Original Research Article

Manuscript title: An Appraisal of Awareness and Practice of Modern Contraception among Prenatal Clinic Attendees in Southern, Nigeria.

Abstract

Background: Contraception is a key measure at the primary level of prevention of maternal mortality and morbidity. It is an important tool for pregnancy spacing, limiting and timing for prevention of adverse perinatal and maternal health outcomes.

Objective: contraceptive practice as a means of preventing unintended pregnancy was assessed among Nigerian women attending prenatal care. The findings were to contribute in defining the current contraceptive practices in the country, proffer suggestions for reproductive health planning and services.

Method: This was a cross-sectional study of 701 prenatal clinic attendees at a missionary Hospital in Benin-city, Nigeria. Structured pretested questionnaire was administered to each consenting client. Database was raised on relevant information and analyzed, setting the level of statistical significance at p-value <.05

Result: Approximately 89% of the respondents demonstrated awareness of modern contraception, about 66% ever used a modern contraception and only a minority 24.1% was using it just prior to the index pregnancy. Leading sources of information were mass media, friends/peers, school and hospital in that order. The most used methods were male condom (54.8%) and pill (21.8%). About three fifths (56.2%) of the respondents have had at least a premarital termination of unintended pregnancy. More than 71% of previous users and approximately 42% of nonusers were willing to uptake a method of modern contraception in postpartum. Women empowerment; education, quality employment and social class

significantly influenced contraception use (P<.05). Key barriers to use of modern contraception were fear of unpleasant side effects, socio-cultural and religious concerns.

Conclusion: There was a wide gap between contraceptive awareness and utilization, a large unmet need of contraception among the prenatal attendees. A renewed concerted contraceptive campaign is advised

Key words: Attendees, awareness, contraception, modern, practice, prenatal, unmet need

1. INTRODUCTION:

Contraception is a key measure at the primary level of prevention strategies of maternal mortality and morbidity. As an important tool for pregnancy spacing, timing and limiting it improves perinatal and maternal health outcomes. Unintended pregnancies mostly end up in induced abortion the outcome of which depends on the safety of the prevailing abortion practices in the area. The rest end up in unplanned births with mixed consequences. Unintended pregnancy is common even in industrialized setting [1] and carries increased health risks such as lack or delayed prenatal care, drug abuse in pregnancy, low birth weight, child abuse and neglect [2].It leads to unwanted and mistimed births with the same obstetrics complications as planned births and 90% global unsafe abortion [3]. Africa has one of the highest death burdens of disease attributable to lack of modern contraception [3].

Over half a million maternal deaths occur globally every year with a whopping 99% of it in developing countries characterized by high total fertility rates (TFR), maternal mortality rates and low contraceptive prevalence . Family planning was among the measures in safe motherhood initiative launch in Nairobi Kenya about three decades ago to allow women to embark on childbearing by choice and not accidentally [4].With this, too many, too frequent pregnancies and births associated with increased perinatal and maternal morbidity and mortality would be controlled. To date this initiative is disappointing and many other global efforts continue to evolve to try to improve these unacceptably high maternal indices.

Today 42 million terminations of unplanned pregnancies still take place each year worldwide with some 20 million of these unsafe [5]. In all, about a quarter of the 210 million annual pregnancies and half of the unintended ones are terminated. Vast majority of these take place in low income countries of the world. Unsafe abortion has been identified to contribute a significant 13% of the global maternal deaths [5]. In developed economies, this cause of maternal death is rare mostly because of their low TFR and nearly 100% contraception use. The reverse is the case in developing countries especially the sub-Saharan Africa not long ago quoted with a contraceptive prevalence of 15%.In Nigeria average national TFR as high as 6.1-5.5 children per woman and contraceptive prevalence as low as 8-15% has been reported [6-7] with over half a million women seeking and obtaining abortion annually, albeit illegally. Nigeria demographic and Health survey of 2013 indicates that average TFR varies with rural areas and northern region having much higher than urban areas and southern regions respectively [7]. Among ECOWAS countries TFR range between 4.0 in Ghana and 7.6 in Niger [7]. Nigeria is rated as having the second highest global maternal mortality [6] and illegal unsafe abortion contributes 20-40% of about 60,000 annual maternal deaths [8]. Unsafe abortion case fatality as high as 18% has been reported in this region of Nigeria with restrictive abortion laws [9].

