Social determinants of fertility behaviour in Nigeria

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Abstract

The study examined the influence of social determinants of fertility behaviour in Cross River South Senatorial District. The specific objectives of this study was to examine the influence of educational status on fertility behaviour among women, and investigate the influence of family size on fertility behaviour among women Wealth flow theory was adopted as a framework for explaining fertility behaviour. The study adopted a cross-sectional survey designed. A sample of 614 participants was selected for the study. The instruments for collection were qualitative and quantitative data. Retrieved data were analysed using statistical package for social sciences (SPSS version 20.0). Results revealed that there is a significant relationship between educational status, family size and fertility behaviour among women. Based on these, it was recommended among others that educational curriculum should be reviewed to include fertility behaviour as a core subject in healthcare especially at the secondary school level. This should be taught to both male and female students; as it will educate them of the various factors that have adverse effect on fertility outcome. It was also recommended that families should be sensitised through social media handles and news outlet and channels on various challenges that exist in society. These sensitizations should focus on the advent of urbanisation and its effect on increasing social problems of which the family is at the receiving end. Women should be encouraged to adopt reproductive health options available to help them manage childbirth.

Keywords: Educational status, family size, fertility behaviour

Introduction

In many developing nations, such as Nigeria, children play dual roles as both labour contributors and carers for their ageing parents. Consequently, these countries tend to experience elevated fertility rates, which place significant pressure on national budgets, strain the financial resources of impoverished households, and dramatically diminish the available means to nourish, educate, and ensure healthcare for both children and their mothers. This heightened fertility rate contributes to swift population expansion, leading to the depletion of natural resources and environmental degradation. It further results in elevated unemployment rates, an increased cost of living, heightened instances of malnutrition, hunger, and even famines, while also fostering conflict, a surge in criminal activities, and social unrest.

Consequently, significant research efforts have been dedicated to investigating the underlying causes of elevated fertility rates and fertility behaviours in both developed and developing nations, particularly in the Asian region (Cadwell, 1982; Dyson & Murphy, 1985; Casterline & Sindling, 2000; Cleland, Bernstein, Ezeh, et al., 2006; Bongaarts, 2001; Song & Kuang, 2021). Furthermore, multiple studies (Macro, 2014; Angioha et al., 2021; Götmark & Andersson, 2020; Saguin, 2021; Odusola, 2006; Imo et al., 2014; Wusu & Amoo, 2015; Obiyan et al., 2019; Odusina et al., 2020) have underscored that poverty-related factors, such as limited access to education for women, meagre family incomes, unequal distribution of national resources, high infant mortality rates, and inadequate access to family planning services, contribute to the persistence of high fertility rates. However, studies conducted in countries like Sri Lanka, China, Taiwan, and Korea have demonstrated that fertility rates can decline swiftly among low-income populations and nations when there is widespread availability of family planning services and comprehensive healthcare education programmes.

Previous research has predominantly highlighted the influence of factors such as low family income, elevated infant mortality rates, limited access to family planning, and insufficient health education in explaining high fertility rates. However, there has been a conspicuous absence of empirical data addressing the impact of variables such as family size preferences, belief systems, gender preferences, the educational attainment of both parents (both husband and wife), and the age at which individuals enter into marriage on fertility or fertility-related behaviors. This study seeks to rectify this knowledge gap by delving into these less-explored factors and their role in shaping fertility rates and patterns.

Once again, prior research on fertility has primarily focused on other countries, particularly in Asia, with limited exploration in the context of Nigeria. This gap in research becomes especially pronounced when considering the southern region of Cross River State, where there has been a notable dearth of investigations into fertility behaviors. While there are no official statistics available for the fertility rate in the Cross River South Senatorial District, estimates suggest a significant ratio of 6 children per woman in the district (Ushie et al., 2011). Additionally, Una (2017) approximated that the Senatorial District, along with other parts of the state, exhibits the highest fertility rates within the South-South region of Nigeria, with a staggering 35% ratio. The elevated fertility rate in this senatorial district can be attributed to the lack of adoption of family planning measures and various socio-cultural factors. While previous studies in different regions of the country have identified factors associated with fertility behaviours (Isiugo-Abanihe, 1995; Ushie et al., 2011), none have comprehensively examined socio-cultural variables specific to Cross River South Senatorial District, such as educational status, age of marriage initiation, belief systems, and family size. Consequently, this study aims to bridge this knowledge gap by investigating how locally distinctive social determinants influence fertility behaviours in the Cross River South Senatorial District. The study's specific objectives are as follows:

1. Examine the influence of educational status on fertility behaviour among women in Cross River South Senatorial District, Nigeria.

