

Health Care Providers' Knowledge, Attitude, Competency and Provision of Emergency Contraception: a Comparative Study of Oyo and Kaduna State, Nigeria

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Abstract

Nigeria has a low contraceptive prevalence rate, a large number of women have unintended pregnancies, many of which are reported to be terminated through covert abortion usually perpetuated by quacks and frequently unsafe, despite the country's restrictive abortion law, thus contributing to the high maternal mortality rate in Nigeria, particularly in the rural areas. Emergency Contraception is proven to be safe and effective in preventing unplanned pregnancy. Health care providers' knowledge, attitude, competency and provision of Emergency contraception as part of Family Planning method mix are important determinants of improved access as well as quality and outcome of care and service. The study determined and compared Knowledge, Competency, Attitude and Provision of EC among health care providers in Oyo State, South Nigeria and Kaduna State, North Nigeria. The study was descriptive and cross sectional. Purposive sampling technique was used. A self-administered questionnaire was used to obtain relevant information from 165 healthcare workers comprising doctors, nurse/midwives and CHEWs. SPSS Version 20 was used for data analysis. Respondents from both states are majorly nurses/midwives and Community Health Extension Workers. Findings showed poor knowledge in both states with mean scores of (8.5±4.0) Oyo and (8.3±3.6) Kaduna, out of 20 points knowledge and competency score. (Only 6%) and (4%) had good knowledge and competency in Emergency Contraception in Oyo and Kaduna state respectively. Only (9.4%) Kaduna and (6.3%) Oyo identified Copper T as the maximum effective EC method. Findings revealed positive disposition towards Emergency Contraception in both states. Majority of respondents affirmed that EC is beneficial (95%) Oyo, (91%) Kaduna and would encourage others to use if they need it (89%) Oyo and (88%) Kaduna. Majority from both states, (85%) Oyo and (89%) Kaduna, agreed that ECP is important in Post Rape care as well as an important component of Reproductive Health. (69%) Oyo and (51%) Kaduna declared that they have been recommending Emergency Contraceptives while only 20% and 17% reported that there are no barriers in recommending and prescribing Emergency contraceptives from Oyo and Kaduna respectively. Only (41.3%) Oyo and (30%) Kaduna reported that they have adequate knowledge in Emergency contraceptives. Only (56%) and (48%) in Oyo and Kaduna respectively felt that EC would not promote sexual promiscuity while about (45%) Kaduna said they have ethical and

religious concern to EC provision as against (15%) in Oyo state. There is urgent need for training and re-training programmes on Emergency Contraception among different cadres of health professionals in Nigeria to enable them serve clients who need it better. Educational efforts to address myths and misconceptions about EC are also recommended.

Keywords: Emergency Contraception, Health providers, Knowledge & Competency, Attitude, Provision, Nigeria

Introduction/Background

Emergency contraception (EC), also called post-coital contraception, refers to the type of contraceptive given as an emergency procedure after unprotected sexual contact to prevent pregnancy. Emergency Contraception is not administered for regular contraception but to prevent pregnancy after unprotected sex or contraceptive failure. It has also been defined as any female method of contraception administered after sexual intercourse and has its effect prior to the stage of implantation of the blastocyst ^(1, 2). Demographic and Health Surveys conducted in sub-Saharan Africa reported rates of EC use as highest in Kenya and Nigeria, (1.7%) and (2.8%) respectively. Despite Nigeria's better use rate, knowledge of EC has been reported to remain largely unchanged in recent years, at 15% of all women compared with 40% of all women in Kenya ⁽³⁾. Access to Emergency Contraceptives in Nigeria has also been stated as less closely studied with few available studies reporting users as being very young adolescents who engage in frequent risky sexual behaviour. ^(3, 4, 5)

1.25 million Induced abortions were reported in Nigeria in 2012, a rate equivalent to 33 abortions per 1,000 women aged 15-49, as well as an estimated unintended pregnancy rate of 59 per 1,000 women aged 15-49, out of which 56% was resolved by abortion. About 212,000 women were also reported treated for complications of unsafe abortion, a treatment rate of 5.6% with 285,000 experiencing grave health consequences as a result of poor treatment ^(6, 7). Owing to Nigeria's low contraceptive prevalence rate, a large number of women have unintended pregnancies, many of which are reported to be terminated through covert abortion despite the country's restrictive abortion law. The high rate of women seeking repeat abortions and induced abortions from unwanted pregnancy contribute significantly to high maternal mortality rate of 576/100,000 in year 2013 and 814 deaths per 100,000 live births in 2015 estimate, with a large proportion of these deaths among teenagers ^(4, 6, 9, 31). One of the major factors responsible for unwanted pregnancies and unsafe abortion is lack of knowledge of the various methods of contraceptives available, including Emergency Contraceptives ^(4, 8). Worst still is the poor knowledge of EC reported among health professionals in Nigeria ^(1, 8, 10, 11, 12).