The prevalence of modern contraception is low in Nigeria especially in the northern and rural areas with rates as low as 3%. This is reflected in the comparatively high total fertility rates in these regions with consequent high maternal, perinatal and infant mortalities. Reasons variously cited in literature as the barriers to effective use of contraception were side effects and other long-term health concerns, misconception on the risk of conception from acts of unprotected sexual intercourse, poor information sharing, partners' objection, religious beliefs and limited availability of methods [2,10-12].

The poor contraceptive-related indices in Nigeria provoked this study to appraise the current contraceptive practice as a family planning option in the Niger Delta Region of Nigeria. The findings will add to the pool of evidence from other studies and contribute to reproductive

health policy making. The choice of prenatal population in this study was because they form a good cohort for entry point for family planning programme. This was because they were all sexually active, some possibly carrying unintended but wanted pregnancies, at risk of postpartum unintended pregnancy and currently under the influence of and will appreciate more ,the stress of pregnancy.

2. Materials and Methods

2.1 Study design

This was a cross-sectional descriptive observational study.

2.2 Study Setting

The study took place at St Philomena Catholic Hospital (SPCH) a second tier missionary hospital in Benin –city the capital of Edo state south south region of Nigeria. Edo state is one of the oil rich states of Niger Delta region. It is home to multiethnic groups both indigenous and non indigenous. The most populous indigenous groups are Bini and Esan .

2.3 Timeline

This study took place between August 2013 and April 2014.

2.4 Study Population

The study population was the pregnant women who were attending prenatal class at the center during the study period.

2.5. Selection Criteria

2.5.1. Eligibility criteria

The eligibility criteria was being a prenatal attendee and giving the consent.

2.5.2. Exclusion Criteria

All the prenatal attendees who declined consent

2.6. Ethical Approval

The consent of each participant and formal approval from the ethics and research committee of the center were obtained. Confidentiality was also ensured to all the respondents.

2.7. Data management

Sample size was determined using the formula [13] and prevalence rate of 25% [14]

As below:

$$n = z^2pq/d^2$$

Where P = Maximum known prevalence of contraceptive in Nigeria

q = 1-p (complement of p).

d = Allowable error margin of estimate (precision) = 0.05

z = this is Z statistic for 95% confidence level (value for selected alpha level α=0.05 which is conventionally 1.96.

n = sample of attendees i.e. sample size=289

To further increase the power of the study the sample size was increased to 701.

A simple consecutive recruitment of the eligible attendees was used to select the sample. One- on -one interview was done using a structured pretested quantitative questionnaire. The authors and two trained assistants both medical officers administered the questionnaire to the consenting respondents during the antenatal clinic periods.

The questionnaire contain sections on the socio-demographic profile; age, marital status, education, occupation, ethnic group, religion and parity, pregnancy/abortion history and awareness and practices of contraception. The social classification of the women was based

on the educational attainment of the women and the occupation of their husbands [15]. The husband occupation was classified into professionals, middle level and unskilled respectively scored 1, 2 and 3 while the education of the women was scored 0, 1 and 2 respectively for tertiary, secondary and primary levels of education. The aggregate of the two scores was the social class. For the purpose of this study the social class I and II was high class, class III middle class while IV and V formed the lower class.

For this study, the Level of awareness (knowledge) was graded into two categories: the ability to tell what contraception is, or/and correctly name one or more methods or/and having correctly used any method before was taken as **'**awareness 'while absence of these was taken as lack of 'awareness'

Data analysis was done using EPI-INFO Version 3.5.1 developed by Center for disease control and prevention (CDC) in Atlanta Georgia USA released August 2008 and INSTAT statistical software. Test of statistical significance was done using Chi square (x^2) test and Fisher's exact test for bivariate statistical analysis as appropriate using 2 x 2 contingency tables. Multivariate analysis was performed using logistic regression to determine the independent predictor variables for contraceptive use by contrasting selected maternal variables to estimate the adjusted Odd Ratio (AOR) and correlation coefficient (r). The level of statistical significance was set at P-value <.05.