2. Investigate the influence of family size on fertility behaviour among women in Cross River South Senatorial District, Nigeria.

Theoretical framework

This research study embraces the Wealth Flow Theory developed by John C. Caldwell in 1976. Caldwell's research into fertility patterns and family dynamics, particularly in developing countries, laid the foundation for this theory. His work has significantly influenced demographic studies and our understanding of the economic and cultural factors driving fertility behaviors. The Wealth Flow Theory posits that fertility decisions are driven by economic rationality, where the direction of wealth flow within a family determines the number of children parents choose to have (Caldwell, 1966; Caldwell, 1976[a,b]). The key elements of the theory include:

Wealth Flows from Children to Parents: In high-fertility societies, children contribute economically to their families by starting work at a young age and supporting their parents in old age. This creates a net wealth flow from children to parents, incentivizing larger family sizes.

Economic Rationality: Parents' decisions to have more children are influenced by the perceived economic benefits they will receive from their offspring. This includes both the immediate economic contributions of children and the long-term security they provide.

Social Insurance: Large families act as a form of social insurance against various risks, such as crop failure or illness. In such societies, having more children ensures that there will be enough family members to support each other in times of need.

Cultural Values: Traditional values and norms that prioritize extended family contributions and support for parents drive higher fertility rates. These cultural factors are deeply embedded in the societal fabric and influence fertility behaviors.

Transition to Lower Fertility: As societies modernize, the wealth flows reverse, with parents investing more in their children rather than receiving economic benefits from them. This shift is driven by factors such as education and changing cultural values, leading to lower fertility rates.

The study on "Social Determinants of Fertility Behavior in Nigeria" aligns with the Wealth Flow Theory in several ways. The theory provides a framework for understanding how socio-economic factors influence fertility behaviors, particularly in a developing country context like Nigeria. The Wealth Flow Theory suggests that increased education raises the costs of childbearing and changes societal perceptions, leading to lower fertility rates. The study will examine how educational status impacts fertility behavior among women in Cross River South Senatorial District, exploring whether higher education levels correlate with smaller family sizes. The theory further posits that in high-fertility societies, large families are economically beneficial. The study will investigate the influence of family size on fertility behavior, seeking to understand if larger families are still seen as advantageous in this Nigerian district. Traditional belief systems, age at marriage, and gender preferences are crucial elements of the Wealth Flow Theory. The study will assess how these socio-cultural variables influence fertility behavior, consistent with Caldwell's assertion that cultural values significantly impact family size decisions.

The Wealth Flow Theory provides a clear economic rationale for fertility decisions, making it easier to understand why high fertility rates persist in certain societies. This perspective is particularly useful in explaining fertility behaviors in developing countries where economic considerations are paramount. The theory considers the influence of cultural values and norms, which are crucial in shaping fertility behavior. It acknowledges that economic decisions are not made in a vacuum but are influenced by the broader cultural context (Caldwell, 1980; 1981). The theory effectively explains the transition from high to low fertility as societies modernize and educational levels increase. This transition is crucial for understanding how fertility patterns change over time and across different developmental stages.

Critics argue that the theory oversimplifies the complex motivations behind fertility decisions, reducing them to purely economic factors. It may not fully capture the multifaceted nature of fertility behavior, which can be influenced by emotional, social, and psychological factors. While the theory incorporates cultural values, it may not fully account for the diversity and complexity of cultural influences across different regions and societies (Cleland, 1993; Sharma, 2013; Mason, 2017). Fertility behaviors can vary widely even within a single country, depending on local customs and traditions. Establishing the direction of causality between economic change and fertility behavior can be challenging. The theory may not hold in all contexts, such as in Asian countries that have managed to lower their fertility rates while maintaining strong extended family systems.