The Boko Haram insurgency in North Eastern Nigeria has displaced about 2.2 million persons, a significant number of which are women and girls. ^(13, 14) This excludes persons displaced by various ethnic, communal and religious uprising elsewhere in the country. A situational assessment among internally displaced persons in Nigeria reported high rate of sexual assault and abuse among displaced women and girls as well as high rate of unprotected casual sex and

unplanned sexual activities due to exchange of sexual services for food and security, with attendant results, much more sexually transmitted infections, coerced sex, unsafe abortions and unwanted pregnancies. ^(15, 16, 17) EC proves to be safe and effective in averting unintended and unwanted pregnancy after an unprotected sexual exposure associated with wrong, mistaken or non-contraceptive use, contraceptive failure, or forced sex. It is also efficacious in reducing pregnancy termination and possibly reduction in mortality from unsafe abortion ^(4, 19). Studies in Nigeria have however reported knowledge and use of EC as disappointingly low among health care professionals with very few service providers providing emergency contraception as part of their routine services ^(10, 11, 12, 18). There is therefore an urgent need for more skilled, competent and motivated health care providers to administer EC in Nigeria. It is highly imperative to ensure that health professionals especially RH/FP providers are adequately and correctly skilled about emergency contraception ^(11, 17). This is essential for quality service delivery and to increase access of women to EC as an option to prevent unplanned pregnancies. This study was undertaken to ascertain the current knowledge of RH/FP providers on EC and compare the level of knowledge, attitude, competency in the provision of emergency contraception among health professionals in Southern and Northern Nigeria, with focus on Oyo and Kaduna States. Findings from the study are anticipated to form the basis of directing and guiding National EC training programs for RH/FP providers which will result in improved capacity to deliver effective services. This remains one of the most effective ways to increase access of women to the use of Emergency Contraception in Nigeria.

PARTICIPANTS AND METHOD

Oyo and Kaduna states were selected for the study. The two states share many similar characteristics in population structure and development and they both best represent the Southern and Northern part of Nigeria respectively. Oyo state is located in the South-West geopolitical zone of Nigeria, and was one of the three States carved out of the former Western State of Nigeria in 1976. Oyo State covers approximately an area of 28,454 square kilometres with an estimated population of 5,580,894 ⁽²⁰⁾. The State consists of thirty-three (33) Local Governments and predominantly occupied by Yoruba people. Kaduna state on the other hand is located in the North- West geopolitical zone of Nigeria and was created state in 1967 out of the former Northern region. Kaduna State covers 46,053 square kilometres with an estimated population of 6,066,562 ⁽²⁰⁾. Muslims compose roughly 60% of the population and Christians constitute roughly 40% of the population. Kaduna State consists of twenty-three (23) Local Government Areas and predominantly occupied by Hausa and Fulani people.

The study was descriptive and cross-sectional, and was conducted using an open and close ended self-administered questionnaire. Health professionals of different cadres were randomly selected across the two states, as part of an ongoing project being implemented to pre-test National training manual on Emergency Contraceptive in Nigeria. Purposive sampling technique was used to recruit a total of 165 respondents for the study. 80 participants from Oyo state and 85 from

Kaduna state were selected across all the Local Government Areas in each state. The questionnaire enquired about respondent's socio-demographic characteristics, knowledge and competency in emergency contraception (EC) service, including, the various types and methods, who can use, most effective method, mode of action, dosage, side effects, and indications of the use of EC, timing of use, etc., as well as questions on EC service provision and their general attitude to EC.

