



## Contraceptive Utilization Among Women of Childbearing Age in Opobo/Nkoro Local Government Area, Rivers State, Nigeria

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### Abstract

This study was a comparative analysis of contraceptive utilization among women of childbearing age in rural and urban areas of the Opobo/Nkoro Local Government Area. Four objectives, four research questions, and four hypotheses were stated to guide the study. The study adopted the comparative research design with a population that consisted of three hundred and fifty-four thousand, five hundred and fifty-six (354,556). The sample size for the study was 420 which was selected using the multi-staged sampling procedure. The data collection tool utilized in the study was a structured questionnaire titled: Utilization of Modern Contraceptive Questionnaire (UMCQ), having a reliability coefficient of 0.88. The collected data from this questionnaire were subjected to analysis using Statistical Product for Service Solution (SPSS) version 23.0, employing mean, standard deviation, and t-test at a significance level of 0.05. The finding illustrated that more women in the urban areas ( $2.62 \pm 0.66$ ) than those in the rural areas ( $2.06 \pm 0.91$ ) utilized hormonal contraceptive methods. More women in the urban areas ( $3.01 \pm 0.69$ ) than those in the rural areas ( $2.76 \pm 0.80$ ) utilized barrier contraceptive methods. The finding of the study showed that more women in the urban areas ( $2.10 \pm 0.51$ ) than those in the rural areas ( $2.01 \pm 0.54$ ) utilized permanent contraceptive methods. The result showed that more women in the urban areas ( $3.01 \pm 0.77$ ) than those in the rural areas ( $2.69 \pm 0.91$ ) utilized natural contraceptive methods. It was concluded that the utilization of hormonal, barrier, permanent, and natural contraceptive methods in Opobo/Nkoro Local Government Area of Rivers State was more among women of childbearing age in the urban areas than those in the rural areas. It was recommended that the government should make hormonal contraceptives more financially accessible by giving it free of charge for women of reproductive age, this will help to boost the utilization of such services.

**Keywords:** Childbearing age, Contraceptive, Opobo/Nkoro, Rural, Urban

### Introduction

The right use of contraception prevents unwanted or unintended pregnancies. Contraceptives as opined by Meka et al. (2013) are procedures employed to interfere with the normal sequence of conception to control the number of children or intervals between birth. They include condoms, rhythm methods, withdrawal, intra-uterine devices, diaphragm, cervical cap, implants, tubal ligation, spermicides, injectables, and birth control pills among others. Contraception among women of childbearing age has assumed a central focus among scholars due to the global concern about population explosion and the high level of unwanted pregnancy among sexually active women who fail to use contraceptives. Oyediran et al. (2013) reported that many women are already mothers at 14-19 years old and 69.0% are unwanted due to poor contraceptive utilization. In Nigeria, the utilization of contraceptives is generally limited, with studies indicating that only 15% of the country's population utilizes them. (Kabir cited in Timothy, 2022). According to Gottschalk et al. (2014), women of childbearing age between the ages of 18 – 35 years old occupy Twenty per cent of the global populace. Out of the 1.2 billion women in the world, 88% reside in developing countries with limitations and constraints to achieving and attaining reproductive health, thereby impacting their reproductive health as compared to their counterparts in developing countries (Gutmacher Institute, 2010; United Nations, 2014). At the childbearing age, women are liable to practice what they deem fit for their sexual consumption, thus the need to focus on their contraceptive utilization.

An effective contraceptive utilization allows sexual relationships among spouses Without the worry of an unplanned pregnancy and the ability to choose when to start having their desired number of children. Contraceptives are broadly classified into traditional and modern contraceptives, the latter being the focus of the study. Some examples of modern contraceptives are male and female condoms, pills, injectables, intrauterine Devices (IUDs), implants, tubal sterilization, and spermicides (Jain & Muralidhar, 2011). These can be further grouped as hormonal methods (oral contraceptives, Injectable, Norplant, and Depo Provera injections), barrier methods (male and female condoms, the cervical cap and the diaphragm, IUD), permanent methods (tubal ligation and vasectomy), and emergency contraception (pills).

