**The Use of Contraception among Young Women in Imo State, Nigeria: Effect of Age and Occupation on Knowledge, Attitude and Practice**

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**ABSTRACT**

Over years, various methods of contraception have been in used for prevention of unwanted pregnancy which is one of the major challenges facing developing countries such as Nigeria. The high rate of unwanted pregnancy might be associated with poor knowledge, poor attitude and poor practice of contraception. Therefore, this study was conducted, which was focused on evaluating the knowledge, attitude and practice of various methods of contraception. Descriptive survey was adopted for this study, in which numerical data was collected as response from structured questionnaire administered by objective sampling technique to young mothers aged 18 to 42years in Imo state, covering the three senatorial zones. The data was frequencies of the respondents that gave similar response on a particular question. A total of 303 questionnaires were administered, while total of 287 were realized with response. Also, 287 (100%) of the respondents have knowledge, 211 (73.5%) showed willingness while 195 (67.9%) have practiced at least one of the given methods of contraception while 27 (9.4%) did not give response. The criteria for grading the responses for this study were < 50% (poor); 50 – 70% (good) and > 70% (very good). Based on these criteria, the respondents displayed poor knowledge (34.8%), poor attitude (33.1%) and poor practice (28.9%) of combined oral contraceptives. They showed very good knowledge (80.1%); very good attitude (76.7%) and good practice (56.1%) of progestogen only pills. For bilateral tubal ligation, the respondents showed poor knowledge (26.5%), poor attitude (24.0%) and poor practice (17.8%). For breastfeeding, they respondents displayed good knowledge (56.2%), good attitude (57.8%) and good practice (50.2%). For Injectables, they had good knowledge (63.1%), good attitude (62.4%) and good practice (57.5%). The response on implant was poor knowledge (24.7%), poor attitude (24.4) and poor practice (23.0%). The response on withdrawal was good knowledge (60.3%), good attitude (58.2%) and good practice (54.0%). The responses on barrier were very good knowledge (100%), good attitude (65.2%) and good practice (56.45). Finally, the response on IUCD was good knowledge (56.8%), good attitude (53.7%) and poor practice (47.4%). The data was further analyzed using Chi test to determine the association between the demographic characteristics and knowledge, attitude and practice. The result of Chi test showed no association between knowledge of contraception and the demographic characteristics (age and occupation) of the respondents (p = 1). Similar finding was evident between attitude and the demographic characteristics. However, there was obvious association between practice and demographic characteristics.

**Keywords:** Age, Attitude, Contraception, Imo state, Knowledge, Nigeria, Occupation

1. **INTRODUCTION (Font-Times New Roman, Bold, Font Size -12)**

The incidence of sexually transmitted diseases or infections and associated complications can be limited together with reduced occurrence of unwanted pregnancies and unsafe induced abortions by the knowledge of and appropriate use of contraception [1,2]. Individuals or couples voluntarily adopt contraception on the bases of knowledge, attitudes and responsible decision. The human right of people is advanced by contraception because it enables them to determine the number and spacing of their children [3].

Contraception has been defined by Mturi cited by [4] as any deliberate practice to reduce the risk of conception. The use of contraception has been regarded as the most vital immediate determinant of fertility [5]. The right to freely and responsibly decide the number and spacing of their children including having access to the information, education and methods to go about it is exercised by all couples and individuals [6].

There are currently present at all tiers of government and private health facilities short term modern methods of contraception, while in health centres, hospitals and private clinics long term methods are being provided [7]. Though contraception methods are freely available at health facilities all over the country [1], its utilization is remains low among young mothers, with high frequency of unplanned pregnancies that result in most public health problem especially in developing countries [8]. The use of contraception results in reduced costs of healthcare for pregnancies, reduced maternal and infant morbidity and mortality rates, and increased standard of living [9]. Increase use of contraceptive and positive outcomes is associated with good knowledge of contraception. Insufficient knowledge of the methods of both control and associated challenges of human reproduction including difficulty in mastering the skills required for many reversible methods of contraception [10]. The basic requirements for effective contraceptive use include knowledge about methods of birth control including access to them [11]. Thus, in the absence of basic knowledge and access to service, it will be unreasonable to expect widespread and careful use of contraception.

Among women of reproductive age in Nigeria, contraceptive knowledge and awareness is generally high but despite this, low usage has been reported in studies and was further buttressed by Nigeria Demographic and Health Survey (NDHS) in 2013 [12]. In 2013 report, by NDHS, modern contraceptive usage in Nigeria was placed at 10% amounting to 6% increases over 24 years period. In Imo State, the maternal and infant mortality remain high (576 per 100, 000 live births) and 96 per 1000 live births respectively notwithstanding the availability of contraception [13].