According to the Wealth Flow Theory, as education levels increase, the economic rationale for having more children diminishes, leading to lower fertility rates. The study will investigate how varying educational levels among women in Cross River South Senatorial

District impact their fertility behavior. For instance, educated women may have fewer children due to the higher costs associated with raising them and the opportunity costs related to lost labor and income. The theory posits that large families are advantageous in high-fertility societies. The study will explore whether this holds true in Cross River South Senatorial District and how family size preferences influence fertility behavior. It will examine whether economic benefits, such as labor contributions and social insurance, still motivate women to have larger families. Traditional belief systems and gender preferences, which are essential in the Wealth Flow Theory, will be examined to understand their role in shaping fertility behavior in the study area. For instance, preferences for male children or early marriage traditions might sustain higher fertility rates, aligning with the theory's elements. The study will investigate how these socio-cultural factors impact women's reproductive choices and family size preferences. Thereby, the Wealth Flow Theory provides a valuable framework for understanding the socio-economic determinants of fertility behavior in Nigeria.

Literature review

Educational status and fertility behaviour

The relationship between women's education and fertility behavior is well-documented, with numerous studies demonstrating an inverse correlation between educational attainment and fertility rates. Higher levels of education, particularly university degrees, are associated with delayed childbearing as women often prioritize their academic and career goals over early motherhood. For instance, research by Dzeubou and Kondjoyan (2021) in Cameroon found that women with higher educational levels had fewer children, as education increases both the direct and opportunity costs of childbearing. Similarly, Sohrabi and Jangholi's (2018) study in Iran highlighted that educated women were more likely to use modern contraceptives, suggesting that education empowers women to make informed reproductive choices, thereby reducing unintended pregnancies and overall fertility rates.

In Sub-Saharan Africa, socioeconomic changes driven by increased educational opportunities have led to significant demographic shifts, particularly in fertility desires. Kebede's (2019) analysis of demographic and health surveys across 34 African countries revealed that women's educational attainment has a more substantial impact on fertility desires than household wealth or residential area. This is particularly evident in rural areas where lower educational achievements correlate with higher desired family sizes. The study further illustrated that community-level educational profiles significantly influence fertility preferences, with women in more educated communities aspiring to smaller family sizes. These findings underscore the transformative role of education in reshaping fertility behavior and promoting demographic transitions in developing regions.

However, while education is a critical determinant of fertility behavior, it interacts with other socioeconomic factors to shape reproductive choices. The comprehensive study by Obiyan et al. (2022) using Nigeria Demographic and Health Survey data found that women's socioeconomic status, encompassing education and income levels, significantly impacted fertility rates. The study demonstrated that as women move from low to high socioeconomic positions, their fertility rates decrease markedly. This highlights the multifaceted nature of fertility behavior, where education works synergistically with economic well-being to influence reproductive decisions. Despite the evident benefits of education in reducing fertility rates, the study suggests that a multifaceted approach, incorporating economic improvements and enhanced educational opportunities, is essential for effective fertility management and sustainable population growth.

Family size and fertility behaviour

Family size and fertility behavior are intricately linked to individual preferences, intentions, and actual outcomes, shaped significantly by spousal disagreements and differing aspirations. Biddlecom et al. (2015) found that in Nepal, higher desired family sizes correlated with increased likelihoods of pregnancy, highlighting the impact of preferences on reproductive behaviors. This underscores how discrepancies between aspirations and intentions influence fertility decisions within marital dynamics. In Uganda, Matovu et al. (2017) explored factors influencing fertility desires among married or cohabiting individuals. They identified socio-demographic factors such as age and education, along with previous use of family planning methods and HIV status, as key determinants affecting the desire for more children. These findings illustrate the complex interplay of individual circumstances and external factors in shaping fertility preferences and behaviors. Furthermore, studies in India and Nigeria reveal additional insights. Kumar, Bordone, and Muttarak (2016) observed that women's education levels relative to their mothers-in-law influenced their desired family sizes, highlighting education as a factor empowering women in decision-making regarding childbearing. Okolo and Okolo's (2020) study among healthcare professionals in Nigeria identified spousal influence, educational background, and concerns about offspring survival as significant factors guiding family size decisions.

