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Original Article

Effects of Parity on Knowledge, Attitude and Practice of Contraception in Young Women of Imo State Nigeria, Aged 18 to 42years

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Abstract

Introduction: This paper presents a descriptive survey conducted to determine the effects of parity on knowledge, attitude and practice of contraception in young women of Imo State Nigeria, aged 18 to 42years. **Methodology:** Structured questionnaire was administered by subjective sampling technique to 303 young women aged 18 to 42years in Imo state Nigeria to obtain their response on knowledge, attitude and practice of various methods of contraception. The data collected from retrieved questionnaire was analyzed using Version 2010 of Microsoft Excel and Version 29.0 of SPSS for Chi-square tests. The responses were graded based on the discretion of the researchers. **Results:** The results obtained show that the respondents have very good knowledge of contraception; displayed very good attitude towards use of contraception and as well showed good practice of contraception. The result of the Chi-square tests show no association between parity and knowledge of contraception ($p = 1$); insignificant association between parity and attitude to contraception ($p = 0.333$) and significant association between parity and practice of contraception ($p = 0.015$). Pearson's correlation coefficient shows strong association between knowledge and attitude to contraception ($r = 0.911$). **Conclusion:** Based on the results of this study, it can be concluded that parity affects practice of contraception but does not affect knowledge of and attitude to contraception. The results of this study will give the Federal Government and the NGOs insight on the most appropriately steps to take in fighting the rising trend of unintended pregnancy in Nigeria, Imo State in particular.

Keywords: Attitude, Contraception, Knowledge, Practice, Parity

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1ntroduction

Background of the Study

Parity has been identified as one of the factors affecting knowledge, attitude and practice of contraception[1, 2]. However, the effects of parity on knowledge, attitude and practice of contraception in Nigerian women have not been clearly defined in any study[3]. Unfortunately, the causes of high prevalence of unintended pregnancy in Nigerian women have not been determined. Also, sustainable measures for mitigation of unintended pregnancy in Nigeria have not been established. Nevertheless, several methods of contraception have been devised over years for prevention of unintended pregnancy, yet unintended pregnancy remains a global challenge, especially in developing countries of the world such as Nigeria; as reported by previous studies[2, 3]. According to the report issued by the United Nations Population Fund, UNFPA, entitled: "2022 State of the World Population (SWOP)" having its theme as; "Seeing the Unseen", 257 million women who want to avoid pregnancy are not using safe, modern methods of contraception[4]. It was also reported that "60 percent of unintended pregnancies end in abortion and an estimated 45 percent of all abortions are unsafe, causing 5 to 13 percent of all maternal deaths, thereby having a major impact on the world's ability to reach the Sustainable Development Goals,"[4]. Based on the report, the number of unintended pregnancies that occur globally every year is 121 million, or 331,000 per day on average which signifies a global failure to uphold a basic human right[4]. Unfortunately, Nigeria records 2.5 million cases of unintended pregnancy out of the 121 million cases recorded worldwide[4]. UNFPA estimated that Nigeria will record 700,000 unwanted pregnancies in 2023 due to the increasing cost of funding family planning in the country[5].

A statistical survey conducted by Ameyaw *et al.*[6] shows that Nigeria accounted for 10.8% of the overall unintended pregnancy recorded in Sub Saharan Africa from 2010 to 2016. In a related study, Ayamolowo *et al.*[7] investigated the factors influencing unintended pregnancy and abortion among unmarried young people in Nigeria using 22 articles that met the criteria for the final review. The study shows that factors influencing unintended pregnancies included a lack of awareness of modern contraceptives and limited access to sexual and reproductive health information. For induced abortions, factors such as the impact on educational career, childbearing outside wedlock and fear of expulsion from school were noted. As unintended pregnancy has been associated with awareness (or knowledge) and use of contraception[7, 8]; so also, some previous studies suggest that parity has influence on knowledge, attitude and the practice of contraception[9, 10]. However, clear evidence of the relationship between *parity* and *knowledge*, *attitude* and *practice* of contraception has not been given. Thus, it is deemed to be of interest to conduct a study that will clearly define the association between these variables perceived to be determinants of unintended pregnancy.