Regarding the methods of contraception, majority of the young mothers know little and even when they know the names of some contraceptive, the place to access them or how to properly use them are not known to these mothers. Thus, it is evident that the several reasons for the dearth of contraception utilization is minimal knowledge of contraception methods, fear of unexpected result, approbation based on social and religious sentiment and provider bias.

In this paper, the aim is to determine the effect of age and occupation on knowledge, attitude and practice of contraception among young women in Imo state, Nigeria.

The specific objectives are to determine how age affects the knowledge, attitude and practice of contraception. And to determine how occupation affects the knowledge, attitude and practice of contraception among young women in Imo state.

 The research questions are:

Research question 1: Does age affect knowledge, attitude and practice of contraception?

Hypothesis 1: Age does not affect knowledge of contraception.

Hypothesis 2: Age does not affect attitude to contraception

Hypothesis 3: Age does not affect practice of contraception

Research question 2: Does occupation affect knowledge, attitude and practice of contraception?

Hypothesis 1: Occupation status does not affect knowledge of contraception.

Hypothesis 2: Occupation status does not affect attitude to contraception

Hypothesis 3: Occupation status does not affect practice of contraception

1. **METHODOLOGY**

## Study Design

A descriptive research design (survey approach) was adopted in this study, which covers the following:

1. Identification of problem
2. Review of literature around the problem statement
3. Statement of hypothesis
4. Sources of data
5. Methods of data analysis
6. Methods of result presentation

This study was designed to use questionnaire method to generate quantitative data on knowledge, attitude and practice of contraception from respondents in the three senatorial zones of Imo State, which includes Owerri, Orlu and Okigwe zone by random sampling.

**2.2 Duration of Study**

This study was carried out for a period of one year (May, 2021 to April, 2022).

## 2.3 Location of Study

This study was conducted in only Imo State, covering the three senatorial zones, which includes Okigwe, Owerri and Orlu zones. 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 February, 3rd, 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, Okigwe situation. It is made up of 27 local government areas, covering a land mass of about 5135km2 with an estimated population of 5459300 as at the year 2022 [14]. Figure 1 shows the map of Imo State.



**Fig. 1.** *Showing the map of Imo State, 5.5720oN, 7.0588oE [15]*

Okigwe zone: In this zone, the medical institutions visited are Ibeme Community Health Centre, located at Umueze Ibeme Ugiri, Isiala Mbano LGA; Ogbor Ugiri Community

Health Centre, located at Eke Ogbor Market in Ugiri, Isiala Mbano LGA and Hifa Hospital, located at Ndiowakereonye Arondizuogu Onuimo LGA.

Owerri zone: The medical institutions visited in Owerri zone include Federal Teaching Hospital Owerri; Umunahu Community Health Centre Umunahu Owerri North LGA and Akarugo Hospital, Ikenegbu Owerri Municipal.

Orlu zone: In Orlu zone, the medical institutions visited includes Nnenasa Health Centre Njaba LGA; Maternity and Child Health Dept. of Health, Orlu council in Orlu LGA and Ezinne Maternity Home, Ihitenansa Orlu LGA.

Streets of the various visited communities were also considered as study locations.

## Study Population

The population considered in this study includes the young mothers between the ages of 18 and 42 years. This study population captures the single, married, divorcee, widows and mothers of unspecified marital status from the three senatorial zones. Based on previous studies, such as [16], the response from 27% of the entire population was deemed sufficient for logical conclusions in this study.

## Sample Size

Jaykaran and Tamoghna [17] defined Equation (1), which was used for calculating the sample size in this study.

 (1)

where Z1-α/2 is the standard normal variate (taken at 5% error margin), P is the expected proportion in population based on previous studies or pilot studies and d is the absolute error or precision. Since the error margin taken for this study is 5%, Z1-α/2 = 1.96 and d=0.05. The 27% proportion of the entire population gave sample size of 303 which was targeted for this study.

## Case Definition

Contraception is a method of birth control by the use of contraceptives [18]. It has been a reliable measure for prevention of unwanted pregnancy [19]-[21]. The use of contraception for prevention of unwanted pregnancy has been recommended by various health institutions across the globe [18,22]. Some methods of contraception that have been practiced over years are given as follows:

* Barrier method [16]
* Oral contraceptives [16]
* Implant (or Norplant) [16,22]: A single, thin rod that is inserted under the skin of a woman’s upper arm. It can last over 3 years. Typical use failure rate 0.1%.
* Intrauterine Contraceptive Device (IUCD) [16]: A small T-shaped device that a provider inserts into the uterus. It can last 3-10years. There are 2 types – hormonal IUCDs and copper IUCDs. Hormonal (Levonorgestrel) intrauterine last 3-6 years with a typical use failure rate of 0.1 – 0.4% copper last up to 10 years with a typical failure rate of 0.8%.
* Breastfeeding [16]
* Progestogen only pills [16,23]
* Bilateral tubal ligation [16]
* Injectables [16]
* Withdrawal method [16]
* Failure use rate – the proportion of women who will become pregnant in the 1st, 12mths after initiating method use.
* Typical use failure rate – Express of effectiveness among all women who use the method, including those who use it inconsistently and incorrectly.
* Failure rate – the anticipated number of times that an item fails in a specified period of time. It is a calculated value that provides a measure of reliability for a product.