2.8. Main Outcome Measures

The outcomes measured from the primary data include the proportion of the participants who demonstrated awareness and prior utilization of modern contraception.

3. Results

A total of 701 respondents were studied, mean age was 30.0±4.5 years, the range 17-48 years and mode 31 years (Figure 1).

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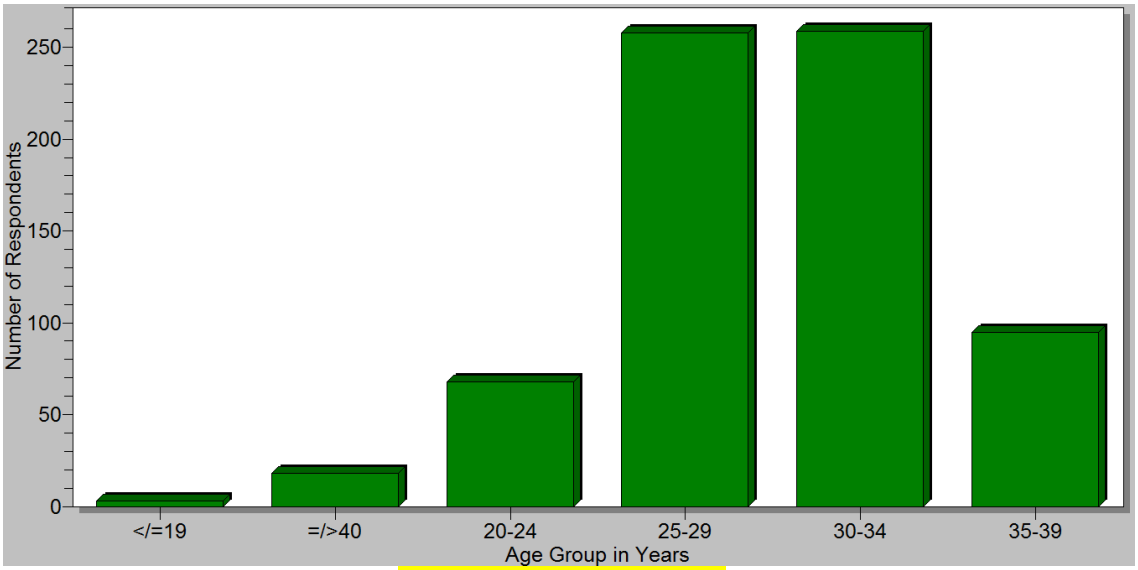

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146 Figure 1: Age of Respondents

147 Majority 504/701 (71.9%) of them attained post secondary level of education, 546(77.9 %)
148 employed while the rest 155 (22.1%) were unemployed (Table 1). Vast majority 683(97.4%)
149 were Christians who were predominantly of Pentecostals denominations (66.5%) and
150 Roman Catholics (27.8%).Dominant tribes were Bini (37.5%),Esan (16.5%) and Igbo
151 (24.0%). Most 694 (99.0%) were married. About three fifths of the respondents have had at
152 least a previous delivery.

Table 1; Socio-demographic characteristics of the respondents **vs. Contraceptive Awareness and use**

Characteristics	Variable	Contraceptive use	Non contraceptive use		Total (%)	Relative Risk	P-value
		Aware /use N (%)	Aware/non use N (%)	Not aware/non use N (%)			
Marital status	Unmarried Married	1(0.1) 461(65.8)	4(0.6) 156(22.2)	2(0.3) 77(11.0)	7(1.0) 694(99.0)	0.22 4.65	0.01
		462(65.9)	160(22.8)	79(11.3)	701(100.0)		
Parity	0 1-4 ≥5	188(26.8) 267(38.1) 7(1.0)	67(9.6) 92(13.1) 1(0.1)	37(5.3) 35(5.0) 7(1.0)	292(41.7) 394(56.2) 15(2.1)	0.96 1.07 0.70	0.52 0.26 0.17
Educational attainment	< secondary Secondary	9(1.3) 104(14.8)	2(0.3) 42(6.0)	4(0.6) 36(5.1)	15(2.1) 182(26.0)	0.91 0.83	0.59 0.005

