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Full Length Research Paper

Assessment of the unmet needs of contraception among female undergraduate students in southern Nigeria

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The proportion of women who have an unmet need for modern contraception is highest (24%) in Sub-Saharan Africa, which is double the world average of 12% in 2015. This unmet need leads to unintended pregnancies, unsafe abortions and limitation of women's ability to achieve educational, employment and economic goals. This study aims to assess the unmet needs of contraception and the reasons for contraceptive non-use among female undergraduate students in Benin City. A descriptive cross-sectional study was conducted on female undergraduate students in Benin City, Edo State from January to June, 2017. The respondents were selected using multistage sampling technique. Data was collected using pre-tested structured self- administered questionnaires and data analysis was by IBM SPSS version 21.0. The level of significance was set at $p < 0.05$. Results revealed that a total of 400 respondents with mean age (SD) of 21.3 (2.5) years participated in this study. One hundred and sixty-one (40.2%) respondents were sexually active and of these, 128 (79.5%) had ever used contraceptives. However, only 97 (76.4%) of those who had sexual exposure within the past 1 month were currently using contraceptives. The unmet need of contraception was 18.6%. Reasons for unmet need included partner's disapproval 24 (80.0%), fear of side effects 12 (40.0%) and religious beliefs 8 (20.0%). Thus, unmet need of contraception was high among the study group. Concerted efforts of relevant stakeholders will ensure universal access to sexual and reproductive health care services.

Key words: Benin City, contraception, undergraduate, unmet needs

INTRODUCTION

The concept of "unmet need for contraception" which refers to the proportion of women who do not want to become pregnant but are not using contraception has been used in the international population field since the1960s (PRB, 2016). It has influenced the development of family planning programs for several decades, and

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several years ago, unmet need was added as an indicator to Millennium Development Goal (MDG) 5, improving maternal health (PRB, 2016). Family planning is also an aspect of the targets around universal access to sexual and reproductive health found in the Sustainable Development Goals (SDG 3.7 and 5.6) (Dockalova et al., 2016).

Worldwide in 2015, 12% of married or in-union women were estimated to have had an unmet need of not using an effective family planning method (UNPFA, 2016). The level was much higher (22%) in the least developed countries. Many of the latter countries are in sub-Saharan Africa, which is also the region where unmet need was highest (24%), which doubles the world average in 2015 (UNPFA, 2016). In developing countries, about half of sexually active women of reproductive age, or 818 million women want to avoid pregnancy, but 17% (140 million) are not using any method of family planning, while 9% (75 million) are using less-effective traditional methods (Darroch et al., 2011). According to the Nigeria Demographic Health Survey done in 2013, the overall unmet need for contraception in Nigeria is 16% (NPopC and ICF Marco, 2014).

The reproductive health status of women and girls in West Africa is extremely poor compared with other regions and is further undermined by unintended pregnancies resulting mostly from unmet need for contraception, which often result in deaths and injuries from abortions provided in unsafe conditions. Unintended fertility fuels a rate of population growth that outpaces the region's efforts to meet the social needs of its citizen and achieve national development goals (USAID, 2005). Unmet need for contraception could also lead to limitation of women's ability to achieve educational, employment and economic goals (Oluwasanmi, 2010).

A country/region may have unmet needs for a variety of reasons. In Sub-Saharan Africa, the leading reasons are concerns about adverse health effects/side effects and opposition to use by the woman or her partner (Darroch et al., 2011). In Nigeria, the reasons given by a greater proportion of women included being not disposed to using contraception, partner opposition, lack of knowledge, a fear of side effects and religious prohibition (NPopC and ICF Marco, 2013). The Nigeria Family Planning Blueprint (Scale Up Plan), was drawn to meet these unmet needs in Nigeria and seeks to increase women's use of FP services and contributes to the reduction of maternal mortality by 75% and infant mortality by 66% across Nigeria by 2018 (FP2020, 2012). Meeting the current need for modern contraception would reduce pregnancy-related deaths by 79,000 in the developing world and most of this reduction- a drop of 48,000 maternal deaths- would take place in Sub-Saharan Africa.

The environment in higher institutions of learning, which is where this study was carried out, is characterized by high levels of personal freedom and social interaction. This social interaction often translates to sexual interaction. Permissive sexual lifestyle in higher educational institution in Nigeria and a number of other African countries have been documented as featuring a high level of risky sexual behaviors including unprotected casual sex (Aigbiremolen et al., 2014). The unmet need for contraception among female undergraduate students in Benin City was therefore assessed with a view to providing information to policy makers and planners that will be used to improve contraceptive uptake among these students.