In a broader context, Cleland, Machiyama, and Casterline's (2020) longitudinal research across Asia and Africa highlights significant discrepancies between women's initial desires to cease childbearing and their actual fertility choices. This discrepancy is particularly pronounced in sub-Saharan Africa, where fertility intentions often do not align with outcomes, reflecting challenges in achieving desired family sizes. Conversely, Channon and Harper (2019) found that a substantial proportion of women in sub-Saharan Africa fail to realize their fertility intentions, with education levels showing inconsistent associations with fertility outcomes compared to other low- and middle-income regions. These contrasting findings underscore regional variations in the alignment between fertility intentions and actual behaviors, influenced by socio-economic and cultural contexts. Moreover, Egenti et al. (2016) explored family size preferences in Orlu, Nigeria, revealing intriguing patterns based on age at marriage and religious affiliation. They found that younger couples tended to desire larger families, whereas older couples preferred smaller ones. Additionally, religious affiliation played a significant role, with adherents of Islamic and traditional religions expressing preferences for larger families compared to their Christian counterparts. This observation suggests that cultural and religious beliefs shape family size preferences, influencing fertility behaviors across different demographic groups.

Methodology

The study adopted a cross-sectional survey research design. This design enabled the researcher to observe two or more variables at a point in time and was useful for describing the relationship between social determinants of fertility behaviour among women in Southern Cross River State, Nigeria. The study population consisted of women of childbearing age who resided in Cross River South Senatorial District, Nigeria. Generally, according to the last official population figures, the population of Southern Cross River is put at 1,189,801 people (NPC, 2006 web). However, the population of women in Cross River South Senatorial District stands at 579,105 (NPC, 2006). A comprehensive breakdown of the population according to their local government shows that Akpabuyo has the highest population of 272,262, of which 130,660 are women. Calabar South has 191,515 people, of whom 96,931 were women; Odukpani has 192,884 people, of whom 92,187 were women; Calabar Municipality has a population of 183,681 people, of whom 90,589 were women; Biase had 168,113 people, of

whom 82,488 were women; Akamkpa had 149,705 people, of whom 72,784 were women; and Bakassi, being the least populous, had a population of 31,641 of whom 13,466 were women.

A sample size of 614 was used for this study. This sample included 14 respondents for qualitative data collection and 600 respondents for quantitative data collection. The 600-sample size was derived using the survey monkey sample size determinant technique at a 95 percent confidence level and a margin of error of 5 percent. The survey monkey is a sample calculator that helps determine the actual sample size for a study that is proportionate to the population of the study. It comes in the form of computer software. The 14 samples that provided qualitative data were purposefully selected from the seven local government areas that make up the senatorial district.

The purposive sampling procedure was used in selecting key informant discussants for the study. These discussants were purposefully selected by the village heads to identify suitable discussants who understand the study object and can respond accordingly. Accordingly, the 14 participants were spread across all seven (7) local government areas. That is, two discussants from each area. This further amplifies the researcher's aim to cover all areas of the study. The criteria for selection include age, marital status, social status, and educational attainment.

Results and discussion of findings

Table 1 presents the socio-demographic distribution of the sampled respondents. The demographic distribution on age showed that 30 (5.0%) were between 15 and 19 years, 75 (12.5%) were between 20 and 24 years, 127 (21.2%) were between 25 and 29 years, 233 (38.8%) were between 30 and 34 years, 106 (17.7%) were between 35 and 39 years, 21 (3.5%) were between 40 and 44 years, and 8 (1.3%) were between 45 and 49 years. This report therefore showed that the majority of the respondents were at their peak reproductive age (25–39 years). Marital status distribution showed that only 33 (5.5%) were single, 337 (56.2%) were married (monogamous) and 108 (18.0%) were married (polygamous), 40 (6.7%) were cohabiting, 26 (4.3%) were divorced, 44 (7.3%) were separated, and 12 (2.0%) were widowed. The educational status of respondents revealed that 41 (6.8%) had primary education, 43 (7.2%) had junior school education, and 94 (15.7%) had senior school education; however, 139 (23.2%) had NCE/OND education, 29 (4.8%) obtained and attained Teacher Training College (TTC), 217 (36.2%) had HND/B.SC/BA/B.Ed education, and 37 (6.2%) had M.Sc./Ph.D. education. The distribution of the respondents by religion indicated that the majority of 479 (79.8%) were Christians, 31 (9.5%) were African traditional religionists, 31 (5.2%) were Muslims, and 14 (2.3%) indicated they were not affiliated with any religion. Distribution based on occupation revealed that 33 (5.5%) were students, 337 (56.2%) were civil or public servants, 120 (20.0%) were SME operators, 66 (11.0%) had private business firms, and 44 (7.3%) were unemployed. Distribution based on family size was categorised into two categories: large and small families. Computing for family size, respondents who indicated 1–3 children were considered small families, while those having more than 3 children were considered large families. Thus, 350 (58.3%) had large families, while 250 (41.7%) had small families.

