



**PERCEIVED RISK AND FACTORS ASSOCIATED WITH UTILIZATION OF
CONTRACEPTIVES AMONG POSTPARTUM WOMEN IN NSUKKA, ENUGU STATE**

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ABSTRACT

Use of contraceptive methods in Nigeria has remained low despite documented evidence of health benefits. Concerns about health risks and side effects of contraceptives, among other factors, may influence uptake of family planning. The objectives of the study were to evaluate the perceived risk and factors associated with utilization of contraceptives by postpartum women. This was a cross-sectional questionnaire-based study conducted among postpartum women at immunization centres in two health facilities. A three-section questionnaire, eliciting information on demographics, information related to the woman's fertility, and perceived risks of contraceptive methods to women's health was used. These were given to postpartum women visiting immunization centers at two health facilities in Nsukka. Data from the questionnaire were coded into Excel software, and analysed using SPSS. Descriptive statistics such as frequencies and means were calculated. Chi-square and t-test were conducted as appropriate. All statistical values were set at $p < 0.05$. Out of the 230 questionnaires given out, 210 were retrieved. Uptake of postpartum contraceptive was 30.4%. Contraceptive methods with the highest risk scoring were IUCD (2.27 ± 1.920), injectable contraceptives (2.23 ± 1.857), and emergency contraceptive pills (2.22 ± 1.886). Factors associated with use of contraceptives were religion ($p = 0.029$), occupation ($p = 0.015$), baby's age ($p = 0.0001$), resumption of sexual activity ($p = 0.005$), discussion of contraception with husband ($p = 0.0001$), and husband's perceived attitude to contraception ($p = 0.0$). Postpartum contraception uptake was low. Intra-uterine contraceptive device (IUCD), injectable contraceptive and emergency contraceptive pills were rated as the methods with the highest risk to women's health. Religion, occupation, baby's age, resumption of sexual intercourse, spousal communication on family planning matters, and spouse's attitude towards contraceptive use were significantly associated with the use of postpartum contraceptive method.

KEYWORDS: Contraceptives, postpartum, utilization, perceived risk, associated factors.

INTRODUCTION

Postpartum contraception is beneficial in preventing unintended pregnancies and achieving the recommended inter-pregnancy intervals. Nigeria is one of the most populous nations in the world with an estimated unmet need of contraception of 16% among married women and a high total fertility rate of 5.5 [1]. The rate of modern contraceptive use in Nigeria was estimated at 11.1% in 2013 [1] and this is quite low compared to very high rates of up to 70% in other developing nations [2]. A birth-to-pregnancy interval of 24 months has been recommended to

improve maternal and child health outcomes [3]. An estimated 12% out of the 16% of unmet need for family planning have a need for birth-spacing [2]. One of the proposed strategies to promote birth spacing is linking maternal postpartum contraception education with infant immunization [4]. Health risks associated with the use of contraceptives have been categorized based on severity ranging from 'nuisance' disadvantages leading to discontinuation of the method, such as weight gain, acne and bleeding disturbances, to serious long-term effects such as infertility, cancer

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risk, depression and cardiovascular disease [5]. However, the incidence of these serious adverse effects is rare, despite over-hyped media coverages of these rare events and this has been a source of concern to many health care professionals [6; 7]. Judgements of the significance and severity of adverse events following contraceptive use are individual-dependent, especially, when the decision is being made by a lay person (in this case the women) and not by an expert health professional [8]. Perceived health risks associated with contraceptives can either lead to avoidance of any contraceptive, influence method used and also contraceptive discontinuation leading to a general increase in the number of unwanted pregnancies [9 - 11]. In Nigeria, understanding the perceived risks associated with specific family planning methods can further illustrate the larger domain of concerns about health and side effects that influences uptake and continuation of family planning. Thus, the study evaluated perceived risk and factors associated with the use of contraceptives among postpartum women seeking infant immunization.

MATERIALS AND METHODS

This was a cross-sectional questionnaire-based study carried out at two health facilities, Bishop Shanahan Hospital, Nsukka and Health Centre, Nsukka. The population and sample were all eligible postpartum women that visited the two facilities' immunization clinics during a period of one month. The sample size for the study was determined using Raosoft sample size calculator

(<http://www.raosoft.com/samplesize.html>).

