THE ROLE OF SOCIOECONOMIC FACTORS IN FERTILITY OF UMUAHIA WOMEN IN ABIA STATE, NIGERIA

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Abstract

Rapid population growth arising from high fertility has been argued as being disadvantageous to the economic growth of countries especially the developing country like Nigeria. This paper examines the role of socioeconomic factors in fertility. The study elicited information from 500 women of the reproductive age of 15-49 years with Davis and Blake framework, economic and intergenerational wealth flows theories of fertility forming the theoretical orientation for the study. The mean age of the respondents and mean number of children were reported as 30.4 years and 3.6 children respectively. Respondents' age was statistically significant with fertility, while ordinal linear regression analysis showed that respondents' levels of educational and marital status were significant determinants of the number of children born by the respondents. There is a fairly high rate of fertility in the study area. Knowledge of these factors influencing fertility is a fundamental step for strategies to achieving sustainable development.

Keywords: socio-economic factors, fertility, proximate variables, Abia State

Background and Problem Statement

In most countries of the sub-Sahara Africa, population growth rates are still quite high (about 3% per year) and prospects for fertility declines are still quite remote in many of the countries of the continent. Nigeria has been seen as largely an agrarian economy and owing to the level of technology prevailing in agriculture and the communal land tenure in practice, especially in the rural areas, emphasis has been strongly on large family size. In most cultures only male children are allowed to share in family land holdings within the context of the extended family structure and communal

ownership of land (Orubuloye, 1995). Since farming is central to economic life, the most economically rewarding reproductive goal a couple could pursue is a large family size, ideally with many male children. It is against this backdrop that Wusu (2001) noted that couples in Nigeria dread barrenness, and until a "good" number of male children are born, extended family members exert pressure, which may culminate in the man marrying another wife. Of course, emphasis by couples was on quantity and not quality of children; mainly raising children who are to engage in farm work would not be as expensive as giving them quality education.

Over the years, the issue of rapid population growth arising from high fertility has been argued as being disadvantageous to the economic growth of countries especially the developing country like Nigeria. There is evidence that the usual inverse relationship between fertility and socioeconomic variables in not seen in traditional peasant societies, where a large family is seen as a benefit.

Socioeconomic and other background variables must operate through some proximate determinants of fertility (behavioural and biological factors) to have an effect on fertility. According to Bongaarts, Frank, and Lesthaegbe (1984), one of the most important advantages of studying proximate determinants of fertility is that they improve understanding of operation of the socioeconomic determinants of fertility. For instance, a socioeconomic variable (such as education) can have negative fertility effects through one set of proximate variables (such as age of marriage), but exerts positive effects through another set (such as duration and intensity of breast feeding).

Available evidence indicates that the level of fertility in Nigeria is high; stable fertility has, in fact, prevailed since the 1950s when the ad-hoc demographic data begun to be available in parts of the country. National data derived from the 1981/82 Nigeria Fertility Survey (NFS), the 1990 Nigeria Demographic and Health Survey (NDHS), and 1991 census, show that total fertility rates are virtually the same at three periods, an indication of constant fertility within the decade. The 1991 post enumeration survey estimated TFR to be 5.89; the NDHS and NFS estimated TFR of 6.01 and 5.94 respectively for the three–year period preceding the respective surveys are 6.27 and 6.34. Generally, these figures indicate that the average Nigerian woman would have, at the end of her childbearing years, about 6 children if she is to bear children at the current observed rates (Isiugo-Abanihe, 1996).

The Nigeria Demographic Health Survey (NDHS) 2003 indicated that the overall mean ideal number of children per Nigerian woman at the end of her childbearing is about 6.7 children. It shows that the ideal number of children is 6.1 for all women and 6.7 for currently married women. More than half of all women consider five or more children to be ideal. Only 9 percent of women think three or less children is ideal. Among all women, the mean ideal number of children increases with the number of living children, from 4.9 for those without any children to 8.3 among those with six or more children. Clearly, Nigerian women consider a large family to be desirable. Urban women prefer to have fewer children than rural women (5.2 children compared with 6.7 children, respectively). The document also reported that the mean ideal number of children desired decreases as women's level of education and wealth status increase. Women with no education want 8.0 children, while those with more than secondary

education want only 4.3 children. Women in the lowest wealth quintile want 7.8 children, while women in the highest wealth quintile want 4.5 children.

However, certain factors could be expected to help in a gradual long-term decline in the fertility rates. These include improvement in educational attainment, occupation status, urbanization and its related changes in the economic nature of the household and decline in infant and child mortality, which reduces the replacement motive for child bearing. The Nigeria Demographic and Health Survey (NDHS) 2008 reported that the Total Fertility Rate (TFR) decreases with increasing level of education. Women with more than secondary education have a TFR of 2.9, compared with women with no education who have a TFR of 7.3. More so, women in the urban area were found to have an average of one child less than women in rural areas.