It is estimated that about 280,000 children in Imo State are orphaned through the loss of one or both parents[11]. Aside those who were orphaned as a result of the death of parent(s) many are children who were abandoned at birth by their mothers, probably due to illegitimate conception and the fear of social stigmatization and or home breakups. A good number of such children are housed in child care or orphanage homes across the nation[11]. Although unintended pregnancy has been noted as one of the factors contributing to increased number of orphans in Imo State, Arisukwu *et al.*[12] has shown that Imo State young female exhibit poor knowledge, poor attitude and low use of contraception. Factors influencing the prevalence of unintended pregnancy include age, income, desire to have more babies, (or parity), education, religion, marital status, low use of contraception, occupation, awareness (or knowledge) of contraception, etc.[9, 13]. As afore stated; the effects of parity on knowledge, attitude and practice of contraception have not been specifically defined in a study. Thus, this study is motivated by

the zeal to specifically determine the relationships between parity and knowledge, attitude, and practice of contraception in order to predict the effects of parity on the prevalence of unintended pregnancy.

In an article[14], parity is referred to as number of pregnancies beyond 20weeks a woman had carried and delivered. It is often classified into 3 groups: nulli-parity (no parity yet), multiparity (1 to 3parity), and grand parity (4 to 8parity)[14]. Grand parity has been defined in different ways, often suggesting a risk threshold at parity of 5 or more pregnancies[15, 16].

The study covers only Imo State Nigeria, sampling a total of 287 respondents from the three senatorial zones of the state, which includes Okigwe, Owerri and Orlu zones. Jibi and Hemant[17] used descriptive statistics to study knowledge, attitude and practice of contraception among urban women in Mangaluru Karnataka.

Objectives of the Study

The aim of this study is to determine the level of relationship between parity and knowledge, attitude and practice of contraception. The specific objectives include to:

1. Determine the number of Imo State young women of various parities, aged 18 to 45 years that have knowledge of various methods of contraception; number of the women that are willing to practice contraception and number of the women that have practiced contraception.
2. Determine the various sources of knowledge of contraception.
3. Determine the percentage response of respondents of different parities.
4. Determine the association between parity and knowledge, attitude and practice of contraception using Chi-square test.
5. Present a model showing the relationship between knowledge, attitude and practice of contraception.

Hypothesis

1. Parity has no effect on knowledge of contraception
2. Parity has no effect on attitude towards contraception
3. Parity has no effect on practice of contraception

Theoretical Framework

Contraception is a deliberate use of a means for prevention of pregnancy. It is has been defined as deliberate prevention of conception or impregnation by the use of drugs, techniques or devices[18]. The type of contraceptive to be used is rightly selected based on certain considerations related to health belief model (HBM). According to the Health Believe Model[19], a person's willingness to change health behaviour or accept an intervention primarily comes from the person's health perceptions (or knowledge) which includes: *Perceived susceptibility, Perceived severity, Health motivation, Perceived benefits and Perceived barriers*[19]. Health Belief Model supports the theory of reasoned action which was discovered by Martin Fishbein and Icek Ajzen in 1967. The theory is applied to determine the behaviour of an individual by his or her intention which is the cognitive representation towards specific health behavior [20]. Health belief model, as well as the theory of reasoned action, both suggests that the attitude of an individual is influenced by the thinking process or perception of the individual. Virtually every woman is conscious of her parity. Therefore, based on the health belief model and theory of reasoned action, parity possibly has influence on knowledge, attitude and use of contraception; also, for an individual to show positive attitude towards any method of

contraception, the person needs to have adequate knowledge of the contraception, which may include how it works, the cost, accessibility and possible side effects.