Residing either in a rural or urban area should not be a barrier to contraceptive utilization yet, there exist discrepancies with regards to location. Nduka and Nduka (2014) stated that women living in urban areas tend to be highly informed about the proper use of contraceptives because they are more exposed to better and adequate information because of the environment they find themselves. Some methods of contraception are more well-known than others but in Nigeria, condom use predominate others in the women population. However, Yidana et al. (2015) opined that women's Contraceptive services in both rural and urban areas of developing nations frequently lack adequate provision. Based on this background, this study carried out a comparative analysis of contraceptive utilization among women of childbearing age in rural and urban areas.

### Statement of the problem

The prevalence of undesired pregnancies, unsafe abortions, and complications arising from abortions is rising, posing health risks to women including infertility and, in severe cases, mortality. The increase in maternal mortality rate is not unassociated with pregnancy-related conditions, which accounts for a great deal of morbidity and mortality among women of childbearing age. Unplanned and unwanted pregnancies can pose a detrimental impact on the welfare and health status of women of reproductive age, and as well, may lead to health challenges, untimely death, social instability also social consequences which include, drop out of school, unemployment, impoverishment, and stigma. Specifically, the alarming rate of unwanted pregnancy among women of childbearing age in Opobo/Nkoro calls for special attention from health professionals and researchers. This is appalling and makes contraception issues paramount which needs to be addressed. Both government and non-governmental organizations have in recent times, increased their effort to control the daily increasing population in Nigeria but, to no avail as the population explosion continues with minimal resources to cater for all. This has made our streets and parks jam-packed with homeless children who at long become perpetrators of all kinds of social vices such as armed robbery, kidnapping, raping, ritual killings, cultism, and the like which have become highly prevalent. This is worrisome given the nuisance constituted by the homeless children on our streets. Numerous studies have been conducted on contraception; however, many of them have concentrated solely on urban settings or without any comparison with their rural counterparts. This study therefore carried out a comparative analysis of modern contraceptive utilization among women of childbearing age in rural and urban areas of Opobo/Nkoro Local Government Area. The study provided answers to the following research questions:

1. What is the extent of utilization of hormonal contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro Local Government Area?
2. What is the extent of utilization of barrier contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro Local Government Area?
3. What is the extent of utilization of permanent contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro Local Government Area?
4. What is the extent of utilization of natural contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro Local Government Area?

**Hypotheses:** The null hypotheses stated below were tested at 0.05 level of significance

1. There is no significant difference in the extent of utilization of hormonal contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro Local Government Area.
2. There is no significant difference in the extent of utilization of barrier contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro Local Government Area.
3. There is no significant difference in the extent of utilization of permanent contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro Local Government Area.
4. There is no significant difference in the extent of utilization of natural contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro Local Government Area.

**Methodology**

This study employed a comparative research design, with a target population of 354,556 women of childbearing age. A sample size of 420 was determined using the Taro Yemane formula:  $n = N / 1 + N(e)^2$ , where N represents the population, e signifies the expected degree of error (0.05)<sup>2</sup>, and n denotes the sample size. The final sample size was 420 (210 for rural and 210 for urban areas). A simple random sampling technique was utilized to select participants. Data collection utilized a structured questionnaire titled "Utilization of Modern Contraceptive Questionnaire (UMCQ)", with a reliability coefficient of 0.88. Statistical analysis was conducted using the Statistical Product for Service Solution (SPSS) version 23.0, employing mean and t-test at 0.05 level of significance.

