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Fertility Preference in Older Women: Effect of Place of Residence and Use of Contraceptives in Nigeria

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Abstract

This paper explores fertility preference and its associated factors among older Nigerian women within the reproductive ages 40 to 49. It considers the impact of proximate factors of place, wealth, education, use of contraceptives, and other associated factors on fertility preference. Using Nigeria Demographic and Health Survey (NDHS 2018) data, responses of 1357women of ages 40-49 years in the couples recode file were considered. Fertility preference is measured by "the desire for another child". We use descriptive statistics and logistic regression to identify the associating factors and impacts of identified explanatory variables on the desire for another child. Result revealed up to 25% of women within ages 40-49 desire to have another child while 35% uses contraceptives. The desire by older women to have another child is higher in the rural areas than in urban areas while more than 50% with desire for another child have no education and are found practising Islam. Logistic regression result indicates that older women not using contraceptive have higher odd ratio with the desire for another child, those in urban areas have lower odd ratio while women in the Northeast and the Northwest have more than 2.5 chance of desiring for another child than those in the Southwest. This study concludes that the desire for pregnancy at later end of reproductive years must be controlled through women's education and community-based sensitization programs.

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1. Introduction

Fertility decline to a small family size has spread around the world during the last three decades (UNFPA, 2018). Until the 1980s low fertility rates were found only in the highly developed countries and recently, low fertility has become a global phenomenon, with a rising number of countries in Asia, Latin America and the Caribbean reporting sub-replacement fertility (United Nations., 2019). Sub-Saharan Africa lags behind with the region largely dominated with high fertility and preference for large family (Bongaarts & Casterline, 2013). Previous studies have shown that low fertility does not reflect low family size preferences (Beaujouan & Berghammer, 2019; Sobotka & Beaujouan, 2014). Misalignment in fertility preference and behaviour remains higher in developing countries than in developed nations (Kodzi, Johnson, & Casterline, 2010). Evidence suggests that instability in fertility preference is associated with change in education, economic and socio circumstances surrounding women reproductive cycle (Yeatman, Sennott, & Culpepper, 2013).

Fertility transition in Africa differs from that of Asia and Latin America with its very slow pattern (Bongaarts & Casterline, 2013; Casterline & El-Zeini, 2007). Notions of high fertility rates in sub-Saharan Africa motivated by desired fertility remained (Bongaarts, 2006; Bongaarts & Casterline, 2013; Pritchett, 1994) while the idea behind actual fertility exceeding desired fertility by two children is also considered (Günther & Harttgen, 2016). This observed fertility difference is termed fertility gap and its high value in Sub-Saharan Africa has been attributed to the presence of high unmet contraceptive needs (Bankole & Ezeh, 1999; Sedgh & Hussain, 2014). The mismatch between fertility outcomes and fertility ideals at an aggregate level is

notably higher in sub-Saharan African (SSA) countries as compared to other Low-Medium Income Countries, with identification of the weak relationship between family planning programs and fertility reduction (Günther & Harttgen, 2016) serving as the determining factors. Globally, almost two thirds of women of childbearing age who are in a union now use contraceptive with Africa, having only a third of such women and slightly close to 20 per cent for Western African women (United Nations, 2017).

Previous studies have shown that low fertility does not reflect low family size preferences; although women in developed regions persistently express a strong preference for having two children; the mean ideal and intended family size stays at or above two children per woman (Beaujouan & Berghammer, 2019; Morgan & Rackin, 2010; Sobotka & Beaujouan, 2014; Sobotka et al., 2015). In sub-Saharan Africa, despite high ideal fertility desire (Casterline & Agyei-Mensah, 2017) evidences suggest that of recent a large proportion of African women have fewer children than their desired children at the end of their reproductive years (Casterline & Han, 2017). This scenario can be associated with change in reproductive desire, pattern and outcome in the fertility transition brought about by impacts of education, urbanization and the mass media role with education playing dominant role among them (Garenne, 2012).

Africa's high demand for children particularly in Middle and Western Africa remained sustained over the years (Mbacké, 2017). In Nigeria, the desire for large family size remains with actual fertility slightly higher than the desired ideal fertility; NDHS 2018 reported the desired/wanted fertility stood at 4.8 while the actual fertility record of 5.3 with variations across the rural, urban and different ethnic groups. Fertility differentials have been widely reported across socio-economic classes in Nigeria (Akpa & Ikpotokin, 2012; Feyisetan & Casterline, 2000; Osuafor, 2011), but geographical location is likely to be one of the important factors due to individual attachment to his/her ethnic domain. People in a geographical location are bonded together by culture, religion, language, and beliefs that distinguish them from other neighbouring communities. It often affects women empowerment and decision making on number of children desired with the man having veto power.