Umuahia, in Abia State, is made up of rural and urban communities. The prevailing incidence of high fertility in the areas, though not well documented in the literature, makes the area suitable for this study. Also, there have been a number of publications on fertility in Nigeria, but little or no such studies have been undertaken in Umuahia. It is therefore pertinent to investigate the issues surrounding determinants of fertility among urban and rural Umuahia women with a view to suggesting adequate strategies that will help to reduce their fertility behaviour.

Brief Literature Review and Theoretical Framework

Education has been recognized as a crucial factor influencing women's childbearing patterns. United Nation (1987) revealed a compelling rationale for focusing on increased investment in education and elimination of institutional and cultural barriers to women's schooling policies aimed at promoting development and reducing fertility. Jeffery and Basu (1996) in their study of India found a significant relationship between education and fertility. To them, "a 10 per cent increase in the female literacy rate seems to be associated with a 0.5 decline in total fertility rate". Studies have also shown that the influence of education on fertility varies greatly between countries with different levels of schooling (Jejeebhoy, 1995; Lan Diamond and Varle, 1998). However, in most cases, the relationship between women's education influences fertility. In Nigeria, studies have consistently indicated lower fertility among women with secondary and higher levels will be accompanied by a decline in fertility. Roudi-Fahimi and Moghadam (2003) found that education clearly affects fertility through the age at childbearing in low-fertility countries. To them, education usually brings women more employment options; a few years of education can result in small family size when the education provides access to a lob that offers a promising alternative to childbearing. Universal education can also make it difficult for women to combine working and large families because older children are in school and not available to care for younger siblings. As a result, many women postpone having children until they have completed their education and established their careers. Sleebos (1999) observed that this delay in childbearing is the cause of the tempo effect that kept fertility low in most developed countries. The desire to limit childbearing varies by education. Almost twice as many women with higher education as women with no education want to limit childbearing (29 percent versus 15 percent) (NPC and ICP Macro, 2003). It also reported that Total

Fertility Rate decreases with increasing level of education. Women with more than secondary education have a TFR of 2.9, compared with women with no education who have a TFR of 7.3. Women's education increases receptivity of awareness and contraceptive use to control fertility. This confirms the work done by Bertrand et al. (1993) who found that education affects the distribution of authority within households, whereby women may increase their authority with husbands, and affect fertility and use of family planning.

Researchers have observed that the type of job (i.e., formal wages sector versus informal sector or piece work) a woman engages in also affects her fertility. It has also been reported that a few years of education can result in smaller family size when it provides access to a job that offers a promising alternative to early marriage and childbearing (PRB, 2007). Working outside the home may expose girls to non traditional roles and values which adversely affect fertility. The fertility decline occurred as female labour force participation increased, a cultural transition took place with rising material aspirations, individualization and changes in gender roles – which may particularly have affected fertility of high status groups (Brown and Guinname 2002, Caldwell 1999, Matysiak and Vignoli 2006, Sathar and Kazi 1990). Most often people assume that changes in the female wage were the causal factor of fertility decline: women wages rose, attracting women into labour force and at the same time causing them to reduce their fertility (Becker, Landes, and Michael, 1977).

There is a monotonic decline in fertility with highest wealth quintile. National Demographic and Health Survey (NDHS, 2008) showed that women in the highest wealth quintile have an average of three children fewer than women in the lowest quintile (4.0 and 7.1 births per woman, respectively) (NPC and ICP Macro, 2009). Furthermore, Stewart (1992) observed that due to the decline welfare and social deprivation generated by economic hardship in the country, women (as managers of household consumption) now play crucial role in mitigating the impact of poverty through high level of participation in income generating activities. With women in employment and as income earners, it is expected that the traditional role of women in family power structure would change.

The Total Fertility Rate (TFR) as reported by NDHS 2008 in Nigeria is 5.7. There is a clear differential in this rate by residence. Rural areas have a much higher TFR than urban areas (6.3 compared with 4.7). Higher rural than urban fertility has been explained with respect to the underlying socioeconomic differences and the changing proximate determinants of fertility, especially delay marriage and higher use of modern contraceptive in urban areas (Isiugo-Abanihe, 1996). Corroborating the above statement, Ainsworth (1996) found that urban women have lower fertility than rural women. She went further to hypothesize that the population that live in urban areas is associated with fundamental revolution in economic basis. These socioeconomic phenomena associated with the urbanization process tend to reduce birth rate in the long run.