**Results**

**Table 1: Mean and standard deviation analysis on hormonal contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro (N = 420)**

S/N	ITEMS	Urban (N = 210)		Rural (N = 210)	
		$\bar{X}$	S.D	$\bar{X}$	S.D
1	Pills (oral contraceptive pills)	2.28	1.16	2.27	1.16
2.	Implants	2.34	0.28	2.00	1.31
3	Birth control patch	3.00	0.70	2.00	0.60
4	Vaginal ring	3.00	0.80	2.00	0.70
5	Injectables	2.12	1.06	2.12	0.99
6	Hormonal intrauterine device	3.00	0.00	2.00	0.70
	Grand mean	2.62	0.66	2.06	0.91

Criterion mean = 2.50

Table 1 shows the mean and standard deviation analysis on hormonal contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro. The result showed that more women in the urban areas (2.62±0.66) than those in the rural areas (2.06±0.91) utilized hormonal contraceptive methods. Thus, the utilization of hormonal contraceptive methods was higher among women in urban areas than in rural areas.

**Table 2: Mean and standard deviation analysis on barrier contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro (N = 420)**

S/N	ITEMS	Urban (N = 210)		Rural (N = 210)	
		$\bar{X}$	S.D	$\bar{X}$	S.D
1	Condom	3.92	0.88	2.28	1.29
2.	Diaphragm	2.68	0.70	3.00	0.62
3	Cervical cap	2.44	0.49	2.00	0.50
	Grand mean	3.01	0.69	2.76	0.80

Criterion mean = 2.50

Table 2 shows the mean and standard deviation analysis on barrier contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro. The result showed that more women in the urban areas (3.01±0.69) than those in the rural areas (2.76±0.80) utilized barrier contraceptive methods. Thus, the utilization of barrier contraceptive methods was higher among women in urban areas than in rural areas.

**Table 3: Mean and standard deviation analysis on permanent contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro (N = 420)**

S/N	ITEMS	Urban (N = 210)		Rural (N = 210)	
		$\bar{X}$	S.D	$\bar{X}$	S.D
1	Tubal ligation	2.10	0.72	2.02	0.59
2.	Female sterilization	2.23	0.38	2.01	0.72
3	Fallopian tube implants (Essure)	1.98	0.42	2.00	0.30
	<b>Grand mean</b>	<b>2.10</b>	<b>0.51</b>	<b>2.01</b>	<b>0.54</b>

Criterion mean = 2.50

Table 3 shows the mean and standard deviation analysis on permanent contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro. The result showed that more women in the urban areas (2.10±0.51) than those in the rural areas (2.01±0.54) utilized permanent contraceptive methods. Thus, the utilization of permanent contraceptive methods was higher among women in urban areas than in rural areas.

**Table 4: Mean and standard deviation analysis on natural contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro (N = 420)**

S/N	ITEMS	Urban (N = 210)		Rural (N = 210)	
		$\bar{X}$	S.D	$\bar{X}$	S.D
1	Periodic abstinence	3.00	0.88	2.23	1.20
2.	Calendar method (rhythm method)	3.00	0.79	3.00	0.00
3.	Withdrawal method	3.71	1.73	2.00	1.61
4	Basal body temperature method	3.00	0.32	2.84	0.33
5	Lactational amenorrhea method (LAM) (breastfeeding)	2.37	0.90	3.71	1.28
6	Circle beads	3.00	0.00	2.37	1.03
	<b>Grand mean</b>	<b>3.01</b>	<b>0.77</b>	<b>2.69</b>	<b>0.91</b>

Criterion mean = 2.50

Table 4 shows the mean and standard deviation analysis on p natural contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro. The result showed that more women in the urban areas (3.01±0.77) than those in the rural areas (2.69±0.91) utilized natural contraceptive methods. Thus, the utilization of natural contraceptive methods was higher among women in urban areas than in rural areas.

