

CORRELATES OF AGE AT FIRST BIRTH AMONG WOMEN IN NIGERIA: DOES ETHNICITY MATTER?

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ABSTRACT

Despite that ECOWAS nations ranked Nigeria among the three nations with the least TFR, the current fertility levels of 5.5 is still high and age at first birth consistently remained a key predictor. This paper examined the associated factors with differentials in the age-at-first-birth across major ethnic groups in Nigeria. Data was obtained from the 2013NDHS on a weighted sample of 27,614 women with at least a child in the last 5years preceding the survey. Result from the univariate analysis showed that 40% of the respondents are from the Hausa/Fulani ethnic group, 12% Igbo, 14% Yoruba and 35% from other ethnic-groups. At the bivariate level of analysis level, education, religion, place of residence and wealth-status were significant predictors of age at first birth. Across the various ethnic-affiliations, the Hausa/Fulani women had the least median age at first birth irrespective of their socio-economic status. The median age for the Hausa/Fulani was as low as 17 years while it was above 20 years among the Igbo and Yoruba women. At the multivariate analysis levels, the adjusted and the unadjusted IRRs revealed that ethnicity is significantly a predictor of age at first birth. Therefore, regulating fertility in Nigeria requires giving special attention to the multi-ethnic groups particularly the Hausa/Fulani group in addition to the identified determinants influencing age at first birth.

Key words: Correlates, Age at first birth, Ethnicity

INTRODUCTION

According to the global WHO (2014) statistics, reproduction commences at early ages. At young age brackets especially between 15 and 19 years, marriage relationships are initiated whether forced or mutual, once contracted child bearing begins. On the average, the global birth rate for those aged 15-19 years is approximately 50 per 1000, between 1 and 229 births per 1000 girls across countries and highest in sub-Saharan Africa (WHO, 2014). Several scientific reports have shown that age at first birth is initiated at puberty (Shanahan, 2000; Kirk, Bloomberg, Duffy, Heath, Owens and Martin, 2001). Therefore, puberty serves as a precursor to the age at first birth and this invariably determines lifetime fertility behaviour (Mathews and Hamilton, 2009). Studies, however have demonstrated strong linkage between early age at menarche with

early marriage and early initiation of motherhood (Pierce and Leone, 2005; Rah, Shamim, Arju, Labrique, Rashid *et al.*, 2009; Walvoord, 2010).

In the developing countries, over 30% of girls in the region marry before 18, slightly more than one-tenth before 15. On yearly basis, approximately 16 million girls between 15 and 19 years and about 1million of them marry before 15years (WHO, 2014). Among the developed nations, age at first birth is initiated at later years i.e between late 30's and 40s (Ushie, Agba, Olumodeji & Attah, 2011) whereas in Sub-Saharan Africa countries, evidence from DHS survey across 54 sub-saharan Africa showed that in 25 countries, the median age at first birth is lower than 20 years(Vadnais, Daniel, Kols, Abderrahim ,2006). Older age at first birth and postponement of birth –order more than three are connected together, though it may not necessarily imply fewer birth (Tomas, 2004). Additionally, mother's age at first birth to a great extent determines of their daughter's (Barber, 2001).

Currently in Sub-Sahara Africa, the median age at first motherhood initiation increased roughly to 18 years (Das Gupta, Bongaart & Cleland, 2011). Also, in Nigeria, women have their first birth as early as age 14 or in marriage relationship (Ushie, 2009).This is because remaining un-married or not been in any marriage relationships in Nigeria, particularly in the south -east, at higher ages such as 30 is referred to as social evil (Isiugo-Abanihe, 1994). In south-western Nigeria, Oyefara (2012) reported that minimum age at first birth is lower than 20 years while the 2013 DHS reported that median age at first birth among women aged 25-49 in the country is 20.2 years(NPC and ICF International,2013). However, this is higher than the usual lower minimum age brackets between 14 and 17 premised in the rural ethnic groups of Hausa, Yoruba and Igbo (Isiugo-Abanihe, 1996; Ushie, 2009). Reasons for early child bearing includes: cultural traits, matrimonial fulfilment, love and economic benefits of large families and perinatal death (Lesthaeghe and Moors, 2000; Caldwell & Caldwell, 2002; Berhan and Asren Berhan, 2014).