Cultural traits such as son preference and number of siblings are important to explain fertility behaviour in a traditional society such as Nigeria. Hank and Hans-Peter (2000) in their study of Europe found that son preference is embedded in cultural and

religious traditions and community norms as well as economic factors, shaping individual attitudes and behaviour. Acsadi and Johnson-Acsadi (1990), comparing wives'opinions on child spacing with husband's notions about abstinence, observed that Nigerian men, particularly in monogamous unions, urged an end to the abstinence period, whereas wives insisted on maintaining the customary length. However, Isiugo-Abanihe (2003) observed that some women resist their husbands' sexual overtures if they believe their children or health will be endangered, they are bound to succumb if such demand persists. As also observed by Orubuloye (1995) "in much of Nigerian society, the greater majority of people still live in extended families either with or in close proximity to relatives", a wife moving into such a home at marriage remains the stranger among the close kin group. This facilitates stronger influence of relatives on the life and decision of the husband. Prolonged breast-feeding is one of the traditional practices that serve as a means of contraception. With increased level of education of women, the period of breast-feeding tends to decrease (United Nation, 1995; Jejeebhoy, 1995; Cleland and Jejeebhoy, 1996). Jejeebhoy (1995) observed that breast feeding practices are affected by education through knowledge autonomy, decision-making autonomy and emotional autonomy.

In decomposing the factors responsible for differences in fertility among sub-population groups in Nigeria, Mikinwa-Adebunsoya and Bamikale (1994), using Bongaarts framework (Bongaarts, Frank and, Lesthaeghe, 1984), found that marriage was the second most important factor. For the entire country, the fertility inhibiting effect of marriage is 25 per cent. The major factor determining adolescent fertility is the early age at marriage and childbearing in Nigeria. NDHS 2008 reported that the age at which childbearing commences is an important determinant of the overall level of fertility as well as the health and welfare of the mother and child. Wusu (2001) observed that the duration of time a woman has stayed in marriage is significantly associated with the number of children. Marriage duration is less likely associated with lower number of children ever born and more likely associated with higher number of children ever born. In some societies, the delay of first births as a result of an increase in the age at marriage has contributed to a decrease in fertility. The median age at first birth increases with level of education. Women with no education have their first birth at a median age of 18.3 years, while women who have attended secondary education have a median age at first birth of 22.8 years, a difference of almost five years. There is also a positive correlation between age at first birth and wealth quintile. However, as the socioeconomic status of households increases, so does the median age at first birth (from 18.5 to 24.1 years).

Marital status of women in Nigeria is another determinant of the reproduction during their reproductive years. Isiugo-Abanihe (1994) found a significant relationship between marital instability and modernization. He believed that there are some evidences that show that the incidence of divorce in Nigeria has increased with modernization, as measured by urban residence and high education perhaps so will 'non-marriage' as an increasing number of 'liberation' or career women assert their independence from the male-controlled family set-up, and choose not to remarry. However, to him, such women still remain exposed to childbearing outside marriage,

but because they are more likely to be using contraception and doing so more efficiently, their rate of childbearing outside marriage is expected to be low.

There are three theoretical explanations for fertility differentials between women in urban and rural areas. The first is the "Davis and Blake" framework which presumed that socio-economic and cultural variables have to operate through a set of proximate determinants that have direct influence on fertility to have their effect on fertility. The second explanation is based on economic theory of fertility which more economical in nature opined that there are two effects when income rises: an "income effect" that causes us to purchase more of all "normal" goods, and a "price effect" as hourly wages raise the "opportunity cost" of any activities requiring an expenditure of our time. The third explanation is based on the "intergenerational wealth flows" theory, which supports the thesis that there is a direct link between family structure and fertility. The theory identifies two major forms of family structure and direction wealth flows among generations. Net wealth flows are primarily upward from younger to the older generation in primitive or traditional societies. On the other hand, in the developed societies, a family structure is organised in terms of downward wealth flows. Parents are expected to provide for the economic well-being of their children. The theory proposes that fertility decisions of couples in every society have economic undertones. However, Salaff (1985) observed that couples tend to reduce their family size because of economic pressures. It also believed that through mass education, fertility can be affected through three routes, all affecting the net costs of rearing children.

As shown in the adopted theories above, they explained the relationship between fertility and social, cultural, and economic features in the society. The fertility of an individual is influenced by several factors in the society.

Research Methods

The triangulation of both qualitative and quantitative methods was employed to generate data for this study. In the quantitative method, 250 respondents each were chosen from urban and rural areas. The respondents were women within the childbearing ages of 15-49 years. They included married, separated, divorced, widowed and unmarried women. The qualitative interviews were structured in all the selected areas of the study to find out their perception, attitude, and knowledge of determinants of fertility. These questions elicited detailed information on the objectives of the study since there was an opportunity to dig deep into the needed information on each section of the study. It is pertinent to note that the two instruments used for data collection were pre-tested to measure their suitability in the collection of reliable and valid data before the commencement of the main field work.

