

Determinants Of Family Planning Choices And Barriers Among Women Attending Private Fertility Clinics In Delta State

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Abstract

The study investigated the determinants of family planning choices and barriers among women attending private fertility clinics in Delta State. A stratified sampling technique was used in selecting three (3) private fertility clinics in Delta State while a simple random sampling technique was employed in selecting 156 participants out of a total population of 1,560 women that are registered with the private fertility clinics. A self-structured, pre-validated questionnaire was designed by the researchers as the instrument for data collection. The questionnaires were administered to the participants and 140 were successfully retrieved for data analysis. Simple percentages and frequency count was adopted as statistical tools for analyzing the obtained data while chi-square technique was used in testing the five (5) formulated hypotheses. Results findings obtained from the analysis revealed that family planning choices and barriers among women attending private fertility clinics in the study area are determined by; health, economic, social, religion, and cultural factors. Hence, the need for the government of Delta State to provide quality, subsidized, and comprehensive family planning services capable of substituting the prevalent traditional family planning methods while considering health, economy, social, religion and culture as necessary factors that might pose as barriers to the choices of these women towards sustainable family planning choices.

Keywords: Family Planning, Fertility, Pregnancy, Women, Clinic, Birth control

1 Introduction

High population growth rates are among the major economic and social problems facing the developing world including Nigeria. Perhaps, unexpected, or unplanned pregnancy poses a major public health challenge in women of reproductive age. Biddlecom, Casterline and Perez [1] believe that when men and women do not know their partners' fertility desires, family planning attitudes, or contraceptive preferences, the consequences can include unintended pregnancy and unsafe abortions. Globally, it has been estimated that of the 210 million pregnancies that occur annually, also about 80 million (38%) are unplanned and 46 million (22%) end in abortion [2]. Indeed, uncontrolled birth can destroy a nation's development aspirations and prevent its people from enjoying an improved standard of living [3].

Birth control is designed to regulate the number and spacing of childbirths in a family through the practice of different strategies or family planning methods. Family planning is a process of

regulating the number of children conceived by couples. According to Smith et al. [4] family planning is one of the most cost-effective and practical health interventions for conception. In essence, family planning is a vital aspect for achieving reproductive health and conceptive wellbeing, however, it likewise has impacts on the socio-economic development of an individual or the nation at large. Historically, family planning is credited primarily for its role in bringing down birth rate globally and particularly in developing countries [5]. According to World Health Organization [6] in the absence of family planning, the level of childbearing will be high, resulting in a greater demand for obstetric and infant/child health services.

There are many different methods of family planning choices available today. According to Abiodun and Balogun [7], family planning methods can be broadly divided into the traditional and modern methods. As per World Health Organization [8], elements to consider decision making with regard to family planning techniques

include the trait of the potential user, security and unfriendly impact profiles of various items, costs, accessibility, and preferences of the patient. However, modern family planning methods that are the most prevalent choice in both developing and developed nations. They include; emergency contraception, condoms, spermicides and diaphragms [9], cervical cap, intrauterine contraceptive device, safe periods [10], hormonal contraceptive injection/implant, withdrawal technique [11], and oral contraceptive pills [12].

Considering the fact that the prevalence of family planning barriers and incidence of high fertility is a significant contributor to high maternal mortality, the World Health Organization [13] has reported that Nigeria which has only 2% of the global population contributes to a lopsided 14% of the global burden of 289,000 maternal deaths recorded yearly. Family planning encourages most women to maintain a strategic distance from undesirable pregnancies, unlawful premature births, and childbirth that will undermine their very own wellbeing and that of their children. Family planning programs themselves influence social norms through the diffusion of new ideas about contraceptive use among couples [14]. Consequently, reproductive decision making among couples could be influenced by the prevalence of social environment which includes; social, religious, economic, religious factors, and political groups [15].