	> secondary	349(49.8)	116(16.5)	39(5.6)	504(71.9)	1.21	0.003
Occupation	Employed Unemployed	374(53.4 88(12.5)	120(17.1) 40(5.7)	52(7.4) 27(3.9)	546(77.9) 155(22.1)	1.21 0.83	0.01
Religion	Christianity Roman catholic Anglican Pentecostal Others Islam	456(65.0) 118(16.8) 8(1.1) 312(44.5) 18(2.6) 6(0.9)	154(22.0) 51(7.3) 5(0.7) 91(13.0) 7(1.0) 6(0.9)	73(10.4) 21(3.0) 1(0.1) 51(7.3) 0(0.0) 6(0.9	683(97.4)* 190(27.1) 14(1.9) 454(64.8) 25(3.6) 18(2.6)*	2.00 0.91 0.85 1.09 1.08 0.50	0.005 0.12 0.57 0.14 0.67 0.005
Social Class	upper middle lower	182(26.0) 202(28.9) 78(11.1)	68(9.7) 55(7.8) 37(5.3)	22(3.1) 28(4.0) 29(4.1)	272(38.8) 285(40.7) 144(20.5)	1.03 1.13 0.79	0.68 0.02 0.001
Ethnic group	Bini Esan Igbo Yoruba Others	174(24.8) 84(12.0) 109(15.5) 18(2.6) 77(11.0)	63(9.0) 20(2.9) 40(5.7) 8(1.1) 29(4.1)	26(3.7) 12(1.7) 19(2.7) 4(0.6) 18(2.6)	263(37.5) 116(16.6) 168(23.9) 30(4.3) 124(17.7)	1.01 1.12 0.98 0.91 0.93	0.93 0.11 0.78 0.56 0.35

153 * Add up to the total respondents

154

155 Previous Pregnancies and Outcomes

156 A total of 867 premarital pregnancies took place among the respondents with the mean and
157 range of 1.24±1.4 and 0-8 respectively. Among these, a large number 835/867 (96.3%),
158 mean 1.19±1.35, a range of 0-7 were terminated (Table 2). Only fifteen (1.7%) ended in
159 premarital births and 17(2.0%) were spontaneous abortions. There were a total of 1645
160 marital pregnancies; mean 2.35±1.52 and a range of 1-9.The total marital births were 750,
161 mean 1.07±1.24 and a range of 0-7. There were 27 (1.64%) marital terminations of
162 unintended pregnancies among the respondents. In all, 58.1% and 3% of the respondents
163 have had at least one premarital and a marital termination of unintended pregnancy
164 respectively.

165 **Table 2**: **Respondents' Previous Pregnancy outcomes vs. Contraceptive Use**

Timing of sexuality	Variable	Contraceptive Use		RR	95% CI	P-Value
Premarital		Yes n (%)	No n (%)			
	Induced abortions ≥1	307(43.8)	100(14.3)	1.43	1.27-1.62	<0.0001

	Nil	155(22.1)	139(19.8)	0.70	0.62-0.79	<0.0001
		462(65.9)	239(34.1)			
	Births ≥1 Nil	 11(1.6) 451(64.3)	 2(0.3) 237(33.8)	 1.29 0.77	 1.02-1.64 0.61-0.98	 0.24 0.24
		462	239			
	Spontaneous abortions ≥1 Nil	 13(1.9) 449(64.1)	 4(0.6) 235(33.5)	 1.17 0.86	 0.89-1.53 0.66-1.12	 0.44
		462	239			
Marital	Induced abortions ≥1 Nil	 14(2.0) 448(63.9)	 7(1.0) 232(33.1)	 1.01 0.99	 0.74-1.38 0.73-1.34	 1.00
		462	239			
	Births ≥1 Nil	 270(38.5) 192(27.4)	 135(19.3) 104(14.8)	 1.03 0.97	 0.92-1.15 0.87-1.09	 0.63
		462	239			
	Spontaneous abortions ≥1 Nil	 74(10.6) 388(26.8)	 43(6.1) 196(28.0)	 0.95 1.05	 0.82-1.11 0.90-1.22	 0.52
		462	239			

Awareness

A large number 622/701 (88.7%) of respondents were aware of modern contraception (Tables 1 & 3). Their main sources of information about contraception were media (25.1%), Friends (24.4%), School (24.3) and Hospital/antenatal clinic (20.2%) in that order as shown in Figure 2.