The sampling technique used was multi-stage sampling method so as to give each respondent a fair chance of being selected. Here, the probability sampling technique that was employed is the systematic random sampling, which ensured the random selection of sample on a systematic basis. The primary data were analyzed at univariate, bivariate and multivariate levels. Qualitative analysis involved the categorization of responses into objective of the study, where they fit in. The responses were carefully gathered by writing them down. In the final analysis, content analysis

was employed by separating the responses based on their relations to the study objectives; hence, the responses from the respondents were reported verbatim.

Results and Discussion of Findings

The presentation of the major findings of the study was divided into four sections. The first section contained information about the background characteristics of the respondents and the comparison of the background characteristics of urban and rural respondents. The second section covered fertility behaviour and proximate factors of the respondents. Section three examined the relationship between some socioeconomic/proximate factors and fertility of the respondents, while the final section revolved around the ordinary linear regression analysis of some socioeconomic and proximate variables to determine the variables that influence fertility more than the other variables.

Background Characteristics of the Respondents

The background characteristics of the sampled respondents presented in table 1 show that out of the 484 returned questionnaire, the mean age of the respondents was 30.4 years. Close to one-third of the respondents are within ages 25-29 years which is the modal age group. This was followed by those less than 25 years with 23.8%. This obviously shows that majority of the respondents have come of age and therefore might have had good experiences on childbearing.

As regards the marital status of the respondents, the table shows that the majority of the respondents with 65.1% reported to be currently married and living together, 30.8% were single, while only 3.3% were widowed. The small number of respondents that were divorced could be an indication that married women in the area do everything possible to live with their husbands considering the social stigma attached to separated and divorced women. The large number of respondents that reported to be married and living together was a plus to this study putting into consideration the topic of the study.

Table 1 show that 45.2% of the respondents had tertiary qualification from NCE, Polytechnics, Colleges of education and Universities. Also, 44.0% reported that they had secondary school certificates, while 10.7% had primary and less level of education. This is an indication that the quest for academic qualifications is high in Umuahia among women of childbearing age. The occupation of the respondents was mainly paid jobs. As shown in table 1, the majority of the respondents 56.8% were in paid jobs like civil service workers, bank workers, company workers and clerk jobs. Only 7.0% of the respondents were farmers. This could be as a result of high level of education of the respondents.

The result reveals that 36.2% of the respondents earn less than #10,000 in a month. This was followed by 28.1% earning between #10,000-#20,000, while only 5.6% earn between #30,000-#40,000. This could be as a result of lack of industries in the area that compels the respondents to accept jobs that are not commensurate with their educational qualifications. Also the respondents were predominantly Igbos (96.3%) which is as a result of the study area which is an lgbo speaking region.

Table 1. Background Characteristics of Respondents

Value Label	Category	Frequency	%
Age	< 25	115	23.8
	25 – 29	145	30.0
	30 – 34	106	21.9
	35 – 39	43	8.9
	40 – 44	43	8.9
	45+	32	6.6
	Total	**484**	**100**
Marital status	Single	149	30.8
	Married/Living	315	65.1
	together	16	3.3
	Widowed	4	0.8
	Separated/Divorced	484	100
	Total		
Educational level	Primary and less	52	10.7
	Secondary	213	44.0
	Tertiary	219	45.2
	Total	**484**	**100**
Occupational status	Farming	34	7.0
	Paid job	275	56.8
	Petty trader	78	16.1
	Labourer	13	2.7
	Others	74	15.3
	No response	10	2.1
	Total	**484**	**100**
Income level	Less than #10,000	175	36.2
	#10,000-#20,000	136	28.1
	#20,000-#30,000	58	12.0
	#30,000-#40,000	27	5.6
	Above #40,000	34	7.0
	No response	54	11.2
	Total	**484**	**100**

Source: Field Survey, 2009

Background Characteristics of respondents by place of residence

Table 2 shows the background characteristics of respondents of urban and rural respondents. The urban area had a relatively higher number of women who were single compared to rural area. This could be due to the high quest for educational pursuits of the urban respondents. About 70.7% of the rural respondents were married/living together compared with 59.1% of urban respondents. Only 6.6% widowed, separated and divorced were in the rural area, while 1.7% in the urban area.

The results reveal that 61% of urban respondents had tertiary education relative to 29% of their rural counterparts. Conversely, rural area had a relatively large population in secondary and primary education category. The higher urban education is expected because of the proximity to location of educational institution. The occupational level of the respondents indicated that over two-third of urban respondents with 77.7% were mostly in paid jobs compared to rural respondents. Only 29% of rural respondents were in petty trading. This could be as a result of the concentration of formal jobs in the urban area than rural area.

The table also shows that the percentage of respondents that earn less than #10,000 was higher in the rural than urban area with 43.8% compared to 28.5%. The percentage of respondents that earn #10,000-#20,000 was higher in the urban area with 31.2% compared to 25.0% rural respondents. Also, the percentage of the respondents that earn above #30,000 was also higher in the urban area than rural area. This could probably be attributed to the fact that some higher income earners preferred residing in the urban than rural area since most establishments are located in the urban Umuahia.