**Table 5: Summary of t-test showing significant difference between rural and urban areas in the extent of utilization of hormonal contraceptive methods among women of childbearing age in Opobo/Nkoro Local Government Area**

Location	N	Mean	SD	df	t-cal	p-value	Decision
<b>Urban</b>	210	2.28	1.16	408	0.89	0.00*	H <sub>0</sub> rejected
<b>Rural</b>	210	2.08	0.16				

\*Significant

Table 5 shows the summary of the t-test of significant differences between rural and urban areas in the extent of utilization of hormonal contraceptive methods among women of childbearing age in Opobo/Nkoro Local Government Area. The findings indicated a significant difference as [t-cal = 0.89; df = 408; p<0.05]. Thus, the null hypothesis, indicating that there is no significant difference in the extent of utilization of hormonal contraceptive methods among women of childbearing age in rural and urban regions of Opobo/Nkoro Local Government Area, was rejected.

**Table 6: Summary of t-test showing significant difference between rural and urban areas in the extent of utilization of barrier contraceptive methods among women of childbearing age in Opobo/Nkoro Local Government Area**

Location	N	Mean	SD	df	t-cal	p-value	Decision
Urban	210	2.34	0.28	408	3.11	0.00*	H <sub>0</sub> rejected
Rural	210	2.00	1.31				

\*Significant

Table 6 shows the summary of the t-test of significant differences between rural and urban areas in the extent of utilization of barrier contraceptive methods among women of childbearing age in Opobo/Nkoro Local Government Area. The findings revealed a significant difference as [t-cal = 3.11; df = 408; p<0.05]. Thus, the null hypothesis, which proposed no significant difference in the utilization of barrier contraceptive methods among women of childbearing age in rural and urban regions of Opobo/Nkoro Local Government Area, was rejected.

**Table 7: Summary of t-test showing significant difference between rural and urban areas in the extent of utilization of permanent contraceptive methods among women of childbearing age in Opobo/Nkoro Local Government Area**

Location	N	Mean	SD	df	t-cal	p-value	Decision
Urban	210	2.34	0.28	408	0.33	0.00*	H <sub>0</sub> rejected
Rural	210	2.00	1.31				

\*Significant

Table 7 shows the summary of the t-test of significant differences between rural and urban areas in the extent of utilization of permanent contraceptive methods among women of childbearing age in the Opobo/Nkoro Local Government Area. The result showed that there was a significant difference as [t-cal = 0.33; df = 408; p<0.05]. Thus, the null hypothesis which stated that there is no significant difference in the extent of utilization of permanent contraceptive methods between women of childbearing age in rural and urban areas of Opobo/Nkoro Local Government Area was rejected.

**Table 8: Summary of t-test showing significant difference between rural and urban areas in the extent of utilization of natural contraceptive methods among women of childbearing age in Opobo/Nkoro Local Government Area**

Location	N	Mean	SD	df	t-cal	p-value	Decision
Urban	210	2.98	1.16	408	0.33	0.00*	H <sub>0</sub> rejected
Rural	210	2.96	1.31				

\*Significant

Table 8 shows the summary of the t-test of significant differences between rural and urban areas in the extent of utilization of natural contraceptive methods among women of childbearing age in the Opobo/Nkoro Local Government Area. The findings indicated a significant difference as [t-cal = 0.33; df = 408; p<0.05]. Therefore, the null hypothesis asserting no significant difference in the extent of utilization of natural contraceptive methods among women of childbearing age in rural and urban areas of Opobo/Nkoro Local Government Area was rejected.

## Discussion

The result showed that more women in the urban areas (2.62±0.66) than those in the rural areas (2.06±0.91) utilized hormonal contraceptive methods. This finding is expected and thus not surprising given that individuals residing in urban areas generally have better access to healthcare services compared to those in rural regions. It can be deduced from the study's results that the utilization of hormonal contraceptive methods in rural areas is lacking, as indicated by a mean lower than the established criterion. The findings of this research align with Umar's (2016) study on the utilization of family planning services among women of childbearing age in rural areas of Kano State, Nigeria showed a low level of utilization in the rural areas. Likewise, the findings are consistent with those of Kana et al. (2016), whose investigation of the prevalence of contraceptive use in rural North Eastern Nigeria also revealed a low level of utilization in rural areas. Additionally, the findings are those of Apanga and Adam (2015), whose study on contraceptive services in the Talensi District, Ghana showed a low level of contraceptive utilization though the study

failed to establish the difference in rural and urban areas. The finding of this study is at variance with that of Peter-Kio and Inaikon (2014) whose study on women's contraceptive use in the Degema Local Government Area of Rivers State showed a high level of contraceptive use. The difference in study areas could explain the variations in the results.

