Socio-Demographic Predictors of Contraceptive Use among Women of Childbearing Age in Umuahia, Abia State, Nigeria

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A B S T R A C T

Contraceptives have numerous documented benefits to the mother and baby; despite this, there has been low uptake of this method by many women in Abia State, Nigeria. The primary objective of this study was to identify the socio-demographic predictors of the use of contraceptives by women of childbearing age in Umuahia North and South Local Government Areas (LGAs) of Abia State. A descriptive cross-sectional study design was used for the study. Four hundred women (aged 15-49 years) were recruited from among antenatal and postnatal clinics in six selected Primary Health Centres in Umuahia North and South LGAs of Abia State, Nigeria. The instrument for data collection was a structured questionnaire, which was validated by three experienced researchers. The questionnaire was administered and collected by the researcher and two research assistants. Data analysis was carried out with Statistical Product and Service Solutions (SPSS version 25, IBM Corporation). Logistic regression was used to determine the socio-demographic predictors of the use of contraceptives among the research participants. Age, education, religion, and marital status of respondents were significant predictors of the use of contraceptives ($\rho<0.05$). It was concluded here that to improve the contraceptive prevalence among women, these predictors need to be put into consideration to provide targeted interventions among women of childbearing age in Umuahia, Abia State, Nigeria.

Keywords: Contraceptives, socio-demographic, predictors, prevalence, women, childbearing age.

1. Introduction

Contraceptive methods are products or medical procedures that interfere with reproduction from acts of sexual intercourse (David & James, 2015). Earlier (in the 1980s), the method mostly utilised by many African nations was the postpartum abstinence (Cleland *et al.,* 2006). The impact of overpopulation on the socio-economic conditions of these countries led policymakers and stakeholders to develop an interest and embrace modern contraceptives (Jacques *et al.,* 2014). Contraceptive use is an important public health intervention and a cost-effective strategy to reduce maternal mortality, avert unintended pregnancies and control population explosion, especially in developing countries. (Beson, Appiah, & Adomah, 2018). About 190 million women all over the world do not use contraceptives (UNDES, 2018). Most of these women (about 83%) are found in sub-Saharan Africa. Nigeria, which has the highest population in Sub-Saharan Africa, has a contraceptive prevalence of 17% which is far below the global average of 65% (Fadeyi *et al*., 2022). This is a worrisome situation in a country of about two hundred million people with a growth rate of 2.55% (UN 2021). The major contributors to Nigeria's population growth are early marriages, high birth rates, and inadequate family planning access. The birth rate in Nigeria is about 37 births per 1,000 people (UN World Population Prospects, 2019). Despite this growth and government efforts to curb it, the use of contraceptives remains low.

A study by Tanuja *et al.* (2016) in Uganda listed determinants of contraceptive use to include (but not limited to) level of education, age, wealth status, fear of side effects, residence, low quality of contraceptive services, alcohol intake, income, sex, age at first sex and access to health facilities. Ejembi *et al*. (2015) also listed similar variables as contextual factors influencing modern contraceptive use in Nigeria. Within Nigeria, regional disparities exist in contraceptive use, influenced by a complex interplay of socio-demographic, cultural, economic, and healthcare system factors. Abia State, located in the southeastern region of the country, presents a unique context due to its specific cultural norms, education levels, and levels of access to healthcare services.

Understanding the predictors of contraceptive use among women of childbearing age in this region is vital for developing targeted interventions to improve reproductive health outcomes. This study aims to identify and analyse the key factors predicting contraceptive use among women aged 15–49 years in Umuahia, Abia State, Nigeria.

2. Research Design and Study Area

A descriptive cross-sectional study design was used to identify the predictors of contraceptive use by women of childbearing age (15-49 years) residing in Umuahia, Abia State of Nigeria. Umuahia is the capital of Abia State. The 2006 national census put the population of Umuahia at 389,120 people.

The inhabitants are mostly civil servants, traders, farmers, artisans, and students. Christianity is the main religion practiced, with various denominations from Orthodox to Pentecostal. Very few are Muslims and Traditionalists. There are many Primary Health Centres and Private Hospitals, in addition to one secondary and two tertiary health facilities in the area. The majority of these facilities offer family planning services.

2.1 Study Population

The study population was women of childbearing age (ages 15-49 years) in Umuahia North and South Local Government Areas (LGAs) of Abia State. Inclusion criteria were all women of reproductive age (15-49 years), married and unmarried, who attended antenatal, postnatal clinics in 6 selected primary health facilities and were willing to participate in the study and were residents within the two LGAs of interest. Those excluded were women with terminal medical conditions that affected their fertility, infertility problems, and women resident outside Umuahia North and South LGA, including those who were unwilling to participate in the study.

