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Family Planning Preferences of Women, Ideal Family Size and Associated Effects on Academic Achievement of Children in Yenagoa, Bayelsa State, Nigeria

***Melody Kay Gibson (PhD)[1] , & Sunday David Edinyang (PhD)[2]**

[1]Senior Lecturer, Department of Social Science Education, Niger Delta University, Wilberforce Island, Nigeria. *Corresponding Author's **Email:** melodygibson@ndu.edu.ng
[2]Professor, Department of Social Science Education, University of Calabar, Calabar, Nigeria.

Abstract
The study examined the influence of family planning preferences of women on ideal family sizes and associated effects on academic achievement of children in schools in Yenagoa, Bayelsa State, Nigeria. An ex post facto design was used for the study with a sample of 160 purposively selected participants comprising 80 women and their 80 children. A self-developed questionnaire instrument comprising three subscales was validated, tested for reliability, and administered to participants to measure the influence of women's family planning preferences on their ideal family sizes and associated effects of this and household family sizes on academic achievement of children. Data collected were analysed using descriptive statistics (percentage and pie charts), independent t-test and chi-square statistics. Results showed that women's family planning preferences had a positive influence on their ideal family size (IFS) by 33.75%, largely driven by women practicing natural methods among the non-family-planning preferring women (NFPPW); and that family planning preferences and family size positively influenced children's academic achievement in schools. Associated effects of family planning preferences of women and household family sizes on academic achievement of their children in schools showed significant differences between mean scores of family-planning preferring women (FPPW) and non-family-planning preferring women (NFPPW) at $t(158) = 5.45$, $p < .05$; and no significant association at $\chi^2(15.51) = 7.4852$, $p < .05$; and at $\chi^2(15.51) = 5.3032$, $p < .05$. The study recommended, among others, that family planning preferences of women should be aimed at improving quality of life and academic achievement of children through enhanced cognitive engagement at home, provision of stable household income, fair distribution of resources, provision of nutritious meals; and creating a positive home environment for learning.

Keywords: Family Planning, Family planning preferences, Ideal Family Size, Learning Engagement, Academic Achievement. Multifarious.

1. Introduction

Family planning (FP) is a strategy aimed at influencing the number of children a couple would have through natural or contraceptive methods. Family Planning preference is the choice a woman of reproductive (WRA) makes on whether or not to engage in family planning procedure; and the method to be used. Women therefore put into consideration their available socio-economic resources as well as maternal and child health; and fertility before choosing family planning (FP) or non-family-planning (NFP) to determine childbirth or child-spacing. Thus women consider it

appropriate to plan for how they would raise their children before childbirth and nurture them through proper upbringing, early childhood cognitive development and education. Planning for the number of children a household would have is significant to maintaining desirable family sizes and ensuring that family income is equitably distributed among children for their childhood development, learning engagement at home and academic achievement in schools. Family planning is also aimed at managing maternal health conditions during pregnancies such as high blood pressure, oedema and diabetics, for healthy foetal growth and mental development of children; as well as safe motherhood to ensure that children grow up in healthy environments. Thus family planning is significant to influencing family sizes, family incomes and lifestyles as well as quality of life of family members.

In Nigeria however, there is low percentage of FP utilisation (Innocent et al., 2022; Mkpae et al., 2025; Okafor et al., 2022) in spite of the many campaigns and interventions employed by many researchers and health workers to counsel and educate women of reproductive age (WRA) the many benefits of FP practice. Parents have always based their desired number of children on their FP preferences and expectations of what they want their children to be in the future. These expectations communicated by parents help to influence academic achievement of children in schools. The level of women's family planning activities in Nigeria can further influence family sizes as well. The concept family size refers to the number of people in a family with special reference to the number of births or children a couple are willing to have as determined by acceptable ideal family size (IFS). Family planning therefore enable parents to maintain affordable IFSs and by which the family income and socio-economic resources can be adequately utilised to nurture, educate and support children to grow into full potentials of what their parental expectations represent.

Similar to home environmental factors, family size also influences learning engagement and academic achievement as FP is also aimed at controlling not only the number of childbirths in a family but also determining how income is distributed among family members as well; putting their welfare into consideration. Family planning plays a very significant role in shaping the demographic dynamics of families in Nigeria. Women's family planning preferences have played a significant role in determining family sizes and the home environment as well as early childhood development and achievement of children in schools. Women's FP preferences have been the avid topic of some researchers in order to determine how it has helped to influence FP desires of women and methods used (Karra & Zhang, 2021; Dibaba & Mitike, 2016; He et al., 2017; Obong et al., 2022).