Review of Empirical Studies

The negative socio-economic impacts of unintended pregnancy have drawn the interest of researchers all over the world to different areas of study related to unintended pregnancy. Previous studies have shown attempts made to investigate the causes, consequences, prevention, and the factors influencing unintended pregnancy in different parts of the world. The study by Agida*et al.*[9] shows that the respondents have good knowledge of contraception (86.3%) while the usage was quite low (61.9%). The results of the Chi-square tests show significant associations between age and unintended pregnancy ($P < 0.001$) and as well parity and unintended pregnancy ($P < 0.001$). In the study, high prevalence of unintended pregnancy was associated with low use of contraceptive. A study conducted in Pakistan[20] shows that the women in Pakistan have different levels of knowledge for various methods of contraception. Another study conducted in Pakistan[29] reveals that most of the women in Pakistan have poor knowledge of contraception while some displayed poor attitude and poor practice of contraception. A similar study conducted in Nigerian[30] shows that 66.3% of the women use modern contraceptives, 6.7% use natural method while 0.7% use traditional methods. It was found that 26.3% of the women were not using any method of contraception due to inaccessibility, poor socio-economic status, religion and family belief. In Nepal, a similar study[31] was conducted which reported good knowledge, good attitude and good practice of contraception. The study further revealed that 97.6% of the women know about only one method of contraception. Nansseu*et al.*[32] conducted a similar study in Cameroon which shows that 96% of women in Cameroonian have knowledge of contraception, 96% using condom, 86% practicing safe period while 76.2% were using Injectable. However, 31.4% of the women were not using any contraceptive due to fear of side effects. A study conducted in Thailand[33] reported that 90 % of the women know about contraceptives but some of them displayed poor practice due to poor educational background and lack of healthcare services. In another study, Ayub *et al*.[34] shows that educational status has effect on knowledge and practice of contraception. A study conducted in Jodhpur India[35] shows association between contraception and marital status, age, and family size. The results of the study further show that the women that were willing to practice postpartum contraception were nulliparous. This suggests that parity has effects on attitude towards contraception. Wahyuningsih *et al*.[36] conducted a study on parity and pregnancy intention related to the use of contraceptives in women of reproductive age in Indonesia. The results obtained show that women of reproductive age who do not use contraception to control their pregnancy have the possibility of getting pregnant at the wrong time. Parity was stated as one of the reasons for some of the women not using contraception. Some other studies[37-39] have attempted to associate parity with use of contraception.

So far, previous studies have not clearly defined the effects of parity on use of contraception. However, the association of parity with knowledge, attitude and practice of contraception is supported by Health Belief Model and Theory of Reasoned Action[19, 20]. Therefore, this study is intended to statistically define the relationship between parity and knowledge, attitude and practice of contraception in Nigerian women age 18 to 42 years, using Imo State as case study.

Materials and Methods

Research Design – Descriptive cross-sectional survey was adopted for this study. This design has been used in a related study[17].

Materials – The materials used as sources of information for this study include online books, journals, newspapers, magazines and structure questionnaire.

Population – Data was collected from singles, married, divorcees, widows and females of unspecified marital status, age of 18 to 42years from Okigwe, Owerri and Orlu zones of Imo State Nigeria in Imo State Nigeria. Female in all parity groups (0, 1, 2, 3, 4, and >4) were considered.

Sampling Technique – Subjective sampling technique was used for this study.

Sample Size – Kish formula[40] was used to estimate the sample. Based on the sample size used in a previous studies[20], the response from 27% (i.e. P = 0.27) of the entire population was deemed sufficient for this study which gives 303 sample size.

Setting – Data was collected from two government hospitals, one private hospital and streets in each senatorial zone of Imo State Nigeria (i.e. Okigwe, Owerri and Orlu zones).

Variables: The variables considered in this study include age, marital status, parity, and knowledge, attitude, and practice of contraception.

Methods of contraception: The methods of contraception included in this study are combined oral contraceptives, progestogen only pills, breastfeeding, barrier, implant, intrauterine contraceptive devices (IUCD), Injectable, withdrawal and bilateral tubal ligation.

Duration of study: Data was collected from May, 2021 to April, 2022.

Data collection: Two hundred and eighty seven (287) copies of the completed questionnaire were retrieved out of the 303 copies administered. The number of respondents that gave a similar response to a particular question was recorded. The number of respondents that did not give answer to a particular question was also recorded. The percentage of respondents that gave similar answer to a particular question was calculated as the response as well as the percentage of the respondents that did not give answer to a particular question. The results obtained were recorded in accordance to the parity of the respondents (i.e. 0, 1, 2, 3, 4, and >4).