2.2 Sampling Technique

A multistage random sampling technique was used to assess the women's utilisation of contraceptives. A simple random sampling method was used, with a lucky dip to select the six health facilities that were used for the study based on the number registered on the monthly antenatal register from each clinic. A convenience sampling technique was used to get a sample size of 400 women during their clinic days.

2.3 Instrument

The instrument for data collection was a structured questionnaire that consisted of four sections. Section A consisted of Respondents' Socio-demographic data; Section B consisted of Questions on knowledge, attitude and practice of contraceptives; Section C had questions on health system practices and non-use of contraceptives; and Section D had health system factors, knowledge and use of contraceptives.

3. Results: Predictors of contraceptive use among the women

Table 1 shows the logistic regression of the relationship between the socio-demographic factors and modern contraceptive use among women. The results showed that age predicted the use of contraceptives among women. The table showed that women between the ages of 25 – 34 years (AOR= 0.86; p=0.001) were more likely to use contraceptives than those of other ages. Whereas women above 45 years were less likely to use more of the contraceptives (AOR=0.42; ρ=0.241).

The results also showed that the use of contraceptives was determined by the educational background of the women. The table showed that women who are educated are more likely to adopt the use of contraceptives than the less educated ones. Women who passed through the secondary (AOR=0.67; p=0.002) and tertiary (AOR=2.05; p=0.001) institutions used more contraceptives than those with no formal education (AOR=1.03; p=0.312). The table also showed that the occupation of the women significantly predicted the use of contraceptives.

The results also indicated that the women who are self-employed (AOR =1.95; p<0.001) and civil servants (AOR=2.04; p<0.001) are more likely to use contraceptives than the unemployed (AOR=1.10; p<0.001). The number of children had an impact in the use of contraceptives. The table showed that women with 3 to 4 children (AOR=6.08; p<0.001) and more than 4 children (AOR=7.97; p=0.002) are more likely to use contraceptives than those with a smaller number of children also, women who had no children were unlikely to use contraceptives (AOR=1.10; ρ<0.05).

In addition, religion is more likely to influence the use of contraceptives. The result showed that the Christians (AOR=1.12; p=0.002) used contraceptives than the other forms of religion. Table 1 also showed that marital status is statistically significant and predicts the likelihood of the use of contraceptives. Married women (AOR=0.96; p=0.001), singles (AOR=1.00; p=0.003), cohabiting (AOR=0.65; p<0.001), widowed (AOR=1.02; p<0.001) and separated or divorced (AOR=0.88; p<0.001 monthly income are significant predictors of the use of modern contraceptives. The table also showed that income was a significant predictor of use of contraceptives among the research participants (p<0.05).

Table 1 - Sociodemographic characteristics and association with modern contraceptive use among women.