Fertility transition in Nigeria is regarded to be very slow and the use of contraceptive among married women remains very low. However, meeting the needs for family planning will abate 29% of maternal deaths (Ahmed, Li, Liu, & Tsui, 2012). Regional variations reveal that the Northern part has a higher fertility rate than the South with the North-west having 6.6 children per woman while the Southwest takes the least with 3.9 children per woman. The huge disparity and variation between the Northern and Southern parts of Nigeria have created divides which reveal a huge gap in norms, beliefs, and form of living.

Underachievement of fertility desire has been found to be linked to educational achievement in all groups in sub-Saharan Africa with highly educated women not achieving their reported fertility (Channon & Harper, 2019). Generally for the reductions in the desired number of children, increases in the use of modern contraceptive is clearly the most important, while increases in age at first marriage play only a minor role. Increasing education is relevant to use of contraceptives (Garenne, 2012) and appears to be the primary driver of later age at first marriage.

This study examines many of the indicators of fertility preference and gaps in Nigeria women with concentration on older women within ages 40-49, it seeks to study variations existing in fertility preference for another child by women living in urban and rural areas at the later end of their reproductive years and what factors brought this gap. It focuses on the role of cultural belief, religion and myths on the use of contraceptive, age of entry into marriage, education and their impact on the achievement of fertility desire. Furthermore, it considers the role of contraceptive use on the desire for another child in women within age 40-49 with clear understanding of factors promoting such variance using data from the latest Demographic and Health Surveys, 2018 (DHS). It builds upon the debate on the high fertility gap existing between the actual and the desired fertility preference in Nigeria. Information on fertility preferences can help family planning program planners assess the desire for children, the extent of mistimed and unwanted pregnancies, and the demand for contraception to space or limit births.

The remainder of this paper is arranged in this sequence: Section two describes the materials and methods of the analysis. Section three presents the result, while section four discusses findings and section five concludes the study.

2. Materials and Methods

2.1. Material

A secondary analysis of quantitative data was undertaken using nationally representative survey datasets from the Nigerian Demographic and Health Survey (NDHS). NDHS 2018 is implemented by the National Population Commission as a national sample survey that provides up-to-date information on demographic and health indicators. NDHS dataset cut across the six geopolitical zones in Nigeria, that of the 36 states and the Federal Capital Territory (FCT), it reflects the area of residence (rural and urban) and also that of different ethnic groups. It provides a dataset on child health, maternal health, fertility levels, awareness and usage of family planning, fertility preferences, and women's reproductive health issues. This study considered the couples Recode file which provides information on women within the reproductive ages 15-49. For this study, only responses of women within age 40-49 years were considered within the previous five-year to the survey.

2.2. Econometric Model

The dependent variable is measured by fertility preference (V602) described with the question "desire for another child" in DHS survey and Explanatory variables include Region; divided into six geopolitical zones North central, North East, North West, South East, South south and the South west, Place; classified by rural and urban. Education; measured by no education, primary, secondary and higher education. Household wealth index classified into; Richest, richer, middle, poorer and poorest which are determined by ownership of the household's consumable goods, household living conditions, source of drinking water, type of toilet facilities, and other household's socioeconomic status wealth index household. Birth entry determined by women who had their first child at age 15-18 and those after 18years. Access to contraceptives grouped into responses of "Yes and No". We restrict this sample to couples within ages 40-49 years because it limits responses to mothers at the later end of their reproductive years only and not to a large group of women within the reproductive ages who may later alter their fertility desire and outcome.

Table-1. Socio-Demographic Characteristics of Variables on ages 40-49 Women.

