (22.5%). The study also identified the factors associated with contraceptive use to include; level of education, marital status, area or residence, early sexual debut, parity and abortion. Hence, since unmet need for contraception is one of the most important indicators for tracking the progress of family planning programmes, it should be maintained as low as possible, if not eliminated entirely, to avoid unintended pregnancies. Health workers should therefore intensify efforts in awareness creation and sensitization activities in order to address the identified factors.

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