These socio-demographic distribution therefore provides a rich context for examining family size preferences and fertility behaviors within the study. The majority of respondents, primarily aged between 25-39 years and predominantly married, reflect a crucial stage for reproductive decision-making influenced by marital stability and partnership dynamics. Educational attainment spanning from primary education to postgraduate degrees suggests varying levels of empowerment that may shape fertility choices. Additionally, the diverse religious affiliations and occupational backgrounds underscore the influence of cultural norms, economic stability, and access to resources on family planning decisions. These demographic insights highlight the multidimensional factors shaping fertility behaviors and emphasize the

importance of considering socio-economic and cultural contexts in understanding reproductive preferences and outcomes.

TABLE 1: Respondents' demographic data/socio-cultural variables

S/N	Demographic data	Options	Response rate	Percentage (%)
1	Age	15-19years	30	5.0
		20-24years	75	12.5
		25-29years	127	21.2
		30-34years	233	38.8
		35-39years	106	17.7
		40-44years	21	3.5
		45-49years	8	1.3
2	Marital status	Single	33	5.5
		Married (monogamous)	337	56.2
		Married (polygamous)	108	18.0
		Cohabitation	40	6.7
		Divorced	26	4.3
		Separated	44	7.3
		Widowed	12	2.0
3	Educational status	Primary school	41	6.8
		Junior secondary	43	7.2
		Senior secondary	94	15.7
		NCE/OND	139	23.2
		Teacher Training College (TTC)	29	4.8
		HND/B.SC/BA/B.Ed	217	36.2
		M.SC/Ph.D	37	6.2
4	Religion	Christianity	479	79.8
		Islam	57	9.5
		Traditional	31	5.2
		Other religion	14	2.3
		No religion	19	3.2
5	Occupation	Student	33	5.5
		Civil servant/ public servant	337	56.2
		Business (SMEs)	120	20.0
		Private service	66	11.0
		Unemployed	44	7.3
6	Family size	Large	350	58.3
		Small	250	41.7

Source: Field survey, 2022

Test of hypotheses

Hypotheses one

Educational status does not significantly influence fertility behaviour among women in Cross River South Senatorial District, Nigeria.

The independent variable in this hypothesis is educational status (categorised into primary school, junior secondary school, senior secondary school, NCE/OND, teacher training college (TTC II), HND/B.Sc/BA/B.Ed, M.Sc/Ph.D.), while the dependent variable is fertility behaviour (measured continuously) among women in Cross River South Senatorial District, Nigeria. Data to analyse this hypothesis are accessed from sub-section 2 of the research questionnaire, analysed using one-way analysis of variance (ANOVA), and the result is presented in table 2. As shown in Table 2, the significant F-ratio ($F = 12.973$; $df = 2,598$; $p < 0.05$) indicates that educational status exerts a substantial influence on fertility behavior, leading to rejection of the null hypothesis. Post hoc LSD tests (Table 3) further reveal specific

educational differences: women with junior secondary education show significantly different fertility behaviors compared to those with primary education (MD = 4.58650*; $p < .05$), while significant differences are also noted between higher educational levels (NCE/OND, B.Sc., BA/B.Ed, M.Sc./Ph.D.) and lower (primary) education levels. These findings underscore the critical role of educational attainment in shaping fertility decisions among women in the region, emphasizing the need for targeted educational and reproductive health interventions aligned with socio-economic contexts to enhance family planning outcomes.

In an interview session conducted with the selected participants (women of reproductive ages) in Cross River South Senatorial District, Nigeria, when asked whether "education plays an important role in helping women plan through conception, childbirth, child-spacing, and upbringing?" The responses were as follows:

> It is good for every woman to be educated. It is only through having basic education that a woman can take care of her reproductive desires. Although, you don't need education to get pregnant, only learned women will be exposed to the right information to take care of themselves during or after their pregnancy (**KII, Calabar South, 2022**).