Given an average of 50 clients per each immunization clinic and four immunization clinics per month in Bishop Shanahan Hospital and an average of 30 clients per clinic day and eight clinic days per month in Nsukka Health Centre, an average monthly population of 450 clients per month for the two facilities was calculated. Thus, on the basis of 31% prevalence rate of contraceptive use among women in Enugu state [1] and allowing 0.5% margin of error at 95% confidence interval, the required sample size was calculated to be 191. The sample size was increased by 10% in anticipation on non-response to get a final minimum sample size of 210.

Inclusion criteria included all postpartum women who came to the immunization clinic during the

study period, had a child of at least six weeks of age and who consented to the study.

The study instrument was a three-section questionnaire that elicited information on demographics, information related to the woman's fertility, and perceived risk of contraceptive methods and abortion to women's health. The last section of the questionnaire, perceived risk to health, included risk estimates using a 6-likert scale – 'Don't Know', 'Very Low Risk' to 'Very High Risk' - for each of the contraceptive methods.

The questionnaires were distributed every immunization day in each facility for a period of one month to minimize possible duplication of questionnaire filling. All women that met the inclusion criteria and who consented to the study were given the questionnaires.

Data from the questionnaire were entered into Excel software and analyzed using SPSS version 20. Descriptive statistics such as frequencies and means were calculated. Chi-square and t-test were conducted as appropriate. All statistical values were set at $p < 0.05$. The Likert rating scale were represented thus: Very Low Risk = 1, Low Risk = 2, Medium Risk = 3, High Risk = 4, Very High Risk = 5, Don't Know = 0. The possible maximum risk score was 5 for each contraceptive method. The average respondents' risk scores were used to divide each method's perceived risk as 'high' or 'low risk' using a cut-off point of 3.

Ethical approval was obtained from the Research and Ethics Committee of University of Nigeria Teaching Hospital Enugu State. Also, approval letters were obtained from the facilities. The study volunteers' informed oral consents were obtained and they were fully assured of the confidentiality of all data collected.

RESULTS

Out of the 230 questionnaires given out, 210 was retrieved, giving a response rate of 91.3%. Women aged 20-29 years (58.1%) represented the most predominant age group in this sample of women. Most women had either secondary (43.3%) or tertiary (45.7%) education and more than half of the women were Catholics (57.1%) (Table 1).

Table 2 represents obstetric-related information of postpartum women. The mean age of babies brought for immunization was slightly above three

months (3.62 ± 3.456 months). Slightly above 50% of the women were practicing exclusive breastfeeding (53.7%) and had resumed sexual intercourse (51.5%). It was also noted that while only very few of them want to get pregnant in the next one year (5.8% in less than a year and 8.9% in one year), only 30.4% of the women were currently using any form of contraceptive. Meanwhile, a little above half of the population (53.1%) had started seeing their periods. More than two-third of the women reported that final decisions on fertility issues are taken in consultation with their partners (76.9%) and have equally discussed the issue of contraception with their partners (71%). However, only 59.9% perceives that their partner approves of any form of contraception.

The different contraceptive methods and the women's sources of information about contraceptives are reported in Table 3. Almost all the women using a form of contraceptive were using condom (98.4%). The next predominantly used forms of contraception were withdrawal methods (79.7%) and oral pills (46.9%).

The most reported source of information about contraceptive among postpartum women were from the immunization clinic (43.3%) and antenatal clinic (30.5%). Interestingly, majority of the women would still like more information on contraceptive methods (84.3%).

Women's perceived risk of contraceptive methods and abortion are presented in Table 4. All contraceptive methods, including abortion, were averagely scored below the cut-off point of 3 and as such perceived to be of low risk. However, IUCD (2.27 ± 1.920), injectable contraceptives (2.23 ± 1.857), and emergency contraceptive pills (2.22 ± 1.886) were the three perceived to be of highest risk to women's health.

Table 5 reveals the relationship between the use of contraceptive methods and socio-demographic variables. The results indicate that women's religion ($p = 0.029$) and occupation ($p = 0.015$) were associated with use of any form of contraceptive method. Women who were protestants (43.3%) were more likely to use a form of contraceptive method than other religious groups. Also, civil servants (53.8%) were the most likely group to use a contraceptive method.