The choices about childbearing and family planning methods are among the most important health decisions that many people make(s). Despite women's increasing influence on household decision making, their preference regarding family planning choices and family size may not translate into practice unless they conform to their husbands' wishes [16]. Increasing the level of family planning technique couples adopt is an important component of many national population and developmental programs; this is because an effective family planning methods reduces the chances of pregnancies, regulate the number of unintended pregnancies while averting the likelihood of induced abortions and decreasing maternal mortality as well as an improvement in maternal and child health and wellbeing [17].

The widespread choices of family planning in any given society are essential for the integration of women with birth control needed for social and economic development. World Health Organization, [18] noted that in developing countries, surveys have shown that the highest levels of contraceptive use are among unmarried,

sexually active youth, between the ages of 20 and 24years, the most reduced levels are among pre-adult married women that fall between the ages of 15 and 19years respectively. However, the perceived factors that determine the prevalence of family planning choices and barriers among women include; race/ethnicity, age, education, occupation, location, and religion [19]. Perhaps, knowledge about family planning choices among couples may affect decision making to its usage. Hence, the level of spousal agreement regarding fertility and family planning remains an area of scholarly contention for planners, researchers, and policy makers in Nigeria.

2 Materials and Methods

Study Settings

This study was carried out in Delta State among women attending private fertility clinics between June and November 2019 after informed consent and ethical clearance was duly obtained. The participants in the study were strictly women between the reproductive age of 20-45years registered at the fertility clinics in Delta State, Nigeria, and who had given birth in the preceding 5years of the survey. A descriptive cross-sectional survey method was adopted in the study as it appropriately describes the relevant aspects of the phenomenon of interest [20]. The survey design involves collecting data in order to answer questions about the opinions of people on a particular issue.

Population and Sampling size

The study employed a multistage sampling method. In the first stage, the stratified sampling technique was used to select three (3) outpatient (OPD) private fertility clinics in Delta State, namely, Lily Hospitals, Okuokoko, Warri; Maviscope Hospital & Fertility Centre Sapele and Nordica Fertility Center, Asaba respectively while in the second stage a simple random sampling technique was adopted to select a total population of 1,560 women of childbearing age that are registered with the private fertility clinics. In the third stage, the researchers sampled 156 participants out of the total population was chosen at the rate of 10% of the population under study based on the appropriate precision (d) for prevalence studies [21].

Ethical Consideration

Ethical clearance was obtained from the Research and Bioethical Committee of the Faculty of Basic Medical Sciences, Delta State University, Abraka, Delta State. Permission to carry out the study was obtained from the hospital management board of the sampled private fertility clinics after proper monitoring and approval of the study protocol. Moreover, participants signed a written informed written consent which indicated their interest and willingness to partake in the research. Meanwhile, confidentiality and anonymity of all voluntary participation were strictly maintained.

Research Instrument and Data Collection

A self- structured, pre-validated questionnaire consisting of a form with a list of closed-ended questions was used after extensive review of related literatures on family planning choices and barriers. The study questionnaire was first pretested on a sample of women before administering them to the participants after suitable modifications were made. The questionnaire was divided into two sections comprising of sections A and B; where section A, sought relevant information on the socio-demographic information of the respective respondents, while section B comprised of 20 items designed based on Likert scale of Strongly Agreed (SA), Agree (A), Disagreed (D) and strongly disagreed (SD) responses. However, the questionnaires were designed in such a way that respondents would have no difficulty in answering the questions asked, while the respondents were to indicate their responses by ticking the option of their choice. Data filled out from the administered questionnaires was successfully retrieved from 140 participants within a period of 2weeks and was subjected to data analysis.

Statistical Analysis

The quantitative data obtained were coded and analyzed using the computer software version 20 of the Statistical Package for the Social Sciences (SPSS). Results of descriptive analysis were expressed in frequency count, and percentages while the inferential analysis was done using the χ^2 test and P-value < 0.05 was considered as statistically significant with a confidence interval of 95%.