Literatures have identified socio-economic characteristics as causal factors associated with early marriage and early age at first motherhood in sub-Sahara Africa, Nigeria particularly. Higher education, place of residence and rich wealth status have been found to be associated with higher ages at first birth or postponement of birth (Bongaart, 2010; Akpan and Ikpotokin 2012; Gayawon and Adebayo, 2013). Also, region of residence as identified in Akpan and Ikpotokin (2012) using Nigeria DHS 2008, showed that among one-tenth (2156) women that gave birth earlier than age 15, South–South and North (Central and East) girls had higher proportions. In addition, religion-types such as Catholic faith among the Christians and the Muslim faith instill reproduction activities only in Holy sanctity of marriage to discourage childbearing outside wedlock. This therefore breeds young ages at entry into marital unions and thus young motherhood (Haloi and Limbu, 2013).

Age at first birth whether at younger or older ages have adverse economic wellbeing, reproduction health implications like cycle of morbidity such as obstructive labour, excessive bleeding , and vesico-vaginal fistula and eventual death of mothers and their off-springs (Usta, Zoorob, Abu-Musa and Naassan, 2008; Stephen 2003; Gayawon *et al.*,2013; Berhan and Asren Berhan, 2014, WHO, 2014). Given the detrimental effects of age at first birth coupled with the

Nigeria's current high fertility levels of 5.5, laying approximately middle levels across the ECOWAS nations, this paper thus examines the associated factors with differentials in the age at first birth across the various ethnic groups in Nigeria. Information elicited on correlates of age at first birth particularly with regards to ethnicity will help to inform and strengthen policies aimed at regulating fertility in multi-ethnic nations such as Nigeria.

DATA AND METHODS

Data source and sample

This study utilized the individual women data from the most recent Demographic and Health Survey (NDHS 2013). The 2013 Nigeria Demographic and Health Survey data elicited information at the national level which catered for the six geo-political zones, the 36 states and all resident types (rural and urban) using the sampling frame of the 2006 Population and Housing Census. A total of 38,948 women aged 15-49 years were selected using stratified two-stage cluster design across 904 clusters to obtain information on fertility, mortality and health, birth history, mortality, fertility, family planning methods and behaviour (NPopC & ICF International, 2014).

The major ethnic groups in Nigeria were selected based on the ethnic differences and availability of comparable data in the age at first birth of the women who ever have at least a live birth in the reproductive age group (12-45). Specially constructed weights using the Stata command "gen wt=v005/1000000" was employed to ensure that there are no over or under sampling of respondents. Therefore, a weighted sample of 27,614 women with at least a live birth in the last 5 years before the survey was used.

Outcome Variable

The outcome variable is Age at first birth. Age at first birth is a count variable thus, Poisson regression analysis was used.

Principal explanatory Variable

The principal explanatory variable is ethnicity. It is categorized into Hausa, Igbo, Yoruba and other ethnic-groups.

Control Variables

The selected control variables utilized in this study includes: education, religion, place of residence and household wealth status (Giyan 2009; Bongaart, 2010; Akpan and Ikpotokin 2012; Gayawon and Adebayo, 2013; Haloi and Limbu, 2013). Religion-types were classified into (Christian, Muslim and others). For household wealth status the DHS wealth quintile index was re-categorized as poorest and poorer quintile representing the "poor", the third quintile representing the "middle", and the last two quintiles (richer and richest) classified as "rich".

Ethical Considerations

Ethical permission for use of the datasets in the study was obtained from the DHS and ICF Macro.

Data Analysis

The STATA software 12 version was used for the analysis. The weighting and the issue of non-response was taken care, however, the 'svy' suite of commands was not used to adjust the standard errors at the multivariate level.