The relationship between obstetric variables and use of contraceptive method are represented in Table 6. Baby's age, resumption of sexual intercourse,

discussion of contraception with husband, and husband's perceived attitude to contraception are associated with the use of contraceptive method among the women. Women with significantly older babies (5.18 ± 4.685 , $p = 0.0001$) were more likely to be using a contraceptive method. The use of contraceptive method, although still low, was significantly higher among women that had resumed sexual intercourse (39.6%) than those that have not (22%), $p = 0.005$. Women that have discussed contraception with their husband were more likely to use contraception than those that have not (39.4% vs 12.1%, $p = 0.0001$). Also, the women that perceived that their husbands approve (49%) or are indifferent (41.2%) were the most likely to use contraceptive than those who either did not know their husband's attitude or whose husbands outrightly disapproves of contraception.

DISCUSSION

The study recorded a low level of postpartum contraception use and low perceived risk scores for all contraceptive methods evaluated. However, Intra-uterine contraceptive device (IUCD) and injectable contraceptives were rated the riskiest contraceptive methods by the women. These are followed by emergency contraceptive pills as a practice that poses the most risk to women's health. Religion, occupation, baby's age, resumption of sexual activity, discussion of contraception with spouse/partner, and partner's attitude towards contraception were the factors associated with contraceptive use among the postpartum women.

The study recorded a higher postpartum contraception use rate than was recorded in the 2013 National Demographic Health Survey [1]. The rate however, is lower in other similar studies in Nigeria [12, 13] conducted among middle aged-women population as used in this study. This low prevalence use rate is against the backdrop that more than 50% of the study population have resumed sexual intercourse, and the fact that only a little above five percent want to get pregnant in less than a year after delivery. This suggests an unmet need for postpartum contraception as only 30.4% were using a form of contraception.

The two most common contraceptive methods used were condom and withdrawal method. Similar results have been reported elsewhere [12, 13] and it is worthy of note that withdrawal method is a

Table 1: Sociodemographic characteristics of postpartum women

Characteristics	n (%)
Age	
≤ 19 years	14 (6.7)
20-29 years	122 (58.1)
30-39 years	69 (32.9)
≥ 40 years	5 (2.4)
Marital status	
Married and in union	189 (90.0)
Engaged	8 (3.8)
With boyfriend	10 (4.8)
Divorced	3 (1.4)
Educational level	
None	2 (1.0)
Primary	21 (10.0)
Secondary	91 (43.3)
Tertiary	96 (45.7)
Religion	
Protestant	60 (28.6)
Catholic	120 (57.1)
Muslim	12 (5.7)
Others	18 (8.6)
Residence	
Rural	41 (19.5)
Semi urban	73 (34.8)
Urban	96 (45.7)
Occupation	
Housewife	25 (11.9)
Civil servant	39 (18.6)
Privately employed	25 (11.9)
Self employed	78 (37.1)
Student	43 (20.5)
Duration of marriage (Mean ± SD)	4.61 ± 3.356
Cohabitation with partner/husband	193 (91.9)

Table 2: Obstetric characteristics of postpartum women

Characteristics	Mean ± SD/n (%)
Baby's age (in months)	3.62 ± 3.456
Number of previous pregnancies	2.47 ± 1.405
Number of child birth(s)	2.46 ± 1.528
Number of children alive	2.27 ± 1.291
Mode of delivery	
Vaginal	167 (83.1)
Caesarean	34 (16.9)
Infant feeding	
Exclusive breast-feeding	109 (53.7)
Infant formula alone	12 (5.9)
Breast-feeding and infant formula	82 (40.4)
Resumption of sexual intercourse	106 (51.5)
When sexual intercourse resumed	
Before six weeks	19 (17.9)
After six weeks	87 (82.1)
Seen period after delivery	104 (53.1)
Wants another child	165 (86.4)
Has a plan for next pregnancy	167 (91.3)
Time planned for next pregnancy	
< One year	11 (5.8)
One year	17 (8.9)
2 years	92 (48.2)
3 years	56 (29.3)
4 years	13 (6.8)
Others	2 (1.0)
Final decision on fertility issues n (%)	
Husband	32 (16.1)
Woman	14 (7.0)
Both	153 (76.9)
Discussed contraception with husband n (%)	142 (71.0)
Husband's perceived attitude to contraception n (%)	
Approves	100 (59.9)
Disapproves	34 (20.4)
Indifferent	17 (10.2)
Don't know	16 (9.6)
Use of contraceptive n (%)	
No	124 (59.1)
Current user	64 (30.4)
Previous user	22 (10.5)