Distribution of women within ages 40-49			**Distribution of women ages 40-49 with desire for another child**	
Variables	**Frequency**	**(%)**	**Frequency**	**(%)**
Total	1,357	100	352	25
Desire for another child	352	25		
Region			*Region*	
North central	247	18.2	37	10.5
North east	226	16.7	83	23.6
North west	318	23.4	108	30.7
South east	191	14.1	46	13.1
South south	148	10.9	42	11.9
South west	227	16.7	36	10.2
Place				
Rural	824	60.7	235	66.8
Urban	533	39.3	117	33.2
Educational Attainment				
No education	614	45.3	181	51.4
Primary	287	21.2	51	14.5
Secondary	325	24.0	83	23.6
Higher	131	9.7	37	10.5
Religion				
Catholic	138	10.2	25	7.1
Other Church	545	40.2	116	32.9
Islam	663	48.9	206	58.5
Traditional	7	0.5	4	1.1
Wealth Index Status				
Richest	276	20.3	76	21.6
Richer	267	19.7	55	15.6
Middle	264	19.5	67	19.1
Poorer	277	20.4	68	19.3
Poorest	273	20.1	86	24.4
Birth Entry Age				
age 15-18 at 1st birth	608	44.8	138	39.2
18+ at 1st birth	749	55.2	214	60.8
Family Planning				
Use contraceptives(Yes)	480	35.4	67	19.0
Use contraceptive (No)	877	64.6	285	80.9
Employment				
Currently working	1133	83.5	291	82.7
Has no job	224	16.5	61	17.3

2.3. Methods

The method of analysis involves the use of descriptive statistics using counts and percentage to describe statistics for the population sample of 1357 women within the ages of 40-49 years extracted out of the 8061 couples in 2018 NDHS report. The Logistic regression is also applied to identify the association between the

explanatory variables and the desire for another child. The general model of the logistic regression equation used in the analysis is of the form:

$$\ln(\frac{p}{1-p}) = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + \cdots B_kX_k$$

Where X_1, X_2 …, X_k are set of independent explanatory variables, B_0 is constant, $B_1 - B_k$ are regression coefficients, P is the probability of desiring another child.

3. Result

3.1. Descriptive Result

This section present the descriptive statistics as indicated in Table 1. It reveals the characteristics of 1357 women of ages within 40-49 years out of the 8061 women in NDHS 2018 couples dataset. 352(25%) of them desire to have another child and about 39% resides in urban areas while up to 61% are living in rural areas. Up to 45% have no form of education, 21% has primary level of education, about 24% attended secondary school while those with higher educational attainment are about 10%. Islam worshippers and Other Church members largely dominate the group with 48% and 40% rate while Catholic members were only 10%. About 35% uses contraceptive and household wealth index is evenly spread within the richest to the poorest wealth index and about 84% have a job although most are in agriculture and requires less skills and education.

On the distribution of 352 women within ages 40-49 with the desire for another child; regional variation is observed with the Northwest zone having the highest 108(30 %) women in their late reproductive years desiring for another child, Northeast had 83(23%), Southeast recorded 43(13%) and the least seen in Northcentral and Southwest region with 10% consecutively. 235 (67%) were found living in rural areas, 181(51 %) has no education, 206 (59%) practices Islam, which surpasses women that are both Catholic and the other church members. Use of contraceptives remains low with up to 285(81%) not using any means of contraceptives to protect unwanted pregnancy and only about 61 (17%) is not working among the women.

3.2. Statistical Regression Analysis Result

Table-2. Binary Logistic Regression Result on 1357 women within ages 40-49.

Variables	Odd ratio	Std.Err.	p>|z|	[95% C.I]	
North central	0.997	0.279	0.992	0.576	1.726
North east	3.096	0.817	0.000	1.845	5.196
North west	2.677	0.702	0.000	1.600	4.477
South east	1.864	0.543	0.033	1.053	3.300
South south	2.037	0.604	0.016	1.139	3.643
South west	1(ref)				
Urban	0.711	0.114	0.034	0.519	0.975
Rural	1(ref)				
No education	0.554	0.172	0.058	0.301	1.019
Primary	0.529	0.158	0.033	0.295	0.951
Secondary	0.994	0.256	0.982	0.600	1.649
Higher	1(ref)				
Catholic	1.535	2.178	0.762	0.095	24.802
Other church	1.779	2.485	0.680	0.115	27.537
Islam	3.324	4.671	0.393	0.211	52.336
traditionalist	6.881	10.904	0.224	0.307	154.05
Richest	1.768	0.515	0.051	0.998	3.130
Richer	1.252	0.335	0.400	0.741	2.116
Middle	1.418	0.324	0.126	0.906	2.221
Poorer	1.005	0.208	0.981	0.669	1.509
Poorest	1(ref)				
Age at 1st birth(15-18)	0.551	0.081	0.000	0.414	0.735
Age at 1st birth(18+)	1(ref)				
Use contraceptive(No)	2.757	0.481	0.000	1.957	3.883
Use contraceptive (Yes)	1(ref)				
Working (Yes)	1.207	0.230	0.324	0.830	1.755
Working (No)	1(ref)				
_cons	0.055	0.080	0.048	0.003	0.981