MATERIALS AND METHODS

The study utilized a descriptive cross-sectional study design. The study population comprised female undergraduate students of the University of Benin, Benin City, Edo State from January to June, 2017. A minimum sample size of 377 using the formula for single proportion was calculated (Suresh and Chandrashekara, 2012) using a prevalence rate of contraceptive use in a study conducted among female undergraduate students in Edo State (Oluwasanmi, 2010). Multi-stage sampling technique comprising three stages was used to select respondents. In stage one, the list of the 14 faculties in the University of Benin was obtained and seven were selected using simple random sampling technique by balloting. From each selected faculty, simple random sampling technique by balloting was used to select one department from the list of departments by balloting in stage two. In the third stage, stratified random sampling technique was used to select respondents from all the levels in the selected departments. The sampling fraction was calculated by dividing the calculated sample size by the total population of undergraduates in the selected departments. The sampling fraction was then used to multiply the total number of students in each level in order to obtain the number of students from each level that were to be recruited in this study. Using simple random sampling by computer generated numbers, the required number of respondents from each level was selected.

Data was collected using a structured self-administered questionnaire comprising both open and closed ended questions and consisting of 3 sections. Section A sought information on the socio-demographic characteristics of the respondents, Section B sought information on sexual and contraceptive history, while Section C sought information on factors affecting contraceptive non-use among respondents. The questionnaires were pre-tested in another tertiary institution, College of Education, Ekiadolor, Edo State. Pre-testing was done to aid standardization and validation of the questions and objectives of this study. Approval for this study was given by the Department of Community Health, School of Medicine, University of Benin, Benin City and the University of Benin Ethics Committee. Permission was obtained from the Vice Chancellor of the University of Benin and the Heads of selected departments before the study was carried out. Informed consent was obtained verbally from the respondents and they were assured of voluntary participation, confidentiality of their responses and the opportunity to withdraw at any time without prejudice.

The questionnaires were screened for completeness by the researcher after which they were coded, entered into the IBM SPSS version 21.0 software and analysed. Unmet needs of contraception was calculated by dividing (the number of women of reproductive age (15 to 49 years) who are married or in union with an unmet need for family planning + number of single women who had sexual intercourse without contraceptives) by (total number of women of

Table 1. Socio-demographic characteristics of respondents.

Variable	Frequency (n =400)	Percent (%)
AGE group (years)		
<18	19	4.7
18-20	142	35.5
21-23	163	40.7
24-26	63	15.8
>26	13	3.3
Religion		
Christian	384	96
Islam	16	4
Marital status		
Single	389	97.2
Married	6	1.5
Cohabiting	5	1.3
Department		
Pharmacy	83	20.8
Medicine	65	16.2
Plant Biology and Biotechnology	64	16
Banking and Finance	58	14.5
Soil Science	54	13.5
Nursing	53	13.3
Production Engineering	23	5.7
Level		
100	99	24.8
200	89	22.3
300	71	17.7
400	92	23
500	34	8.5
600	15	3.7
Place of residence		
On campus	209	52.3
Off campus	191	47.7

Mean age ± SD (years): 21.3 ± 2.5.

reproductive age (15 to 49) who are married or in a union + total number of single women who are sexually active) x 100 (FP2020, 2012). The statistical measure for the analysis was the adjusted odds ratio and 95% confidence interval. The level of significance was set at $p < 0.05$ for all statistical associations. Frequency tables were used to present the results.

RESULTS

A total of 400 respondents participated in this study. The mean age of respondents was 21.3 ± 2.5, with a higher proportion 163 (40.6%) being between the age group of 21-23 years. Majority of the respondents 384 (96.0%) and 389 (97.2%) were Christians and Single respectively. A greater proportion of respondents 83 (20.8%) belonged to the Pharmacy Department (Table 1).

One hundred and sixty-one (40.2%) of the respondents were sexually active; of these, 127 (78.9%) had last sexual exposure ≤ 1 month ago. Over three-quarters of those who had sexual exposure ≤ 1 month ago 97 (76.4%) used contraceptives. Condom was the most popular form of contraceptive used by 84 (86.6%) of the

Table 2. Sexual and contraceptive history of respondents.