Implant and IUCD are classified as long acting reversible contraceptives (Larcs). They are very effective with failure rates less than 1% per year. They also give high rates of patient satisfaction and continuation. However, there are few exceptional cases [22]. Larcs have gained confirmation as safe method of contraception for women often after [19,21]. The WHO’s 2010 Medical Eligibility Criteria (MEC) for contraceptive use recommends larcs for mothers between the age of18 and 20 yrs.

## Sampling Technique

Subjective sampling technique was adopted in this study, in which three hundred and three (303) copies of structured questionnaire were self-administered, to three hundred and three respondents (young mothers between the age of 18 and 42years) from the various study locations (i.e. Okigwe, Owerri and Orlu zones) of Imo State in order to get their response on knowledge, attitude (willingness /unwillingness) and practice of contraception under the various demographic characteristics considered in this study, which includes age, parity, religion, marital status, educational status and occupation. In each senatorial zone, the questionnaire was administered to patients in two government hospitals; one private hospital and street. The numbers of administered/ retrieved questionnaire and study locations are given in Table 1.

**Table 1.** Number of administered / returned questionnaire and study location

|  |  |  |
| --- | --- | --- |
| **Study location** | **Administered** | **Returned** |
| **Okigwe zone:** |  |  |
| Ibeme Community HealthCentre (**Government**) | 28 | 26 |
| Ogbor Community HealthCentre (**Government**) | 24 | 23 |
| Hifa Hospital (**Private**) | 23 | 22 |
| **Street** | 26 | 25 |
| **Orlu zone:** |  |  |
| Nnenasa Health Centre(**Government**) | 23 | 21 |
| Maternal and Child Health Orlu(**Government**) | 25 | 24 |
| Ezinne Maternity Home (**Private**) | 23 | 22 |
| **Street** | 24 | 23 |
| **Owerri zone:** |  |  |
| Federal Teaching HospitalOwerri; (**Government**) | 24 | 23 |
| Umunahu Community HealthCentre (**Government**) | 26 | 25 |
| Akarugo Hospital (**Private**) | 30 | 27 |
| **Street** | 27 | 26 |
| Total | 303 | 287 |

The questionnaire was administered every first week of each month and the completed copies were collected before the end of the month. Only patients willing to participate in the exercise were given the questionnaire, in other words, no respondent was compelled to participate in the exercise. However, the relevance of this study was well explained to the respondents in order to gain their interest. Also, the terms of the questionnaire were clearly explained to the respondents to enable them give the appropriate response based on individual discretion. The exercise was started in 1st May, 2021 and was ended in 30th April,, 2022. The number of administered / returned questionnaire and the various study locations are given in Table 1.

## Data Collection

Two hundred and eighty seven (287) copies of the completed questionnaire were returned out of the 303 copies administered. The response were carefully sorted and categorized under the various demographic characteristics. In each case, the number of respondents giving a similar response to a particular question (frequency) was recorded. Also the number of participants that did not give response to a particular question was also recorded. The number of similar response (frequency) obtained for each question was considered as raw data. The participants got knowledge of contraception from different sources as shown in Tables 2.

**Table 2.** Sources of knowledge, respondents and percentage of contraception for all zones

|  |  |  |
| --- | --- | --- |
| **Source** | **No. of Responses** | **% of Responses** |
|  |  |  |
| Radio programs | 33 | 12 |
| News papers | 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 |

## Data Analysis Method

Data was analyzed using the Statistical Package for Social Sciences (SPSS) and Microsoft Office Excel 2010. Frequency distribution and two way tables were used to summarize the data and Chi square test was used to determine the association between each of the demographic characteristics and knowledge, attitude and practice of contraception. In the Chi square analysis, p-value < 0.05 was considered significant.

Based on the discretion of the researcher, the criteria adopted for grading the response for this study is given as follows:

Response (< 50%) – Poor

Response (50 - 70%) – Good

Response (> 70%) – Very good

##  Validity/Reliability of Instrument

Validity of data collecting instrument influences decisions and conclusions on the research especially as regards applicability of findings. To determine the validity of the data collecting materials used for this research, copies of the questionnaire and other instruments were presented to supervisors and three experts in the area of measurement and evaluation in the field of education to assess the questions in face and content validity. In this study, a test re-test approach was employed to ensure that the instruments gave consistent and reliable results. As a reliable statistical tool, Chi-square analysis was used to test the research hypothesis at significant level of (p < 0.05).