Data Analysis: Data was analyzed using SPSS version 29.0 and Microsoft Office Excel 2010. Frequency distribution in two way tables were used to present the data and Chi- square test was used to determine the associations between parity and knowledge, parity and attitude and parity and practice of contraception. In the Chi square test, p-value < 0.05 was considered significant. Pearson's correlation coefficient was determined between knowledge and attitude to contraception using Microsoft Excel. The responses obtained were graded by the authors following the criteria: 1. (< 50%) = Poor, 2. (50 - 70%) = Good and 3. (> 70%) = Very good.

Imo State

Imo State is one of the 36 states in Nigeria, in the South-East geopolitical zone and bordered to Anambra State, Rivers State, Cross River State, Enugu State, Ebonyi State and Abia State. Imo State was created on 3 February, 1976 out of the old east central state by the then regime of General Murtala Mohammed. It has Owerri as its state capital and largest city, with other notable towns such as Orlu, Obowo, Oguta, Mbaise, Mgbidi and Okigwe. It is made up of 27 local government areas, covering a land mass of about 5135km^2 with a estimated population

of 5459300 as at the year 2022[41]. Presently, Imo State records high rate of unintended pregnancy, yet show negative attitude to use of contraceptives[11, 12].

Results and Conclusion

Results

Table 1: Number of administered / retrieved questionnaire and study location

Study location/settings	Administered	Retrieved
Okigwe zone		
Hospital A (Government)	28	26
Hospital B (Government)	24	23
Hospital C (Private)	23	22
Street	26	25
Orlu zone		
Hospital A (Government)	23	21
Hospital B (Government)	25	24
Hospital C (Government)	23	22
Street	24	23
Owerri zone		
Hospital A (Government)	24	23
Hospital B (Government)	26	25
Hospital C (Government)	30	27
Street	27	26
Total	**303**	**287**

Table 2: Frequency and percentage of respondents in various age groups

Characteristics	Frequency	Percentage
Age		
18 – 22	24	8.4
23 – 26	47	16.4
27 – 30	77	26.8
31 – 34	98	34.1
35 – 38	31	10.8
39 – 42	10	3.5

From Table 2 the mean, standard deviation and modal age of the respondents were calculated using microsoft excel, and the results obtained are as follows:
Mean age, m = 29.8years.
Modal age, m_o = 31.5years.
Standard deviation, SD = 4.9years.

Table 3: Showing the percentage of the respondents and their various sources of knowledge of contraception for all the Okigwe, Orlu, and Owerri zones put together

Source	No. of Resp.	%. of Resp.
Radio programs	33	12
Newspapers	15	5
Public health awareness	26	9
Television programs	34	12
Hospital orientations	38	13
Peers	51	18
Health magazines	24	8
Research journals	33	12
School	10	3
Others	23	8
Sum	**287**	**100**

%. of Resp. – Percentage of respondents (response).

Table 4: Showing the frequency of parity (F) and the response (%) on knowledge, attitude and practice of contraception for each parity

Parity	F	Knowledge	Willing	Unwilling	No response	Practice
0	25	25(100%)	20(80.0%)	2(8.0%)	3(12.0%)	16(64%)
1	26	26(100%)	17(65.4%)	5(19.2%)	4(15.4%)	16(61.5%)
2	90	90(100%)	64(71.1%)	20(22.2%)	6(6.7%)	61(67.8%)
3	87	87(100%)	61(70.1%)	16(18.4%)	10(11.5%)	60(69.0%)
4	38	38(100%)	32(84.2%)	3(7.9%)	3(7.9%)	26(68.4%)
>4	21	21(100%)	17(80.9%)	3(14.3%)	1(4.8%)	16(76.2%)

Table 5: Response (%) on knowledge, attitude (willingness) and practice of various methods of contraception

Method	Knowledge	Attitude	Practice
Combined oral contraceptives	100 (34.8%)	95 (33.1%)	83 (28.9)
Progestogen only pills	230 (80.1%)	220 (76.7%)	161 (56.1%)
Bilateral tubal ligation	76 (26.5%)	69 (24.0%)	51 (17.8%)
Breastfeeding	170 (56.2%)	166 (57.8%)	144 (50.2%)
Injectables	181(63.1%)	179 (62.4%)	165 (57.5%)
Implant	71 (24.7%)	70(24.4%)	66 (23.0%)
Withdrawal	173 (60.3%)	167 (58.2%)	155 (54.0%)
Barrier	287 (100%)	187 (65.2%)	162 (56.4%)
IUCD	163 (56.8%)	154 (53.7%)	136 47.4%)