The percentage distribution of selected women background/household characteristics was analyzed at the univariate level. At the Bi-variate level of analysis, the unweighted median ages of the women at first birth across the ethnic groups was tabulated by their selected background characteristics. Lastly, at the multi-variate level, three Models of Poisson Regression analysis were developed firstly to obtain the relationship between selected background variables and age at first birth (Model 1). In Model 2 the relationship of the ethnicity (un-adjusted) on the age at first birth while Model 3 shows the adjusted simultaneous effects of the ethnicity, background/household variables on the age at first birth.

The Poisson regression model (PRM) is expressed as:

$$\Pr\{Y=y\} = \frac{e^{-\mu} \mu^y}{y!}$$

where:

y is the age at first birth of the women i.e from 12 to 45year.

RESULTS

Background characteristics

Table 1 presents the percentage distribution of the respondents by background characteristics. Nearly half of the women (46%) has no formal education, at least one-fifth had up to primary and secondary education i.e 20% and 27% respectively, while below a tenth had tertiary education (7%). At least 3 in 5 women live in the rural area (62%) whereas about 2 in 5 women live in the urban area (38%). The distribution according to household poverty-wealth status shows that most of the women (43%) are from poor households, (19%) are in the middle class and (38%) women are from rich households.

Result of the ethnic background variable showed that the proportion of the Hausa/Fulani (40%) were more than the sum of Igbo (12%) and Yoruba (14%) women while slightly more

than a third of the women were from other ethnic groups (35%) . Majority of the women are predominantly Muslim (57%) with a substantial proportion of them as Christians (42%) and fewer than 2% from other religion-type.

TABLE 1: PERCENTAGE DISTRIBUTION OF RESPONDENTS BY BACKGROUND CHARACTERISTICS

BACKGROUND CHARACTERISTICS	FREQUENCY	PERCENT
EDUCATION		
None	12,719.33	46.1
Primary	5,614.48	20.3
Secondary	7,311.94	26.5
Tertiary	<u>1,968.80</u>	<u>7.1</u>
Total	<u>27,614.55</u>	<u>100.0</u>
PLACE OF RESIDENCE		
Urban	10,404.80	37.7
Rural	<u>17,209.75</u>	<u>62.3</u>
Total	<u>27,614.55</u>	<u>100.0</u>
WEALTH INDEX		
Poor	11,748.76	42.6
Middle	5,256.07	19.0
Rich	<u>10,609.72</u>	<u>38.4</u>
Total	<u>27,614.55</u>	<u>100.0</u>
ETHNICITY		
Hausa/Fulani	10,899.61	39.5
Igbo	3,299.00	12.0
Yoruba	3,721.01	13.5
Others	<u>3,652.39</u>	<u>35.0</u>
Total	<u>27,572.01</u>	<u>100.0</u>
RELIGION		
Christian	11,481.13	41.8
Islam	15,689.34	57.1

Others		<u>297.08</u>	<u>1.1</u>
	Total	<u>27,467.55</u>	<u>100.0</u>

Table 2 shows the percentage distribution of women s’ median age at first birth by their background characteristics across the ethnic groups. The median ages of the women at first birth across the ethnic groups (Hausa/Fulani, Igbo, Yoruba and others) increases with increasing level of education. The median ages for the women with no –formal education and primary education increased monotonically across the various ethnic groups, that is Hausa/Fulani (17years), other ethnic groups (18years), Igbo (19years) and Yoruba (20years). Among those with secondary education, the Hausa/Fulani women and women from the other ethnic group have the same median age (19years) while that of the Yoruba and Igbo women were 21 and 22years respectively. All the women that attained tertiary education on the minimum, initiated their first

birth at ages 20 and above irrespective of their ethnic group. While the Hausa/Fulani women had the least age (21 years), the Igbo and Yoruba women equally had the highest median ages (25 years).