##  Ethical Consideration

In line with ethical requirement standard for medical research, the approval to conduct this study was sought for and granted by the Ethical and Research Review Committee of Imo state and the Ethics Committee of the health facilities before embarking on the study. Also, the authorization to administer the research questionnaire in the streets of the visited localities was obtained through the community leaders of each of the visited area. These consideration were made as standard for international best practice, according to Helsiniki declaration. The financial responsibility of this research was borne by the researcher.

1. **DATA ANALYSIS**

## Data Presentation

The data obtained from this work is presented in this section using two way tables, bar charts and pie chart. Table 3 shows the frequency distribution of the respondents in various age groups. Table 4 shows the frequency distribution of the respondents based on occupation. Table 5 showsresponse (%) on knowledge, attitude and practice of various methods of contraception. Table 6 shows responses on willingness to contraception. Table 7 shows thereasons for willingness to contraception. Table 8 shows the reasons for unwillingness to contraception. Table 9shows the frequency of age group knowledge and response (%) regarding attitude (willingness, unwillingness, and no response) and practice of contraception for the age group. Table 10 shows the frequency of occupation knowledge and response (%) regarding attitude and practice of contraception base on occupation. Table 11 shows the result of the chi-test conducted to determine the association between the demographic variables and knowledge, attitude and practice of contraception.

The number of copies of the questionnaire administered in the various study locations and the number returned with response is given as follows

* Okigwe zone: Administered = 101; Retrieved with response = 96
* Orlu zone: Administered = 95; Retrieved with response = 90
* Owerri zone: Administered = 107; Retrieved with response = 101
* Total: Administered = 303; Retrieved with response = 287; Not retrieved = 16 (5.3%)
* Mean age, m = 29.8years
* Modal age, mo = 31.5years
* Standard deviation, SD = 4.9years

**Table 3.** Frequency of respondents in various age groups

|  |  |  |
| --- | --- | --- |
| **Age** | **Frequency** | **Percentage** |
| 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 |

Table 3 shows the percentage of respondents from different age groups. It shows that 24 (8.4%) of the 287 respondents were aged 18 – 22 years, 47 (16.45%) were aged 23 – 26 years, 77 (26.8%) of the respondents were aged 27 – 30 years, 98 (34.1%) of the respondents were aged 31 – 34 years, 31 (10.8%) of the respondents were aged 35 – 38 years while and 10 (3.5%) of the respondents were aged 39 – 42 years. This data shows that most of the respondents were in the age range 31 – 34 years.

**Table 4.** Frequency of respondents based on occupation

|  |  |  |
| --- | --- | --- |
| **Occupation**  | **Frequency** | **Percentage** |
| Civil service  | 55 | 19.2 |
| House wife  | 20 | 10.1 |
| Others  | 203 | 70.7 |

Table 4 shows the percentage of respondents based on occupation. It shows that 55 (19.2) are civil servants; 20 (10.1%) are house wife and 203 (70.7%) have other occupations. The data shows that most of the respondents are neither civil servants nor house wives.

**Table 5.** Response on knowledge, attitude and practice of various methods of contraception

|  |  |  |  |
| --- | --- | --- | --- |
| **Method of contraception** | **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%) | 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%) |
| Withdrawal | 173(60.3%) | 167(58.2%) | 155 (54%) |
| Barrier | 28 (100%) | 187(65.2%) | 162(56.4%) |
| IUCD | 163(56.8%) | 154(53.7%) | 136(47.4%) |

Table 5 shows the percentage of the respondents that have knowledge of different methods of contraception. It further shows the percentage of the respondents that showed willingness to practice contraception and the percentage of the respondents that have practiced the various methods of contraception. From the table, 100 (34.8%) have knowledge of combined oral contraceptive, 95 (33.1%) showed willingness towards combined oral contraceptive while 83 (28.9%) has practiced the method. 230 (80.1%) have knowledge of progestogen only pills, 220 (76.7%) showed willingness towards the method while 161 (56.1%) have practiced it. 76 (26.5%) have knowledge of bilateral tubal ligation, 69 (24.0%) showed willingness towards the method while 51 (17.8%) have practiced it. 170 (56.2%) have knowledge of breastfeeding, 166 (57.8%) showed willingness towards the method while 144 (50.2%) have practiced it. 181 (63.1%) have knowledge of injectables, 179 (62.4%) showed willingness towards the method while 165 (57.5%) have practiced it.71 (24.7%) have knowledge of implant, 70 (24.4%) showed willingness towards the method while 66 (23.0%) have practiced it. 173 (60.3%) have knowledge of withdrawal, 167 (58.2%) showed willingness towards the method while 155 (54.0%) have practiced it. 287 (100%) have knowledge of barrier, 187 (65.2%) showed willingness towards the method while 162 (56.4%) have practiced it. 163 (56.8%) have knowledge of IUCD, 154 (53.7%) showed willingness towards the method while 136 (47.4%) have practiced it. All the respondents have knowledge of at least one of the given methods of contraception. Some have positive attitude toward a certain method of contraception while some do not have. Some have practiced one or more of the given methods of contraception.