Table 3: Contraceptive methods and sources of information about contraceptives

Characteristics	n* (%)
Contraceptive methods	
Condom	63 (98.4)
Pills	30 (46.9)
Injection	4 (6.3)
Implants	4 (6.3)
IUCD	1 (1.6)
Tubal ligation	1(1.6)
Lactational amenorrhea	2 (3.1)
Emergency contraceptives	3 (4.7)
Rhythm method	2 (3.1)
Withdrawal method	51 (79.7)
Contraceptive Group	
LARC	5 (7.8)
Non LARC	59 (92.2)
Source of information	
Immunization personnel	91 (43.3)
Antenatal care	64 (30.5)
Radio	11 (5.7)
Television	8 (3.8)
Print media	9 (4.3)
Family/relative	34 (16.2)
Would like more information about contraceptive methods	177 (84.3)

*women used multiple contraceptive methods

Table 4: Perceived risk of contraceptive methods

Contraceptive method	Don't know n (%)	Very low risk n (%)	Low risk n (%)	Medium risk n (%)	High risk n (%)	Very high risk n (%)	Mean risk score (mean ± SD)
Condom	37 (19.8)	73 (39.0)	43 (23.0)	17 (9.1)	7 (3.7)	10 (5.3)	1.54 ± 1.304
Pills	45 (25.1)	17 (9.5)	29 (16.2)	35 (19.6)	31 (17.3)	10 (5.3)	2.21 ± 1.736
Injectable contraceptives	55 (30.7)	19 (10.6)	19 (10.6)	25 (14.0)	38 (21.2)	23 (12.8)	2.23 ± 1.857
IUCD	58 (32.8)	12 (6.8)	23 (13.0)	24 (13.6)	28 (15.8)	32 (18.1)	2.27 ± 1.920
Tubal ligation	61 (35.5)	19 (11.0)	16 (9.3)	17 (9.9)	33 (19.2)	26 (15.1)	2.12 ± 1.940
Emergency contraceptive pills	51 (29.3)	16 (9.2)	25 (14.4)	30 (17.2)	29 (16.7)	23 (13.2)	2.22 ± 1.886
Lactational amenorrhea	58 (33.7)	20 (11.6)	33 (19.2)	24 (14.0)	17 (9.9)	20 (11.6)	1.90 ± 1.747
Rhythm method	60 (34.1)	19 (10.8)	40 (22.7)	19 (10.8)	16 (9.0)	18 (10.1)	1.88 ± 1.752
Withdrawal method	48 (27.0)	37 (20.8)	43 (24.2)	16 (9.0)	18 (10.1)	16 (9.0)	1.81 ± 1.603
Abortion	67 (37.3)	16 (8.9)	19 (10.6)	13 (7.2)	22 (12.2)	43 (23.9)	2.20 ± 2.067