Table 6: Result of Chi-test between parity and knowledge of contraception

Parity	Frequency	Knowledge	Chi-test p-value
0	25	25	
1	26	26	
2	90	90	
3	87	87	
4	38	38	
> 4	21	21	**1**

Table 7: Result of Chi-test between parity and attitude to contraception

Parity	Willing	Unwilling	Chi-test p-value
0	20	2	
1	17	5	
2	64	20	
3	61	16	
4	32	3	
> 4	17	3	**0.333**

Table 8: Result of Chi-test between parity and practice of contraception

Parity	Frequency	Practice	Chi-test p-value
0	16	4	
1	16	2	
2	61	3	
3	60	1	
4	26	6	
> 4	16	1	**0.015**

Table 9: Result of Pearson's correlation test between knowledge and attitude to contraception

Method of contraception	Knowledge	Attitude (Willingness)	Pearson's correlation coefficient (r)
Combined oral contraceptive	100	95	
Progestogen only pills	230	220	
Bilateral tubal ligation	76	69	
Breastfeeding	170	166	
Injectables	181	170	
Implant	71	70	
Withdrawal	173	167	
Barrier	287	187	
IUCD	163	154	**0.911**

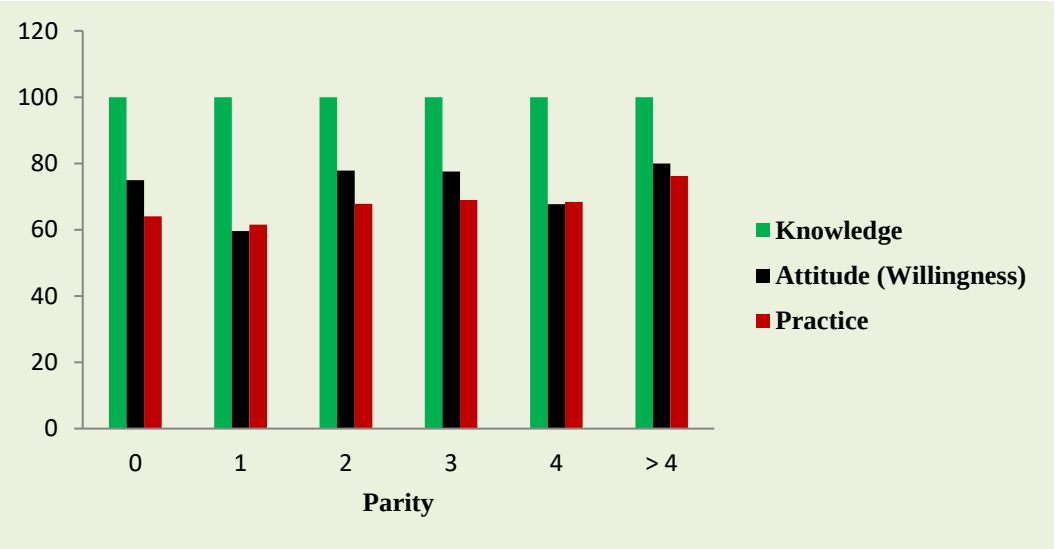

Figure 1: Knowledge, Attitude and Practice of contraception based on parity

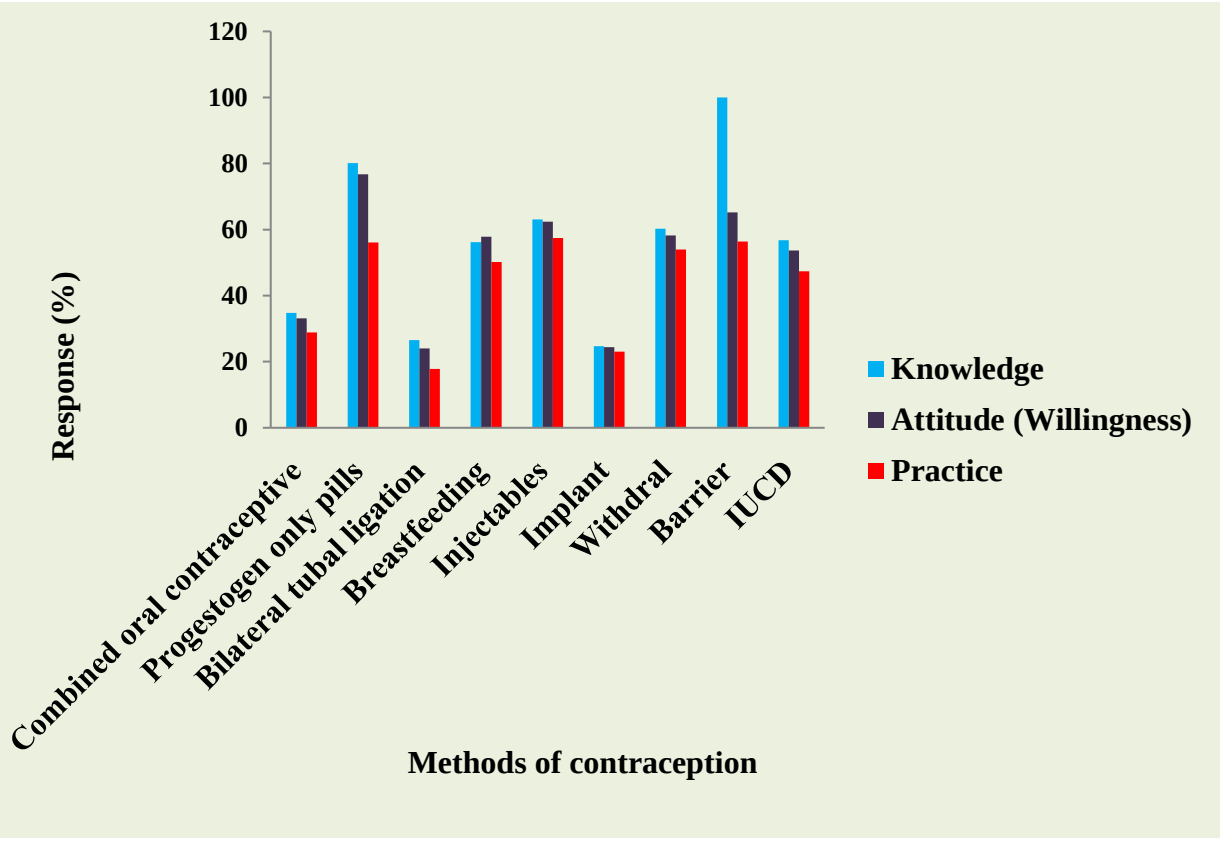

Figure 2: Response on knowledge, attitude anf practice of the various methods of contraception

Discussion

Table 1 shows that a total of 303 copies of questionnaires were administered while 287 copies were retrieved with responses. **Table 2** shows that most of the resondents (34.1%) were of age 31 – 34years. **Table 3** shows that most Imo State young female (18%) access knowledge of contraception through their peers. **Table 4** shows that all (100%) of the respondents have knowledge of contraception; respondents of parity (>4) were most willing to practice contraception and as well have practiced contraception the most. **Table 5** shows that barrier method is the most known method (100%); progestogen only pills attracted the willingness of most of the respondents (80.9%) while injectables had been practiced most by the respondents. **Table 6**, **Table 7**, and **Table 8** respectively show no association between parity and knowlegde of contraception ($p = 1$); insignificant association between parity and attitude to contraception ($P = 0.333$) and significant association between parity and practice of contraception ($P = 0.015$). This result conforms with the result of Agida*et al.*[9] which shows significant association between parity and practice of contraception ($p < 0.001$) but contradicts the findings from another study which shows significant association between parity and awareness (or knowledge) of contraception ($p < 0.001$)[42]. Figure 1 is a graphical plot of Knowledge, Attitude and Practice of contraception based on parities of the respondents.