As regards the place of work of the respondents for two areas, the majority of the respondents with 82.2% from urban area work away from home compared to 41.7% of rural dwellers. Whereas only 14.4% of urban residents work at home, 45.5% of rural residents do so. This is consistent with the nature of work in the urban areas.

Table 2. Background Characteristics of Respondents by Place of Residence

		Urban		**Rural**	
Value label	**Category**	**Frequency**	**%**	**Frequency**	**%**
Marital status	Single	95	39.3	55	22.7
	Married/Living together	143	59.1	171	70.7
	Widowed/Separated/Divorce	4	1.7	13	6.6
	Total	242	100	242	100
Educational level	Primary and less	5	2.1	47	19.4
	Secondary	89	36.8	124	51.2
	Tertiary	148	61.2	71	29.3
	Total	242	100	242	100
Occupational status	Farming	5	2.1	29	12.0
	Paid job	188	77.7	87	36.0
	Petty trader	8	3.3	70	28.9
	Labourer	2	0.8	11	4.5
	Other	36	14.9	38	15.7
	No responses	3	1.2	7	2.9
	Total	242	100	242	100
Income level	Less than #10,000	69	28.5	106	43.8
	#10,000-#20,000	76	31.4	60	24.8
	#20,000-#30,000	36	14.9	22	9.1
	#30,000-#40,000	16	6.6	11	4.5

	Above #40,000	26	10.7	8	3.3
	No response	19	7.9	35	14.5
	Total	242	100	242	100
Place of work	At home	35	14.5	110	45.5
	Away from home	199	82.2	101	41.7
	No response	8	3.3	31	12.8
	Total	242	100	242	100

Source: Field Survey, 2009.

Fertility Behaviours of the Respondents

This section focuses on the analyses of the data collected from the respondents on fertility behaviour. The following questions were considered: the number of children the respondents had given birth to, preferred number of children, preferred numbers the respondents would like to be boys and girls and behaviour of the respondents if the children are of the same sex.

Table 3 shows that the mean number of children by the respondents is 3.6 children. The large number of respondents with 34.6% had family size of 1-2 children. This is followed by 31.9% of the respondents that had 3-4 children, while 18.0% had children from 5 and above. The respondents that did not respond on the numbers of children they had were those that were married without children yet. The above result indicated that the current economic condition in rearing children in present times is affecting the initial large family sizes cherished by couples. The respondents who did not give any response attributed their reasons to "God's time" and "up to God". This shows that potential parents considering the economic involvement in rearing children coupled with the fact that the 1988 population policy mandated each couple not to have more than 4 children tend to trade-off quantity for quality.

Out of 484 respondents, majority of them with 80.0% reported that they would not continue having more children to have the desired sex if their children are of the same sex, while only 13.6% reported that they would continue to have children till they have the desired sex. This corroborates the findings of Salaff (1985) who observed that couples tend to reduce their family because of economic pressure.

With respect to the number of months the respondents stay away from their husbands after childbirth (postpartum abstinence), table 3 reveals that the majority of the respondents with 68.7% abstain sexually from their husband after childbirth for 1-5 months. The mean number of months abstained from sex by the respondents was 5.3 months. Some of the respondents who never specified the number of months they stay away reported that they do not count the number of months, but commenced sexual relationships with their husbands whenever they were clean and strong. This confirmed the submission made by an urban woman during an in-depth interview;

Talking about the number of months a woman should stay away from the husband after childbirth, it should be whenever the woman in question is clean and strong. To me, that is exactly the method I apply in my marriage (a woman aged 35).

I know that it is not bad for one to maintain a sexual relationship with her husband after child birth. Therefore, I do it when I know that I can bear the pains (Rural woman).

There is no much difference on the preference for male and female children in the area. Table 3 shows that 66.7% of the respondents preferred 1-2 female children, while 62.4% preferred 1-2 male children. This probably means that equal preference is almost given to both sexes. The high level of education could be the main factor responsible for almost equal preference of both sexes.

Table 3. Fertility Behaviours and Proximate Factors of the Respondents

	Frequency	**%**
Value Label/Category	**Frequency**	**%**
No of Children		
1 – 2	116	34.6
3 – 4	107	31.9
5+	87	26.0
No response	25	7.5
Total	335	100
Mean number of children is **3.6**		
Preferred Number of Children		
1 – 3	61	12.6
4	203	41.9
5 – 7	185	38.2
8+	17	3.5
No response	18	3.7
Total	484	100
Mean preferred children is **4.6.**		
Desire to have more children if they are of the same sex		
Yes	66	13.6
No	387	80.0
No response	31	6.4
Total	484	100

Postpartum Abstinence				
1 – 5	230		68.7	
6 – 9	47		14.0	
10 – 24	7		2.1	
No response	51		15.2	
Total	335		100	
Mean **5.3** months				
Preferred sex of children	**Boys**		**Girls**	
Preferred number of sex	**Frequency**	**%**	**Frequency**	**%**
1 – 2	302	62.4	323	66.7
3 – 4	148	30.6	124	25.6
5+	9	1.8	9	1.8
No response	25	5.2	28	5.8
Total	484	100	484	100

Source: Field Survey, 2009.

