



Socio-Economic Correlates of Fertility Behaviour Among Rural Women in Akwa Ibom State of South-South Nigeria

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INTRODUCTION

Fertility has been defined as the actual reproductive performance as measured in live births of a woman in a population (Jones, 1982). The investigation of fertility level is an important aspect of demographic study. Scholars of fertility study are of the view that fertility level is affected by myriads of factors. It is necessary for these factors to be thoroughly investigated if we are to understand their effects on fertility behaviour, taking into consideration the effects of this behaviour on the general development of the individual and the society.

In Nigeria, most especially, in her rural areas, fertility level is high. The effects of this permeate the social, economic, educational health and other fabrics of these communities, thus making development difficult. Although the possible effects of the factors affecting fertility behaviour in Nigeria constitute veritable areas of research among demographers and others interested in the study of fertility, few researchers exist that attempt to investigate this assumed relationship in an appropriate manner. What we find in the literature are mainly works investigating the possible effects. Apart from this, most of the studies always consider the effect of socio-cultural factors, and ignore socio-economic and demographic factors as if they are inconsequential.

One shortcoming of their approach is that they consider individual factor instead of groups of factors. Another limitation of these studies is the simple correctional approach taken by the researcher to the analysis of data especially in testing the hypotheses. This makes it difficult to assess the relative strength of the association of different factors with fertility behaviour, much less how the different factors might interact. Therefore, these studies have only highlighted certain factors as being significantly related to fertility behaviour.

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The objective of this study is to investigate the fertility correlates of the people of rural Akwa Ibom based on the age at first marriage, educational level and occupational status of the respondents. This research differs from others in the sense that, it uses sophisticated multivariate data analysis techniques, which can better our understanding of the influence and related significance of wide range of factors affecting the fertility behaviour. Reliable information about the factors influencing fertility is indispensable in the process of planning for the overall socio-economic development of a developing country such as Nigeria.

LITERATURE REVIEW

A review of the literature suggests that in developing countries, human fertility behaviour is affected by a number of socio-demographic factors. For this study, a critical review of the effects of occupation, education and age at first marriage on fertility is undertaken. Occupational status of women has been identified as one of those factors affecting the fertility behaviour of women. Generally speaking, the occupational status of women tends to be related to their fertility levels. Sweet (1970:195-209) reports that as labour force participation increases, fertility gets lower. This is because women are interested in careers rather than childbearing and rearing. An economic inference is that opportunity to earn higher wages and be economically self-sufficient reduces the propensity to produce children (Denton, 1979:297-311). The effect of labour force participation by women on fertility reduction seems to depend on how incompatible the jobs are with mothering (Tickamyer, 1979:167-173); Gendel, 1970: 273-286 and Sweet, 1970:195-209). Unfortunately, this relationship does not occur in all societies. For example, an inverse relationship between occupation and fertility had been reported by Reed and Udry (1973:596-602). Arowolo (1977:37-66) reported lower number of children among unemployed women in Ibadan, Nigeria and those in home-related services at almost every age group, but reported a higher fertility level among those in gainful occupations. According to Arora, et al (1989:311-314) among rural women in Ludhiana in India, occupation, family income and employment had little impact on both number of children and spacing of births.

A factor frequently mentioned as contributing to the changing attitude of women towards child bearing and rearing is education. El-badry and Rizk (1967); Ekanem (1974:115-128); Oyemade and Ogunmuyiwa, (1981:109-111); Nieuwoudt and Fairiamb (1990:357-363); Okjie (1990) and Ainsworth et al (1996:85-122); report that uneducated women are more fertile than educated women. To them, this is because uneducated women spend their youthful years and fertile periods in child bearing. They noted that education seems to bring about a gradual change in values and expectations. According to Okediji (1967:68), educated people are exposed to those values, which are

in conflict with traditionally oriented, and high fertility values. However, there seems to be conflicting evidence on the relationship between education and fertility. Arowolo (1977:37-66) reports that both urban and rural women show some evidence of decrease in children ever born with increased education but at higher levels of education fertility tends to be enhanced. Scholars have debunked the independent effect of education on fertility. Arnold (1972), Arora, et al (1989:311-314) and Islam and Khan, 1995:51-63) say that education bears a spurious relationship with fertility. We should bear in mind that the lower fertility of educated women may disappear once the control on age at first marriage is introduced (Olasanya, 1967:351-374).