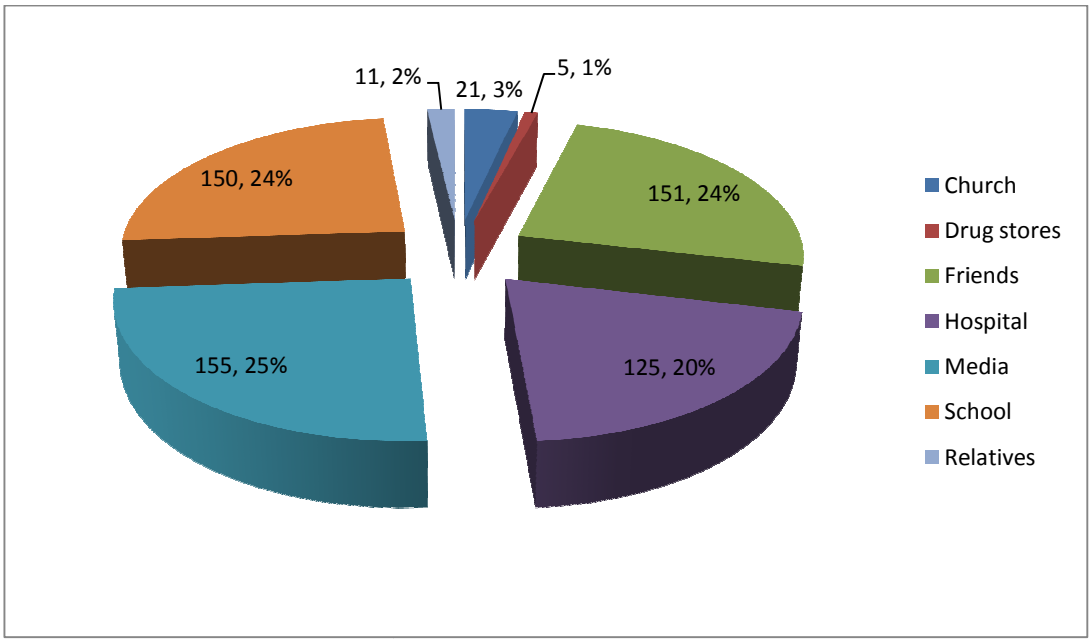

Figure 2: Respondents' source of information about modern contraception (%)

Half (50.4%) of those who were aware of contraception perceived it as a means of spacing child births, about two fifths(38.7%) saw it as a means of preventing unwanted pregnancy. In Table 1, married status influenced the level of contraceptive awareness 88.9% versus 71.4%.Similarly educational attainment 92.3% vs. 73.3, gainful employment over 90% against over 80% and Social status 91.9% vs. 79.9% for upper and lower classes. Religion of the respondents equally influenced their level of contraceptive awareness 89.3% vs.66.6% for Christianity and Islam. A further subgroup analysis of the Christian group showed their respective levels of contraceptive awareness.

Utilization and Practices

About 7 out of every 10 respondents 462/701 (65.9%) have ever used at least a method of modern contraception at some points in their lives (Table 3). Among these a total of (293/462) 63.4 % used it only before marriage, 78/462 (16.9%) only after marriage and 91 (19.7%) both before and in their marriage. This meant that a proportion 169/701 of the respondents was using contraception at the period preceding their ongoing pregnancy, a

retrospective contraceptive prevalence of 24.1% in this population. A large number 384/701(54.8) of the respondents who ever used contraception did so premarital while only 91 (13.0%) of them continued with the use in marriage. This meant that the contraceptive use among the premarital users reduced from 63.4% to 19.7% in their marriage. Only 6 out every 10 of the respondents will use contraception in future .The methods most used by the respondents were male condom (54.8%) and oral contraceptive pill (21.8%).

From Figure 3, those that used contraception only before marriage discontinued mainly because of marriage (23.3%), desire for pregnancy (48.8%), partner's instruction (8.2%) and unpleasant side effects (6.4%).