Variable	Frequency (N = 400)	Percent (%)
Age group (years)		
<18	19	4.7
18-20	142	35.5
21-23	163	40.7
24-26	63	15.8
>26	13	3.3
Religion		
Christian	384	96
Islam	16	4
Marital status		
Single	389	97.2
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100	99	24.8
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300	71	17.7
400	92	23
500	34	8.5
600	15	3.7
Place of residence		
On campus	209	52.3
Off campus	191	47.7

*Multiple response bbillings method, birth control vaccines, basal body temperature.

respondents. A higher proportion of the respondents 61 (62.9%) got the contraceptives from their partners (Table 2). Unmet need of contraception was 18.6%. Over three-quarters of the respondents who did not use contraceptives in the past month 24 (80.0%) cited their partner's disapproval as the reason. Twelve (40.0%) and 8 (26.7%) cited fear of side effects and sexual promiscuity respectively as reasons. Four (13.3%) and 6 (6.7%) of the respondents stated personal dislike and cost of contraceptives respectively as reasons for not using contraceptives in the past 1 month (Table 3).

Older respondents were more likely to not use contraceptives in the last 1 month in both the unadjusted (OR: 1.136, CI: 0.962 to 1.340) and adjusted (OR: 1.056, CI: 0.861 to 1.296) analyses. Christian respondents were more likely to not use contraceptives in the last 1 month compared to the Muslim respondents in both the unadjusted (OR: 1.247, CI: 0.134 to 11.607) and adjusted (OR: 1.671, CI: 0.097 to 28.945). Respondents who had never married were less likely to not use contraceptives

Table 3. Reasons for contraceptive non-use in the last 1 month among respondents.

Variable*	Frequency (n = 30)	Percent (%)
Partner disapproval	24	80
Fear of side effects	12	40
Encourages sexual promiscuity	8	26.7
Reduces sexual pleasure	8	26.7
It can lead to infertility	7	23.3
Cultural beliefs	6	20
Religious beliefs	6	20
Personal dislike	4	13.3
Cost of contraceptives	2	6.7
Not easily available	1	3.3

Multiple response.

Table 4. Unadjsuted and adjusted predictors of non-use of contraceptves in the last 1 month.

Predictors	Unadjusted OR (95% CI)	p-value	Adjusted OR (95% CI)	p-value
Age (years)	1.136 (0.962 – 1.340)	0.132	1.056 (0.861 – 1.296)	0.602
Religion				
Christianity	1.247 (0.134 – 11.607)	0.846	1.671 (0.097 – 28.945)	0.724
Islam*	1		1	
Marital status				
Never married	0.638 (0.056 – 7.290)	0.718	0.708 (0.035 – 14.309)	0.822
Ever Married*	1		1	
On campus	1.431 (0.634 – 3.231)	0.389	1.715 (0.713 – 4.127)	0.228
Off campus*	1		1	
Level				
≤ 300	0.346 (0.150 – 0.798)	0.013	0.360 (0.129 – 1.009)	0.052
>300*	1		1	

in the past month compared to those who had ever gotten married in the unadjusted (OR: 0.638, CI: 0.056 to 7.290) and adjusted analyses (OR: 0.708, CI: 0.035 to 14.309). The level of respondents was a significant predictor of non-use of contraceptives in the past month in the unadjusted analyses, as respondents who were in ≤ 300 level were less likely not to use contraceptives in the past month compared to those who were in >300 level (p = 0.013) (Table 4).

DISCUSSION

Four in ten respondents were sexually active. This finding is similar to national studies as well as studies conducted in Africa, which show a high proportion of sexually active young persons (NARHS, 2007; NPopC and ICF Marco, 2014) Maria and Roinahn, 2015; Magreat et al., 2014). The outcomes related to sexual activity are often complex and not just health-related. In addition to exposing young persons to increased risks of STI/HIV infection, unintended pregnancy, and unsafe abortion, sexual activity also affects the social and emotional wellbeing of the individual (Vasilenko et al., 2012).

Results also show that frequency of sexual activity was high in the studied population as over three-quarters of the respondents had had sex less than a month prior to the study. Of those who had ever had sexual intercourse, majority had used contraceptives. This is in tandem with findings from a study carried out in North-East Nigeria

and Uganda in 2014 and 2016 respectively (PRB, 2016; Isa et al., 2016). Most of the sexually active respondents in this study were single and furthering their education at the time of the study; hence they were not ready to have children which they all opined so as to enable them concentrate, thus likely accounting for the finding in our study. This may imply that more individuals are making safer and more responsible sexual choices and is a step forward towards the achievement of SDGs 3 and 5. In the time frame of the SDGs, there is thus the opportunity to achieve a grand convergence between the developed and developing world, ending preventable child and maternal deaths and achieving relative parity in meeting family planning needs of persons who want to space or limit childbearing.