The regression result presented in Table 2 revealed that the Northeast, North west and the South south have more than 2 times higher odd ratio of having desire for another child than the Southwest region

identified as the reference point. Generally may research work in Nigeria has indicated that the North-South divide affect and retard development with the Northern part of Nigeria having high level of fertility and mortality than the South. Urban-rural divide is observed with the urban areas exhibiting a lower odd ratio(0.71) at 5% level of significance with the desire for another child; thus signifying that place of residence embedded with environmental factors, norms and practices has effect on women desire for children and their fertility rate at the end of their reproductive years.

On educational attainment, women with no form of education and primary schools certificate exhibit lower odd ratio with the result significant at both 5% and 10% level of significance but the result with those with secondary education is not statistically significant with the result at the lower and upper boundary of confidence interval passing through 0-1; an indication that the result might not be valid thus concluding that the report on the desire for another child by women with secondary school certificate might not be valid. On religion, all forms of religion have positive association with desire for another child but no form of religion has significant relationship with the desire for another child and this make the result inconclusive and insignificant. Age at birth entry result indicates that women who had their first child at age 15-18 has lower odd ratio with desire for another child at the age of 40-49; this result can be attributed to their early start of reproduction and might have given birth to many children within the space of their reproductive years.

The use of contraceptive which is a major variable of consideration has significant association with the desire for another child; women within age's 40-49 not using contraceptive have higher odd ratio (2.7) with the desire for another child with the result significant at 1% level of significance and the confidence interval boundaries not passing through 0-1.

4. Discussion of Findings

Our results show significant relationships between place of residence and women's fertility preference with focus on the desire for another child in women within age 40-49. Evidence of lower fertility preference was also found in women living in urban areas while those in rural place of residence have higher odd ratio. This result is consistent with that of Shapiro and Tenikue (2017) which indicates that fertility decline in urban places is higher than rural areas. Regional variation was found across the six geopolitical zones with the Northwest zone found with the highest number of women within the ages of 40-49 with desire for another child. This result is in line with that of Oyediran, Ishola, and Bankole (2020) which indicates that the regional environmental dynamics where women live have impact on their decision on childbearing.

The descriptive statistics on those that desire another child reveal that more than 50% of them have no form of education; this is in line with previous evidence on female education and empowerment as driver of changes in reproductive behaviour (Lutz & Skirbeck, 2014). We found that women's fertility preferences were sensitive to the use of contraceptive with those not using contraceptive desiring to have another child despite being in their late reproductive years.

5. Conclusion

This study found that 25% of women within age 40-49 desire to have another child before the end of their reproductive years. The study provides support for the effect of place of residence and use of contraceptives on fertility preference with concentration on the desire for another child in women within the ages of 40-49. Findings identified that regional disparity has influence on women's attitudes, preference and fertility behaviours. It therefore recommends that region and place of residence must be considered on programs and policies for addressing the problem of high fertility preference in Nigeria to ensure women and couples reduce their fertility desire. The use of contraceptive must be encouraged for older women within the reproductive years to reduce childbearing at the later end of reproductive years.

References

Ahmed, S., Li, Q., Liu, L., & Tsui, A. O. (2012). Maternal deaths averted by contraceptive use: An analysis of 172 countries. *The Lancet*, *380*(9837), 111-125.

Akpa, O. M., & Ikpotokin, O. (2012). Modeling the determinants of fertility among women of childbearing age in Nigeria: Analysis using generalized linear modeling approach. *International Journal of Humanities and Social Science*, *2*(18), 167-176.

Bankole, A., & Ezeh, A. C. (1999). Unmet need for couples: An analytical framework and evaluation with DHS data. *Population Research and Policy Review*, *18*(6), 579-605.

Beaujouan, É., & Berghammer, C. (2019). The Gap between lifetime fertility intentions and completed fertility in Europe and the United States: A cohort approach. *Population Research and Policy Review*, *38*, 507-535.Available at: https://doi.org/10.1007s11113-019-09516-3.

Bongaarts, J. (2006). The causes of stalling fertility transitions. *Studies in Family Planning*, *37*(1), 1-16.

Bongaarts, J., & Casterline, J. (2013). Fertility transition: Is sub-Saharan Africa different? *Population and Development Review*, *38*(Suppl), 153–168.