Thus some researchers believe that women's preferences for FP methods depends on such factors like longevity of method, effectiveness, distance, availability, number of times to visit a clinic and fear of side-effects (Gahungu et al, 2021; Innocent et al, 2022; Okafor et al, 2022). These issues are therefore considered deciding factors for some women when utilizing family planning methods or contraceptives. Other factors to be considered in examining the influence of women's FP preferences on ideal household family sizes and academic achievement of children in schools include creating nurturing environment for successful learning, adequate distribution of resources, provision of learning materials, good lifestyle and learning space, conducive home environment, emotional stability, supervised academic engagements, good parenting styles, development of good character, parental expectations; and nutritious meals.

All these can be achieved through determined efforts of parents who strive to provide all the socio-economic requirements for learning engagement of their children both at home and in school by developing family sizes that would help them provide the kind of resources and home environments required for successful learning engagements and academic achievement. The primary reason why some parents engage in FP and child spacing is to create conducive home environments for children to thrive and grow up in a family which enables equitable distribution

and utilisation of resources for their development. Family planning therefore plays a very significant role in shaping the demographic dynamics of families in Nigeria.

1.1 Research Objectives

The study sought to examine influence of family planning status of women, on their family size and academic achievement of students; as well as influence of family size on family size on academic achievement of students in secondary schools in Yenagoa, Bayelsa state, Nigeria. Specifically the study sought to:

1. Examine the extent to which family planning preferences of women influence their ideal family size
2. Examine how family planning preferences of women influence their children's academic achievement in schools
3. Examine how family size of households influence academic achievement of children in schools

1.2 Research Questions

The following questions were raised to guide the study:

1. To what extent do family planning preferences of women influence ideal family sizes of households?
2. How do family planning preferences of women influence academic achievement of their children in school?
3. How do family sizes of households influence academic achievement of children in schools?

1.3 Hypotheses

The following hypotheses were formulated to test significance of associations between women family planning preferences, household family sizes and academic achievement of children in schools at .05 level of significance:

1. HO1: The mean score of households' ideal family sizes do not significantly differ between family planning preferring women (FPPW) and non-family planning preferring women (NFPPW)
2. HO2: The academic achievement of children in schools is not significantly associated with family planning preferences of women (their mothers).
3. H03: The academic achievement of children in schools is not significantly associated with family sizes of (their) households.

2. Review of Related Literature

Family planning gives parents the opportunity to plan their children's education through, improved income and adequate distribution of resources, family income, education and socio-economic resources. Many parents influence their children's education and academic achievement by communicating their expectations to them so that they never forget to work towards achieving their parents' expectations. To examine the influence of parental expectations and other associated factors, Li et al. (2025) investigated effects of family expectation, family education, family support, and individual self-regulation on academic achievements of pupils in Chinese families using data from a longitudinal panel study between 2016 and 2020 by the Chinese Family Panel Studies (CFPS) team of researchers. The authors used purposive sampling to select 913 pupils from primary schools. Findings of the study revealed high parental education, support, environment and high levels of family expectations to positively impact pupils' self-regulation skills and academic performance in schools.

Olaru et al. (2022) also investigated effects of parental socio-economic status and joint effects of parental education, occupational status and home learning environment on kindergarten and

primary school children's language competence in Germany using longitudinal study design. A sample of 420 children was purposively selected and their Demographic data was collected from the National Educational Panel Study (NEPS) to measure home learning environment, parental socio-economic as well as Peabody Picture Vocabulary Test (PPVT) to test children's vocabulary competence in schools. Results of the study revealed positive associations between parental education and children receptive vocabulary competence; significant effects of home learning environment on academic achievement of children as well as significant effects of maternal education on children receptive vocabulary competence as well.

Thus family support and financial investment on a child's education fosters nurturing environments for that child to succeed academically. This also implies that FP provides time for parents, especially mothers to study and develop skills for work to be able to earn more income and invest both time and money in their children's education and thus provide the necessary requirements for academic engagement and success. Substantiating this claim, Santra and Panda (2025) reported positive correlations between nurturing family environments and academic achievements of students in their study on 'relationship between family environment and academic achievement among secondary school students'. The researchers adopted descriptive correlational design and stratified random sampling to select 80 students, collecting data from the West Bengal Secondary Education Board to measure academic achievement students and Family Environment Scale (FES) to measure students' family environments. The findings of this study also revealed significant differences in the families' residential backgrounds; and significant differences in the academic achievement of students with respect to residence.