With the exception of the Igbo women whose median ages remained unchanged (21years) for those resident in the urban and the rural areas, there is a slight increase in the median ages among the Hausa /Fulani, Yoruba and other ethnic group that lived in the urban areas (18, 22 and 20 respectively) than their counterparts in the rural areas (17, 20 and 18 respectively). Across the categories of household wealth status, with the exception of the Igbo women, there is no difference in the median ages for those in the poor and middle class household wealth status. Women from the rich households has higher median ages especially for Yoruba and Igbo (22years) as against 20years for women from other ethnic groups and 18years for the Hausa/Fulani.

For all the religion-types, Christian women has the highest median ages at first birth while in all the ethnic groups, the Hausa/Fulani women has the least median age at first birth. For instance, among the Christian from the three (Hausa/Fulani, Igbo and Yoruba), the median age at first birth ranged from 20-22 years with Hausa/Fulani women having the least (20 years). Also, among the Muslim women, the Hausa/Fulani women had the least median age at first birth (17years) unlike the Igbo (20years), Yoruba (21years) and women from other ethnic groups (18 years). In all the ethnic groups, the Hausa/ Fulani has the least median age at first birth (17 years) irrespective of their background characteristics. The Igbo and Yoruba women equally have higher median ages (21 years) than the women from other ethnic groups (19 years).

TABLE 2: Percentage distribution of respondent’s median age at first birth by background characteristics across the three major ethnic groups

BACKGROUND CHARACTERISTICS	MEDIAN AGE AT FIRST BIRTH			
	HAUSA	IGBO	YORUBA	OTHERS
Education None	17	19	20	18

Primary	17	19	20	18
Secondary	19	22	21	19
Tertiary	21	25	25	23
Place of residence				
Urban	18	21	22	20
Rural	17	21	20	18
Wealth status				
Poor	17	19	20	18
Middle	17	20	20	18
Rich	18	22	22	20
Religion				
Christian	20	21	22	19
Islam	17	20	21	18
Others	17	20	20	18
ALL	17	21	21	19

MULTIVARIATE ANALYSIS

Tables 3 and 4 present three models of Poisson regression analysis of the age at first birth across the ethnic groups and background characteristics.

In Model 1, as shown in table 3, the result indicated that age at first birth increased with the respondents increasing educational qualification. Women with primary education like their counterparts with no formal education, showed no difference in their age at first birth initiation (IRR= 1.01, $P<0.05$) whereas, women educated up to secondary level were 1.07 times more likely to initiate first birth at higher ages than those with no formal education ($P<0.01$). Similarly, women with tertiary education were 1.22times more likely to have higher ages at first birth compared to women with no formal education ($P<0.01$). This result obtained are also consistent with those obtained at the bivariate level of analysis. As expected, the urban women are 0.97times less likely to initiate first birth at lower ages than their rural counterparts ($P<0.01$). Furthermore, household wealth status influenced the age at which first birth is initiated. Women from rich household hold wealth status were more likely to have higher ages at first birth than their counterparts from poor households (IRR=1.04, $P<0.01$). Lastly, the Muslim women are 1.04 times more likely than women from other religion-types to initiate first birth at slightly higher ages ($P<0.01$).

In Model 2 as shown in table 4, attempt were made to relate ethnicity to age at first birth. Result showed that women from the Igbo and Yoruba ethnic groups were equally 1.22 times more likely to have higher ages at first birth than the women from the Hausa/Fulani ethnic group ($P < 0.01$). In addition, women from the other ethnic groups were 1.09times more likely to have higher ages at first birth relative to the women from the Hausa/Fulani ethnic groups ($P < 0.01$). This is also consistent with those obtained at the bivariate level of analysis. For instance, at the bivariate level, the Igbo and Yoruba women have equally higher ages (21years) as well as the women from other ethnic groups (19years) than the Hausa/Fulani women (17years).