Urban and Rural Respondents by Fertility Behaviours

Table 4 shows that 35.8% of the rural respondents have family size of 1-2 children compared with 33.3% urban respondents. Also, 29.8% of rural respondents have 5 children and above compared with 21.8% of urban respondents. There is no much difference between the two areas on the number of family size by the respondents.

Urban respondents preferred more small family sizes than their rural counterparts. Urban respondents with 48.8% preferred 4 children compared with 35.1% of their rural counterparts. Also, 46.7% of the rural respondents preferred 5-7 children higher than 22.7% of the urban dwellers. The high urban demand in the area could be the possible reason for the preference of small family sizes by the respondents. A comparison of the data on postpartum abstinence of the two areas indicated that over two-third of rural respondents abstain from sexual relationship with their husbands between 1-5 months compared with 64.6% of the urban respondents. Only 14.9% of rural respondents abstain for 6-9 months compared with 12.9% of their urban counterparts. This could be as result of the nature of job urban respondents engaged in which did not give them that constant relationships with their partners.

Table 4. Urban and Rural Respondents by Fertility Behaviours and Proximate Factors

		Urban		Rural	
Value label	**Category**	**Frequency**	**%**	**Frequency**	**%**
No of children	1 – 2	49	33.3	67	35.6
	3 – 4	51	34.7	57	30.3
	5+	32	21.8	56	29.8
	No response	15	10.2	8	4.3
	Total	147	100	188	100
Preferred family size	1 – 3	51	21.1	27	11.2
	4	118	48.8	85	35.1
	5 – 7	55	22.7	113	46.7
	8+	4	1.7	13	5.4
	No response	14	5.8	4	1.7
	Total	242	100	242	100
Postpartum Abstinence	1 – 5	95	64.6	135	71.8
	6 – 9	19	12.9	28	14.9
	10+	-	-	7	3.7
	No response	33	22.4	18	9.7
	Total	147	100	188	100

Source: Field Survey, 2009.

Socioeconomic/Proximate Factors of the Respondents and Fertility

The main focus of this section was to examine the relationship between socioeconomic/proximate factors and fertility of the respondents. The results revealed that there were no relationships between the respondents' occupational status, place of residence, level of income and fertility. Table 5 shows that there was a significant relationship between respondents' age and fertility in the area. Out of 43 respondents that are aged less than 25 years, over two-third of them with 76.7% had 1-2 children, while 18.6% had 3-4 children. Also, out of 32 respondents that were aged 45-49 years, 65.6% of the respondents had 5 children and above, while 28.1% had 3-4 children.

Table 6 shows the respondents' educational level and fertility. The result indicates that respondents who had small family sizes had secondary and tertiary levels of education, the majority of those who had primary and less level of education with 50.0% had 5 children and above, while 28.0% respondents have 1-2 children. Also, out of 113 respondents with tertiary education, 43.4% of the respondents had 3-4 children, while 36.3% had 1-2 children. This confirmed that as the education of the respondents increased, the number of children they had decreased. The above result corroborates Jejeebhoy (1995), in which he opined that women's education has been widely recognised as a crucial determinant of reproductive behaviour. Also, United Nation (1995) findings confirmed that education provides women with the knowledge that allows them to make informed decision, with skills that enhance their opportunities in

the wages employment sector and with exposure to new values, norms and attitudes that are likely to enhance their autonomy. The chi-square analysis showed that there was a significant relationship between education and fertility.

Table 7 shows that the majority of respondents with 60.0% out of the respondents that gave their birth at 30 years and above had 1-2 children, while 24.2% had 3-4 children. More so, out of 33 respondents that gave their first birth at ages 15-19 years, 42.4% of them had 5 children and above, while 36.4% had 1-2 children. This is an indication that the age at which the respondents started giving birth in the area was significantly related to the number of children they had with the chi-square test of 0.025. The result confirmed the findings of NDHS 2008 which revealed that the age at which childbearing commences is an important determinant of the overall level of fertility as well as the health and welfare of the mother and child. In some societies, the delay of first births as a result of an increase in the age at marriage has contributed to a decrease in fertility. This is also consistent with the statement made by an urban respondent during the IDI;

> *I spent most of my time in pursuit of educational certificates. This really affected the time and year I got married which also affected the age I started giving birth. Frankly speaking, the number of children I initially had in mind to give birth to reduced. This is basically because I cannot afford to risk my life giving birth in my old age* (Urban woman aged 44).