The statistical software SPSS Version 20 was used for data analysis and presented in tables, graphs, proportions and percentages. Knowledge and competence score in Emergency contraception was calculated for each respondent using a 20-point score assessing knowledge on major types of EC, Key working mode of Levonorgestrel ECP, EC Side effects, effectiveness, appropriateness , time-frame to use, correct dosage of different methods, maximum effective method, efficacy, and prescription, among others. Each correct answer had a score of 1, while incorrect answer or undecided response had a score of 0. The scores were then summed up to give a composite knowledge and competence score for each respondent. The higher the score, the higher the knowledge and competence, and vice versa. Using the 75th percentile grading, a score between 15 and 20 was considered good, a score between 10 and 14 was considered fair while a score between 0 and 9 was considered poor.

FINDINGS

Table 1: Socio-demographic Characteristics of Respondents

S/N	Variables	Frequency (%) n=80 Oyo State	Frequency (%) n=85 Kaduna State
1	Age Group		
	20-30	(13.8%)	(12.9%)
	31-40	(7.5%)	(32.9%)
	41-50	(31.3%)	(28.2%)
	50 & above	(35.0%)	(17.6%)
	No Response	(12.5%)	(8.4%)
	Total	(100%)	(100%)
2	Gender		

	Male	(5.0%)	(7.4%)
	Female	(88.8%)	(84.7%)
	NR	(6.3%)	(7.9%)
	Total	(100%)	(100%)
3	Educational background		
	B Sc.	(36.3%)	(8.1%)
	MBBS	(3.8%)	(1.2%)
	Nursing School	(13.8%)	(22.4%)
	Post Graduate	(12.5%)	(16.5%)
	Diploma	(26.3%)	(49.4%)
	NR	(7.5%)	(2.4%)
	Total	(100%)	(100%)
4	Household size		
	Polygamy	(15.0%)	(38.85%)
	Monogamy	(62.5%)	(45.9%)
	NR	(22.5%)	(15.3%)
	Total	(100%)	(100%)
5	Marital Status		
	Married	(81.3%)	(62.4%)
	Single	(8.8%)	(10.6%)
	Widow	(3.8%)	(10.6%)
	No Response	(6.3%)	(16.4%)
	Total	(100%)	(100%)
6	Current Position		

Intern	(12.5%)	(3.5%)
CHEW	(23.8%)	(43.5%)
Medical Officers	(5.0%)	(0.0%)
FP Coordinator	(41.3%)	(42.4%)
Nurse/midwife	(6.3%)	(4.7%)
No Response	(11.3%)	(0.0%)
FP Provider	(0.0%)	(4.7%)
Consultant	(0.0%)	(1.2%)
Total	80(100%)	85(100%)

All distributed questionnaires were retrieved and analysed. Out of the 196 respondents, 158 (80.6%) were aware of emergency contraception (Table 1). In the respective professional groups, pharmacist had the highest awareness rate of 97%, while the awareness rate was 69.8% among All distributed questionnaires were retrieved and analysed. Out of the 196 respondents, 158 (80.6%) were aware of emergency contraception (Table 1). In the respective professional groups, pharmacist had the highest awareness rate of 97%, while the awareness rate was 69.8% among All distributed questionnaires were retrieved and analysed. Out of the 196 respondents, 158 (80.6%) were aware of emergency contraception (Table 1). In the respective professional groups, pharmacist had the highest awareness rate of 97%, while the awareness rate was 69.8% among ll distributed questionnaires were retrieved and analysed. Out of the 196 respondents, 158 (80.6%) were aware of emergency contraception (Table 1). In the respective professional groups, pharmacist had the highest awareness rate of 97%, while the awareness rate was 69.8% among nurses/midwives ll distributed questionnaires were retrieved and analysed. Out of the 196 respondents, 158 (80.6%) were aware of emergency contraception (Table 1). In the respective professional groups, pharmacist had the highest awareness rate of 97%, while the awareness rate was 69.8% among nurses/midwives

All distributed questionnaires were retrieved and analysed. 165 respondents, comprising 85 from Kaduna state and 80 from Oyo state participated in the study. Respondents are majorly female (88.8%), Oyo state and (84.7%), Kaduna state. Respondents from Oyo state are mostly from age group 50 and above (35%) and 41-50 (31.3%), while most respondents from Kaduna are from age group 31-40 (32.9%) and 41-50 (28.2%). Majority of the respondents from Oyo state have

B.Sc. degree (36.3%), Diploma (26.3%) and Nursing School (13.8%) with MBBS (3.8%), and constitute mainly of LGA FP coordinators who are nurses/midwives (41.3%) and CHEWs (23.8%) while respondents from Kaduna state also constitute mainly of CHEWs (43.5%) and LGA FP coordinators (42.4%) with educational background in Diploma (49.4%), Nursing School (22.4%) with MBBS (1.2%). Most respondents from both states are married (81.3%), Oyo state with (62.5%) from monogamy household while (62.4%) are married with just (45.9%) from monogamy household in Kaduna state. See Table 1 for details of socio-demographic characteristics of respondents.