Thus many women also consider the environment to raise children in when considering their family planning preferences. Obong et al. (2022) also investigated the preference, utilisation and factors affecting use of contraceptives among women in primary healthcare facilities in Delta state, southern Nigeria using a cross-sectional study design and a multistage sampling to select 426 women of reproductive age (WRA) from 32 primary healthcare facilities. Interview and self-structured questionnaire instrument was developed by authors and used to collect data which revealed most participants preferred injectibles to other contraceptive methods. Health education, spouse support and training were significantly associated with their family planning preferences.

He et al. (2017) examined women's contraceptive preferences using panel internet-based survey design and a sample of 1078 women aged between 18 and 55 from 2013-2016 using household random probability panels of 50,000 US citizens. A survey titled 'Women healthcare experience and preferences study survey' was developed to measure women's preferences and experiences with healthcare and socio-demographic characteristics of women on their health behaviour and service intentions. The results showed most women used long-lasting hormonal non-long acting reversible contraceptives with 7.9% permanent method, 10.6% long lasting reversible contraceptive (LARC), 36.3% hormonal injection, 13.4% condoms, 6.3% withdrawal, and 25% no contraceptives use.

Some studies indicate that factors influencing families' desired family size include household income, religion, education, maternal health, psychological factors, contraceptive knowledge, preferred child's gender and age at the time of marriage.(Dibaba & Mitike, 2016; Ntoimo, 2021) Dibaba and Mitike (2016) examined factors influencing desired family size among residents of Asesela town in Ethiopia using cross-sectional study design discovered that household income, maternal health and emotional satisfaction are among the top factors influencing desired family sizes in Ethiopia. The authors used a randomly selected 428 household participants based on a 50% interval and a structured questionnaire instrument developed to measure couples' desired family sizes among selected households and the relationship between family size and the desire

of couples to have more children.. Analysed data revealed that household income, gender preference, education and socio-economic factors influenced desired family sizes among Assela residents and that people with higher educational backgrounds preferred small family sizes than those with less education.

Another study by Ntoimo (2021) also examined family size preference among women in union in Nigeria and associated factors and discovered that majority of women in a union preferred an IFS of between 4 and 5 children while the educated women preferred 4 or less than 4 children. The authors adopted a cross-sectional survey and a sample of 13422 participants including 674 women aged between 15 and 49 selected using multistage sampling comprising stratified and random sampling techniques. The independent variable of women's ideal family size (IFS) was used as a predictor of family planning in which has not been generally determined in Nigeria. A standardised questionnaire instrument was used to measure socio-economic, demographic and health characteristics of women and men in selected households. The findings indicated that women in southern Nigeria preferred smaller family sizes while their counterparts in Northern Nigeria prefer large family sizes influenced mostly by religious and-cultural beliefs.

Research on the impact of family size on home environment supports the belief that the type of family size a family has can either reduce or improve the nurturing environment at home; and therefore influence learning engagement of children as well as their academic performance in schools (Oladeji, 2016; Onugo, 2021; Santra & Panda, 2025).

To substantiate this assertion, Oladeji (2016) investigated the relationship between family size, peer influence and school environment as predictors of academic performance of students in Ibadan North, Nigeria and found significant correlations between family size, peer influence and academic performance of students; and between school disciplinary environment and academic performance of students. The author adopted a correlational survey and a sample of 100 randomly selected students for the study and employing a self-structured questionnaire instrument to measure family size, peer influence and school environment on academic achievement of students. The results revealed family size to have significant relationship on academic engagement and achievement.

It is commonly believed that the smaller the family size is, the better to manage available resources, home environment and academic achievement of children. However, contrary to this belief, other studies found no significant effects of family size on learning engagement and academic achievement of children (Onugo, 2021). A study carried out by Onugo (2021) investigated the implications of family size on academic achievement of Social Studies students in Abakalili, Nigeria found no significant differences in the mean scores of students by family size and parental expectations. The author adopted a survey research design and a sample of 258 randomly selected students and an achievement test (SOSAT) instrument to measure students' achievement to measure home environment variables. The findings revealed low positive relationship between family size, parental expectation and academic achievement of Social Studies students; no significant difference in the achievement mean scores of Social Studies students based on family sizes and parental expectation.

These findings can be attributed to socio-economic status of parents and failure of parents to plan family sizes with available family resources and income (Li et al., 2025; Olaru et al., 2022; Santra & Panda, 2025). Research has also shown that many married women of reproductive age (WRA) in Nigeria fail to plan childbirths due to religious beliefs, spouses' approval, family planning knowledge, peer influence, low fertility rates, prevailing IFS in geopolitical zone, marital age, level of education and income, preferred family size and gender of children, as well as side-effects of methods used in family planning (Hutchinson et al., 2021; Innocent et al., 2022). Family

planning therefore entails a proposed plan on how women (families) plan childbirth as well as provide for children according to their family resources or income.