Table 5: Sociodemographic factors associated with use of contraceptive methods

Characteristics	Non-users n (%)	Users n (%)	P
Age			
≤ 19 years	12 (85.7)	2 (14.3)	0.524
20-29 years	82 (67.2)	40 (32.8)	
30-39 years	47 (68.1)	22 (31.9)	
≥ 40 years	4 (80.0)	1 (20.0)	
Marital status			
Married and in union	124 (65.6)	65 (34.4)	0.553
Engaged	6 (75.0)	2 (25.0)	
With boyfriend	10 (100.0)	0 (0.0)	
Divorced	2 (66.7)	1 (33.3)	
Educational level			
None	2 (100.0)	0 (0.0)	0.767
Primary	15 (71.4)	6 (28.6)	
Secondary	64 (70.3)	27 (29.7)	
Tertiary	65 (67.7)	31 (32.3)	
Religion			
Protestant	34 (55.7)	26 (43.3)	0.029*
Catholic	83 (69.2)	37 (30.8)	
Muslim	11 (91.7)	1 (8.3)	
Others	15 (83.3)	3 (16.7)	
Residence			
Rural	32 (78.0)	9 (22.0)	0.419
Semi urban	49 (67.1)	24 (32.9)	
Urban	63 (65.6)	33 (34.4)	
Occupation			
Housewife	20 (80.0)	5 (20.0)	0.015*
Civil servant	18 (46.2)	21 (53.8)	
Privately employed	21 (84.0)	4 (16.0)	
Self employed	55 (70.5)	23 (29.5)	
Student	30 (69.8)	13 (30.2)	
Duration of marriage (Mean ± SD)	4.47 ± 3.174	4.92 ± 3.730	0.376
Cohabitation with partner/husband	126 (65.3)	67 (31.6)	0.209

Table 6: Obstetric characteristics associated with use of contraceptives

Characteristics	Non-users n (%)	Users n (%)	p
Baby's age (in months) (mean ± SD)	2.92 ± 2.450	5.18 ± 4.685	0.0001*
Number of previous pregnancies (mean ± SD)	2.36 ± 1.323	2.71 ± 1.562	0.101
Number of child birth(s) (mean ± SD)	2.40 ± 1.543	2.59 ± 1.501	0.400
Number of children (mean ± SD)	2.15 ± 1.173	2.53 ± 1.501	0.051
Mode of delivery			
Vaginal	113 (67.7)	54 (32.3)	0.416
Caesarean section	26 (76.5)	8 (23.5)	
Infant feeding			
Exclusive breast-feeding	78 (71.6)	31 (28.4)	0.262
Infant formula alone	10 (83.3)	2 (16.7)	
Breast-feeding and infant formula	52 (63.4)	30 (36.6)	
Resumption of sexual intercourse			
Yes	64 (60.4)	42 (39.6)	0.005*
No	78 (78.0)	22 (22.0)	
When sexual intercourse resumed			
Before six weeks	12 (63.2)	7 (36.8)	0.588
After six weeks	54 (62.1)	33 (38.9)	
Seen period after delivery	66 (63.5)	38 (36.5)	0.078
Wants another child	115 (69.7)	50 (30.3)	0.408
Has a plan for next pregnancy	113 (67.7)	54 (32.3)	0.586
Time planned for next pregnancy			
< One year	8 (72.7)	3 (27.3)	0.511
One year	15 (88.2)	2 (11.8)	
2 years	61 (66.3)	31 (33.7)	
3 years	38 (67.9)	18 (32.1)	
4 years	9 (69.2)	4 (30.3)	
Others	2 (100.0)	0 (0.0)	
Final decision on fertility issues n (%)			
Husband	19 (59.4)	13 (40.6)	0.381
Woman	11 (78.6)	3 (21.4)	
Both	106 (69.3)	47 (30.7)	
Discussed contraception with husband n (%)			
Yes	86 (60.6)	56 (39.4)	0.0001*
No	51 (87.9)	7 (12.1)	
Husband's perceived attitude to contraception n (%)			
Approves	51 (51.0)	49 (49.0)	0.0001*
Disapproves	31 (91.2)	3 (8.8)	
Indifferent	10 (58.8)	7 (41.2)	
Don't know	14 (87.5)	2 (12.5)	
Mean contraceptive risk score	19.01 ± 14.125	21.32 ± 14.336	0.354

*p < 0.05 is significant

traditional contraceptive method that has often been perceived as ineffective [14]. A perfect-use failure rate for withdrawal is 4% compared to 3% for condoms within the first year of use [15]. Research has also documented that withdrawal method is often used with other contraceptive methods, most commonly condom [16]. This would obviously increase the effectiveness of the two methods as most women in the study used multiple methods of contraception. The very low use of LARC methods in this study have been reported elsewhere [17]. However, this was to be expected considering that high parity (≥ 5 childbirths) have been associated with the use of long-acting reversible contraceptives (LARC) [17]. Women in this study had a lower average parity of 2.46 births. Contrary to the results obtained in the study, another similar study in the same southeastern region had recorded that implants, a LARC method, was one of the most used method of contraception among postpartum women [18].