Majority of the respondents agreed that Emergency Contraceptive is beneficial (95%) and (91%) for Oyo and Kaduna respectively. Majority also reported that they would use EC if they need it (92.5%) Oyo and (91%) Kaduna and even encourage others to use EC if they need it (88.8% and 88.2%) for Oyo and Kaduna respectively. From Oyo state, (83.8%) supported prior hand distribution of EC to prevent unplanned pregnancy while (74%) supported from Kaduna State. A little over half (56.5%) only, reported that EC may not increase sexual promiscuity in Kaduna state while about (62.5%) from Oyo state reported same. Majority of the respondents (87.6% and 80%) in Oyo and Kaduna state respectively, believed that EC is efficacious to prevent unplanned pregnancies. Only half of respondents from both states reported that provision of EC would not discourage compliance with regular contraceptives, (55%) in Oyo and (49.4%) in Kaduna states.

About (57.5%) and (47%) of respondents from Oyo and Kaduna State reported that ECPs are needed because there is no method of contraception that are 100% effective. Majority of respondents from both states (85%) Oyo, and (89.4%) Kaduna affirmed that ECPs are important element in post-rape care as well as component of reproductive health. Only (66.3%) felt that EC should be distributed in Youth Friendly Centres in Oyo state while about (71.8%) in Kaduna State. (81.3%) and (72.9%) from Oyo and Kaduna respectively believed in the use of Mass Media informational campaigns and advertising to improve access to all sources of ECPs while (28%) of respondents in Oyo and (40%) of respondents in Kaduna State reported that providing EC in advance for women is not ideal as it will increase sexual promiscuity. Some respondents were silent on the question while some reported not sure. See Table 2 for details on attitude to Emergency Contraceptive use among respondents.

Table 2: Attitude to Emergency Contraceptive Use

S/N	Questions	Yes	No	Not Sure	No Res.
		Oyo Kaduna (%)	Oyo Kaduna (%)	Oyo Kaduna (%)	Oyo Kaduna

					(%)
1	Is EC beneficial?	(95%)	(2.5%)	(1.3%)	(1.3%)
		(91%)	(3.5%)	(3.5%)	(2.4%)
2	Will you use EC if you need it?	(92.5%)	(5.0%)	(0.0%)	(2.5%)
		(91%)	(3.5%)	(3.5%)	(2.4%)
3	Will you encourage others to use EC if they need it?	(88.8%)	(6.3%)	(3.8%)	(1.3%)
		(88.2%)	(5.9%)	(3.8%)	(2.4%)
4	Do you support prior hand distribution of EC to prevent unplanned pregnancy?	(83.8%)	(11.3%)	(3.8%)	(1.3%)
		(74.1%)	(16.5%)	(3.5%)	(5.9%)
5	Do you think EC may increase sexual promiscuity?	(26.3%)	(62.5%)	(10%)	(1.3%)
		(32.9%)	(56.5%)	(7.1%)	(3.5%)
6	Do you believe EC is efficacious to prevent unplanned pregnancies?	(87.6%)	(7.5%)	(3.8%)	(1.3%)
		(80.0%)	(10.6%)	(7.1%)	(2.4%)
7	Do you think providing EC would discourage compliance with regular contraceptives?	(37.5%)	(55%)	(5.0%)	(2.5%)
		(35.3%)	(49.4%)	(10.6%)	(4.7%)
8	ECPs are needed because as of now, there is no method of contraception that are 100% effective	(57.5%)	(36.3%)	(3.8%)	(2.5%)
		(47.0%)	(43.6%)	(4.7%)	(4.7%)