From **Figure 1**, it can be deduced that all (100%) the respondents in all parity have knowledge of contraception. The figure further shows that the response on attitude (willingness) to contraception varied between 65.45% and 84.2% for all the respondents in all the parity (0, 1, 2, 3, 4 and >4). However, the variation did not follow a regular pattern. Also, the response on

practice of contraception varied between 61.5% and 76.2%. These results suggest that parity does not affect knowledge, but affects attitude and practice of contraception. Naqvi*et al*. [43] got a similar result, which displayed good knowledge of contraception but less practice. In this study, 75% of the nulliparous showed willingness to contraception while 64% had practiced contraception. Because the nulliparous women had no child yet, they would show less practice of contraception in order to conceive. This might be the reason the response on practice is less than that of willingness. This result, to a reasonale extent conforms with the result of Budu *et al.*[42] where 55.3% of the nulliparous women showed willingness. On the other hand, the findings from this study disagree with the results of another study conducted in Pakistan[29] which revealed that most of the women in Pakistan have poor knowledge of contraception while some displayed poor attitude and poor practice of contraception. Interestingly, the results of this study agree with the results obtained from a study conducted in Nepal[31] which reported good knowledge, good attitude and good practice of contraception for all the sampled participants.

Figure 1 shows that respondents in all parity (0, 1, 2, 3, 4, and >4) have knowlegde of contraception. Similar results have been obtained from other studies[33, 42]. The figure further shows that 59.6% of the respondents in parity (1) displayed willingness to contraception while 61.5% of the respondents in the same pariy had practiced contraeption. Unlike the nulliparous, those in parity (1) showed more practice than willingnes, probably because of child spacing. From the figure, it can be noted that all (100%) the respondents in parity (2) have knowlegde of contraception although in a similar study[42], a lesser response on knowledge (37.2%) had been recorded for women in parity (2). Figure 1 also shows that 77.9% of the respondents in parity (2) had willingness to contraceptionand 67.8% of the same parity had practiced contraception. Some women with two children would have not completed their family, so even though they have much willingness to practice contracepiton; for the fact that they are yet to complete their familty, their practice of contraception would be less. This might be the reason the respondents in this category showed less practice but more willingness to contraecption. Agida*et al.*[9] shows a similar result where (86.3%) of the respondents have knowledge of contraception while (61.9%) had practiced. Agida*et al* also showed significant associations between parity and unintended pregnancy ($P < 0.001$). However, the association between parity and knowledge, attitude, and practice of contraception was not investigated in their study. **Figure 1** shows that all (100%) of the respondents in parity (3) have knowlegde of contraecption while another study[42] shows that only (40.6%) of women in parity (3) had knowledge of contraception. This discripancty might be attriuted to differences in level of exposure in diffenet study locations.

Furthermore, **Figure 1** shows that 77.65% of the women in parity (3) had willingness to contraception and 69.0% had practiced. This result also suggests that some of the respondents with three children had not yet completed their family; therefore, would show less practice of because they still want to have babies.It shows that all (100%) the respondents in parity (4) had knowledge of contraception whereas in another study[42], only 42.6% the respondents in this (4) had awareness of contraception. Of all the respondents in parity (4), 67.7% showed willingness while 68.4% had practiced contraception. Drammatically, the respondents in this category showed almost equal responses on knwoledge and practice of contracepiton. In the recent times, most women with four children would have completed their family. For this study, it might be that virtually all the respondents in parity (4) showed good willingness to practice contraception because they have no intention to conceive.**Figure 1** also shows that all (100%) the respondents in parity (>4) have knowlegde of contraception, 80% showed willingness while 76.2% had practiced contraception. In the recent times, most women with up to four children would have had enough number of children they planned to have. Based on this fact,

one would expect more response on practice than willingness of contraception. However, many women in this category have approached menopause, therefore would show less response on practice of contraception. This might be the reason the respondents in parity (>4) exhibited less practice of contraception compared to their willingness. The result of this study shows that the highest willingness to accept contraception was displayed by women in parity (>4) (80%). Budu *et al.*[42] got a similar result which suggest that the more the parity, the more the willingness to practice contraception.

In a study[42], the willingness to contraception increased with increase in parity but the study presented in that paper shows no regular parttern of variation between parity and willingness to contraception; rather the nulliparous women had the lowest willingness which connotes the statement made by Samandari *et al.*[44] that "women of less parity will likely show negative attitude to contraception". In this present study, the highest willingness to contraception was dislayed by women in parity (2) (22.2%) while the lowst willingness as afore stated was dispayed by the nulliparuos women (8.0%). Women of parity (1) showed the lowest practice (61.5%) of contraception while those in parity (>4) displayed the highest practiced (76.2%).