Interestingly, majority of the sources of information on contraception came from health facility unlike in other studies where the main sources of contraception information were from friends/relation and media sources [19, 20]. Despite this report, there is still need for a lot of work to be done as majority of the women still need more information on contraception. This thirst for knowledge casts doubts on the quality and depth of information they may have gotten even from the health facility sources reported.

Perceived health risks associated with contraceptives can either lead to avoidance of any contraceptive or use of less effective methods. Ironically, oral pill was rated be of less risk to women compared to IUCD. This is contrary to a report about health risks associated with IUCDs and oral pills where concerns of health risks were more for oral pills [8]. Some of their reported concerns were cardiovascular effects, cancer, infertility, mood changes and weight gain. These are valid risks that have been reported elsewhere in the literature [21-23]. Contrary to our study that reported injectable as the second rated contraceptive with health risks to women, another study in Nigeria reported that injectable contraceptives were perceived to be of very low risk to health [24]. Emergency contraceptive was reported the next in line of perceived risk. Misrepresentations of the health risks of emergency contraceptive by inflammatory media coverage have been reported as a contributory factor to low use of emergency contraceptives [25]. However, a careful review of evidence has shown that levonorgestrel-alone emergency contraceptive pills are safe [26]

with only reports of generally mild, uncommon, and short-term side effects like irregular menses, fatigue, abdominal discomfort, and nausea [27]. Thus, this misperception of risk of emergency contraceptives needs to be addressed through appropriate education. Condom, and the two traditional methods – rhythm and withdrawal methods – were reported as the least methods with health risks. This could have contributed to the fact that they were among the most commonly used contraceptive methods among the women.

Similar to this study, religion [28] and women's occupation [29, 30] have been highlighted in other studies as contributors to postpartum contraceptive use. In fact, an analysis of the 2013 Nigerian Demographic and Health Survey (NDHS) [31] revealed that religion affected the use of contraceptives, with contraceptive use highest among Christian women and lowest for Muslim women, just as was reported in this study. Women with jobs has also been reported to be more likely to use contraceptive just as civil servants were more likely to use contraceptive in our study [30].

Considering that the WHO recommends that women transit from lactational amenorrhea to another modern contraceptive method [32], it would be expected that use of contraceptive will be higher among women with older babies (> 5 months-old babies) than those with younger babies (< three months-old babies) as was reported in the study. Resumption of sexual intercourse is expected to be associated with use of contraceptive as was found in this study, however, a study has linked early resumption of sexual intercourse with non-use of contraception leading to associated sexual morbidity [33]. Emphasis on sexual and contraception education should be stressed in order to build on this positive trend. Women should ideally start a contraceptive method before or on resumption of sexual intercourse after delivery. Discussion between couples on family planning matters was reported to be associated with contraceptive use as well as the spouse's opinion on family planning. A similar observation of communication between couple on family planning matters leading to significant increased use of contraceptive have been reported [34]. Spousal positive and neutral attitude towards contraceptive use has also been linked to high contraceptive use among women [35]. In fact, men's involvement in family planning programs and policies has been recommended for increased contraception uptake [36].

CONCLUSIONS

The prevalence of contraceptive use among pregnant women was low. The commonest types of contraceptives used were condom, withdrawal method and oral pills, while the use of long-acting reversible contraceptives was poor among postpartum women. Intra-uterine contraceptive device (IUCD), injectable contraceptive and emergency contraceptive pills were rated, in a descending order, as the methods with the highest risk to women's health, while condoms, rhythm method, and withdrawal methods were the least risk-rated methods. Religion, occupation, baby's age, resumption of sexual intercourse, spousal communication on fertility matters, and spouse's attitude towards contraceptive use were significantly associated with the use of postpartum contraceptive method. These results buttress the need for enlightenment campaigns that would take into consideration the perceptions and factors highlighted in this study so as to achieve increased uptake of effective contraceptive methods. Also, such improved enlightenment campaigns should equally be evaluated for effectiveness after implementation.