The gap in literature portrays most researchers sought to examine awareness or knowledge and use of contraceptives in Nigeria as the only option open to women for family planning. However, there are other options such as natural methods of birth spacing used by women that can be investigated for safe practices. For most of the literature reviewed on local authors in Nigeria, researchers mostly investigated demand for family planning, modern family planning methods, unmet needs for family planning among WRA or Married Women (MW); and current practice of family planning among WRA in Nigeria (Hutchinson et al., 2021; Mkpae et al., 2025; Odjesa & Okenofua, 2024). Family planning according to the 2018 Nigeria Demographic and Health Survey (NDHS); corroborated by Okafor et al. (2022) in their study on 'current practice of family planning among teachers' still show low levels of FP practice, average knowledge and poor attitude towards it among WRA or MW in Nigeria. There is little done on the influence of family planning preferences of women on their ideal family size (IFS) or on associated effects on academic achievement of children in schools due to the ambience created at home for these children. This study therefore sought to examine the influence of family planning status of women on ideal family size and associated effects on academic achievement of children in schools in Yeanagoa Bayelsa state, Nigeria.

3. Methods

3.1 Participants

Participants for the study constitute a sample of 160 subjects comprising two cohorts of 80 women between 25 and 49 years and 80 of their children between 10 and 13 years purposively selected for the study in Yenagoa, Southern Nigeria. The participants comprise 80 women with Natural methods of Family Planning Preferences (NMFPP), Contraceptives Family Planning Preferences (CFPP) and Faith in God Non-Family Planning Preferences (FGNFPP) and their children constituting two clusters for the study. Both categories of samples (Mothers and children) are important to the study because the women are the only ones to provide detailed background information on their family planning preferences, their deal family sizes and their children's academic achievement as well. The children are important to the study as well because without them there would not be any measures on the associations between family planning preferences of women and achievement as well as between family size and academic achievement of children in schools. Due to ethical issues, the women were first approached for their consent at the Family planning clinics before administering the instrument. Some of the women preferred to have the questionnaire sent to their phones which they responded and sent back through social media channels. Some of the data was collected through personal interviews because some participants preferred answering direct questions instead of the questionnaire instrument which they said would be better due to lack of time. Observations were also made on some participants' residences and nurturing home environments where ethical permission was obtained.

Yenagoa is the capital of Bayelsa state in southern Nigeria and located in the central Niger Delta region and the South-South geo-political zone in Nigeria. Bayelsa was created out of old Rivers State and having common boundaries with Delta State on the North, Rivers State on the East and the Atlantic Ocean on the West and South. Bayelsa State was created along with its capital Yenagoa on the 1st of October, 1996 by the old Sani Abacha regime and officially consists eight Local Government Areas (LGAs); although the Diepreye Alammiesiegha administration created an additional eight LGAs to make up 24 LGAs for administrative purposes only and not officially recognised at the Federal Capital Territory Abuja. The state covers a land area of 9415.7 km^2 and a population of 2,277,961 million people (Multiple Indicator Cluster Survey Population Census, 2016).

3.2 Measures and Instruments

The design for the study is an ex-post facto used to observe and describe some phenomena of interest that has already occurred and which variables cannot unfortunately be manipulated but seeks to identify systematic and observable causal-effects in form of comparative causal effects. This method was adopted for the study to examine how family planning preferences of women which have already occurred have influenced their ideal family sizes as well as academic achievement of their children in schools. Therefore a Likert-type questionnaire scale titled 'Influence of Family Planning Preferences of Women on Ideal Family Size and Associated Effects on Academic Achievement of Children (IFPPWIFSAEAAC) Scale with 3 subscales was developed, validated and tested for reliability. The IFPPWIFSAEAAC scale comprises two sections of which the first part of the instrument sought to measure demographic characteristics of children and parents comprising 11 items. The second segment of the IFPSWIFSAAC scale comprises 3 subscales of a 10-item, 4-point IFPPWIFSY subscale with a Cronbach of 0.70 measuring influence of family planning preferences of women on ideal family size in Yenagoa, a 10-item, 4-point IFPPWAACS subscale with a Cronbach of 0.80 measuring influence of family planning preferences of women on academic achievement of children in schools; and a 10-item, 4-point IFSHAACS subscale with a Cronbach of 0.74 measuring influence of family size of households on academic achievement of children in schools. Children's academic achievement was measured through the retrieval of terminal examination scores which was indicated by mothers and confirmed by school records with the permission of mothers to cater for ethical considerations. For some participants, observation and interview was used to collect data based on the questionnaire items as they preferred answering direct questions in an interview instead of Ethical issues were taken into consideration as the sample included students with parental permission to participate in the study.