The use of modern form of contraceptives = frequency (%= percentage)}					
Variable	**Yes (n=228)**	**No (n=172)**	**COR (95% CI)**	**AOR (95% CI)**	**P-value**
Age (years)					
15 – 24	12 (66.67)	6 (33.33)	1.32 (1.03 – 1.71)	0.81 (0.54 – 1.12)	<0.001
25 – 34	252 (94.03)	16 (5.97)	1.48 (1.15 – 1.89)	0.86 (0.58 – 1.29)	0.001
35 – 44	63 (74.12)	22 (25.88)	1.39 (1.08 – 1.78)	0.94 (0.68 – 1.32)	0.001
45 and above	15 (51.72)	14 (48.28)	0.81 (0.61 – 1.08)	0.42 (0.31 – 0.69)	0.241
Educational background					
No formal education	7 (28.00)	18 (72.00)	2.08 (1.12 – 2.86)	1.03 (0.33 – 2.16)	0.312
Primary school	58 (72.50)	22 (27.50)	2.91 (1.62 – 2.81)	1.87 (1.49 – 2.08)	0.062
Secondary school	113 (59.47)	77 (40.53)	4.01 (2.14 – 7.08)	2.67 (1.51 – 2.42)	0.002
Tertiary education	99 (94.29)	6 (5.71)	3.22 (1.95 – 6.88)	2.05 (1.48 – 2.08)	0.001
Occupation					
Unemployed	2 (50.00)	2 (50.00)	1.33 (1.15 – 1.54)	1.10 (0.91 – 1.32)	<0.001
Self-employed	158 (79.80)	40 (20.20)	2.34 (1.90 – 2.88)	1.95 (1.05 – 2.81)	<0.001
Civil servant	103 (85.83)	17 (14.17)	2.64 (1.79 – 3.88)	2.04 (1.50 – 2.81)	<0.001
Student	50 (64.10)	28 (35.90)	1.64 (1.40 – 1.91)	1.35 (1.10 – 1.66)	<0.001
No. of children					
0	4 (25.00)	12 (75.00)	2.13 (1.39 – 3.28)	1.10 (0.92 – 1.31)	0.08
1 – 2	8 (80.00)	2 (20.00)	13.24 (6.28 – 28.36)	5.28 (2.18 – 12.53)	0.001
3 – 4	108 (60.34)	71 (39.66)	14.09 (7.36 – 30.18)	6.08 (2.95 – 15.92)	<0.001
Above 4	138 (70.77)	57 (29.23)	16.78 (8.06 – 32.98)	7.97 (3.02 – 18.95)	0.002
Religion					
Christianity	319 (94.94)	17 (5.06)	1.98 (1.53 – 2.57)	1.21 (0.86 – 1.74)	0.002
Muslim	11 (21.15)	41 (78.85)	1.23 (0.93 – 1.63)	1.13 (0.93 – 1.32)	0.001
Traditionalist	9 (75.00)	3 (25.00)	0.61 (0.53 – 0.70)	0.71 (0.59 – 0.85)	<0.001
Marital status					
Single	39 (76.47)	12 (23.53)	1.45 (1.13 – 1.79)	1.00 (0.74 – 1.34)	0.003
Married	303 (91.27)	29 (8.73)	4.45 (1.71 – 3.52)	0.96 (0.44 – 1.48)	0.001
Cohabiting	2 (66.67)	1 (33.33)	0.81 (0.72 – 0.97)	0.65 (0.51 – 0.82)	<0.001
Separated/divorced	5 (62.50)	3 (37.50)	1.10 (0.92 – 1.39)	0.88 (0.71 – 1.25)	<0.001
Widowed	4 (66.67)	2 (33.33)	0.95 (0.64 – 1.41)	1.02 (0.61 – 1.72)	<0.001
Monthly income (₦)					
Below 30,000	41 (68.33)	19 (31.67)	1.44 (1.26 – 1.65)	1.21 (1.91 – 1.43)	0.07

31,000 – 40,000	96 (80.00)	24 (20.00)	1.75 (1.51 – 2.11)	1.46 (1.21 – 1.78)	0.25
41,000 – 50,000	92 (76.67)	58 (48.33)	2.45 (2.01 – 2.98)	2.15 (1.50 – 2.92)	0.002
Above 50,000	84 (84.00)	16 (16.00)	2.75 (1.90 – 4.96)	2.28 (1.78 – 3.05)	<0.001

COR: crude odds ratio, AOR= adjusted odds ratio, CI= confidence interval.

4. Discussion

This study indicated that the socio-demographic characteristics of respondents influenced the utilisation of contraceptives by women. This is not surprising because Age, marital status, and education level emerged as significant factors influencing contraceptive use in a study carried out by Naidoo *et al*. (2024). Age predicted the use of contraceptives among the women. Those between the ages of 25 – 34 years (AOR= 0.86; p=0.001) made more use of contraceptives than others. Women above 45 years were less likely to use contraceptives (AOR=0.42; ρ=0.241). This result is similar to the study of Abodunrin *et al*. (2014), where most of the respondents who used contraceptives (72.0%) were between 25 and 45 years of age and reduced in other age groups. It is also similar to other studies by Ba *et al*. (2019) and Sidibé *et al*. (2020) that showed a statistically significant association between modern contraceptive use and women's age, with teenagers and middle-aged women having higher odds of utilisation and need for family planning compared to women aged above 45 years. This could be a result of early initiation of sexual intercourse, which may lead to increased demand for family planning that may not be adequately provided. This observation is also supported by a study that found that more than 44% of health facilities in urban areas offer family planning services to younger women (Federal Ministry of Health, 2020). It is believed that most old-aged women in their menopausal stage, mostly due to decreased sexual activity, are less likely to use contraceptives (WHO, 2015).

Educational background was also found to be a determinant of the use of contraceptives. Women who are educated are more likely to adopt the use of contraceptives than less educated women. Women who passed through the secondary (AOR=0.67; p=0.002) and tertiary (AOR=2.05; p=0.001) institutions used more contraceptives than those with no formal education (AOR=1.03; p=0.312). The study of Rasooly *et al*. (2015) indicated that "education usually improves knowledge and attitude of women towards contraceptive use. Kidayi *et al*. (2015) also stated that "women with higher education are more likely to use contraceptive methods than women with no education". This finding is similar to Apanga & Adam (2015), who found that women with tertiary education used contraceptives more than those with lower levels of education.