3 Results and Discussions

Family planning is a way of maintaining a reasonable interval in childbearing practice. Family planning choices embraces a way of preventing unwanted pregnancy and a means of sexual

gratification. Hence, the results on socio-demographic variables and determinants of family planning choices and barriers are presented in Tables 1 -13 as follows;

Data on socio-demographic information and family planning methods:

Table 1: Distribution of Participant's Socio-demographic Variables

Socio-demographic Characteristics	Frequency	Percentage (%)	
Age Range	20 –25yrs	30	21.4
	26 –30yrs	40	28.6
	31– 35yrs	35	25
	36– 40yrs	20	14.3
	41 –45yrs	15	10.7
Marital Status	Single	35	25
	Married	105	75
Family Structure	Polygamy	60	42.9
	Monogamy	80	57.1
Number of live births	0-1	62	44.3
	2-3	53	37.8
	4-5	14	10
	≥6	11	7.9
Religion	Christianity	84	60
	Islam	11	7.9
	Tradition	32	22.9
	None	13	9.2
Occupational Status	Employed	31	22.1
	Unemployed	60	42.9
	Self-employed	49	35
Family Monthly Income	<33,000 (New Minimum Wage)	17	12.1
	34,000 – 50,000	22	15.7
	51,000 – 99,000	58	41.4
	>100,000	43	30.7
Educational Background	Primary	20	14.3
	Secondary	35	25
	University Education	70	50
	No Formal Education	15	10.7

The results presented in Table 1 shows the demographic characteristics of the participants and it revealed that 30(21.4%) out of the sampled participants were between of 20-25yrs; 40(28.6%) fell within the ages of 26- 30yrs; 35(25%) had their age between 31-35yrs, while 20(14.3%) fell between the age brackets of 36 - 40yrs. The remaining 15(10.7%) fall within the age brackets of 36yrs and above. Participants that were single were 35(25%) while those married were 105(75%). Evidence from the study indicated that 80(57.1%) had monogamy as the nature of family structure while 60(42.9%) are polygamy family structure.

The number of live births that fell within a frequency of 62(44.3%) out of the total sampled had only 1 child or no child, 53(37.8%) had 2-3 children, 14(10%) had 4-5 children, while the remaining 11(7.9%) had more 6 or more children. Majority of the participants 84(60%) were Christians, 11(7.9%) practice Islam, and 32 (22.9%) are traditional believers while the remaining 13(9.2%) practice no religion. Most of the respondents, 60 (42.9%) were unemployed, 49

(35%) were self-employed, and the least participants, 31(22.1%) were employed. Our data indicated that 17(12.1%) of the respondents had low financial strength with the average minimum wage of <33,000; 22(15.7%) had a family income between 34,000 – 50,000; 58 (41.4%) of the respondents had a family income between 51,000 – 99,000 and the remaining 43(30.7%) had a family income of >100,000 and above. Majority of the respondents, 70(50%) had University Education, 35(25%) had secondary education, 20(14.3%) had primary education while the least participants, 15(10.7%) had no formal education.

Table 2: Private Fertility Clinics in Delta State and Participants Use of family planning methods

Family Planning Methods	Lily Hospitals, Okooko, Warri		Maviscope Hospital & Fertility Centre Sapele		Nordica Fertility Center, Asaba		Total Percentage (%)
	F	%	F	%	F	%	
EC	-	-	1	0.7	1	0.7	1.4
Condom	17	12.1	15	10.7	14	10	32.8
Injectable/Implant	3	2.1	-	-	-	-	2.1
IUCD	8	5.6	1	0.7	4	2.9	9.2
OCPs	2	1.4	2	1.4	2	1.4	4.2
Safe periods	18	12.9	14	10	13	9.3	32.2
Withdrawal	2	1.4	12	8.6	10	7.1	17.1
Spermicides/Diaphragms	-	-	-	-	1	0.7	0.7
Total Responses	50	35.7	45	32.1	45	32.1	100