> *Actually, I made up my mind that I would not marry until I bag my Bachelor of Science (B.Sc.). I know that affected my age at marriage, which has also affected the number of children that I have now* (Urban woman aged 39).

On the respondents age at marriage and number of children they had, table 8 shows that the majority of the respondents with 59.1% out of 22 respondents that married between the ages of 30 years and above had 1-2 children, while 22.7% had 5 children and above. Out of 51 respondents that married at 15-19 years, 45.1% of the respondents had 5 children and above, while 27.5% had both 1-2 and 3-4 children. The above result indicates that the respondents' age at first marriage had great influence on the number of children they gave birth to. This depicts result of Wusu (2001), which revealed that the duration of time a woman had stayed in marriage is significantly associated with the number of children.

Table 5: Distribution of Respondents by Age of Respondents and Fertility

	AGE OF RESPONDENTS						
NO OF CHILDREN	**< 25**	**25 - 29**	**30 – 34**	**35 - 39**	**40 – 44**	**45 – 49**	**TOTAL**
1 – 2	33 76.7%	39 50.0%	30 38.5%	7 17.5%	5 12.8%	2 6.3%	116 37.4%
3 – 4	8 18.6%	33 42.3%	23 29.5%	17 42.5%	17 43.6%	9 28.1%	107 34.5%
5+	2 4.7%	6 7.7%	25 32.1%	16 40.0%	17 43.6%	21 65.6%	87 28.1%
Total	43 100%	78 100%	78 100%	40 100%	39 100%	32 100%	310 100%
Pearson's chi-square(df) = 88.936(10), significant value=0.000							

Source: Field Survey, 2009.

Table 6: Distribution of Respondents by Educational Level and Fertility

	EDUCATIONAL LEVEL			
NO OF CHILDREN	**PRIMARY AND LESS**	**SECONDARY**	**TERTIARY**	**TOTAL**
1 – 2	14 28.0%	61 41.5%	41 36.3%	116 37.4%
3 – 4	11 22.0%	47 32.0%	49 43.3%	107 34.5%
5+	25 50.0%	39 26.5%	23 20.4%	87 28.1%
Total	50 100%	147 100%	113 100%	310 100%
Pearson's chi-square(df) = 18.074(4), significant value=0.001				

Source: Field Survey, 2009.

Table 7: Distribution of Respondents by Age at First Birth and Fertility

	AGE AT FIRST BIRTH				
NO OF CHILDREN	**15 – 19**	**20 – 24**	**25 – 29**	**30+**	**TOTAL**
1 – 2	12 36.4%	47 32.2%	36 37.5%	20 60.0%	115 37.3%
3 – 4	7 21.2%	59 40.4%	32 33.3%	8 24.2%	106 34.4%
5+	14 42.4%	40 27.4%	28 29.2%	5 15.2%	87 28.2%
Total	33 100%	146 100%	96 100%	33 100%	308 100%
Pearson's chi-square(df)=14.469(6), significant value=0.025					

Source: Field Survey, 2009.

Table 8: Distribution of Respondents by Age at First Marriage and Fertility

	AGE AT FIRST MARRIAGE				
NO OF CHILDREN	**15 – 19**	**20 – 24**	**25 – 29**	**30+**	**TOTAL**
1 – 2	14 27.5%	50 33.6%	24 41.0%	13 59.1%	111 36.4%
3 – 4	14 27.5%	62 41.6%	27 32.5%	4 18.2%	107 35.1%
5+	23 45.1%	37 24.8%	22 26.5%	5 22.7%	87 28.5%
Total	51 100%	149 100%	83 100%	22 100%	305 100%
Pearson's chi-square(df)=15.644(6), significant value=0.016					

Source: Field Survey, 2009.

Ordinary Linear Regression of Some Socioeconomic and Proximate Variables

This section focuses on the ordinary linear regression analysis of some socioeconomic and proximate variables. This was to determine the variables that influence fertility more than the other variables. Table 9 shows the ordinary linear regression analysis of the variables taking number of children as the dependent variables.

Using the stepwise methods, five significant model emerged ($F_{5,263} = 33.59$, $P<0.005$), being the last model containing five predictor variables (age at first marriage, age at first childbirth, educational level and marital status) which all significantly predicted or were associated with the number of children by respondents ($P<0.005$). The model with Adjusted R square = 0.378 thus accounted or explained about 38% of the variation observed in the number of children by the respondents.

In summary, the respondents' age at first marriage, age at first childbirth, educational level and marital status were significant determinants of the number of children born by the respondents. The relationship between the number of children and the women age at first marriage and being separated from husband (-1.099 and -0.147 respectively) were negatively significant. Age at first marriage is inversely related to fertility implying that age of marriage rises fertility falls. Thus one means of reducing fertility is for government to increase age at marriage either through legislation or compulsory schooling. They negative coefficient for women who were separated meant that they have lower fertility than those who were married.

