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Original Research Article

Perception of a sample of pregnant women towards contraception

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Abstract

Purpose: The use of contraception is not yet widespread. Therefore, the objective of this study is to investigate the perception of a sample of pregnant women towards contraception.
Methods: A 22 item questionnaire was developed to collect data from pregnant women visiting two ante-natal clinics in Benin City, Nigeria. Responses to the items showing thelevel of agreement with the statements related to contraception was anchored on a scale of 1-5 where 1 = strongly disagree and 5 = strongly agree. The cut-off point was set at 3.0 such that scores <3.0 are considered unfavourable perception. Cronbach alpha was determined. Principal component analysis employed Varimax rotation and Kaiser normalization with listwise deletion of missing data. A Likert summation of scores was used in calculating perception scores for all items and extracted components. The relationship between demographic factors and extracted components was further explored using inferential analysis such as Student t-tests and One-Way ANOVA as appropriate. P-values <0.05 were interpreted as significant.
Results: The response rate was about 92%. A majority of the respondents were married while 30% had no children. Six subscales were extracted from which the component that states that family planning improves women's health had the highest score of 4.5 ± 0.9 compared to a summary perception score of 3.55 ± 1.22 for all study participants. However, only about 31.0% (184/600) of the women had used a birth control method prior to getting pregnant. Two items that imply that family planning methods do not always work and that the study participants have an inherent preference for natural methods of birth control had low perception scores <3.0. Cronbach's alpha was approximately 0.7 and no significant difference was found between perception and actual use of family planning methods.
Conclusion: Despite a slightly favourable perception towards contraception, actual use of birth control methods appears to be low. This may be as a result of doubts about the efficacy of family planning methods and an inherent preference for natural methods of contraception. Development of intervention strategies to encourage use should put these findings into consideration.
Keywords: Birth control, family planning, Nigeria, contraceptive drugs and devices

Indexing: Index Copernicus, African Index Medicus

Introduction

Modern birth control methods are not being used by an estimated 225million women who want to delay or stop having children in developing countries even in the presence of increasing availability of effective and safe family planning methods [1,2]. As at 2008 maternal deaths due to pregnancy have decreased by 40% as 270,00 deaths were prevented. If the full demand for contraception is met, deaths as a result of pregnancy can be further reduced by 70%. Improved earnings and general wellbeing of mother and child have been attributed to the use of contraceptive drugs and devices. Economic growth due to fewer children to spend money on, more time in the workforce away from maternity leave by women and reduction in the use of scarce resources are some of the benefits of family planning [3-6].

Nigeria, with 190million, has a population growth rate of 2.4%. Live births per woman is 5.13. The maternal and infant mortality rate at 65 infant deaths per thousand live births and 224 maternal deaths per a hundred thousand live

births [7-9]. This led the government to formulate and implement a national birth control policy between 1989 and 1993 which was revised in 2004 with a 2015 target (in line with the millennium development goal number 5) of reducing maternal deaths by 75% [10,11]. Implementation involves several educational and communication strategies aimed at changing the attitudes of Nigerians towards family planning.

In 2013, contraceptive use rose to 15.1% from 6% in 1990 [12]. Despite this increased uptake, birth control methods appear to be low. Information on the perception of pregnant women living in Benin City who before they got pregnant had come in contact with contraceptive drugs and devices and were aware of interventions aimed at increasing uptake, appears to be lacking in the medical literature. It is suspected that several factors which may be social, economic, religious and cultural may be responsible for the low use of contraceptives. A better understanding of these factors may aid the design of better communication and educational interventions to further improve the prevalence of contraceptive use. Therefore, the objective of this study is to investigate the perception of a sample of pregnant women living in Benin City, Nigeria, towards contraception.

Methods

Setting

The study was conducted in a missionary and university teaching hospital located in Benin City, Nigeria.