 **Table 6.** Response on willingness to use of contraception

|  |  |  |
| --- | --- | --- |
| **Willingness to use contraception** | **Frequency** | **Percentage** |
| YES  | 211 | 73.5 |
| NO  | 49 | 17.1 |
| No response  | 27 | 9.4 |

Table 6 shows the attitude of the respondents towards contraception. It shows that 211 (73.5%) of the respondents showed willingness to contraception, 49 (17.1%) showed unwillingness to contraception while 27 (9.4%) never responded on the attitude to contraception. This data shows most of the respondents have positive attitude toward contraception

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 **Table 7.** Reasons for willingness to contraception

|  |  |  |
| --- | --- | --- |
| **Reasons for willingness to use contraceptives** | **Frequency**  | **Response (%)** |
| Husbands' approval  | 25 | 8.7 |
| Child spacing  | 90 | 31.4 |
| Health reasons  | 12 | 4.2 |
| Doctors' advice  | 32 | 11.1 |
| Income  | 15 | 5.2 |
| Completed family  | 37 | 12.9 |

Table 7 shows the reasons given by to respondents for their willingness to contraception. It shows that 25 (8.2%) of the respondents ticked husbands’ approval as their reason for willingness to contraception, 90 (31.4%) ticked child spacing, 12 (4.2%) ticked health reason. 32 (11.1%) ticked doctors’, 15 (5.2%) ticked income, while 37 (12.9%) ticked completed family. This data suggests that the most common reason given by women for willingness to contraception is child spacing.

**Table 8.** Reasons for unwillingness to contraception

|  |  |  |
| --- | --- | --- |
| **Reasons for unwillingness to use contraceptives** | **Frequency**  | **Response (%)** |
| Side effect  | 24 | 8.4 |
| Religion | 4 | 1.4 |
| Sex of babies  | 5 | 1.7 |
| Death of child | 3 | 1.0 |
| Fear of failure  | 10 | 3.5 |
| Other reasons  | 3 | 1.0 |

The respondents’ reasons for unwillingness to contraception are presented in Table 8. From the data given in the table, 24 (84%) did not show interest to contraception because of the fear of the side effects. Four respondents (1.4%) did not show interest to contraception because their religion forbids contraception. Five respondents (1.7%) did not show interest to contraception because they have needed a sex of baby, even though they might not be nulliparous. Three respondents (1.0%) showed no interest to contraception because of death of child, so they needed to conceive. Ten of the respondents (3.5%) did not show willingness to contraception because of the fear of failure of the contraceptive, which might endanger their lives. Three respondents (1.0%) ticked other reasons unknown for their unwillingness to practice contraception.

**Table 9.** Showing the frequency of age group knowledge on attitude and practice of contraception

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Age** | **Frequency** | **Knowledge** | **Willingness**  | **Unwillingness**  | **No response** | **Practice** |
| 18 – 22  | 24 | 24 | 18(75%)  | 2(8.3%)  | 4(16.7%)  | 24(100%) |
| 23 – 26  | 47 | 47 | 28(59.6%)  | 12(25.5%)  | 7(14.9%)  | 23(48.9%) |
| 27 – 30  | 77 | 77 | 60(77.9%)  | 10 (13%)  | 7(9.1%)  | 77(100%) |
| 31 – 34  | 98 | 98 | 76 (77.6%)  | 15(15.3%)  | 7(7.1%)  | 69(70.4%)  |
| 35 – 38  | 31 | 10.8 | 21 (67.7%)  | 8 (25.8%)  | 2 (6.5%)  | 19(61.3%) |
| 39 – 42  | 10 | 3.5 | 8 (80%)  | 2(20%)  | 0(0%)  | 6(60%) |

Table 9 shows the response on knowledge, attitude and practice of contraception following the age groups of the respondents. From the data given in the table, 24 respondents were aged 18 – 22years. All of them (100%) have knowledge of contraception, 18 (75%) of them showed willingness, 2 (8.3%) of them showed unwillingness, 4 (16.7%) of them never responded while all of them (100%) have practiced contraception. There were 47 respondents aged 23 – 26years; all of them (100%) have knowledge of contraception, 28 (59.6%) of them showed willingness, 12 (25.5%) of them showed unwillingness, 7 (14.9 %) of them never responded, while 23 (48.9%) of them had practiced contraception. A total of 77 respondents were aged 27 – 30 years; all of them (100%) have knowledge of contraception, 60 (77.9%) of them showed willingness, 10 (13.0%) of them showed unwillingness, 7 (9.1 %) of them never responded, while all of them (100%) had practiced contraception. The respondents aged 31 – 34years were 98; all of them (100%) have knowledge of contraception, 76 (77.6%) of them showed willingness, 15 (15.5%) of them showed unwillingness, 7 (7.1 %) of them never responded, while all of them 69 (70.4%) had practiced contraception.