Age at first marriage has been reported, have an important effect on fertility. But unfortunately, its effect on fertility as an independent variable has not been properly investigated especially in Nigeria. Among rural women of Ludhiana in India, Arora et al (1989:311-314) reports that age at first marriage was significantly associated with both number of children ever born and spacing of birth. Also Chojnacka and Adegbola (1990:173-93); (Islam and Khan, 1995:51-63); Ratanawichit (2002:221-233); Chimere, Dan, 1990:162-71) and INFO (2003) show that age at first marriage has a significant effect on the number of children ever born. According to them, early marriage exposes women to longer childbearing and consequently more births.

METHODOLOGY

The study area

The study was conducted in rural areas of Akwa Ibom State. Akwa Ibom is situated in the South South geographical zone of the country (Nigeria). Trigonometrically, Akwa Ibom State lie between latitude 4°32' and 5°53' North, and longitude 5°25' West and 8°25' East. It has 31 Local Government Areas with Uyo as its capital. In the state, most social and economic activities take place in few urban centres such as Uyo, Eket, Oron, Ikot Ekpene and Abak. There are basically three ethnic groups in the state – Ibibio, Annang and Oron. Just as in other states in the federation, literacy level is very low in the state with pockets of health centres scattered around some rural and urban areas. These health facilities are ill-equipped in terms of drugs, equipment and personnel.

This study was conducted in Akwa Ibom State of South-South Nigeria. It was restricted to the rural areas in the State. The survey universe consisted of women aged between 15 and 49 years, irrespective of their marital status. The restriction of the study to women in this age bracket hinges on the fact that demographically, this age bracket is the most fecund period of women. Information used in this study was collected from a representative sample size of 900 women. This was achieved through a combination of simple

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random and multi-stage cluster sampling techniques. This study used a five-stage multi-stage cluster scheme. The first stage involved the sampling of local government areas from the first “areas” Senatorial Districts’ the second was the sampling of wards from the local government area that had been selected. The third stage was the selection of villages from the sampled wards. The fourth involved the selection of streets/roads and bush paths from the villages previously selected from the sampled wards. The fifth involves the selection of households from the selected streets/roads and bush paths from which the study elements were drawn.

Akwa Ibom State is made up of three Senatorial Districts: Akwa Ibom South, Akwa Ibom central and Akwa Ibom North. Three local government areas were randomly selected from the 3 senatorial districts; these 9 local government areas represent the major ethnic groups that make up the state: Ibibio, Annang and Oron. Two wards in each local government area were selected. All together, 18 wards were selected. In each ward selected, two (2) villages were selected. Altogether, 36 villages were selected. The next stage was the selection of the streets/roads or bush paths from which respondents were drawn. The last stage was the sampling of the required number of households from the streets/roads and bush paths drawn in the fourth stage of the sampling. In these streets/roads and bush paths selected, every fourth compound was selected from the left-hand side. In each village sampled, 25 respondents were interviewed. If a potential respondent in a compound chosen was absent at the first visit, the compound was visited again. This was done until the 25 respondents were selected.

Structured interview was employed to collect retrospective and real time data. The interview schedule contained questions on respondents’ socio-demographic characteristics, their fertility and marriage history. Before the real administration of the interview schedule, pretest of this schedule was carried out in some randomly selected communities in the state. This was very helpful in identifying the variety of possible responses to questions before the final close-ended categories were made.

Thirty-six (36) female research assistants helped the researcher in conducting the interview. They were students of the Faculty of Social Sciences, University of Uyo; each of them from one of the sampled villages. They being native of these villages, the potential respondents were more likely to cooperate with them than with outsiders. Also, they arranged the interview time that was convenient for them and the respondents. After the recruitment, they were trained for two weeks on how to relate with respondents and complete the interview schedule; they were taught the techniques of interviewing and interpreting the questions using vernacular as the interview schedule was framed in English.

RESULTS**Background characteristics of respondents**

Table 1 shows the distribution of respondents by selected characteristics. The data collected were analysed using a stepwise multiple regression model. Independent variables were education (X_1), and occupation (X_2), while the independent variable was age at first marriage. X_1 was measured in terms of the number of years spent in school. X_2 was measured in terms of quality of occupation in relation to mean monthly income in Naira. Y was measured in terms of age at first marriage in years.

Table 1: Percentage Distribution of Women Aged 15-49 Years by Some Socio-Demographic Characteristics.