The Instrument

The questionnaire used in this study consists of three sections. Demographic data such as age, sex, marital status, occupation, income and educational level were collected in section one. The second part was made up of 22 statements agreed on by the researchers and a panel of 8 women drawn from the study sites as possible items that can influence the use of contraception. Respondents were to indicate how strongly they agree or disagree with the items on a scale of 1-5 where 1 = strongly disagree and 5 = strongly agree. Section 3 had yes or no questions on if the women had health insurance or if they had actually used contraceptive drugs and or devices prior to getting pregnant. The questionnaire was then tested on a sample of 30 women from a different hospital that is not a site for this study. This resulted in rephrasing some items in section 2 such that some were now negatively worded to prevent mechanical responses.

Data Collection

Every second pregnant woman visiting the antenatal clinic of the two study sites was approached to take part in the study as they come through the clinic entrance. Where consent is not granted the next visitor was recruited. The local Bini language was used to interpret to those who could not communicate in English. Care was taken to ensure that all items were completely filled. The theoretical basis for using pregnant women for this study is that since they are in a sexual relationship the probability that they have formed an opinion on contraception, and have actually come in contact with them and interventions designed to promote their use, will be very high and any sign of poor uptake is a clear indication that there is an underlining problem that needs to be addressed.

Data Analysis

The collected data was entered into Microsoft Excel,cross-checked for accuracy and sorted. Frequencies, mean and standard deviation were computed. The data was then loaded into SPSS 21.0.Internal consistency of the items in section 2 was explored using Cronbach alpha. Factor loading with principal component analysis that employed Varimax rotation and Kaiser normalization with deletion of missing data listwise was also performed. Following the determination of commonalities 7 items that loaded <0.4 were deleted because their contribution to the summary scores were considered inadequate. Therefore, only 15 items of the original 22 were part of the final analysis reported in this study.

A Likert summation of scores was employed for the 15 contraception statements on a scale of 1-5 such that a mean score >3.0 was considered a positive or favourable perception towards contraception with the probable implication that those with a higher perception score would use contraceptive drugs and devices. Possible association between demographic variables with the extracted components were investigated with the calculation of p-values using One Way Analysis of Variance and Student t-test where applicable with the aid of GraphPad Instat 3.06

that reports exact p-values. P-values >0.05 were reported as significant.

Results

Of the 650 questionnaires distributed 600 were returned and found useable giving a response rate of 92.35%(600/650). A majority of the women were aged 26-35 years old and were married except 35(5.8%) who were either divorced or widowed. None was single. About 39%(236) of the women were self-employed and 427(71.2%) had post-secondary education. Most of the women(33%) had a monthly income of ₦10,000 - 70,000 while 30% had no children. About 25% of them had health insurance. Table 1.

The reliability of the 15 items used in the final analysis as determined by Cronbach alpha was approximately 0.7 after deletion of 7 items that loaded <0.4. More than half of the items (13) had a score >3.0 with a mean total score of 3.55 ± 1.22 for all respondents. This seems to imply that this sample of women studied has a slightly favourable perception towards contraception. They do not appear to believe that contraception always works (2.9 ± 1.8) but seemed to be highly favourably disposed to being allowed to choose what they do with their bodies (3.9 ± 1.4) including when to have sex (3.8 ± 1.2). The highest favourable perception score of 4.5 ± 0.9 was obtained by items that clearly state that contraception improves women's health and standard of living.

Principal component analysis extracted 6 subscales with the largest consisting of 5 items (component 2) andwas identified as 'socio-cultural influences. On the basis of the items component, 1 was named 'side effects' as shown in Table 2.

Component 3 (advantages of contraception) had the highest subtotal mean score of 4.5 ± 0.9. Side effects and component 5 (socioeconomic barriers) had scores of 3.4 ± 1.2 and 3.7 ± 1.2 respectively. Component 6 (preference) had the lowest score 2.3 ± 1.3 (score was reversed) which seems to indicate that the women have more preference for natural methods of birth control. The subtotal mean scores of the extracted components were significantly different ($p < 0.0001$, $F = 210.1$).