OCP-Oral Contraceptive pills, IUD-Intrauterine Device, EC-Emergency Contraception

Results obtained from the study as contained in Table 2 represented the family planning methods being used by women attending the three (3) sampled private fertility clinics in Delta State, Nigeria. On average, 1.4% of the respondents preferred emergency contraception; 32.8% preferred the use of condoms, 2.1% choose injectable/implants, 9.2% accepted the use of an intrauterine devices, 4.2% preferred the use of oral contraceptives, and 0.7% preferred the use of spermicides/diaphragms. It was revealed that 32.2% relied on natural family planning (safe periods), and the remaining 17.1% preferred withdrawal method.

Determinants of Family Planning Choices and Barriers:

Table 3: Health Factors as a Determinant of Family Planning Choices and Barriers

S/N	Description of Items	SA	A	D	SD
1	Disease-like cancer prevalence is a barrier to family planning choices	65 (46.4%)	71 (50.7%)	4 (2.9%)	0 (0%)
2	Most family planning choices causes migraine headache	69 (49.3%)	58 (41.4%)	10 (7.1%)	3 (2.1%)
3	Family planning choices results occasionally increases body weight experiences	70 (50%)	67 (47.9%)	2 (1.4%)	1 (0.7%)
4	Some family planning choices makes one prone to urinary tract infection	64 (45.7%)	72 (51.4%)	1 (0.7%)	3 (2.1%)
5	Use of contraceptive pills makes my period irregular	75 (53.6%)	42 (30%)	23 (16.4%)	0 (0%)

SA - Strongly Agree, A-Agree, D - Disagree, SD-Strongly Disagree

Table 3 represented the statement on health as a determinant of family planning choices and barriers. 136(97.9%) accepted the view that disease like cancer prevalence is a barrier to family planning choices when compared to the remaining 4(2.1%) with alternative opinions. 127(90.7%) were satisfied with the view that most family planning choices caused migraine headache when compared to only 13(9.3%) that held a contrary opinion. 137(97.9%) believed that family planning choice results occasionally increased body weight experience when compared to 3(2.1%) participants that held a contrary opinion. In item 4, 136(97.1%) accepted the view that some family planning choices make one prone to urinary tract infection, unlike the remaining 4(2.9%) that holds a contrary view while in item 5, 112(83.6%) respondents accepted that the use of contraceptive pills makes their period irregular unlike the remaining 28(16.3%) that perceived it from a different perspective.

Table 4: Economic Factors as a Determinant of Family Planning Choices and Barriers

S/N	Description of Items	SA	A	D	SD
6	Family planning is often costly to practice	64 (45.7%)	58 (41.4%)	12 (8.8%)	6 (4.3%)
7	Family planning is not promoted by the economic situation	110 (78.6%)	30 (21.4%)	0 (0%)	0 (0%)
8	Family planning enables couples to make informed choices	82 (58.6%)	28 (20%)	20 (14.3%)	10 (7.1%)
9	Family planning reduces the risk associated with abortion.	59 (42.1%)	72 (51.4%)	8 (5.7%)	1 (0.7%)
10	Socio-economic status has influence on family planning choices	58 (41.4%)	70 (50%)	5 (3.6%)	7 (5%)

SA - Strongly Agree, A-Agree, D - Disagree, SD-Strongly Disagree

Table 4 represented the statement on economic factors as a determinant of family planning choices and barriers. In item 6, 122(87.1%) were satisfied with the view that family planning is often costly to practice, while 18(12.9%) held contrary opinions. Results obtained in item 7 revealed that all the 140(100%) participants accepted that family planning is not promoted by the economic situation. Meanwhile, in item 8, 110(78.6%) participants believed that family planning enables couples to make informed choices when compared to 30(21.4%) who held contrary opinions. 131(93.5%) respondents were satisfied with the view that family planning reduces the risk associated with abortion while 9(6.5%) had a contrary opinion. 128(91.4%) respondents accepted the view that socio-economic status has an influence on family planning choices. However, 12(8.6%) were not satisfied with this statement.