The result showed that more women in the urban areas ( $3.01 \pm 0.69$ ) than those in the rural areas ( $2.76 \pm 0.80$ ) utilized barrier contraceptive methods. It can be deduced from the result that utilization was high in both rural and urban areas for barrier contraceptive methods. The reason for the high utilization may not be far fetch from the fact that barrier methods such as condoms were extensively talked about among different organizations to curb not only unplanned pregnancies but also sexually transmitted infections as well as HIV/AIDS. The result of this research corresponds with Bajrachanya (2015) who studied the practice of contraception among women attending Kathmandu Medical College Teaching Hospital in Nepal showed a high level of utilization in rural areas. The results of this study align with Peter-Kio and Inaikon (2014) whose study on women's contraceptive use in the Degema Local Government Area of Rivers State showed a high level of contraceptive use which showed a high level of utilization of contraceptive methods. The similarities between both studies might be because the barrier methods are easily accessible.

The study's results indicated that a greater number of women in urban areas (with a mean of  $2.10 \pm 0.51$ ) utilized permanent contraceptive methods compared to those in rural areas (with a mean of  $2.01 \pm 0.54$ ). This finding is consistent with Umar's (2016) research, which observed a low level of utilization of family planning services among women of childbearing age in rural areas of Kano State, Nigeria. The results of this study coincide with those of Kana et al. (2016), whose research on the prevalence of contraceptive use in rural North Eastern Nigeria also demonstrated a low level of utilization in rural areas. These findings are consistent with Apanga and Adam (2015) whose study on contraceptive services in the Talensi District, Ghana showed a low level of contraceptive utilization though the study failed to establish the difference in rural and urban areas.

The result showed that more women in the urban areas ( $3.01 \pm 0.77$ ) than those in the rural areas ( $2.69 \pm 0.91$ ) utilized natural contraceptive methods. It can be deduced from the result that utilization was high in both rural and urban areas for natural contraceptive methods. The reason for the high utilization may not be far fetch from the fact that natural methods are easily affordable, some do not even require any money to get. The results of this study are consistent with Bajrachanya (2015) also studied the practice of contraception among women attending Kathmandu Medical College Teaching Hospital in Nepal and showed a high level of utilization in the rural areas. The finding of this study is in line with that of Peter-Kio and Inaikon (2014) whose study on women's contraceptive use in the Degema Local Government Area of Rivers State showed a high level of contraceptive use with a high level of utilization of contraceptive methods. The similarities between both studies might be because the natural methods are affordable.

## Conclusion

Drawing from the study's findings, it was concluded that the utilization of both hormonal, barrier, permanent, and natural contraceptive methods in Opobo/Nkoro Local Government Area of Rivers State was more among women of childbearing age in the urban areas than those in the rural areas.

## Recommendations

Based on the findings of the study, the following recommendations were made:

1. The government should make hormonal contraceptives more financially accessible by giving them free of charge for women of reproductive age, this will help to boost the utilization of such services.
2. The stakeholders in the health sector should also make the barrier methods of contraception more interesting in both urban and rural areas, by distributing it to every woman who visits primary healthcare facilities.
3. The Ministry of Health should focus on both rural and urban areas to encourage permanent methods of contraception among women by sending more personnel to teach the women.
4. Non-governmental organizations interested in maternal healthcare should launch a campaign on the use of the natural method of contraceptive which is cheaper than other methods, this may encourage women of childbearing age to use it.

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