REFERENCES

1. NPC and ICF International. Nigeria demographic and health survey 2013. Abuja: National Population Commission (NPC) [Nigeria] and ICF International, 2014.
2. MEASURE Evaluation. Family Planning and Reproductive Health Indicator database. Carolina Population Center. [Online] October 29, 2015. http://www.cpc.unc.edu/measure/prh/rh_indicators/specific/fp/cpr.
3. WHO. Report of a WHO Technical Consultation on Birth Spacing, 13-15 June, 2005. Geneva, Switzerland: World Health Organization, Department of Making Pregnancy Safer (MPS); Department of Reproductive Health and Research (RHR), 2006.
4. Garfield ME, Egan S, Temmerman MI. It's about time: WHO and partners release programming strategies for postpartum family planning. *Global Health: Science and Practice* Vol. 2, 2014, pp. 4-9.
5. Serfaty D. Medical aspects of oral contraceptive discontinuation. *Adv Contracept*, Suppl 1 Vol. 8, 1992, pp. 21-33.
6. Skjeldestad EFI. Increased number of induced abortions in Norway after media coverage of adverse vascular events from the use of third-generation oral contraceptives. *Contraception*. 55, 1997, pp. 11-14.
7. Lee PR, Stewart GH. Failing to prevent unintended pregnancy is costly. *American Journal of Public Health*. 85(4), 1995, pp. 479-480.
8. Shivo S, Hemminki E, Kosunen E. Contraceptive health risks – women's perception. *Journal Psychosomatic Obstetrics & Gynecology*. Vol. 19, 1998, pp. 117-325.
9. Oddens BJ, Visser N, Vemer HM, Everaerd WT, Leher P. Contraceptive use and attitudes in Great Britain. *Contraception*. 49(1), 1994, pp. 73-86.
10. Williamson LM, Parkes A, Wight D, Petticrew M, Hart GJ. Limits to modern contraceptive use among young women in developing countries: a systematic review of qualitative research. *Reproductive Health*. 6(3), 2009, pp. 1-12.
11. Campbell M, Sahin-Hodoglugil NN, Potts M. Barriers to fertility regulation: a review of the literature. *Studies in Family Planning*. 37(2), 2006, pp. 87-98.
12. Sule S, Omotese I, Onajole A, Ogunowo B. Contraceptive methods awareness and use among women of reproductive age in an urban district of Lagos, Nigeria. *Journal of Community Medicine and Primary Health Care*. 27(1), 2015, pp. 104-119.
13. Usman SO, Kalejaye OO, Isola IN, Oluwaniyi O, Ojogbede AK, Adu AS. Family planning practices among rural community women in Nigeria. *Journal of Experimental and Integrative Medicine*. 6(2), 2016, pp. 88-92.
14. Doherty IA, Stuart GS. Coitus interruptus is not contraception. *Sexually Transmitted Disease*. 38(4), 2011, p. 356.
15. Kost K, Singh S, Vaughan B, Trussell J, Bankole A. Estimates of contraceptive failure from 2002 National Survey of Family Growth. *Contraception*. 77(1), 2008, pp. 10-21.
16. Jones RK, Fennel J, Higgins JA, Blanchard K. Better than nothing or savvy risk-reduction practice? The importance of withdrawal. *Contraception*. 79(6):, 2009, pp. 407-410.
17. Anguzu R, Sempere H, Sekandi JN. High parity predicts the use of long-acting reversibly contraceptives in the extended postpartum period among women in rural Uganda. *Contraception and Reproductive Medicine*. Vol. 3, 2018, p. 6.
18. Anaba R, Ugwa EA, Agbor IE, Nwali MI, Orji B. Knowledge, attitude, and contraceptive preferences among postpartum women in Izzi, Ezza South, and Ikwo local government areas