Furthermore, a total of 31 respondents were aged 35 – 38years. all of them have knowledge of contraception, 21 (67.7%) of them showed willingness to contraception, 8 (25.8%) of the were unwilling to practice contraception, 2 (6.5%) of them never responded while 19 (61.3%) of them had practiced contraception Lastly, the respondents aged 39 – 42years were ten, all of them have knowledge of contraception, 8(80.0%) showed willingness to contraception, 2 (20.0%) of them showed unwillingness to contraception and 6(60.0%) of them had practiced contraception. From this data, most of the respondents aged 39 – 42years showed willingness to practice contraception while most of the respondents aged 35 – 38years showed unwillingness to practice contraception. Also, all of the respondents aged 18 – 22years and 27 – 30years had practiced contraception while only a few of the respondents aged 23 – 26years had practiced contraception.

**Table 10.** Showing the frequency of age group knowledge on attitude and practice of contraception

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Occupation**  | **Frequency** | **Knowledge** | **Willingness**  | **Unwillingness**  | **No response** | **Practice** |
| Civil service  | 55 | 55 | 42(76.4%)  | 7(12.7%)  | 6(10.9%)  | 37(67.3%) |
| House wife  | 20 | 29 | 21(72.4%)  | 4(13.8%)  | 4(13.8%)  | 15(51.7%) |
| Others  | 203 | 203 | 148(72.9%)  | 38(18.7%)  | 17(8.4%)  | 143(70.4%) |

Table 10 shows the response on knowledge, attitude, and practice of contraception bade on occupation. The data in the table shows that 55 of the respondents are civil servants and all of them have knowledge of contraception. 43 (76.4%) indicated willingness to contraception while 7 (12.7%) showed unwillingness to contraception, 6 (10.9%) did not respond while 37 (67.3%) in the same group had practiced contraception. There were 29 house wives among the respondents and all of them have knowledge of contraception. 21 (72.4%) showed willingness to contraception, 4 (13.8%) indicated no interest towards contraception, 4 (13.8%) did not give response while 15 (51.7%) had practiced contraception. In addition, 203 of the respondents have other occupations and all in this group have knowledge of contraception. 148 (72%) of the respondents in this category showed willingness to contraception while 38 (18.7%) indicated no interest towards contraception. 17 (8.4%) did not give response while 143 (70.4%) had practiced contraception.

**Table 11.** The p-values of Chi-test between the demographic variables and knowledge, attitude and practice of contraception

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **Knowledge** | **Attitude**  | **Practice**  |
| Age  | 1 | 0.220 | 0.013 |
| Occupation | 1 | 0.576 | <0.001 |

Table 11 shows the result of the chi-test conducted to determine the association between the demographic variables and knowledge, attitude and practice of contraception. The result in the table suggests that knowledge of contraception is not associated with age, parity, religion, marital status, education, and occupation. Also, the results in the table did not show significant association between attitudes to contraception and age, parity, religion, marital status, education, and occupation. However, significant association was seen between practice of contraception and age, parity, religion, marital status, education and occupation**.**

## Result Analysis

The section presents the analysis of the results given in this section. Chi square – test was conducted using SPSS version 29.0 statistical software to determine the association between each demographic characteristics and knowledge, attitude and practice of contraception at significant level of 0.05 often recommended [24]. The p – values obtained are given in Table 11. The results of the analysis were used to answer the research questions given in section 1, following the hypothesis accordingly. Also, the results of the statistical analysis would show whether the research hypothesis should be accepted or rejected.

* Research question 1: Does age affect knowledge, attitude and practice of contraception?

Hypothesis 1: Age does not affect knowledge of contraception.

Hypothesis 2: Age does not affect attitude to contraception

Hypothesis 3: Age does not affect practice of contraception

The results of the Chi square test, given in Table 11 shows that there is no association between age and knowledge of contraception (p = 1). The result shows that the association between age and attitude to contraception is not statistically significant (p = 0.220). Also, the result shows that the relationship between age and practice of contraception is significant (p = 0.013). These results show agreement with the “Hypothesis 1” and “Hypothesis 2”, but does not agree with “Hypothesis 3”. Thus, age does not affect knowledge and attitude to contraception but affects practice of contraception.

* Research question 1: Does occupation affect knowledge, attitude and practice of contraception?

Hypothesis 4: Occupation status does not affect knowledge of contraception.

Hypothesis 5: Occupation status does not affect attitude to contraception

Hypothesis 6: Occupation status does not affect practice of contraception

From the result of the statistical analysis given in Table 11, occupation yielded (p = 1) with knowledge of contraception, (p = 0.576) with attitude to contraception and (p < 0.001) with practice of contraception. These results show no relationship between occupation and knowledge of contraception but shows association between occupation and practice of contraception. Therefore, “Hypothesis 4” and “Hypothesis 5” are true but “Hypothesis 6” is not true. Alternatively, it can be stated that occupation does not affect knowledge and attitude to contraception but affects practice of contraception.