The instrument was validated for face and content validity and administered to participants by the researcher and retrieved by same by the end of one week. Data collated was represented in bar charts showing percentages; and analysed with independent t-test and chi-Square statistics.

4. Results

4.1 Percentage Analysis of Child and Parental Demographic Characteristics

Analysis of the collated data based on the following research questions used to guide the study yielded the following results:

1. To what extent do family planning preferences of women influence ideal family sizes of households?

From the percentage analysis the findings revealed that family planning preference of women influenced ideal family size of households to be 4 children per household at 33.75% and mostly preferred by non-family planners made up of those with strong faith in God and those who used natural methods of family planning. The extent to which family planning preferences of women have influenced ideal family size is revealed to be at 33.75% at 4 children per household in Bayelsa state, South-Southern Nigeria.

Moreover, analysis of demographic data also showed sample of children to comprise 47 (58.75%) male and 33 (41.25%) female children aged between 6 and 14 years at the lower, middle and upper Basic schools level. It was also revealed that 40% of women who participated in the study have had college degrees as well as most (42.5%) women providing their families with one meal per day, 45% of fathers working in public (civil) service., while the sample comprises 50% family planning women and 50% non-family planning women; with 50% preference for contraceptives and 35% preference for natural family planning methods, leaving 15% of the sample which does not engage in any form of family planning do not engage in any form of family planning due to their religious affiliations and faith in God. Demographic findings also revealed women's preferred ideal family size (IFS) to be 4 children per household at 33.75%.

2. How do family planning preferences of women influence academic achievement of children in schools?

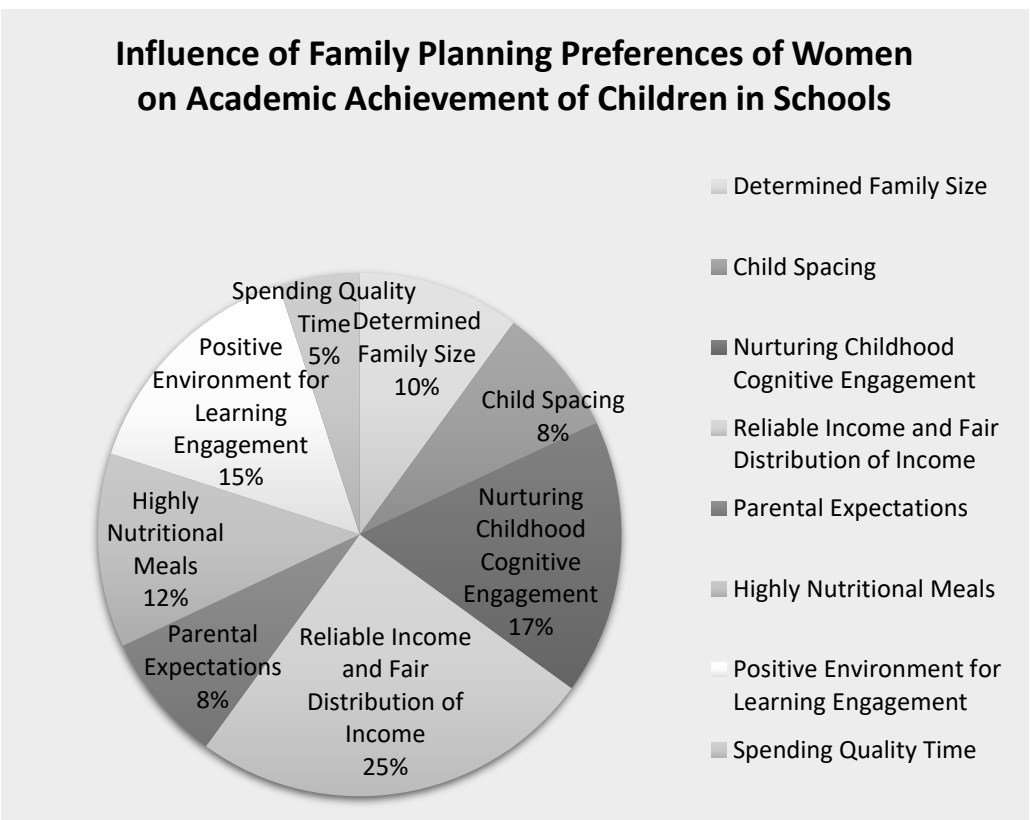

Figure 1: Influence of women's family planning preferences on academic achievement of children

Percentage analysis of data also revealed that family planning preferences of women has low positive relationship with in most categories except for 'reliable income and fair distribution of income' (25%) as well as childhood cognitive engagement (!7%) and positive environmental learning engagement (15%). Percentage analysis also showed family size by 10%, child spacing by 8%, nurturing childhood cognitive engagement by 17%, parental expectations by 8%, provision of highly nutritional meals by 12%; and spending quality time with parents by 5%.