Background Characteristics	No.	Percentage
Age		
15 – 19	348	38.5
20 – 24	318	35.3
25 – 29	192	21.3
30+	42	4.7
Education		
Higher Education	89	9.9
Secondary Education	185	18.3
Secondary School Attempted	308	34.2
Primary School Education	338	37.6
No Formal Education		
Occupation		
Teaching	96	10.7
Nursing/Midwifery	41	4.5
Farming	230	25.6
Clerical (White Collar Job)	257	28.5
Home Keeping and Petty Trading	276	30.7
Religion		
Protestant	398	66.4
Catholic	285	31.7
African Tradition Religion	17	1.7
Number of Living Children		
None	198	22.0
1	132	14.7
2-3	173	19.2
4-5	178	19.8
6-7	169	18.8
8+	50	5.5
Marital Status		
Currently married	703	58.1
Single	58	6.4
Separated	105	11.7
Divorced	34	3.8
Widowed		

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Table 1 shows that the ages of the women interviewed ranged from 15 – 49 years with the highest number (76.5 percent) being in the 20 – 29 years age groups, 4.7 percent were aged 30 years and above. About 37.6 percent of the respondents reported no formal education, while 34.25 percent had primary education. Nearly one-third (28.2%) of the respondents proceeded as far as secondary level and above.

The Table also shows that 43.7 percent of the respondents were working mostly as civil servants while 25.6 percent were farmers. The remaining 30.7 percent of the respondents were permanent housewives and petty traders. In terms of religion, 98.1 percent were Protestants and Catholic respectively, while an insignificant (1.9 percent) of the respondents were African traditional worshippers.

With regard to the number of living children, 22.0 percent of the respondents had no living children, about one half of the population had between one and five children. About 24.3 percent had six and above living children. We also observed from Table 1 that one-half of the respondents were currently married, while the remaining half were made of single (28.1 percent), separated (6.4 percent), divorced (11.7 percent) and widowed (3.8 percent) women.

Choice of fertility variables

There is no doubt that the choices of fertility variables for this kind of study is bound to vary from researcher to researcher. This study, however, was restricted to these fertility variables, which from the pilot survey conducted, proved significant. These include age at first marriage, education and occupation.

Table 2: Mean Number of Children Ever-born (CEB) by Age at First Marriage and for Educational and Occupational Status

Age at First Marriage (In Years)	No. of Respondents	Education					Occupation				Mean CEB
		No Formal Education	Primary Edu.	Sec. Edu.	Higher Edu.	Nursing Related Professions	Farming	White Collar Job	Home Keeping/Petty Trading	Teaching	
15 – 19	348	161 (3.0)	133 (2.0)	45 (0.7)	9 (0.3)	5 (0.1)	132 (3.0)	66 (0.3)	131 (2.4)	14 (0.2)	6.0
20 – 24	318	113 (2.1)	94 (1.8)	66 (1.4)	45 (0.6)	16 (1.8)	62 (1.7)	102 (1.1)	96 (1.3)	42 (0.7)	5.6
25 – 29	192	48 (1.2)	64 (1.7)	50 (1.0)	30 (1.0)	20 (0.6)	18 (1.3)	76 (0.6)	38 (1.1)	40 (0.9)	4.5
30	42	16 (1.3)	17 (2.4)	4 (0.3)	5 (0.4)	0 (0.0)	18 (1.8)	13 (1.4)	11 (1.2)	0 (0.0)	4.4
Total	900	338	308	165	89	41	230	257	276	96	

Table 2 indicates that majority of the respondents marry early between the ages of 15 and 24 years. This means longer exposure to childbearing and consequently more births; most especially when contraceptives are not widely used by the people. The table further shows that for education, fertility (as measured by the mean number of children ever born) was higher for women who had no formal education and those with primary school education were aged between 15 and 24 years.

For occupation, fertility was higher for women who were engaged in farming, petty trading and those who were permanent housewives.