Condom was the most common type of contraceptives used by the respondents. This is similar to findings from studies carried out in South Western Nigeria, Southern Nigeria and Uganda in 2012, 2015 and 2016 respectively (Henry et al., 2016; Ogboghodo et al., 2017; Ajayi et al., 2016). Condoms are cheap, easily accessible and much advertised on media, which may be a reason for this finding. Condoms have been stated to have a dual role of protecting from sexually transmitted illnesses as well as preventing unwanted pregnancy; so this gives it an edge over other contraceptives and as well means that fewer people contract STIs. It is protective and preventive in the long run. Over two-fifths of respondents who used contraceptives in the past month got it from their partners. This may also be a reason why condom was the most used method of contraception in this study; however, this is a disturbing finding as the implication of this could be that more females are shying away from taking responsibility for contraception, and our cultural inclination where women take the back seat in decision making may contribute to this. Empowering women to take responsibility for contraception thereby choosing the number, timing and spacing of pregnancies is not only a matter of human rights but touches on many issues vital to sustainable development including health, education and women's status in the society.

The unmet need for contraception in this study was high (18.6%). This finding is in congruence with the results of NDHS (2013) which gave an overall unmet need of contraception of 16% NPopC and ICF Marco, 2014). A much higher value of unmet need was however observed in studies conducted in Rivers State, Nigeria (68%) and Tanzania (86%) in 2012 and 2014 respectively (Kagashe et al., 2014; Imadelo et al., 2012). Unmet need for family planning points to the gap between women's reproductive desire to avoid pregnancy and contraceptive behaviour. The sequela of unmet need for contraceptives ranges from unwanted pregnancies to maternal morbidity and mortality. This drives home the point that a lot more still needs to be done by relevant stakeholders with regards to educating females about proper and adequate uptake of contraceptives as this may be the only way to avoid unplanned pregnancies and unfortunate sequelae that could result thereof. Accessibility seems far from being a major problem to having unmet need for contraceptives especially in this highly urbanized setting; thus, corrective counseling and sensitization is a major way out in surmounting the different reasons women put forth for non-use of contraception.

Interestingly, respondents who were in their third year in the higher institution and below were more likely to use contraceptives and this was a significant finding. The results from a study carried out in Zanzibar in 2014 gave a contrast finding where female undergraduate students who started sexual activity at secondary school level were less likely to be associated with current use of contraceptives compared to those who started sexual activity in University (Sweya et al., 2016). This may be due to the fact that they are younger and less experienced sexually; hence they may shy away from risky sexual behaviours of which non-use of contraception is one, because of the fear of unwanted pregnancies. To also support this finding, with increasing age of respondents, unmet need of contraception was also found to increase in this study. This same pattern was also noticed in the NDHS (2013) where women aged 15 – 19 years had the lowest levels of unmet need of contraception (NPopC and ICF Marco, 2014).Older sexually active females are more likely to feel more experienced and hence may become more daring and more careless with regards to their sexual behavior.

The top two reasons for contraceptive non-use which in turn leads to unmet needs in this study were partner disapproval (80.0%) and fear of side effects (40.0%). This was in tandem with findings from a 51 multi country survey conducted between 2006 and 2013. Findings from Nigeria revealed fear of side effects (26.6%), personal disapproval (21.2%) and spousal disapproval (12.2%) to be the reasons for non-use mentioned by a higher proportion of women (Sedgh and Hussain, 2014). The fear of side effects cited by the respondents could be due to personal experiences, hearsay from other friends and family or perceived. However, more females need to be enlightened to know that there are other methods of contraception available if the one they had used before resulted in side effects. Partner disapproval may imply that campaigns targeted at improving uptake of contraception among women should not only be directed towards the females, but their partners as well, because an enlightened spouse or partner is more likely to support contraception. Policy and programmes intended to reduce unmet need in low- and middle-income countries, particularly efforts towards goals set for FP2020 and the Sustainable Development Goals (SDGs), should be informed by clear understanding of the causes of unmet need for family planning to better reflect the population needs and to more effectively target planning and

investments.

Conclusion

A high rate of unmet need for contraceptives was found in the course of the research and reasons such as partner's disapproval and fear of side effects were the predominant reasons for non-contraceptives use. Intensified efforts should therefore be made by health care providers to educate the public on the benefits of contraceptives and governing agencies in charge of contraceptives availability should also intensify availability and easy access of contraceptives to every individual. Individuals seeking contraceptives should be adequately counseled as well on the various types of contraceptives, their benefits and side effects so that they can make informed choice of contraceptives convenient for them. The females should also be empowered to know they have a right on their contraceptives choice and make decision to protect their reproductive health rights.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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