Occupation was also another predictor of the use of modern contraceptives. Use of modern contraceptives was found to be higher among women who are self-employed (AOR=1.95; p<0.001) and civil servants (AOR=2.04; p<0.001) than those who are unemployed (AOR=1.10; p<0.001). This is not surprising because building a career often requires focus and fewer distractions, which can occur through unplanned pregnancies. This finding is similar to the study of Abdul-Aziz *et al*. (2020), who observed that contraceptive use was high among self-employed women in the agricultural sector [AOR = 1.710, 95% CI = 1.218, 2.400].

Another predictor of the use of contraceptives amongst respondents is parity. Women with 3 to 4 children (AOR=6.08; p<0.001) and more than 4 children (AOR=7.97; p=0.002) are more likely to use contraceptives than those with a smaller number of children. Women who had no children were less likely to use contraceptives than those with children (AOR=1.10; ρ>0.05). This observation is supported by the study of Berhane *et al*. (2024), which found out that there is increased use of contraceptives among women with larger families.

In addition, religion also influenced the use of contraceptives. The result showed that the Christians (AOR=1.12; p=0.002) used the contraceptives. This has been found in similar studies (Sedgh & Hussein, 2014), who stated that belief is associated with lower odds of contraceptive use.

The marital status of respondents predicted the use of contraceptives. Married women (AOR=0.96; p=0.001), cohabiting (AOR=0.65; p<0.001) and separated or divorced (AOR=0.88; p<0.001) were less likely to use contraceptives than the singles (AOR=1.00; p=0.003) and widowed (AOR=1.02; p<0.001).

Monthly income is also another significant predictor of the use of modern contraceptives. Those with higher income 41,000 – 50,000 (AOR=1.46; p= 0.002) above 50,000 (AOR=2.28; p=<0.001) predicted their use, while those with lower income. Below 30,000 (AOR=1.21; p=0.07), 31,000 – 40,000 (AOR= 1.46 p=0.25) were less likely to use contraceptives. This corroborates the findings of Adewale *et al*. (2013) that indicated that wealth status, social class and education were found to correlate positively with contraceptive uptake in similar studies.

5. Recommendations and Conclusions

5.1 Conclusion

Contraceptives are beneficial to the health of women and the well-being of the children and the family. Good contraceptive uptake by women has helped to improve their wellbeing, but there are so many factors that have either positively or negatively influenced the uptake of contraceptives among women residing in the State. Some predictors, such as age, parity, religion, and level of education, were significant predictors of the use of contraceptives. Taking into consideration these predictors during family planning intervention amongst women of childbearing age will improve their uptake. This will help to improve maternity and child welfare, improve sexual satisfaction among couples, to create as much as possible a happier home, which will in turn have a positive impact on society.

5.2 Recommendations

The findings from this study have a lot of public health implications, not only for the women but also for the healthcare practitioners, stakeholders and society at large. Therefore, the following recommendations are made

1. The results have shown that women's education and improved income have a positive correlation with the use of contraceptives. This implies that encouraging and supporting the education of women will not only improve the uptake of contraceptives but also their general well-being

2. The study also showed the role of religion in the uptake of contraceptives. This indicates that for any program to be effective, the religion of the community must be taken into consideration.

3. The findings that contraceptive use is higher among younger women indicate the need to encourage the older ones who are still within childbearing age and are satisfied with the number of children they have to embrace the use of contraceptives for their well-being

4. Finally, an increase in uptake of contraceptives can be done through sensitisation campaigns that will enable women to have increased knowledge about the benefits and side effects of contraceptives. This will help to dispel misconceptions attached to its use. This is done through television and radio jingles, short drama and sponsoring of movies to sensitise the general society on the importance of contraceptives.

5. Advocacy groups need to promote higher educational attainment among women since one of the findings simply suggests that women who attained primary, secondary or tertiary levels of education were more likely to use contraceptives than women who never had any form of education.

Limitation of Study

The study solely focused on government-owned primary health centres, excluding those owned by private individuals and organisations, which made it difficult to generalise the findings for all women in the area. However, since they came from the same communities as those who attend privately owned health centres, everything will add to null.

Suggestions for Further Study

The following are made for further studies

1. A similar study on predictors of contraceptives by women in other local governments of the State, and to include privately owned health centres in the area.

2. Further study should be conducted on the perception of different religious groups towards contraceptives.

3. The study may be replicated in other states with different backgrounds.

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