Table 2: Socio-demographic data of respondents

Variable	Number responding	Percentage
Age (years)		
≤ 25	**77**	**12.8**
26-35	**414**	**69.0**
≥ 36	**109**	**18.2**
Marital Status		
Married	**565**	**94.2**
Others	**35**	**5.8**
Occupation		
Student	**51**	**8.5**
Government worker	**173**	**28.8**
Self- employed	**236**	**39.3**
Unemployed	**64**	**10.7**
Private sector worker	**76**	**12.7**
Educational Level		
Nil/primary	**71**	**11.8**
Secondary	**102**	**17.0**
Post- secondary	**427**	**71.2**
Income(₦)		
<10,000	**98**	**16.3**
10,000-40,000	**124**	**20.7**
40,001-70,000	**77**	**12.8**
70,001-100,000	**56**	**9.3**
>100,000	**42**	**6.9**
Number of Children		
0	**180**	**30.0**
1	**158**	**26.3**
2	**140**	**23.3**
3	**60**	**10.0**
≥ 4	**62**	**10.3**
NHIS		
No	**449**	**74.8**
Yes	**151**	**25.2**

In Table 3, component 6 was found to have a significant difference with age ($p = 0.0034$), educational level ($p = 0.0433$), income ($p = 0.005$) and number of children ($p = 0.0037$). It thus appears that those who are less educated, earn less than ₦10,000 monthly, having ≥4 children significantly have less preference for natural methods of birth control.In addition, those who had post-secondary education seemed to be less likely to view contraception as an abortion or too expensive. This is derived from the existence of a statistically significant difference between socioeconomic barriers and

Table 2: Component Distribution of Contraception Related Statements and their Mean Perception Score

Statements	Factor Loading	Mean Perception Score ± SD
Component 1: Side Effects		
It gives me pimples	0.701	3.5 ± 1.1
It stops my menses and makes me feel like a man	0.747	3.4 ± 1.2
The injections cause excessive bleeding	0.687	3.4 ± 1.2
Sub-total mean score		3.4 ± 1.2
Component 2: sociocultural influences		
Contraception is a normal cultural practice	0.555	3.1 ± 1.3
Contraception always works	0.633	2.9 ± 1.8
I am not ashamed to buy or use contraceptives	0.528	3.7 ± 1.3
Since I am a married woman, I do not feel ashamed to buy contraceptives	0.544	3.8 ± 1.3
Contraceptives are against my religion	0.467	3.8 ± 1.4
Sub-total mean score		3.5 ± 1.4
Component 3: advantages of contraception		
Spacing the children help to improve a woman's health	0.836	4.5 ± 0.9
Having few children improves one's standard of living	0.807	4.5 ± 0.9
sub-total mean score		4.5 ± 0.9
Component 4: the right to choose		
I have a right to choose what I do with my body	0.752	3.9 ± 1.4
I like to have sex when I want to	0.720	3.8 ± 1.2
Sub-total mean score		3.9 ± 1.3
Component 5: socioeconomic barriers		
Contraception is thought of as an abortion inmy village	0.791	3.8 ± 1.2
The types I would like to use are too expensive	0.659	3.5 ± 1.2
Sub-total mean score		3.7 ± 1.2
Component 6: preference		
I prefer natural methods	0.832	2.3 ± 1.3
Sub-total mean score		2.3 ± 1.3

level of education (p = 0.0075). However, no significant difference was found between the slightly favourableperception of the women studied and the actual use of contraceptive drugs and devices (p = 0.145) since only about 31.0% (184/600) of them reported having used any form of contraception.

Discussion

Results of this study show that uptake of contraceptive drugs and devices before conception by the pregnant women was low despite their favourable perception towards the use of contraception. A study in Ghana and Tanzania similarly found a serious disconnect between contraceptive knowledge and actual real world use even when the study participants believe that contraception improves the health of both mother and child. Information campaigns have been found to have a positive effect on knowledge of family planning methods but has no direct effect on their acceptance and use [13,14].