Figure 3: Reasons for Discontinuation of Modern Contraception

Among those who ever used modern contraception, 330(71.4%) will still use it in the future while the rest were either undecided (8.9%), will not (19.5%) or never (0.2%) use it. Among those who never used any method 100/239 (41.8%) were ready to uptake modern contraception in the future while 84 (35.1%), 50 (20.9%) and 5 (2.1%) will not, undecided or never uptake modern contraception respectively (Table 3). The main reasons cited by those who will not, never or undecided on future use of modern contraception were spouse

decision (11.5%), against religion 7.5%, preferred natural methods 45.0%, personal decision 28.4%, fear of long term side effects 4.7% or need more enlightenment 2.9%

The main fear expressed by the participants against the modern contraception from Table 3 were fear of unpleasant side effects (12.7%), weight gain/fatness (15.7%),delay in conception (11.1%), damage to uterus and other reproductive organs(4.7%) , menstrual irregularities(10.1%) and failure rates (9.9%) . As many as about two out of every five (40.1%) of the respondents did not perceive any fear in use of modern contraception.

Table 3: CONTRACEPTIVE PRACTICES AMONG THE RESPONDENTS

Practice	Variable	Number	%	95% Confidence Interval
Level of awareness	Aware Not Aware	622 79	88.7 11.3	86.1-90.9 9.1-13.9
Contraceptive uptake	Yes No	462 239	65.9 34.1	62.2-69.4 30.6-37.8
Future use of contraceptive	Yes No Undecided Never	430 174 91 6	61.4 24.9 13.0 0.9	57.6-64.9 21.7-28.2 10.6-15.7 -
Contraceptive method used	Pills Injectables Male Condom Implant IUCD*	153 19 385 2 9	21.8 2.7 54.8 0.3 1.3	7.5-12.0 1.7-4.3 51.1-58.6 - -
Perceived benefits	Child spacing Prevent unwanted pregnancy Birth limiting Better family Sexual satisfaction Don't know None	354 272 149 34 2 35 18	50.4 38.7 21.2 4.9 0.3 5.0 2.6	46.7-54.3 35.2-42.5 18.3-24.5 2.4-5.3 - 3.6-6.9 1.6-4.1
Fears respondents have of modern contraception	Nothing Fatness/weight gain Side effects Delay conception Menstrual irregularity Failure rates/not reliable Damage of reproductive organs Cancer Infections Others ł	281 110 89 78 73 69 33 13 10 13	40.1 15.7 12.7 11.1 10.1 9.9 4.7 1.9 1.4 1.8	36.6-44.0 13.1-18.6 10.4-15.4 8.9-13.7 8.3-13.0 7.8-12.4 3.3-6.6 1.0-3.2 - -

Reasons for refusal to use modern contraception	Prefer natural family planning Personal decision Partner objection Against religion Long-term side effects Need more enlightenment	125 79 32 21 13 8	45.0 28.4 11.5 7.5 4.7 2.9	15.1-20.9 9.1-13.9 3.2-6.5 1.9-4.6 1.0-3.2 -

213 *: Intrauterine contraceptive device

214 ł: Fibroid, impair sexual satisfaction, insufficient health education

215 A number of factors have been associated with the utilization of modern contraceptives
216 among the respondents. There was a forty percent significant increased chances of a
217 woman who had premarital termination of unwanted pregnancy up taking modern
218 contraception (RR 1.403, P:<.001).Marital status, educational attainment, employment,
219 social status and religious belief of the respondents significantly influenced their utilization of
220 modern contraception (Table 1).