9	ECPs are important element in post-rape care as well as component of reproductive health	(85%) (89.4%)	(6.3%) (2.4)	(3.8%) (3.5%)	(5.0%) (4.7%)
10	Do you feel that EC should be distributed in Youth Friendly Centers?	(66.3%) (71.8%)	(23.8%) (22.4%)	(6.3%) (2.4%)	(3.8%) (3.5%)
11	I believe Mass Media informational campaigns and advertising should be used to improve access to all sources of ECPs	(81.3%) (72.9%)	(6.3%) (14.1%)	(8.8%) (9.4%)	(3.8%) (3.5%)
12	Providing EC in advance for women is not ideal as it will increase promiscuity	(27.8%) (40.0%)	(66.3%) (48.2%)	(3.8%) (7.1%)	(2.55) (4.7%)

About (68.8%) of respondents in Oyo state and just half (50.6%) from Kaduna state reported that they have recommended and prescribed Emergency contraceptives. (55%) and (53.8%) reported recommended Levonorgestrel and COC (Yuzpee) respectively and in Oyo state while just (40%) and (29.4%) recommended same methods in Kaduna State. Only (42%) of respondents in each of the state reported that they approve the prescribed EC. Only (20%) respondents in Oyo and (17.6%) in Kaduna reported that there are no barriers in recommending and prescribing EC. Only (43.8%) and (49.4%) of respondents in Oyo and Kaduna respectively, felt that EC would not discourage the use of regular contraceptives. On belief that EC will promote sexual promiscuity, 44.2% of respondents felt that EC would promote sexual promiscuity while 55.3% felt same in Kaduna state. This is considered high and could significantly negatively affect the use and uptake of EC. (40%) and (47%) of respondents in Oyo and Kaduna state respectively reported that they are worried about side effects of EC, while (33.8%) reported fear about outcome of EC use in Oyo state and (44.7%) reported same in Kaduna state. Only 15% reported having ethical and religious concerns on EC use in Oyo state while about (44.7%) reported same in Kaduna state. Only (41.3%) and (30.6%) of respondents in Oyo and Kaduna State reported having adequate knowledge of EC. Others reported not sure while others were silent on it. Details on EC Practice are presented in Table 3 below.

Table 3: Provision

S/N	Questions	Yes	No	Not Sure	NR
		Oyo Kaduna (%)	Oyo Kaduna (%)	Oyo Kaduna (%)	Oyo Kaduna (%)
1	Have you ever recommended Emergency Contraceptives?	(68.8%) (50.6%)	(25%) (43.3%)	(1.3%) (3.5%)	(5.0%) (2.4%)
2	Prescribed Levonorgestrel	(55.1%) (40%)	(13.8%) (36.5%)	(3.8%) (4.7%)	(27.5%) (18.8%)
3	Prescribed Combined oral pills (yuzpee)	(53.8%) (29.4%)	(15.0%) (40.6%)	(3.8%) (10.6%)	(27.5%) (20%)
4	Do you recommend the prescribed EC	(42.5%) (42.4%)	(16.3%) (17.6%)	(8.8%) (14.1%)	(32.5%) (25.9%)
5	Are there barriers in recommending/prescribing EC	(27.5%) (31.8%)	(20%) (17.6%)	(12.5%) (20.6%)	(40%) (30.6%)
6	I feel EC may discourage the use of regular	(31.3%) (33%)	(43.8%) (49.4%)	(6.3%) (7.1%)	(18.8%) (10.6%)