A report from Ethiopia found that women who are better educated have a more positive attitude and are more likely to use contraception. This was not the case in this study. Women in this study with higher education appeared to prefer natural methods of family planning which can possibly lead to having more children than is desired.Our findings are similar to that of India where highly educated women were still having more children than they desire despite being knowledgeable about contraception [15-17].

Though, cost savings from avoidance of unwanted pregnancies have been well documented [18-20]; irrespective of thelevel of education, income and number of children;

Table 3: The relationship between socio-demographic factors and mean component perception score

Variable	Number responding (%)	Total mean perception score	Component's Total Mean Score ± SD					
			1	2	3	4	5	6
Age(years)								
≤ 25	77(12.8)	3.5 ±1.2	3.4 ±1.2	3.4 ±1.2	4.4 ±0.9	3.8 ±1.2	3.5 ±1.2	2.5 ±1.3
26-35	414(69)	3.5 ±1.2	3.5 ±1.2	3.4 ±1.3	4.5 ±1.0	3.9 ±1.3	3.6 ±1.2	2.1 ±1.3
≥ 36	109(18.2)	3.6 ±1.3	3.4 ±1.1	3.4 ±1.8	4.6 ±0.8	3.7 ±1.4	3.8 ±1.2	2.5 ±1.5
P-value			0.6322	0.9999	0.3642	0.3410	0.9963	0.0034
Marital Status								
Married	565(94.2)	3.5 ±1.2	3.4 ±1.1	3.4 ±1.3	4.5 ±0.9	3.8 ±1.3	3.6 ±1.2	2.2 ±1.3
Others	35(5.8)	3.6 ±1.5	3.3 ±1.5	3.7 ±2.3	4.2 ±1.1	4.2 ±1.2	3.7 ±1.3	2.4 ±1.4
P-value			0.6105	0.2113	0.0596	0.0766	0.6342	0.3796
Occupation								
Students	51(8.5)	3.5 ±1.2	3.4 ±1.3	3.4 ±1.3	4.4 ±0.9	4.1 ±1.1	3.5 ±1.2	2.3 ±1.4
Government worker	173(28.8)	3.5 ±1.3	3.5 ±1.2	3.4 ±1.3	4.6 ±0.9	3.7 ±1.4	3.6 ±1.3	2.2 ±1.4
Self-employed	236(39.3)	3.5 ±1.2	3.4 ±1.1	3.5 ±1.3	4.4 ±1.1	3.9 ±1.2	3.7 ±1.2	2.2 ±1.3
Unemployed	64(10.7)	3.4 ±1.2	3.5 ±1.1	3.2 ±1.3	4.5 ±0.9	3.6 ±1.3	3.6 ±1.1	2.2 ±1.3
Private sector worker	76(12.7)	3.6 ±1.2	3.5 ±1.1	3.6 ±1.8	4.7 ±0.7	3.8 ±1.4	3.7 ±1.1	2.1 ±1.3
P-vaue			0.8882	0.4599	0.0856	0.1553	0.7888	0.9508
Educational Level								
Nil/Primary	71(11.8)	3.5 ±1.3	3.3 ±1.2	3.5 ±1.4	4.3 ±1.1	3.7 ±1.4	3.5 ±1.3	2.4 ±1.5
Secondary	102(17.0)	3.5 ±1.2	3.4 ±1.1	3.5 ±1.7	4.6 ±0.8	3.9 ±1.1	3.3 ±1.1	2.4 ±1.3
Post-Secondary	427(71.2)	3.5 ±1.2	3.5 ±1.1	3.4 ±1.3	4.5 ±0.9	3.8 ±1.3	3.7 ±1.2	2.1 ±1.3
P-value			0.3144	0.7264	0.0997	0.5934	0.0075	0.0433
Income(~~₦~~)								
10,000	98(16.3)	3.5 ±1.2	3.4 ±1.1	3.4 ±1.3	4.4 ±1.0	3.8 ±1.3	3.4 ±1.3	2.5 ±1.3
10,000-40,000	124(20.7)	3.5 ±1.2	3.4 ±1.1	3.4 ±1.3	4.6 ±0.9	3.9 ±1.3	3.6 ±1.1	1.9 ±1.2
40,000-70,000	77(12.8)	3.6 ±1.2	3.5 ±1.1	3.5 ±1.3	4.7 ±0.7	3.9 ±1.3	3.7 ±1.1	2.3 ±1.5
70,000-100,000	56(9.3)	3.4 ±1.3	3.5 ±1.3	3.3 ±1.3	4.4 ±1.1	3.7 ±1.4	3.7 ±1.3	1.9 ±1.2