3. How do family sizes of households influence academic achievement of children in schools?

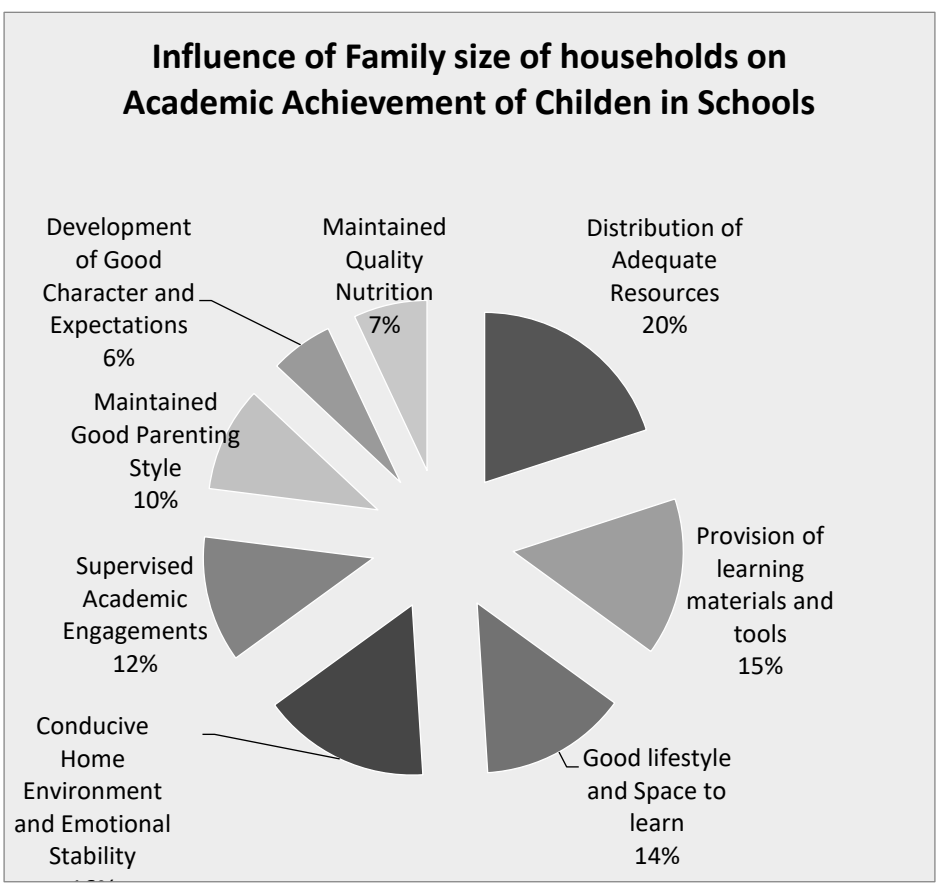

Figure 2: Influence of family size of households on academic achievement of children in schools

Percentage analysis of data showed family size of households to influence academic achievement of children through adequate distribution of resources by 20%, provision of learning materials by 15%, good lifestyle and learning space by 14%, conducive home environment and emotional stability by 16%, supervised academic engagements by 12%, maintained good parenting style by 10%, development of good character and expectations by 6%; and maintained good nutritional quality by 7%.

4.2 Independent T-test Analysis

The following hypotheses were formulated to test the significance of findings at.05 level of significance:

1. H01: The mean score of ideal household family sizes do not significantly differ between family planning preferring women (FPPW) and non-family planning preferring women (NFPPW).

Table 2: Independent t-test of influence of women's family planning preference on household ideal family size

Family Planning Status	N	Mean	Standard Deviation	Standard Error	T-Value
FPPW	40	68.63	14.55	2.29	5.45
NFPPW	40	13.75	13.18	2.09	

P < .05; critical t = 1.98; df = 158

The t-test calculated value (5.45) is higher than the t-critical value (1.98) and so the null hypothesis is rejected in favour of the alternative hypothesis as ideal family sizes of households are influenced by women's family planning preferences.

4.3 Chi-Square Analysis

H02: The academic achievement of children in schools does not significantly associate with women's (mothers') family planning preferences.