Table 5: Religious Factors as a Determinant of Family Planning Choices and Barriers

S/N	Description of Items	SA	A	D	SD
11	Religion influences women's decision towards family planning choices	30 (21.4%)	17 (12.1%)	50 (35.7%)	43 (30.7%)
12	Religion only approve safe periods and withdrawal methods as the accepted family planning choices	67 (47.9%)	38 (27.1%)	22 (15.7%)	13 (9.3%)
13	Religious beliefs are barriers to family planning and contraception choices	45 (32.1%)	80 (57.1%)	10 (7.1%)	5 (3.6%)
14	Religion is against family planning because it is used to control population	38 (27.1%)	59 (42.1%)	32 (22.9%)	11 (7.9%)
15	Religious practices plays important role in women's choices of family planning	90 (64.3%)	50 (35.7%)	0 (0%)	0 (0%)

SA - Strongly Agree, A-Agree, D - Disagree, SD-Strongly Disagree

Table 5 represented the statement on religious factors as a determinant of family planning choices and barriers. Results obtained revealed that 47(33.5%) accepted that religion influences women's decision towards family planning choices; while, 93(69.5%) had contrary opinions. 105(75%) participants believed that religions only approved safe periods and withdrawal methods as the accepted family planning choices when compared to 35(25%) participants that had contrary opinion. 125(89.2%) respondents were satisfied with the view that religious beliefs are barriers to family planning and contraception choices, while 15(10.8%) had a contrary opinion. 97(69.2%) of the respondents accepted that religion is to family planning because it is used to control population, however, 43(30.8%) did not support the view. Item 15, all respondents 140(100%) accepted that religious practice play important role in women's choice of family planning.

Table 6: Social Factors as a Determinant of Family Planning Choices and Barriers

S/N	Description of Items	SA	A	D	SD
16	Family planning choice has become a good measure for reducing childbirth ratio	54 (38.6%)	35 (25%)	31 (22.1%)	20 (14.3%)
17	The use of family planning methods is against the norms and values of life	15 (10.7%)	20 (14.3%)	67 (47.9%)	38 (27.1%)
18	Family planning is not the most accepted in marital life setting	90 (64.3%)	48 (34.3%)	1 (0.7%)	1 (0.7%)
19	Family planning choices can be promoted by social media	84 (60%)	40 (28.6%)	8 (5.7%)	8 (5.7%)
20	Family planning choices can be affected by peer group influence	29 (20.7%)	25 (17.9%)	66 (47.1%)	20 (14.3%)

SA - Strongly Agree, A-Agree, D - Disagree, SD-Strongly Disagree

Table 6 represented the statement on social factors as a determinant of family planning choices and barriers. In item 16, 89(63.6%) accepted that family planning choice has become good measure for reducing childbirth ratio, unlike the remaining 51(36.4%) participants that held a contrary view. 105(75%) respondents accepted that the use of family planning methods is against the norms and values of life when compared to 35(25%) that had

an alternative opinion. Furthermore, 138(98.6%) were satisfied with the view that family planning is not the most accepted in the marital life settings when compared to only 2(1.4%) of the respondents that held contrary opinions. 124(88.6%) accepted that family planning choices can be promoted by social media, while 16(11.4%) respondents perceived it from another perspective. 54(38.6%) participants accepted that family planning choices can be affected by peer group influence while the majority, 86(61.4%) held a contrary view.