1. **DISCUSSION OF FINDINGS**

This study was conducted to determine the knowledge, attitude and practice of contraception among young mothers aged 18 to 42 years in Okigwe, Orlu and Owerri geopolitical zones of Imo state Nigeria using questionnaire. The survey was conducted under the following demographic characteristics: age and occupation. Methods of contraception considered were *Combined oral contraceptive, Progestogen only pills, Bilateral tubal ligation, Breastfeeding, Injectables, Implant, Barrier and IUCD.*

#### 4.1 Effect of Age on Knowledge, Attitude and Practice of Contraception

The effect of age of the respondents on knowledge, attitude and practice of contraception are represented is discussed in this subsection. The respondents were age 18 to 42years. In order to determine the effect of age on knowledge, attitude and practice of contraception, the participants were categorized into various age groups between 18 and 42years. The age groups were 18 – 22, 23 – 26, 27 – 30, 31 – 34, 35 – 38 and 39 – 42years. The mean age of the respondents was 29.8years; the modal age was 31.5years while the standard deviation was 4.9 years. Therefore, the age of the respondents can be stated as 29.8±4.9years. The modal age of 31.5years implies that most of the respondents were of this age, which is active age for child bearing.

The study showed that all the respondents of all the age groups have knowledge of contraception. This result conforms to the result of the Chi square test and hypothesis 1 given in section 1. It also shows that (75.0%) the respondents aged 18 – 22 years have willingness to practice contraception. The reason for this high willingness might be because most women at young age say 18 to 22years are not yet ready to have children but involved in sexual practice. Therefore, this group of respondents would show much willingness to contraception in order to avoid unintended pregnancy. Only (59.6%) of the respondents aged 23 – 26years showed willingness. Most women aged 23 – 26years are newly married and have much interest to conceive; therefore would show less willingness to contraception. Furthermore, Figure 5.7 shows that (77.9%) of the respondents aged 27 – 30years showed willingness. Most women aged 27 - 30years of are married and still bearing children; therefore, women in this category would show much willingness to contraception in order to space their children. From Figure 5.7, it can be deduced that (77.6%) of the respondents aged 31 – 34years showed willingness. The responses from the women aged 27 – 30years and 31 – 34years on attitude are almost equal because the respondents in the stated age groups are still in active child bearing age and would show much willingness for child spacing.

Some women approach menopause at age of 35 to 38years. Therefore the willingness of women of this age group to contraception would be less. From the study, 67.7% of the respondents showed willingness to contraception. The reason for the less willingness shown by the respondents in this age group might be early menopause. Most women aged 39 – 42 years have completed family; therefore are not willing to conceive again. Women in this age group would show much willingness to contraception in order to avoid unwanted pregnancy. In this study, the respondents aged 39 to 42years displayed highest willingness to contraception (80.0%). The reason for this attitude might be completed family, health reasons.

The result of the Chi-test given in Table 11 showed no association between age and knowledge of contraception (p = 1). The result also showed insignificant association between age and attitude to contraception (p = 0.220). However, significant association was shown between age and practice of contraception (p = 0.013). In [1], a similar study by cross-sectional survey was conducted in Tanzania for 347 women aged 27.4 ± 5.7years, but the result of their study showed significant association between age and knowledge of contraception (p < 0.0001). It might be that all Nigerian women aged 18 years and above have equal awareness on contraception while only the advanced age women in Tanzania were exposed to knowledge of contraception. In [1], 64.6% of the respondents showed poor attitude to contraception which implies that only about 35.4% of the respondents showed positive attitude to contraception. However, in this study, 211 (73.5%) of the respondents indicated willingness to contraception. It might be Nigerian women might be are more educated than the Tanzanian women, which resulted to better attitude to contraception found in Nigerian women. In [24], a study on the intention of 180682 married and cohabiting women aged 15 – 49 years in Sub-Saharan Africa to accept contraception was conducted. The result of their study showed increased willingness to contraception with increase age between 20 and 49 years. On the contrary the women aged 15 – 19 years showed more willingness (52.2%) than those aged 20 – 24 years (46.6%). The reason for this contradicting result might be because most women aged 15 – 19 years not yet married, so they would show more willingness to contraception to prevent pregnancy out of marriage. On the other hand, the women aged 45 – 49 years showed the highest willingness (89.9%). The reason for this result might be because most women at this age would have completed their family therefore would show much interest to contraception to avoid having more than the number of children planned for. The result of Chi square test given by [24] showed significant relationship between age and attitude to contraception (p < 0.001) whereas the result of this study showed insignificant relationship between age and attitude to contraception (p = 0.220). The reason for the difference shown in the results of statistical analysis might be traceable to the fact that the ages of the women sampled in this present study were in the range 18 – 42 years while [24] sampled women aged 15 – 49 years.