Casterline, J., & El-Zeini, L. (2007). The estimation of unwanted fertility. *Demography*, *44*(4), 729–745.Available at: https://doi.org/10.1353/dem.2007.0043.

Casterline, J. B., & Agyei-Mensah, S. (2017). Fertility desires and the course of fertility decline in sub-Saharan Africa. *Population and Development Review*, *43*(Suppl), 84–111.

Casterline, J. B., & Han, S. (2017). Unrealized fertility: Fertility desires at the end of the reproductive career. *Demographic Research, 36*, 427-454.Available at: https://doi.org/10.4054/demres.2017.36.14.
Channon, M. D., & Harper, S. (2019). Educational differentials in the realisation of fertility intentions: Is sub-Saharan Africa different? *PloS one, 14*(7), e0219736.Available at: https://doi.org/10.1371/journal.pone.0219736.
Feyisetan, B., & Casterline, J. B. (2000). Fertility preferences and contraceptive change in developing countries. *International family Planning Perspectives, 26*(3), 100-109.Available at: https://doi.org/10.2307/2648298.
Garenne, M. (2012). *Education and Fertility in Sub-Saharan Africa: A Longitudinal Perspective. DHS Analytical Studies No. 33.* Calverton, Maryland, USA: ICF International.
Günther, I., & Harttgen, K. (2016). Desired fertility and number of children born across time and space. *Demography, 53*(1), 55-83.Available at: https://doi.org/10.1007/s13524-015-0451-9.
Kodzi, I. A., Johnson, D. R., & Casterline, J. B. (2010). Examining the predictive value of fertility preferences among Ghanaian women. *Demographic Research, 22*(30), 965–984.
Lutz, W., & Skirbeck, V. (2014). *How education drives demography and knowledge informs projections. Chapter 2, 14–38 in World population and human capital in the twenty-first century.* Oxford: Oxford University Press.
Mbacké, C. (2017). The persistence of high fertility in sub-Saharan Africa: A comment. *Population and Development Review, 43*(s1), 330-337.Available at: https://doi.org/10.1111/padr.12052.
Morgan, S., & Rackin, H. (2010). The correspondence between fertility intentions and behavior in the United States. *Population and Development Review, 36*(1), 91–118.Available at: https://doi.org/10.1111/j.1728-4457.2010.00319.xPMID:20414471.
Osuafor, G. (2011). *Fertility in Nigeria and Guinea: a comparative study of trends and determinants.* A Thesis Submitted In Partial Fulfilment Of The Requirements For The Degree Of Magister Philosophiae, in the Department of Statistics, University of the Western Cape.
Oyediran, K., Ishola, G., & Bankole, A. (2020). Relationship between religion and unintended childbearing in Nigeria: A cross-regional perspective. *Genus 76*(15), 1-20.
Pritchett, L. (1994). Desired fertility and the impact of population policies. *Population and Development Review, 20*(1), 1–55.
Sedgh, G., & Hussain, R. (2014). Reasons for contraceptive nonuse among women having unmet need for contraception in developing countries. *Studies in Family Planning, 45*(2), 151-169.
Shapiro, D., & Tenikue, M. (2017). Women's education, infant and child mortality, and fertility decline in urban and rural sub-Saharan Africa. *Demographic Research, 37*(21), 669-708.
Sobotka, T., & Beaujouan, É. (2014). Two Is best? The persistence of a two-child family ideal in Europe. *Population and Development Review, 40*(3), 391-419.
Sobotka, T., Zeman, K., Potančoková, M., Eder, J., Brzozowska, Z., Beaujouan, É., & Matysiak, A. (2015). *European fertility datasheet 2015.* Vienna Institute of Demography/Wittgenstein Centre for Demography and Global Human Capital (IIASA, VID/ÖAW, WU). Retrieved from: http://fertilitydatasheet.org.
UNFPA. (2018). *The power of choice. UNFPA State of the world population report 2018.* New York: United Nations Population Fund.
United Nations. (2017). *World population prospects: The 2017 Revision.* New York: United Nations.
United Nations. (2019). United nations department of economics and social affairs. Population Division.World Population Prospects. United Nations New York, 2019. ST/ESA/SER.A/423.
Yeatman, S., Sennott, C., & Culpepper, S. (2013). Young women's dynamic family size preferences in the context of transitioning fertility. *Demography, 50*(5), 1715-1737.