Another respondents response when asked whether: having basic education helps women understand the information and practices for having children? Averred that:

> If I understand your question correctly, you mean if being educated exposes women to the right information for childbearing. Sure…. Education is very essential for every woman. When a woman gets to a certain age, she is ripe for childbearing. It is what everywoman is made to go through. Biologically, there are certain things about health women don't just know, they need proper information to know them. In essence, I might take paracetamol to ease my pains, but another woman don't need paracetamol but ibuprofen. These and other information needs you to have basic education to understand (**KII, Calabar Municipality, 2022**).

Probing: Are women's choice to have or not have more children influenced by their level of education?

> This answer is very plain. Education does not influence whether to have or not have children. That is why you can see women get pregnant even without being educated. However, in this age and time, if a woman has low IQ (intellectual quotient) the children they have will also have low IQ. So, it is advisable for women to at least receive basic education before embarking through childbearing (**KII, Calabar Municipality, 2022**).

TABLE 2: Summary of ANOVA result: Educational status and fertility behaviour among women

VARIABLES			N	Mean	Std. Deviation
PRIMARY SCHOOL			41	17.6098	7.19680
JUNIOR SECONDARY			43	13.0233	7.22261
SENIOR SECONDARY			94	19.7553	7.73164
NCE/OND			139	18.5540	7.58638
TEACHER TRAINING COLLEGE			29	16.2069	6.12594
HND/B.Sc/BA/B.Ed			217	13.4700	8.10922
M.Sc/Ph.D			37	12.6216	6.45648
Total			600	15.9633	8.07428
SOURCES OF VARIANCE	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4531.226	2	755.204	12.973	.000
Within Groups	34519.967	598	58.212		
Total	39051.193	600			

**Significant at .05*

TABLE 3: LSD post-hoc test for significance of mean

(I) EDUCATIONAL STATUS	(J) EDUCATIONAL STATUS	Mean Difference (I-J)	Std. Error	Sig.
PRIMARY SCHOOL	JUNIOR SECONDARY	4.58650*	1.66541	.006
	SENIOR SECONDARY	-2.14556	1.42797	.133
	NCE/OND	-.94420	1.35595	.486
	TEACHER TRAINING COLLEGE	1.40286	1.85125	.449
	HND/B.Sc/BA/B.Ed	4.13971*	1.29926	.002
	M.Sc/Ph.D	4.98813*	1.73006	.004
JUNIOR SECONDARY	PRIMARY SCHOOL	-4.58650*	1.66541	.006
	SENIOR SECONDARY	-6.73206*	1.40466	.000
	NCE/OND	-5.53070*	1.33138	.000
	TEACHER TRAINING COLLEGE	-3.18364	1.83333	.083
	HND/B.Sc/BA/B.Ed	-.44679	1.27359	.726
	M.Sc/Ph.D	.40163	1.71087	.814
SENIOR SECONDARY	PRIMARY SCHOOL	2.14556	1.42797	.133
	JUNIOR SECONDARY	6.73206*	1.40466	.000
	NCE/OND	1.20136	1.01886	.239
	TEACHER TRAINING COLLEGE	3.54842*	1.62068	.029
	HND/B.Sc/BA/B.Ed	6.28527*	.94209	.000
	M.Sc/Ph.D	7.13370*	1.48074	.000
NCE/OND	PRIMARY SCHOOL	.94420	1.35595	.486
	JUNIOR SECONDARY	5.53070*	1.33138	.000
	SENIOR SECONDARY	-1.20136	1.01886	.239
	TEACHER TRAINING COLLEGE	2.34706	1.55760	.132
	HND/B.Sc/BA/B.Ed	5.08391*	.82889	.000
	M.Sc/Ph.D	5.93234*	1.41142	.000
TEACHER TRAINING COLLEGE	PRIMARY SCHOOL	-1.40286	1.85125	.449
	JUNIOR SECONDARY	3.18364	1.83333	.083
	SENIOR SECONDARY	-3.54842*	1.62068	.029
	NCE/OND	-2.34706	1.55760	.132
	HND/B.Sc/BA/B.Ed	2.73685	1.50850	.070
	M.Sc/Ph.D	3.58527	1.89226	.059
HND/B.Sc/BA/B.Ed	PRIMARY SCHOOL	-4.13971*	1.29926	.002
	JUNIOR SECONDARY	.44679	1.27359	.726
	SENIOR SECONDARY	-6.28527*	.94209	.000
	NCE/OND	-5.08391*	.82889	.000
	TEACHER TRAINING COLLEGE	-2.73685	1.50850	.070
	M.Sc/Ph.D	.84842	1.35704	.532
M.Sc/Ph.D	PRIMARY SCHOOL	-4.98813*	1.73006	.004
	JUNIOR SECONDARY	-.40163	1.71087	.814
	SENIOR SECONDARY	-7.13370*	1.48074	.000
	NCE/OND	-5.93234*	1.41142	.000
	TEACHER TRAINING COLLEGE	-3.58527	1.89226	.059
	HND/B.Sc/BA/B.Ed	-.84842	1.35704	.532