Techniques of data analysis

The data were analysed using the step-wise multiple regression model, which enables the selection of the significant independent variables only. For a typical multi-regression problem, the value of dependent variables (Y) is usually given as:

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_nX_n + e$$

Where:

Y = the estimate value of the dependent variable

a = the Y intercept

$b_1, b_2 \dots b_n$ = the multiple regression plane

$X_1, X_2 \dots X_n$ = the independent variables

e = is the residual or the error term

The stepwise model is usually adopted in situations where the independent variables in a study are numerous. The technique has the advantage that irrelevant variables are filtered out of the analyses. Some of the basic problems of the multiple regression models have been identified as:

- 1) The abnormality of data set
- 2) The non-random collection of data, and
- 3) The existence of multi-collinearity in the data

For this study, the problem of abnormality of data was overcome by selecting a large sample size of 900 respondents. Also, we ensured that our data was randomly collected by selecting the samples through simple random sampling and stratified sampling procedures. As the inter-correlations among the independent variables did not exceed 0.80, multi-collinearity was not found to pose a serious problem in the application of the technique (Udofia and Etukudo, 2003:1-7)

DISCUSSION

The stepwise multiple regression analysis reveals that of the three independent variables, only age at first marriage was significant in explaining

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the variation in mean fertility in the study area at 0.05 levels. Its correlation with mean fertility recorded a high coefficient of 0.666, with a coefficient of multiple determinations, R^2 of 0.477. With this, we see that age at first marriage alone explains approximately 44% of the variation in mean fertility rate in the study area with a standard error of 0.304.

The Analysis of Variance (ANOVA) table reveals that the computer F value is by far larger than the significant value. For this reason, the null hypothesis that the regression is not significant is rejected and the alternate hypothesis is accepted. We can now conclude that on X1, value did not occur by chance. The multiple lineal regression equations expressing the contribution of age at first marriage mean fertility is then:

$$MF = 7.411 + 0.78X_1 + e.$$

The above finding is consistent with the finding of Arora, et al (1989:311-314) who in their study of fertility variations among rural women in Ludhiana (Punjab) observed that age at first marriage was significantly associated with number of children ever born, while occupation, employment, income and education had little impact. According to Hawthorn (1970:89) less is probably known about age at first marriage as a social determinant of fertility behaviour of women than other demographic variables. It is known, however, that in many traditional societies in Africa, marriage comes very early. It is obviously easier for couples to marry early in an extended family system where they do not need to establish a separate household than in a nuclear family system where each couple has to start anew in terms of accommodation and household properties. In rural Akwa Ibom, marriage is primarily an alliance between individuals, thus kin groups arrange marriages for their members whom they consider to be appropriate. Thus, since arranged marriage is the norm, marriage comes earlier in communities in the study area. Another important explanation for this is that, the rural people of Akwa Ibom State place great premium upon pre-marital chastity, the aim being to see that the girls are married immediately they attain the age of marriage so that they would not disgrace their kins by becoming pregnant before marriage. The prevalence of infant mortality in the study area is another issue that one could explore to explain early age at marriage. In the study area is another issue that one could explore to explain early age at marriage. In the study area, because of high rates of infant mortality, early marriage is seen as kind of insurance to promote survival. Also, the lineage and clan organization in rural areas of Akwa Ibom State emphasizes continuity of their lines and heirs for property and succession to traditional office. These concerns motivate people to arrange early marriage for their children and this brings about longer exposure to childbearing and consequently high fertility among women.

RECOMMENDATIONS AND CONCLUSION

The study shed more light on the fertility correlate among rural people of Akwa Ibom State. The study reveals the strength of age at first marriage in explaining the variation in mean fertility in the study area. Teenage childbearing was found to be common in the study area. Some social determinants of early marriage among the people of rural Akwa Ibom were discussed.

It is hoped that the finding of this research will be useful to the government, social agencies and organizations who are interested in fertility issues, population policy formulation, those who are interested in the economic development of the society. Following the finding of the study, the following recommendations are made:

The government should make population education to be taught in primary, adult, secondary and other institutions. Also, educational process, which systematizes population learning, should be introduced to out-of-school youths, as well as to adults, through the mass media and community educational programmes. It is believed that if the people benefit from population education, their attitude towards child bearing will change and a decline in fertility levels will be experienced in the study area. Secondly, the state and local governments should come up with programmes that would ensure a decline in the infant mortality in their rural areas. This will discourage parents and kins from arranging early marriages for their young ones.

Finally, since it has been found that women age at the first marriage has a significant effect on fertility, raising the age at marriage by implementing a minimum age marriage law is likely to lower fertility in the study area in particular and Nigeria in general. These recommendations are not meant for rural Akwa Ibom alone; they are applicable to other rural communities in Nigeria.

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