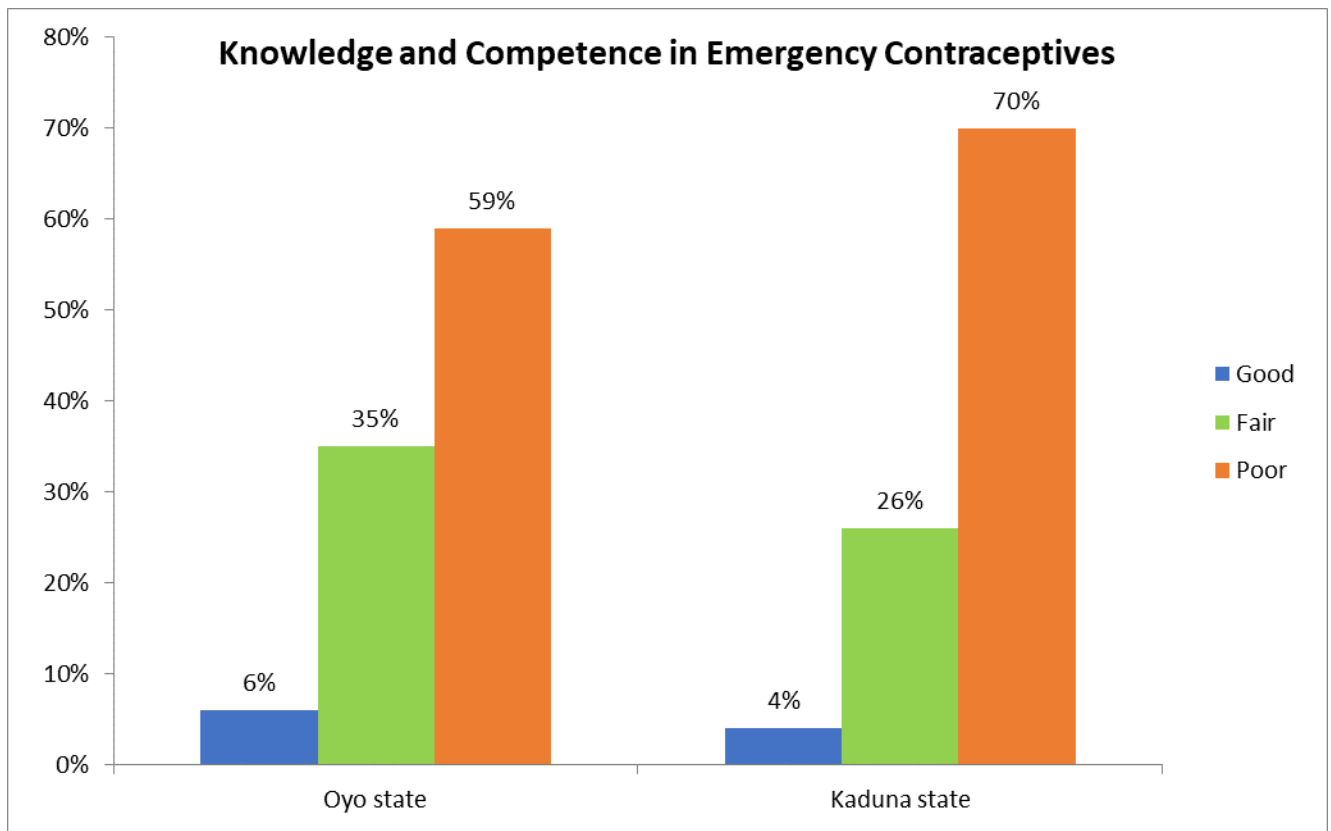
7	contraceptives	(21.3%) (35.3%)	(55.8%) (44.7%)	(7.5%) (8.2%)	(17.5%) (11.8%)
8	I feel EC may promote sexual promiscuity	(38.8%) (49.4%)	(41.3%) (30.6%)	(3.8%) (10.6%)	(16.3%) (9.4%)
9	I do not have adequate knowledge of EC	(40%) (44.7%)	(38.8%) (34.1%)	(7.5%) (12.9%)	(13.8%) (8.2%)
10	I am worried about side effects of EC	(33.8%) (44.7%)	(45.0%) (36.5%)	(7.5%) (11.8%)	(13.7%) (7.1%)
11	I fear about outcome of EC use	(15.0%) (44.7%)	(61.3%) (36.5%)	(7.5%) (9.4%)	(16.3%) (9.4%)
12	I have ethical and religious concerns	(12.5%) (34.1%)	(45.0 %) (29.4%)	(21.3%) (16.5%)	(21.3%) (20.0%)
	No reason does not want to disclose				

Fig 1 below shows level of knowledge of EC and competency in service provision among the respondents in the two states. Level of knowledge is poor in both states with only (6%) and (4%) of respondents in Oyo and Kaduna state respectively had good knowledge of EC and competent in EC service provision. The knowledge and competency mean scores for both Oyo and Kaduna state are 8.5 ± 4.0 and 8.0 ± 3.6 respectively, out of 20 points score on Knowledge of EC and service provision. Only (54.1%) in Kaduna State and (58.8%) reported that EC should be considered if a woman does not wish to conceive and has had Unprotected Sexual Intercourse

(UPSI). Most respondents (72.9%) in Kaduna state and (73.8%) in Oyo State agreed that EC is appropriate for use after unprotected intercourse (including rape and contraceptive failure).