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223 **Table 4: Multivariate correlation analysis between contraceptive utilization and selected**
224 **variables in the study population**

Characteristic	Variable	AOR	95% CI	Correlation coefficient(r)	P-value
Education	Secondary	ref			
	primary	1.19	0.36,3.88	+0.17	0.78
	Tertiary	1.48	0.79, 2.78	+0.39	0.22
Occupational group	Unemployed	ref			
	Employed	1.76	1.19, 2.59	+0.56	**0.004**
Social class	Lower	ref			
	Middle	1.56	0.80, 3.05	+0.45	0.19
	Upper	1.34	0.64, 2.81	+0.29	0.44
Pregnancy history	Premarital births	2.24	0.51,9.84	+0.81	0.28
	Premarital terminations	1.39	1.21,1.60	+0.33	**<0.001**
	Marital births	0.97	0.85, 1.11	-0.03	0.65
	Marital terminations	0.71	0.34, 1.47	-0.35	0.35

225

When contrasted with other variables in a multivariate analysis of selected variables, only premarital termination of unintended pregnancy and employment consistently independently significantly correlated with utilization of modern contraception (AOR 1.4, r 0.33, P< .001) and (AOR 1.8, r 0.56, P 0.004) respectively (Table 4). There was a positive correlation of each of primary and tertiary education, upper and middle social class and a negative correlation of unemployment, marital birth and termination of pregnancy and utilization of modern contraception P>.05. The likelihood ratio was (49.7, P <.001).

4. Discussion

Our data revealed a high level of awareness and low up take of modern contraception among prenatal attendees, a wide gap between personal knowledge and utilization of modern contraception.

The level of modern contraceptive awareness of 88.7% in this study was high and comparable to other published reports in Nigeria [16-17]. This was higher than the reported average national awareness level [7] and lower than the figures by other authors [18-19]. The leading cited source of contraceptive information among the respondents was the media similar to other reports [14, 18, 20-21]. This contrasted with other reports citing health workers as the leading source of family planning information [17, 19, 22]. The hospital was the forth main source of contraceptive information in this study which fell short of the expected leading role of healthcare system in health information dissemination. One of the possible explanations for this was that the health facility used for the study promotes natural family planning methods in preference to the modern contraception. Since most sexually active women within the reproductive age bracket are at the risk of unintended pregnancy, reproductive health education and possibly services should be offered to everyone of them at every contact point in health facilities; post abortion care clinic, prenatal, during labor, immediate postpartum before discharge and at subsequent postnatal follow-ups. This was

strongly corroborated by our data that consistently significantly associated previous termination of unintended pregnancy and contraceptive use. This will improve contraceptive practices and reduce the incidence of unintended pregnancies and consequent maternal morbidity and mortality attributable to lack of contraception especially in poor resource countries. The accurate and reliable information is expected from health workers against every other source. It is equally expected that clients' confidence to uptake, continue and consistently use the service will be higher when the information emanates from the health professionals with much more knowledge and skill in health services.

The cumulative contraceptive prevalence of 65.9% in this population was higher than previous report in the region [18].and lower than the figures from other surveys [11, 19-20]. Contraceptive prevalence is defined as the percentage of currently married women using a method of contraception [7]. Only 24.1% of the attendees still used contraception outside their pregnancy a contraceptive prevalence of 24.1% in this population. This indicated the possibility of low post delivery contraceptive uptake in this population. This figure was similar to a report from another study [14], lower than another report in sub-Saharan Africa [23] and comparatively higher than the overall and the modern contraceptive prevalence rates of 15% and 10% respectively among currently married women in Nigeria [7]. Even among a cohort of post abortion care seekers with 7 out of every 10 with at least a previous termination of an unintended pregnancy whom about 8 of every 10 were aware of contraception their uptake was comparably poor [9].This reflected in their high unsafe abortion related maternal mortality and morbidity . The contraceptive prevalence is a valuable measure of the success of family planning programme and useful in estimation of fertility reduction attributable to contraception [7].It can also predict the disease burden attributable to contraceptive lack and its attendant unintended pregnancy and possibly unsafe abortion. The prevalence in this population as reported was nonetheless, low and comparable to reports from other centers in Nigeria and other developing countries especially sub-Saharan Africa [3, 14]. In developed economies like USA 99% of women who have ever had sexual intercourse have used at

least a contraceptive method [24-25]. About 62% of all women of reproductive age and 83-91% among the various population subgroups at risk of unintended pregnancy were currently using a contraceptive method [24]. Other developed economies similarly demonstrate high level of modern contraceptive awareness and use with significant proportion of the target population benefiting from modern contraception [22]. In the global perspective, the proportion of the reproductive aged women who used modern contraception ranged 14% in WHO African region to 64% in high income countries [3]. Level of women empowerment and self-motivation, concerted and coordinated media campaign coupled with strong governmental will and involvement are some of the possible reasons for the observed regional differences in modern contraceptive up take. This is eloquently evident in the wide regional disparity in TFR and maternal mortality [7, 24]. The most popular contraceptive methods among the respondent users were male condom and pills in tandem to other reports [16-17, 19, 22] and contrasted with the national report with injectables the most popular followed by male condom and pill [7]. In USA the pill, female sterilization and male condom in that order were the most popular [1, 24].