Table 7: Cultural Factors as a Determinant of Family Planning Choices and Barriers

S/N	Description of Items	SA	A	D	SD
21	Cultural difference has significant relationship with family planning choices	70 (50%)	40 (28.6%)	15 (10.7%)	15 (10.7%)
22	Rate of family planning practices is considerably low due to cultural practices	57 (40.7%)	62 (44.3%)	13 (9.3%)	8 (5.7%)
23	Most culture forbids women to use family planning methods	68 (48.8%)	66 (47.1%)	5 (3.6%)	1 (0.7%)
24	Most culture encourage natural family planning than the use of contraceptives	58 (41.4%)	61 (43.6%)	18 (12.9%)	3 (2.1%)
25	Cultural practice could lead to higher levels of unplanned pregnancies	44 (31.4%)	59 (42.1%)	22 (15.7%)	16 (11.4%)

SA - Strongly Agree, A-Agree, D - Disagree, SD-Strongly Disagree

Table 7 represented the statement on cultural factors as a determinant of family planning choices and barriers. 110(78.6%) respondents accepted that cultural difference has a significant relationship with family planning choices while, 30(21.4%) had an alternative opinion. 119(85%) were satisfied with the view that the rate of family planning practice is considerably low due to culture when compared to 21(15%) of the respondents that held contrary opinions. 134 (95.9%) believed that most culture forbids women to use contraceptives when compared to 6(4.1%) that holds a contrary opinion. 119(85%) accepted the view that most culture encouraged natural family planning than the use of contraceptives, unlike the remaining 21(15%) that held a contrary view. Finally, 103(73.5%) respondents accepted that cultural practice could lead to higher levels of unplanned pregnancies when compared to 37(26.5%) respondents that perceived it with alternate opinions.

Hypotheses Testing

Chi-square statistical technique was used in testing the five (5) formulated hypotheses based on the decision rule and degree of freedom described as follows:

Decision Rule: If the Chi-Square calculated value (X^2_{cal}) is greater than the derived or table Chi-square value (X^2_{tab}), reject H_0 and accept H_1 .

Otherwise, the Ho is accepted and Hi is rejected. The theoretical table Chi-square value is usually read from the Chi-square (X^2) table at the chosen level of significance

Degree of Freedom: For the available degree of freedom, the test was carried out at 5% or 0.05 level of significance and degree of freedom (Df) = (c-1) (r-1). Therefore, $Df = (1-1) (4-1) = 3$, The frequency expected (Fe) is = Total frequency observed (TFO)/Total Rows (TR).

Null Hypothesis One:

There is no significant relationship between health factors and the determinants of family planning choices and barriers among women attending private fertility clinic in Delta State.

Table 8: Contingency Table for Hypothesis I

Response	Fo	Fe	Fo - Fe	(Fo - Fe) ²	$\frac{(Fo - Fe)^2}{Fe}$
Strongly agree	65	31.3	33.7	1135.69	36.3
Agree	71	31.3	39.7	1576.09	50.4
Disagree	4	31.3	-27.3	745.29	23.8
Strongly Disagree	0	31.3	-31.3	979.69	31.3
Total	140				X²=141.7

Fo – Frequency observed, Fe – Frequency expected

In keeping with our decision rule for Hypothesis I, since the chi-square analysis for the T-calculated value of 141.7 is greater than the derived or T-critical chi-square value of 9.488, that is, $X^2_{cal} > X^2_{tab}$ as shown in Table 8 above, hence, we reject Ho and accept the Hi. By this analysis, it shows that there is a significant relationship between health factors and the determinants of family planning choices and barriers among women attending private fertility clinic in Delta State. Based on the analysis conducted on the determinants of family planning choices and barriers among women attending a private fertility clinics in Delta State as shown in Tables 3 and 8 respectively, it was revealed that on the basis of health factors; disease like cancer prevalence is a barrier to family planning choices, and that most family planning choices cause migraine, occasionally increase weight experiences, meanwhile, some family planning choices makes one prone to urinary infection and use of contraceptive pills makes their period to be irregular. Such health determinants were similar to those reported by Dahlgren and Whitehead [22], that religion played a major role in family planning method choice.