#### Effect of Occupation on Knowledge, Attitude and Practice of Contraception

The study showed variation on knowledge, attitude and practice of contraception with occupations of the respondents. It that all the respondents (100%) in various occupations have knowledge of contraception which signifies that knowledge of contraception has no association with occupation of the participants. From the figure, it can be deduced that attitude and practice of contraception varies with occupation of the respondents. Based on occupations, the categories of the respondents considered for this study were civil servants, house wife and others.

It showed the civil servants have equal knowledge (100%) with house wives and the respondents in other occupations. However, 76.4% of the civil servants showed willingness to contraception, 72.9% of those in other occupations showed willingness and 72.4% of the house wives showed willingness. On the other hand, 67.3% of the civil servants had practiced contraception, 70.4% of the respondents in other occupations had practiced contraception while 51.7% of the house wives had practiced contraception. The high willingness and high practice of contraception exhibited by the civil servants might be traceable to the fact that the respondents in that category would not want to get unintended pregnancy because of their jobs. The respondents in other occupation may include teachers, bankers, doctors, etc. Thus, in order not to be disrupted by unintended pregnancy, this category of respondents would show much willingness and practice of contraception.

On the other hand, the house wives showed much willingness but less practice of contraception. The reason for this might be that house wives would want to have as many children as they could because they don’t have jobs that impose limitations in child bearing. From these results, one can infer that attitude and practice of contraception varies with occupation of the respondent. However, the result of the Chi-test test given in Table 11 showed no association between occupation and knowlegde of contraception (p = 1). On the other hand, the result shows statistically significant association beween occupation and practice of contraception (p < 0.001). In their study,[24] also evaluated the intention of women in Sub-Saharan Africa to accept contraceptives under the woking class and the none working class. From the result of their study, 61.65% of the working class showed intention to accept contraception while 57.4% of the none working class showed willingness to contraception. It is evident that the result of [24] comforms to the result obtained from this study. In both cases, the working class showed more willingness to contraception that the none working. The better attitude to contraception found in working class women suggests that working class are more careful not to get unwanted preganancy which can disrupt the work. The result of the Chi-sqaure test given by [24] shows that the relationship between occupation and atttude to contraception is significant (p < 0.001). However, a contradicting result was obtained in ths study (p = 0.576). this contradiction might have resulted from the fact that all the women working in diferent occupation were grouped together in woking class in the case of [24].

1. **CONCLUSION**

The study was conducted by descriptive survey to investigate the effect of age and occupation of young women aged 18 – 42 years on knowledge, attitude and practice of contraception. The methods of contraception sampled in this study were combined oral contraceptives, progestogen only pills, bilateral tubal ligation, breastfeeding, injectables, implant, withdrawal, barrier and IUCD. The quantitative data used for this study were frequency distribution of young women ages 18 – 42years in Imo state. The data was collected via structured questionnaire administered to young women of the specified age rang in the given study settings. The questionnaire was administered by purposive sampling technique to provide response on knowledge, attitude and practice of contraception in accordance to the various demographic variables. Chi-square test was used to determine the association between each of the demographic variables and knowledge, attitude and practice of contraception. From the results obtained, it can be concluded that knowledge of contraception does not depend on age and occupation. It can also be concluded that attitude to contraception (willingness or unwillingness) does not depend on age and occupation. However, it can be concluded that age and occupation affects practice of contraception. Based on the criteria used for grading response in this study, it can be concluded that the respondents have poor knowledge, poor attitude and poor practice of combined oral contraceptives. They have very good knowledge, very good attitude and showed poor practice towards progestogen only pills. They showed good knowledge, good attitude and showed good practice towards toward breastfeeding. They displayed good knowledge, good attitude and showed good practice of injectables. They showed poor knowledge, poor attitude and poor practice towards implant. They showed good knowledge, good attitude and good practice towards withdrawal method. They showcased very good knowledge, good attitude and good practice towards barrier method and lastly, they showed good knowledge, good attitude and poor practice towards IUCD. Thus, from the findings, the following recommendations are made:

* More intensive awareness on contraception is require in the various study settings to improve the attitude and practice of contraception in order to reduce to rate of unintended pregnancy.
* Government at all levels should subsidize the cost of contraception.
* Proper awareness on the benefits of contraception other than pregnancy prevention (e.g. the protective effect against benign breast disease, reduced risk both of ovarian and endometrial cancers and lowered risk of pelvic inflammatory disease.
* Women at risk for unintended pregnancy should be counseled about contraceptive options regardless of the presenting complaints or reason for visit.
* Contraceptive methods should be provided at all levels of government and private health facilities.
* Mass media should educate people more on the contraceptive aspects of contraception than its overall sexual content.

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