>100,000	42(6.9)	3.6 ±1.2	3.5 ±1.2	3.6 ±1.3	4.7 ±0.7	3.9 ±1.2	3.9 ±1.2	2.0 ±1.4
P-value			0.9446	0.8056	0.0980	0.8714	0.1810	0.0050
Number of Children								
0	180(30)	3.4 ±1.2	3.4 ±1.1	3.3 ±1.3	4.5 ±0.9	3.9 ±1.2	3.6 ±1.2	2.0 ±1.2
1	158(26.3)	3.4 ±1.3	3.4 ±1.1	3.3 ±1.6	4.5 ±1.0	3.7 ±1.4	3.6 ±1.2	2.1 ±1.3
2	140(23.3)	3.5 ±1.2	3.4 ±1.2	3.6 ±1.3	4.5 ±1.0	4.0 ±1.2	3.6 ±1.2	2.1 ±1.3
3	60(10)	3.6 ±1.2	3.6 ±1.2	3.6 ±1.2	4.6 ±0.7	3.7 ±1.3	3.7 ±1.2	2.4 ±1.4
≥ 4	62(10.3)	3.6 ±1.3	3.4 ±1.3	3.5 ±1.2	4.4 ±1.0	3.6 ±1.5	3.8 ±1.2	2.7 ±1.6
P-value			0.8056	0.1927	0.8497	0.1364	0.7821	0.0037
NHIS								
Yes	449(74.8)	3.5 ±1.3	3.4 ±1.2	3.4 ±1.4	4.5 ±1.0	3.8 ±1.3	3.6 ±1.3	2.2 ±1.4
No	151(25.2)	3.5 ±1.2	3.5 ±1.2	3.4 ±1.4	4.5 ±0.9	3.8 ±1.3	3.6 ±1.2	2.1 ±1.2
P-value			0.3761	0.9999	0.9999	0.9999	0.9999	0.4322

women who desire more children are less likely to use birth control methods before the attainment of the desired family size [21,22]. The scores for sides effects, socioeconomic barriers, and many other items were greater than the cut-off point of 3.0 thus indicating at least a favourable perception towards contraception. The implication of this finding is that these women may not consider these factors a strong enough reason for their lack of contraception uptake. This appears to be supported by theirhigh perception score in the 'advantages of contraception' component which possibly outweighed any unfavourable impression caused by the side effects of family planning methods. Therefore, a more probable explanation can be derived from the two items that scored <3.0. The findings show that these pregnant women do not accept that contraception always works and have a preference for natural methods of birth control. These two factors may be the main reasons for the disconnect between the slightly positive perception and poor contraception uptake. To address this anomaly, communication materials,counseling activities and other intervention strategiesand policies [23] should be

further evaluated and restructured to clearly disseminate information on efficacy and differences between orthodox and natural methods of birth control.

Conclusion

There is alow uptake of contraceptive drugs and devices despite an apparent slightly favourable perception towards their use. The main reasons may be due to the perception that contraception doesn't always work and secondly there appears to be an inherent preference for natural methods of birth control. Modification of intervention strategies may, therefore, be required to address issues of efficacy involving both natural and non-natural methods of family planning.

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