Only half (50.6%) of respondents in Kaduna state and 62.5% Oyo state, stated that EC is not free from side effects. Only (34%) Kaduna State agreed that higher weight and BMI could reduce the effectiveness of oral EC while half of respondents (51.3%) in Oyo state agreed same. Majority (89.4%) Kaduna and (80%) Oyo agreed that EC does not protect against HIV and STIs. Only (9.4%) Kaduna and (6.3%) Oyo identified Copper T as the maximum effective EC method. About half (49.4%) Kaduna and (61.3%) Oyo opined that Doctor's prescription is not required to obtain EC. Only (23.8%) and (23.5%) of respondents in Oyo and Kaduna state respectively reported that EC is highly effective in preventing unwanted pregnancy from UPSI. Over half of respondents in both states (57.5%) in Oyo and (52.9%) did not give any response while others reported not sure.

Fig 1: KNOWLEDGE OF EMERGENCY CONTRACEPTIVES AND COMPETENCY IN SERVICE PROVISION



Discussion

Knowledge and Competency

Findings from this study reveals a positive disposition to Emergency Contraception but poor level of knowledge and competency among healthcare providers comprising doctors, nurses and CHEWs in Oyo and Kaduna State, Nigeria. This finding replicates the findings of ⁽¹⁰⁾ in a similar study in Lagos, and ⁽¹¹⁾ Ibadan, South Nigeria, and also in Borno, North Nigeria ⁽¹⁾, where high level of awareness of EC does not translate to knowledge such as, key mode of action of Emergency Contraceptives, time frame for effective use, correct prescription of emergency contraceptive methods, various methods that can be used, among others. Only (6%), Oyo state and (4%) Kaduna State, have good knowledge and competent in EC service provision while a considerable number of respondents from both states reported recommending and prescribing EC. High quality of care and service in Family Planning is a basic human right and is crucial to the survival and health of every woman ⁽²¹⁾. Several studies have shown positive relationship between high quality of care and increased use of contraceptives and family planning services. ⁽²²⁾

A similar study of EC among female undergraduates in Nigeria indicates poor knowledge with majority of them seeking information from healthcare providers who were noted not to be well informed about EC or not effectively communicating correct information to their clients ⁽²³⁾. A similar study by (4) in Ilorin, North central Nigeria, revealed incorrect timing of use of EC among users. Another similar study emphasized on need to educate on available different methods and timing of use ⁽²³⁾. Inadequate knowledge of EC and its service delivery among Health care workers will not only reduce the efficacy of EC in preventing pregnancy due to contraceptive failure, it will also lead to negative attitude and erroneous belief about EC among the general populace. Many studies indicate dearth of correct information on EC in Nigeria as a serious barrier toward its use and uptake ^(10, 23).

Attitude and Provision

Result of this study indicates a favourable attitude towards Emergency Contraception among the respondents from both states. This disagrees with a similar study where health workers showed unfavourable attitude to EC in South Nigeria ⁽²⁴⁾. About half (49.4%) Kaduna and (55%), Oyo, were of the opinion that providing EC would not discourage compliance with regular contraceptives. The opinion that EC would discourage compliance with regular contraceptives among health care providers may affect quality of EC service delivery and leads to deprivation of EC service to those who need it. A study on Repeated Pattern of EC use in Kenya and Nigeria ⁽²⁵⁾, reported that EC use does not affect compliance with regular contraceptives. It is also noteworthy that about (40%) Kaduna, North Nigeria as against (27%) in Ibadan, South Nigeria was of the opinion that providing EC in advance for women is not ideal as it will increase promiscuity. This finding is similar to report on EC misconceptions in Nigeria ^(24, 26), where EC was reported to increase promiscuity.

There have been incessant reports of drastic increase in cases of sexual abuses, exploitation, harassments, gender-based violence due to Boko Haram terrorism and insurgency in Northern Nigeria. Cases of rape, teenage pregnancy, forced and coerced sex with many subject themselves in exchange of food and protection. Making EC pills available in advance for this vulnerable population may possibly reduce unintended and unwanted pregnancies which could lead to unsafe abortion and high maternal mortality rate in Nigeria. Another similar study indicated a positive attitude and improved knowledge of EC with health education supported with advanced EC provision among tertiary institution students. ⁽²⁷⁾.