According to our data, majority of the prenatal attendees were aware of modern contraception, its availability and benefits yet, poor contraceptive utilization. The expectation is that contraceptive awareness would positively influence the utilization [24]. In this population this was not the case, socio-cultural and religious concerns seemed to influence the health seeking behavior and contraceptive services up take than lack of information, availability and accessibility to modern contraception. The Federal government of Nigeria in her effort intensified the provision of free contraceptives to the citizens [7]. From our results the extent of empowerment of a woman contributed to her contraceptive utilization as demonstrated by the positive correlation between gainful employment and social class and contraceptive utilization as against unemployment and lower social class .This was in agreement with other reports [7, 11, 23-24].

The leading reason for discontinuation of contraceptive use among the population was the desire for pregnancy .This was similar to other reports [7, 16]. This was to be expected in this population; married and characterized by high TFR but the concern was the prompt resumption and consistent post delivery use of contraception to achieve the objectives of family planning programme of proper timing, spacing and limiting child birth. Other reasons for discontinuation were partners' objection and side effects. A well structured and coordinated counseling and information sharing on merits and demerits of modern contraception and actions to take in event of any side effects will enable the recipients make informed decision and engender better compliance . It was evident that good-quality prenatal contraceptive counseling improved postpartum contraceptive adoption and decreased the incidence of discontinuation therefore unintended and mistimed pregnancies [1, 26-27].This is further corroborated by the evidence from the survey on the effect of product labeling and practice guidelines on contraceptive use [10]. Again the male partners have vital role in reproductive health and should be carried along in family planning efforts to make the programme and service delivery more effective. About 42% of nonusers in this study indicated the willingness for future use. Though this was higher than the figure reported in 2013 NDHS [7] nevertheless, it was low. The future demand of modern contraception among nonusers as demonstrated in this population indicates more intense contraceptive campaign to overcome the cited barriers of personal indecision, religious beliefs, fear of side effects and spouse disapproval.

As in another report [19], most of the respondents correctly identified contraception as a valuable means of birth spacing and limiting. It appears that accurate knowledge of the benefits of contraception is not a guarantee for service uptake. Some factors like partner objection and religious beliefs appeared prominent barrier to uptake of modern contraception in this population as in another report [20]. In addition, a good number of the subjects in this study received their information majorly from peers/ friends who might not have had and passed accurate contraception information. More so the peer's negative health beliefs and

bias may impair contraceptive utilization. This indicates the need for the healthcare workers to take their central role by increasing their campaign efforts. Health care providers and media play a significant role in dissemination of medical information, targeting the duo to improve the utilization of contraceptive services will undoubtedly have a beneficial effect on contraceptive efforts.

This study drew its strength from the sample size and prospective data. However, this data was self-reported behaviors known to be fraught with inaccuracies. It was a hospital based data which may not be the true reflection of the larger community. A multicenter study will be more representative. The currently prenatal attendees cannot be used for accurate determination of contraceptive prevalence rather their use rate before or after the prevailing pregnancy. Participants indication of willingness to use contraception following delivery may be influenced by the pregnancy outcome therefore may not be the best index of contraceptive willingness. A postpartum or interpregnancy contraceptive survey would be better. Non pregnant married and sexual active unmarried women of reproductive age group at risk of unintended pregnancy will equally give a better contraceptive use rate.

5. Conclusion

The participants demonstrated a high level of awareness and a huge unmet need of contraception. Obviously there was a pressing need for concerted and well coordinated mass contraceptive campaign backed by committed government will and supervision to overcome the mitigable barriers and myths. Contraception and other family planning practices no doubt, help reduce family expenses and improve health and social standards

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