Null Hypothesis Two:

There is no significant relationship between economic factors and the determinants of family planning choices and barriers among women attending private fertility clinic in Delta State.

Table 9: Contingency Table for Hypothesis II

Response	Fo	Fe	Fo - Fe	(Fo - Fe) ²	$\frac{(Fo - Fe)^2}{Fe}$
Strongly agree	64	31.3	32.7	1069.29	34.12
Agree	58	31.3	26.7	712.89	22.8
Disagree	12	31.3	-19.3	372.49	11.9
Strongly Disagree	6	31.3	-25.3	640.09	20.5
Total	140				X²=89.3

Fo – Frequency observed, Fe – Frequency expected

Considering our decision rule for Hypothesis II, since the chi-square analysis for the T-calculated value of 89.3 is greater than the derived or T-critical chi-square value of 9.488, that is, $X^2_{cal} > X^2_{tab}$, hence, we reject Ho and accept the Hi. By this analysis, therefore, we concluded that there is a significant relationship between economic factors and the determinants of family planning choices and barriers among women attending a private fertility clinic in Delta State. With regard to economic factors and family planning choices and barriers among women attending fertility clinics as shown in Tables 4 and 9, respectively, it was deduced that family planning is often costly to practice; although family planning is not promoted by the economic situation and that family planning enables couples to make informed choices as it reduces the risk associated with abortion. Nevertheless, socio-economic status has an influence on family planning choices. This finding was in line with a study by Kumari *et al.* [23] who found that working women were more inclined to adopt one or the other methods of family planning compared to housewives. Moreover, they observed a positive relationship between the economic status of the family and the adoption of contraception.

Null Hypothesis Three:

There is no significant relationship between religious factors and the determinants of family planning choices and barriers among women attending private fertility clinic in Delta State.

Table 10: Contingency Table for Hypothesis III

Response	Fo	Fe	Fo - Fe	(Fo - Fe) ²	$\frac{(Fo - Fe)^2}{Fe}$
Strongly agree	67	31.3	35.7	1274.49	40.8
Agree	38	31.3	6.7	44.89	1.4
Disagree	22	31.3	-9.3	86.49	2.8
Strongly Disagree	13	31.3	-18.3	334.89	10.7
Total	140				X²=55.6

Fo – Frequency observed, Fe – Frequency expected

In keeping with our decision rule for Hypothesis III, since the chi-square analysis for the T-calculated value of 55.6 is greater than the derived or T-critical chi-square value of 9.488, that is, $X^2_{cal} > X^2_{tab}$, hence, we reject H_0 and accept the H_1 . From this analysis, we therefore conclude that there is a significant relationship between religious factors and the determinants of family planning choices and barriers among women attending a private fertility clinic in Delta State. The study found that religious factors has a relationship with family planning choices among women attending fertility clinics as represented in Tables 5 and 10, respectively, thus, religion influences women’s decision towards family planning choices as religion only approves safe periods and withdrawal methods as the accepted family planning choices, meanwhile, religious beliefs are barriers to family planning and contraception choices because it is believed to be used in controlling population, although, it was jointly accepted that religious practices plays important role in women’s choices of family planning. This agrees with the findings of Raine, Minnis & Padian [24], who found that women raised within a given religion were half as likely to use any contraceptive method. A study by Lawani, Iyoke and Ezeonu [25], who revealed that the religious prohibition of contraceptive adoption in Nigeria still partly persists due to misconceptions and myths about family planning.

Null Hypothesis Four:

There is no significant relationship between social factors and the determinants of family planning choices and barriers among women attending private fertility clinic in Delta State.