The responses on knowledge, attitude and practice of the various methods of contraception are given in **Table 5** and presented graphically in **Figure 2**. The figure 2shows that all the respondents (100%) have knowledge of the barrier method of contraception which suggests that the barrier is the most common method of contraception among Imo State young female. A similar result was obtained in a study conducted in Cameroon[32], in which most of the women (96%) had knowledge of the barrier (condom). For this study, the next to the barrier method is progestogen only pills, for which response of (80.1%). Implant was the least known (24.7%). This result shows that most of the respondents do not have knowledge of implant.

Figure 2 also show that many of the participants have willingness for progestogen only pills (76.7%), followed by barrier method (65.2%), while the least interest was shown for implant (24.4%). The poor knowledge and the poor attitude towards implant may be due to the associated high risk. Furthermore, **Figure 2** shows that most of the participants had practiced injectables with response of (57.5%), followed by the barrier method, with response of (56.4%) while the least is bilateral tubal ligation with response of (17.8%). The reason for the high level practice of injectables might be because the method is long acting with less failure rate compared to other methods. The high level practice of the barrier method might be attributed to cheap cost[45] and easy application associated with the barrier methods. A study conducted in Nigerian[30] shows that 66.3% of the sampled women use modern contraceptives, 6.7% use natural method while 0.7% use traditional methods. The results of this study agree with the findings from a study conducted in Pakistan[20] which shows that the women in Pakistan have different levels of knowledge for various methods of contraception.

Based on the response grading criteria adopted for this study, it can be said that Imo State young women aged 18 to 42years have "very good" knowledge, show: "very good" attitude and "good" practice towards contraception. This suggests that the high rate of unitended pregnancy recorded in Imo State is not traceable to lack of knowledge of contraception, neither poor attitude to contraception. Also, based on the results of the Chi-square test given in **Table 6**, **Table 7** and **Table 8**, it can be said that parity is related to practice of contraception ($p = 0.015$) but not related to knowledge ($p = 1$) and attitude ($p = 0.333$) towards contraception. These results show that the first hypothesis is true; the second hypothesis is true; but the third hypothesis is not true. The result of Pearson's correlation test given in **Table 9** shows that knowledge and attitude to contraception are strongly related ($r = 0.911$). Based on the findings from this study a model has been proposed, which is illustrated as **Figure 3**: showing related

variables among parity, knowledge, attitude and practice of contraception using colour code. Parity and practice of contracetption are related; thus, both are presented in "blue" while knowledge and practice of contraception are related; and both are presneted in "yellow"

Figure 3: Proposed model relating parity, knowledge, attitude and practice of contraception

Conclusion

Based on the findings from this study, it can be concluded that parity has no effect on knowledge and attitude to contraception but has significant relationship with practice. Imo State young women have very good knowledge, very good attitude and show good practice towards contraception. The high rate of unintended pregnancy in Imo State is not associated with knowledge, attitude and practice of contraception. Barriers are the most common method of contraception known to Imo State women while the most used is Injectable. Most of Imo State young women access knowledge of contraception through their peers. However, the results obtained from this study may not be suitable for generalized conclusion to all young women in Imo State because of the sampling technique adopted.

Recommendations

Further studies are recommended, in which broader study settings are covered. Further researches are also recommended, in which other methods of contraception (such as traditional methods) are considered. It will be interesting to consider failure rate and health status of the patients as determinant factors for attitude and practice of contraception. More intensive awareness on contraception is required in the various study settings to improve the attitude and practice of contraception in order to reduce to rate of unintended pregnancy. Public awareness on the use of contraception and inculcating sex education into the curriculum at primary, secondary and tertiary levels of education can help to improve knowledge, attitude and practice of contraception, thereby minimize the rate of unwanted pregnancy.

Contribution to Knowledge

This study has shown that Imo State young women have very good knowledge, very good attitude and showed good practice towards contraception which suggests that some other factors such as failure of contraception may be responsible for the high prevalence of unwanted pregnancy in Imo State. This study has also shown that parity is related to practice of contraception but not related to knowledge and attitude to contraception.

Conflict of Interest

The authors declare no conflict of interest on this paper.

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