- of Ebonyi state, Nigeria. *Hospital Practices and Research*. 3(1), 2018, pp. 11-15.
19. Monjok E, Smesny A, Ekabua JE, Essien EJ. Contraceptive practices in Nigeria: Literature review and recommendation for future policy decisions. *Open Access Journal of Contraception*. Vol. 1, 2010, pp. 9-22.
 20. Oye-Adeniran BA, Adewole IF, Odeyemi KA, Ekanem EF, Umoh AV. Contraceptive prevalence among young women in Nigeria. *Journal of Obstetrics and Gynaecology*. Vol. 25, 2005, pp. 182-185.
 21. Tanis BC, van den Bosch MAA, Kemmeren JM, Cats VM, Helmerhorst FM, Agra A, van der Graaf Y, Rosendaal FRY. Oral contraceptives and the risk of myocardial infarction. *New England Journal of Medicine*. Vol. 345, 2001, pp. 1787-1793.
 22. Gillum LA, Mamidipudi SK, Johnston SC. Ischemic stroke risk with oral contraceptives: A meta-analysis. *JAMA*. Vol. 284, 2000, pp. 72-78.
 23. IARC. Monograph 91: Combined estrogen-progestogen contraceptives and combined estrogen-progesterone menopausal therapy. s.l.: International Agency on Research of Cancer, 2007.
 24. Schwandt HM, Skinner J, Hebert LE, Saad A. Perceived Risks Associated with Contraceptive Method Use among Men and Women in Ibadan and Kaduna, Nigeria. *African Journal of Reproductive Health* 2015; 19(4): 31-40.
 25. Emergency contraception: dispelling the myths and misperceptions., *Bulletin of the World Health Organization*. Vol. 88, 2010, pp. 243-243.
 26. WHO. Fact sheet on the safety of levonorgestrel-alone emergency pills (LNG-ECPs). Geneva: World Health Organization Press, 2010.
 27. Randomized controlled trial of levonorgestrel versus Yuzpe regimen of combined oral contraceptives for emergency contraception. Task Force on postovulatory methods of fertility regulation. *Lancet*, Vol. 352, 1998, pp. 428-433.
 28. Uganda National Development Plan. Uganda National Development Plan (2010/11-2014/15): Uganda National document. [Online] 2014. [http://opm.go.ug/assets/media/resources/30/National development plan 2010:11-2014: 15](http://opm.go.ug/assets/media/resources/30/National%20development%20plan%202010-11-2014-15).
 29. UN. The Millennium Development Goal report 2013. This is made for periodic assessment of the progress towards the MDGs. 2013.
 30. Che BY, Cleland J, John M. Unintended Pregnancy Among Newly Married Couples in Shanghai. *International family planning perspective*. 30(1), 2004, pp.6-11.
 31. Obasohan, PE. Religion, ethnicity and contraceptive use among reproductive age women in Nigeria. *International Journal of Maternal and Child Health (MCH) and AIDS* 3(1): 2005, pp. 63-73.
 32. WHO. Programming strategies for Postpartum Family Planning. WHO, USAID, MCHIP. Geneva: Switzerland: World Health Organization Press, 2013.
 33. Anzaku AS, Mikah S. Postpartum resumption of sexual activity, sexual morbidity and use of modern contraceptives among Nigerian women in Jos. *Annals of Medical and Health Science Research*. 4(2), 2014, pp. 210-216.
 34. Irani L, Speizer IS, Fotso JC. Couple characteristics and contraceptive use among women and their partners in urban Kenya. *International Perspectives on Sexual and Reproductive Health* 40(1): 2014, pp. 11-20.
 35. Mtae HG. Spouse communication and attitudes towards contraceptive use among married women in Morogoro Municipality. *Huria: Journal of the Open University of Tanzania* 2012; 10(1):92-101.
 36. Ezeh AC. The influence of spouses over each other's contraceptive attitudes in Ghana. *Studies in Family Planning*. 24(3), 1993, pp. 163-174.
 37. Ajayi AI, Adeniyi OV, Akpan W. Use of traditional and modern contraceptives among childbearing women: findings from a mixed methods study in two southwestern Nigerian states. *BMC Public Health*. 2018;18(1): 604.
 38. Balogun OAA, Adesina K, Aboyeji A, Adeniran P. Effect of male partners's support on spousal modern contraception in a low resource setting. *Ethiopian Journal of Health Sciences*. 26(5), 106, pp.439-448.
 39. Lasee A, Becker S. Husband-wife communication about family planning and contraceptive use in Kenya. *International Family Planning Perspectives*. 23(1), 1997, pp.15-20.
 40. Borda MR, Winfrey W, McKaig C. Return to sexual activity and modern family planning use in the extended postpartum period: An analysis of findings from seventeen countries. 4, 2010, *African Journal of Reproductive Health*. 14(4), 2029pp.75-82.