It is notable that a considerable number of respondents 68.8%, Oyo state, (50.6%) Kaduna State, have been recommending and prescribing EC without adequate knowledge of the method. Only (40.1%) and (30.6%) in Oyo and Kaduna state respectively reported having adequate knowledge of EC while only (6%) Oyo and (4%) Kaduna scored between 15 and above out of the 20 points knowledge and competency questions on EC. Several similar studies reported need to educate health workers on adequate information on EC. Only very few (20%) respondents in Oyo and (17.6%) in Kaduna reported that there are no barriers in recommending and prescribing EC. Some studies revealed wrong belief of assenting Emergency Contraception to be Abortion ^(28, 29). The stigmatization associated with abortion in Nigeria may limit health workers from prescribing and recommending EC to women who need it especially in society where these misconceptions prevail.

A considerable percentage (44.7%) of respondents in Kaduna as against (10%) in Oyo, reported having ethical and religious beliefs about Emergency contraception. This finding among health workers in the northern part is noteworthy, considering the prevailing insurgency activities of Boko Haram, subjecting vulnerable large number of women of reproductive age internally displaced to sexual assault and forced sex leading to unwanted pregnancy with attendant unsafe abortion. ^(15, 16, 17) Only a little over half (55.8%) Oyo and (44.7%) Kaduna, reported they do not feel EC may promote sexual promiscuity. A similar study in Ibadan, south Nigeria reported that health care workers perceived EC provision as promoting sexual promiscuity. ⁽²⁴⁾ Reservations due to myths and misconception about EC and inadequate knowledge of EC among health care providers may contribute to lack of confidence in service provision thereby discouraging clients who may need it. EC has been reported useful in preventing pregnancy after a UPSI. ⁽¹⁹⁾

Study Limitation

The poor knowledge and competency in EC revealed in the study may not be generalized among all health care providers' group as some group of health workers did not participate in the study. Health professionals including pharmacists, Medical Laboratory Scientist, Social workers, etc., did not participate in the study. Few medical doctors (5%), participated in the study. Similar study among Medical doctors, pharmacist, Patent Medicine Vendor etc., is suggested for further study. Whether EC provision would actually discourage compliance and uptake of regular contraceptives is also a subject for further research.

Conclusion and Recommendations

Findings from this research has shown positive attitude of health workers towards the intention to provide EC to women of reproductive age as a contraceptive method mix without bias. This is impressive and has potentials to promote the provision of EC by health workers. However, the impression that EC could increase promiscuity could also potent danger for continuous provision by health workers. It is therefore expedient that health workers are oriented and updated with correct and adequate information on all aspects of EC including its provision, as well as values and values clarifications, to correct myths, misconceptions. This will also include sensitization programs to address wrong socio-cultural and religious beliefs. Health workers especially nurse and CHEWs constitute the largest cadre of health professionals in Nigeria and are majorly found in Primary Health Care Centres. ⁽³⁰⁾ Hence, the need for training programs on EC among them, especially the CHEWs who constitute the largest cadre of health workers in Nigeria and work more in the community. It is also essential to update and incorporate training programs on Emergency contraception, as appropriate, in the curriculum of all cadres of health care providers in Nigeria, especially the Community Health Officers and Community Health Extension Workers who serves more in rural areas, and as part of effort to facilitate implementation of task shifting and sharing health policy in Nigeria. National Guidelines and Policy on EC including training manuals should be developed and reviewed as required and appropriate to different cadres of health workers in order to increase access and quality service delivery. Periodic refresher and update on the job training on EC to health workers who specialize in family planning services is also recommended. There should be increased communication and awareness on EC as it has been reported to present opportunities for counselling clients on long-term contraceptive needs. Effective training programs to improve providers' knowledge and competency in subsequent service provision should be intensified. Emergency Contraception is safe, beneficial and serves as a healthy choice for women who need to prevent unwanted and unintended pregnancy due to unprotected sexual intercourse or contraceptive failure especially the adolescents and young adults who are sexually active. It is therefore crucial for health care providers to be well equipped with adequate knowledge and proficiency required for effective and quality service delivery.

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