***.** *The mean difference is significant at the .05 level*

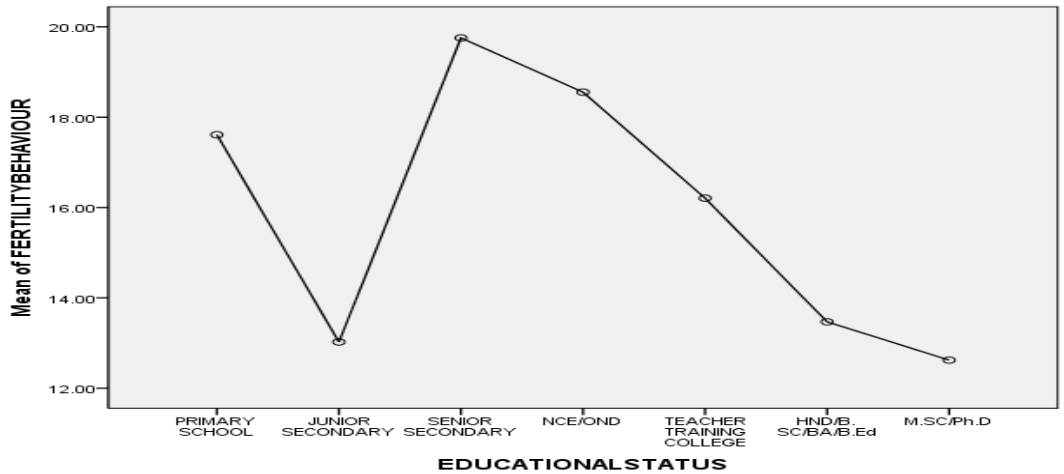

Figure 1: Mean plot for educational status and fertility behaviour

The findings align with Ekane's (2020) study on Cameroonian women's fertility desires across different education levels, indicating that higher education levels do not consistently decrease the desire for more children as hypothesized. Instead, women with primary and secondary education showed a higher likelihood of desiring additional children compared to those without education, while highly educated women also exhibited a notable inclination towards expanding their families. However, factors such as the number of living children, husband's employment status, and household socioeconomic status were found to play significant roles in shaping fertility preferences in Cameroon. Similarly, Obiyan et al. (2022) underscored the influence of socioeconomic status on Nigerian women's fertility patterns, revealing a negative correlation between socioeconomic status and Child Ever Born rates. This highlights the need for economic empowerment strategies as integral components of efforts to address fertility rates in Nigeria. Testa's (2022) study on European fertility behaviors further supports these findings by identifying a positive relationship between women's educational attainment and their fertility choices, emphasizing the importance of supportive institutional frameworks that enable women to pursue education and family expansion concurrently.

Hypotheses two

There is no significant influence of family size on fertility behaviour among women in Cross River South Senatorial District, Nigeria

The independent variable in this hypothesis is family size, categorised into two groups (small and large), while the dependent variable is fertility behaviour among women in Cross River South Senatorial District, Nigeria. An independent t-test was used to test the hypothesis at the 0.05 level of significance, and the result is presented in Table 4. The results as presented in Table 4 reveal that fertility behaviour among women with small family sizes significantly differs from fertility behaviour among women with large family sizes. This is because the calculated t-value of (df = 598; = 4.159 < .05) is significant. Thus, the null hypothesis, which states that there is no significant influence of family size on fertility behaviour among women in Cross River South Senatorial District, Nigeria, was rejected, while the alternate hypothesis was upheld. On average, results further revealed that fertility behaviour among women with small family sizes had a higher mean value (M = 16.5629, SD = 8.20722), which is an indication of a fertility behaviour with a tendency to continue with more childbearing than fertility behaviour among women with large family sizes (M = 15.1240; SD = 7.82365).