Also, women with primary education had higher fertility than others and those whose marriage was early had higher fertility.

Table 9: Ordinary Linear Regression of Some Socioeconomic and Proximate Variables

Variables	Standardized coefficient (Beta)	T
Marital status		
Single	-0.058	-1.201
Married/living together	0.135	1.201
Widowed	-0.147*	-3.011
Separated/Divorced	0.098*	1.998
Place of residence		
Urban	0.55	0.990
Rural	----------	----------
Occupational status		
Farming	-0.010	-0.182
Paid job	0.004	0.079
Petty trader	0.014	0.277
Labourer	0.025	0.511
Other	-0.037	-0.759
Place of work		
At home	0.025	0.494
Away from home	-0.025	-0.494
Income level		
Less than #10,000	-0.065	-1.291
#10,000-#20,000	0.027	0.554
#20,000-#30,000	0.064	1.312
#30,000-#40,000	0.012	0.252
Above #40,000	-0.030	-0.606
Educational level		
Primary and less	0.200*	3.963
Secondary	0.002	0.045
Tertiary	-0.002	-0.045
Age at first marriage	-1.099*	-11.685
Age at first birth	0.802*	8.448

*Significant at $p<0.05$

Source: Field Survey, 2009.

Discussion of Findings

The findings of the study were discussed in relationship to the specific study objectives. They revealed that the mean age of the respondents in the area was 30.4 years and the majority of the respondents with 65.1% were married and living together. This is probably as a result of social stigma attached to separated and divorced women in Igbo land where the study was conducted. Also, 89.2% of the

respondents had secondary and tertiary education which mainly comprised of urban respondents higher than that of rural. As a result, 56.8% of the respondents were in paid jobs.

In addition, the study revealed that the mean number of children and preferred number of children by the respondents were 3.6 and 4.6 children respectively. There was no much preference on a particular sex of the children by the respondents in the area. This could be attributed to the change in social roles where the female children read the same courses in the tertiary institutions and work in same establishments with their male counterparts. Also, the majority of the respondents (80.0%) reported not to continue having more children if their children were of the sex, which shows that the fertility behaviour of Umuahia women is positively changing.

On the number of months the respondents abstain from sexual relationship with their partners, the result showed that the mean number of months the respondents stay away from their husbands was 5.3 months. This is an indication that the respondents abstained from sexual intercourse with their partners within a short period after childbirth. There is no doubt that delaying the resumption of sexual relations after a birth also prolongs the period of postpartum protection. Women are considered insusceptible to pregnancy if they are not at risk of conception, either because they are amenorrhoeic or abstaining from sexual activity after a birth. The analysis also showed that there were significant relationship between maternal age, educational attainment, age at first birth, age at first marriage and fertility.

Based on various findings, the following recommendations are made; one, the government should invest heavily on women schooling beyond primary school. Investment in female education in secondary and high education will foster economic growth, increased modern contraceptive use and improve child health which in turn promotes smaller families. Also, it should be noted that the empowerment and autonomy of women and the improvement of their political, social, economic and health status is a highly important end in itself. It is therefore imperative for government to enact a new population policy that should stress the full participation of men and women in productive and reproductive life for the achievement of sustainable development in the country.

The major limitations encountered during the conduct of the research were the unwillingness and reluctance of some respondents to open up by giving some needed vital information. This was as a result of the nature of the questions, which aimed at extracting deeply-rooted information about their personal lives and reminding them of their childless or painful experience. Consequently, not all the questionnaires distributed in the course of the study were returned, out of the 500 questionnaires distributed (250 questionnaires in the urban area and 250 questionnaires in the rural area), 242 questionnaires were returned from each of the two areas totalling 484 questionnaires.

Conclusion

This research made has made available data that explained the correlates of socioeconomic factors and fertility and contributed to the methodological and theoretical relevance of demography by exploring and explaining the collective

influences of the identified variables on fertility among Umuahia women. The major focus in the area studied should be to sensitize the women on the needed information on fertility decline and family planning since their ages at first marriage and birth were fairly late. Also, there is need for quick intervention on the side of the government to expedite action by embarking on policy that will educate the women, most especially the unmarried women on the benefits of having small family sizes.

Empowering women to participate more fully in household decisions, the economy and political life is a key to creating a supportive environment for mothers and newborns. Government should introduce some courses on fertility in our secondary and tertiary institutions to inculcate in the citizens the advantages of marrying and giving birth at the appropriate time. The implications of the reverse most follow suit to have its influence on them. The rural women must be carefully informed on the above mentioned issues to have equal chances with their urban counterparts. Comprehensive research should be conducted to ascertain the routine change on fertility behaviour of women.

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