Cells	O	E	O – E	$(O – E)^2$	$(O – E)^2/E$
1	8	7.7	0.3	0.09	0.0117
2	6	5.25	0.75	0.5625	0.1071
3	6	7	-1	1	0.1429
4	5	595	-0.95	0.9025	0.1517
5	3	2.1	0.9	0.81	0.3857
6	7	9.9	-2.9	8.41	0.8495
7	5	6.75	-1.75	3.0625	0.4537
8	12	9	3	9	1
9	10	7.65	2.35	5.5225	0.7219
10	2	2.7	-0.7	0.49	0.1815
11	7	4.4	2.6	6.76	1.5364
12	4	3	1	1	0.3333
13	2	4	-2	4	1
14	2	3.4	-1.4	1.9	0.5765
15	1	1.2	-0.2	0.04	0.0333
Total					χ^2 = 7.4852

df =8; at .05 level of significance and Critical Chi-square = 15.51

The Chi-square analysis showed χ^2 calculated (7.4852) to be lower than the critical χ^2 (15.51) value and so the null hypothesis is accepted.

H03: The academic achievement of children in schools does not significantly associate with their household's family sizes.

Cells	O	E	O – E	$(O – E)^2$	$(O – E)^2/E$

1	8	11.2	-3.2	10.24	0.9142
2	6	4.55	1.45	2.1025	0.4621
3	5	6.3	-1.3	1.69	0.2683
4	6	3.85	2.15	4.6225	1.2006
5	3	2.1	0.9	0.81	0.3857
6	19	16	3	9	0.5625
7	5	6.5	-1.5	2.25	0.3462
8	10	9	1	1	0.1111
9	4	5.5	-1.5	2.25	0.4091
10	2	3	-1	1	0.0333
11	5	4.8	0.2	0.04	0.0083
12	2	1.95	0,05	0.0025	0.0013
13	3	2.7	0.3	0.09	0.0333
14	1	1.65	-0.65	0.4225	0.2561
15	1	0.9	-0.1	0.01	0.0111
Total					χ^2 = 5.2982

df =8; at .05 level of significance and Critical Chi-square = 15.51

The Chi-square analysis showed χ^2 calculated (5.2982) to be lower than the critical χ^2 (15.51) value; and so the null hypothesis is accepted.

5. Discussion

From the findings it is revealed that family planning preference of women influenced ideal family size of households positively by 33.75% at four children per household. This means that family planning preferences of women can alter family size and socio-economic trends and responsibilities; and similar to the findings of Ntoimo (2021) and Dibaba and Mitike (2016) who reported that many women, especially southern women preferred small family sizes and an ideal family size of four children per household. However, the educated women among them preferred less than four children. It was also discovered that most of the women who preferred ideal family size of four children per households to be four children per household were mostly non-family planning women and surprisingly some who preferred natural family planning methods. It appears that most women who identified themselves as non-family planning individuals did so because they were not on any contraceptives but somewhat actually utilising natural means of family planning except for the percentage of women who have completely abstained from family planning activities due to their religious affiliations and faith in God. It is implied therefore that use of natural means of family planning such as post partum breastfeeding, safe period calendar and abstinence have been practiced by women for centuries and still utilized by some women in contemporary times, especially in the rural areas.

Only a small percentage of women who utilize natural methods discuss it. This was corroborated by He et al. (2017) as they reported in their study that 6.3% of women used natural methods of family planning. Many women may opt out contraceptive use due to some reported side effects with some contraceptives use. Some of the women who utilize use natural methods of family planning do so for fear of side-effects. This issue was reported as part of factors responsible for hindering some women's use of family planning as they associate side-effects with contraceptive use in Gahungu et al. (2021), Innocent et al. (2022) Okafor et al. (2022) in their separate studies.

Findings of the study also revealed that family planning preferences of women have influenced the academic achievement of their children positively though mostly low positive influence is recorded with a few exceptions. Some factors identified as influencing family planning preferences of women in the study are family size, child spacing, nurturing childhood and cognitive engagement, reliable income and fair distribution of resources, parental expectations, provision of nutritious meals, positive nurturing environment for learning engagement; and spending of quality time with parents. Although the gap in literature has not readily provided direct empirical evidence on the relationships with, or effects of family planning preferences of women on academic achievement of their children in schools, associated effects of family planning with child, parental and environmental variables exist.