TABLE 4: Summary of independent t-test results: Family size and fertility behaviour among women

VARIABLE	Grouping	N	Mean	Std. Deviation	Df	T	Sig.
FAMILY SIZE	SMALL	350	16.5629	8.20722	598.	4.159	.000
	LARGE	250	15.1240	7.82365			

**Significant at .05*

In an interview session conducted with the selected participants (women of reproductive ages) in Cross River South Senatorial District, Nigeria, when asked “Whose desire is it to have or not have more children?” and “What are the criteria that guarantees the number of children a woman should have?” The responses were as follows:

> The number of children a couple have is a joint decision; however, the man has the final say. But you see, apart from having the final say, anything can still happen. The woman can still get pregnant without having any plans to keep one. And in most cases, these pregnancies may not be aborted based on the couples belief. So, the decision not just depend on the man it is also the man’s willingness to take the necessary precaution or adopt any of the preventive measures. ***Probing: What are the criteria that guarantees the number of children a woman should***

have? The number of children a woman should have has many determinants. First, in our traditional society, if a woman give birth to all female without male children, she will want to keep trying till she gets a male child and vice versa. It is a normal practice for couple to want to balance the gender of their children. Another determinant is age, a young woman will be more fertile that conception pattern could be more often than planned. While, for the older women, the age factor makes them want to have a minimal number they can take care of per time. The husband's decision is also another factor, women don't get pregnant on their own, it takes two to make pregnancy (**KII, Odukpani, 2022**).

The third hypothesis, which posited no significant influence of family size on fertility behavior among women in Cross River South Senatorial District, Nigeria, was contradicted by the study's findings, thereby rejecting the null hypothesis in favor of the alternative. This discovery resonates with Biddlecom et al.'s (2015) research, which similarly identified a strong link between a preference for larger family sizes and increased pregnancy rates. Moreover, Matovu et al. (2017) found in their study in Rakai, Uganda, that factors such as age, number of biological children, and HIV status negatively influenced reproductive desire, while being male and having a primary education positively impacted it. Kumar et al. (2016) highlighted from their research in rural Bihar, India, that a woman's family size preferences were more closely associated with her educational level than with her mother's fertility. These insights underscore the multifaceted influences shaping fertility behaviors, emphasizing the need for tailored reproductive health interventions that consider cultural, educational, and socio-economic factors to better support women's reproductive decision-making processes.

Conclusion

Human fertility plays a crucial role in global population dynamics and its eventual fate. While women are the primary contributors to fertility, their decisions are often shaped by a complex interplay of social, economic, and cultural factors. The escalating challenges associated with poverty, such as rapid population growth, environmental degradation, soaring living costs, unemployment, malnutrition, starvation, and elevated crime rates, exert considerable pressure on fertility outcomes. Numerous medical interventions have been introduced to empower families and couples to manage their fertility. Nevertheless, these efforts frequently encounter resistance due to the pervasive influence of social and cultural norms. This research thus delves into the examination of these social determinants that influence fertility behaviour among women residing in the Cross River South Senatorial District of Nigeria. Empirically, the study establishes that educational attainment and family size wield significant influence over fertility behaviour among women in the Cross River South Senatorial District, Nigeria.

Recommendations

Based on the outcome of this study, the following recommendations were made:

(i) Education is the bedrock of knowledge. Thus, for a positive fertility behaviour, education is required to improve mother and child health as well as increasing a woman's physical capacity to give birth and reducing the (economic) necessity for more children. Thus, educational curriculum should be reviewed to include fertility behaviour as a core subject in healthcare especially at the secondary school level. This should be taught to both male and female students; as it will educate them of the various factors that have adverse effect on fertility outcome.

(ii) Although, the traditional society encourages large family sizes, families should be sensitised through social media handles and news outlet and channels on various challenges that exist in society. These sensitizations should focus on the advent of

urbanisation and its effect on increasing social problems of which the family is at the receiving end. Women should be encouraged to adopt reproductive health options available to help them manage childbirth.

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