Table 11: Contingency Table for Hypothesis IV

Response	Fo	Fe	Fo - Fe	(Fo - Fe) ²	$\frac{(Fo - Fe)^2}{Fe}$
Strongly agree	54	31.3	22.7	515.29	16.5
Agree	35	31.3	3.7	13.69	0.4
Disagree	31	31.3	-0.3	0.09	0.003
Strongly Disagree	20	31.3	-11.3	127.69	4.08
Total	140				X²= 21.0

Fo – Frequency observed, Fe – Frequency expected

In keeping with our decision rule for Hypothesis IV, since the chi-square analysis for the T-calculated value of 21.0 is greater than the derived or T-critical chi-square value of 9.488, that is, $X^2_{cal} > X^2_{tab}$, therefore, we reject H_0 and accept the H_1 . From this analysis, it could be inferred that there is a significant relationship between social factors and the determinants of family planning choices and barriers among women attending a

private fertility clinic in Delta State. This study further revealed that social factors have a link to family planning choices and barriers among women attending fertility clinics as shown in Tables 6 and 11, it was noted that family planning choice has become good measure for reducing childbirth ratio and that it works against the norms and values of life, as such family planning is not accepted in most marital life setting, although, choices can be promoted by social media but can’t be affected by peer group influence. This finding was consistent with the study of Burgard [26] who reported that increase in the use of contraception is linked to rapid population growth rates, high levels of unemployment, higher socioeconomic status, and greater availability of contraceptive services.

Null Hypothesis Five:

There is no significant relationship between social factors and the determinants of family planning choices and barriers among women attending private fertility clinic in Delta State.

Table 12: Contingency Table for Hypothesis V

Response	Fo	Fe	Fo - Fe	(Fo - Fe) ²	$\frac{(Fo - Fe)^2}{Fe}$
Strongly agree	57	31.3	25.7	660.49	21.10192
Agree	62	31.3	30.7	942.49	30.1115
Disagree	13	31.3	-18.3	334.89	10.69936
Strongly Disagree	8	31.3	-23.3	542.89	17.34473
Total	140				X²=79.3

Fo – Frequency observed, Fe – Frequency expected

Considering our decision rule for Hypothesis V, since the chi-square value for the T-calculated value of 79.3 is greater than the derived or critical chi-square value of 9.488, that is, $X^2_{cal} > X^2_{tab}$, hence, we reject H_0 and accept the H_1 . From this analysis, it could be deduced that there is a significant relationship between cultural factors and the determinants of family planning choices and barriers among women attending a private fertility clinic in Delta State. When referring to cultural factors as a determinant of family planning choices and barriers among women attending fertility clinics as shown in Tables 7 and 12, it was obtained that cultural difference has significant relationship with family planning choices, the rate of family planning practices is considerably low due to culture, most culture forbids women to use contraceptives rather encourage natural family planning than the use of contraceptives and the fact that cultural practice could lead to higher levels of unplanned pregnancies. This agrees with the opinion of Kennedy *et al.* [27], who argued that the prevalence of modern methods of contraception

among married adolescents is low in most countries. Thus, the down regulatory response to reproductive outcome has a link to low contraceptive use among young women and this to greater extent is considered to reflect a desire to become pregnant, particularly in settings where there is cultural pressure to prove fertility [28].

4 Conclusion

Population growth has been a problematic issue all over the world consequently; many developed countries have approved and resorted to birth control or family planning. The prevalence of family planning choices is very low with an attendant increase in unwanted pregnancies and unsafe abortions. Findings obtained from the analysis of results revealed that family planning choices and barriers among women attending private fertility clinics in Delta State are determined by; health, economic, social, religion and cultural factors. Hence, it is recommended that orientation and induction programmes should be provided to educate women towards appropriate family planning choices to encourage their use of contraceptives in reproductive issues especially in the study area.

Declaration of conflict of interest: None.

Authors' Contributions

NBC conceived the study idea, drafted the manuscript and conducted the analysis. **OFM** oversaw the study field survey and provided guidance for critical revisions. **COA** and **MUJ** both organized the literatures. All authors read and approved the final manuscript.

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