Olaru et al. (2022) found positive associations between parental education and children receptive vocabulary competence and significant effects of home learning environment on academic achievement of children with respect to parents reading aloud at home. Li et al. (2025) also found high parental education, support, educational environment and high levels of family expectations to positively impact pupils' self-regulation skills and academic performance in schools. Sub-variables such as reliable income and fair distribution of resources take the highest place of preference among women as it was rated 25%. Family planning may be positively related to academic influence but may not be significantly associated due to many differentiated factors acting as intervening variables to its tests of significance. Academic achievement of children depend on a lot more than just environment and materials, it also depend on teaching and learning styles, parenting styles, school environment, emotional stability and nutritional quality of food; as well as maternal mental state and parental educational background.

The study also revealed that household family sizes influences academic achievement of students positively through adequate distribution of resources, provision of learning materials, good lifestyle and learning space, conducive home environment and emotional stability, supervised academic engagements, maintained good parenting style, development of good character and parental expectations. This is similar to the results discovered in Oladeji (2016) and Onugo (2021) who in their separate studies recorded positive and low positive relationships between family size and academic achievement of students in schools. While family sizes influence positive environments for learning engagement, improved income and resources, which in turn improves provision of learning materials, nurturing environment and mental states of students, it does little by itself to alter academic achievement without self-efficacy beliefs, self-determination and mastery and intrinsic motivation. However, students' academic achievement based on household family sizes may be more importantly due to intervening (confounding) variables and not directly related. Although significant associations may exist, it is indirectly influenced by many factors which constitute sub-variables to this study and which may be regarded as intervening variables due to the nature of their characteristics.

The study also found significant differences between mean scores of women with family planning preferences (FPP) and those with non-family planning preferences NFPP). It was discovered that most women preferring family planning did so with full knowledge of contraceptives use due to education level or enlightenment campaigns launched by public healthcare facilities or NGOs on population reduction agenda and improving global economies. However, educated participants had a higher uptake among women in the Bayelsa state compared to other studies such as in Okafor et al (2022), which registered contraceptive uptake of 15% in Enugu state and 35% at the national level and 35.2%, as well as in Odjesa and Okonofua (2024); also reported in the Nigeria Demographic and health Survey (NDHS, 2018).

The study also found no significant associations between family planning preferences of women (mothers) and academic achievement of their children in school. Thus it is inferred that there is no direct associations between women's family planning preferences and academic achievement of their children. It is possible to infer that any positive influence or impact of women's family planning preferences occurred in combination with several factors or influences. This is so inferred due to the many factors at play in influencing academic achievement of children. There was also no significant association between household family sizes and academic achievement of children in schools. This is similar to the findings of Onugo (2021) who also found no significant differences in the achievement mean scores of students by family size and parental expectations. These findings can be is attributed to poor socio-economic status of parents as a result of falling income levels and rising inflationary trends especially in the face of regional wars and rising petroleum crisis globally. With low incomes, smaller family sizes may not make so much difference in helping families improve the socio-economic conditions of their children as well as provide basic needs for them. Besides, family sizes do not matter much to the wealthy class. It is apparent that several other undefined variables are capable of acting as intervening or confounding variables in the study have yielded no significant associations between family size and academic achievement of children based on their household sizes. Parental income, education and expectations as well as quality nutrition were brought into the study but yet could not be manipulated or controlled due to the time, and nature of design as well as sampling technique used due to difficulty in sampling family planning women, many of who refused to reveal their family planning status or preferences.

6. Conclusion

Ideal household family sizes of women in the study greatly influence household sizes among non-family planning women. The study found positive influence of family planning preferences of women and household family sizes on academic achievement of children but no significant associations exist between family planning preferences of women and academic achievement of their children; as well as between household family sizes and academic achievement of their children in schools. However there was a significant mean score differences between achievement mean score of ideal household family sizes of family planning preferring women (FPPW) and non-family planning preferring women. In the study many women understood family planning to mean being placed on contraceptives, but it was discovered from analysed data that many women registered as non-family planning preferring women were actually engaged in family planning activities through natural methods (non-contraceptive use).

Researchers should not only research on contraceptive utilization or uptake when investigating family planning trends or development, but can also examine alternative methods as well as the impact these have on conventional families' resources, quality of life and associated effects on academic achievement of their children. Women's family planning preferences should be based on informed decision-making, personal experience and responsibilities accruing from such decisions for the intending mother and child's multifaceted development due to extant risk factors.

7. Recommendations

The following recommendations were proffered based on findings:

1. Women's family planning preferences should be given serious consideration when population issues are raised it poses a significant influence on ideal household family sizes in society and other socio-demographic characteristics of women's health behavior.
2. Family planning preferences of women should be aimed at improving socio-economic resources and academic achievement of children.
3. Every household should maintain an ideal family size that would enable children excel in their academic edeavours.

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