Additionally, in Model 3 as depicted in table 4, result showed that Ethnicity with the simultaneous effect of other socio-economic correlates, have similar influence on the age at first birth as obtained in model 2. For instance, result showed that women from the Igbo and Yoruba ethnic groups were equally 1.11 times more likely to have higher ages at first birth than the women from the Hausa/Fulani ethnic group ($P < 0.01$). Following the same pattern, women from the other ethnic groups were 1.09times more likely to have higher ages at first birth than the women from the Hausa/Fulani ethnic group ($P < 0.01$). Higher ages at first birth is associated with higher educational level as women with secondary education and tertiary education were 1.05 and 1.20times respectively, more likely to initiate first birth at higher ages than those with no formal education at $P < 0.01$. Urban residence, is linked with higher ages at first birth. The urban women are 0.97times less likely to initiate first birth at lower ages than their rural counterparts ($P < 0.01$). Across the various household wealth status, women from rich households have almost the same attitude in their age at first birth as those from poor households (IRR=1.03; $P < 0.01$). Additionally, women who are either Christians or Muslim showed similar attitude in their age at first birth (IRR=1.02 and 1.00 at $P < 0.01$ respectively).

TABLE 3: Poisson Regression Models showing the Relationship between background characteristics on the age at first birth

AGE AT FIRST BIRTH (OUTCOME)	MODEL 1		
	IRR	95 CI	$P > z $

Education			
None	RC		
Primary	1.01*	1.00-1.02	0.01
Secondary	1.07**	1.06-1.08	0.00
Tertiary	1.22**	1.21-1.24	0.00
Place of residence			
Rural	RC		
Urban	0.97**	0.96-0.97	0.0
Wealth Index			
Poor	RC		
Middle	1.00	0.99-1.04	ns
Rich	1.04**	1.03-1.05	0.00
Religion			
Others	RC		
Christian	1.01	0.99-1.04	ns
Muslim	1.04**	1.03-1.05	0.00

Note: RC= Reference Category; ns= Not significant, *= P<0.05; ** = P<0.01, CI= Confidence Interval

TABLE 4: Poisson Regression Models showing the Relationship of Age at Firth Birth by Ethnicity and background characteristics

Age at first birth	Unadjusted Model 2			Adjusted Model 3		
	IRR	95% CI	P> z	IRR	95% CI	P> z
Ethnicity						
Hausa/Fulani	RC			RC		
Igbo	1.22	1.21-1.23	0.00	1.11	1.103-1.13	0.00
Yoruba	1.22	1.21-1.23	0.00	1.11	1.10-1.12	0.00
Others	1.09	1.08-1.10	0.00	1.04	1.03-1.05	0.00
Education						
None				RC		
Primary				1.00	0.96-1.02	ns
Secondary				1.05	1.04-1.06	0.00
Tertiary				1.20	1.19-1.22	0.00
Place of Residence						
Rural				RC		
Urban				0.99	0.98-0.99	0.00
Wealth Status						
Poor				RC		
Middle				1.00	1.00-1.01	ns
Rich				1.03	1.02-1.04	0.00
Religion						
Others				RC		
Christian				1.02	1.00-1.04	ns
Muslim				1.00	0.96-1.02	ns

Note: RC= Reference Category; ns= Not significant, *= P<0.05; ** = P<0.01, CI= Confidence Interval

DISCUSSION OF FINDINGS

In this study, majority of the women sampled were from the Hausa/Fulani ethnic group. Across all the ethnic groups, the Hausa/Fulani women had youngest median age at first child

birth (17 years). Women from other ethnic groups had their median ages at first birth to be 19 years unlike the Igbo and Yoruba women that equally had higher median ages (21 years).

Higher educational and household wealth status is associated with higher ages at first motherhood across all the ethnic groups. This is consistent with previous studies (Bongaart, 2010; Akpan and Ikpotokin 2012; Gayawon and Adebayo, 2013). These authors found that postponement or delay either at entry age into marriage relationships or child bearing initiations necessitated by increased learning and richer wealth status tends to hold women till they are advanced in age before they enter into motherhood.

Also, the study found that there are linkages between lower ages at first birth and rural residence in all the ethnic groups. This is in line with the findings of Isiugo-Abanihe (1996) and Ushie (2009) which suggested that in the rural areas of Hausa, Igbo and Yoruba, teenage girls between the ages of 14 and 17 years have begun childbearing. The possibly reasons for this could be the fear of been unfruitful if delayed age at childbearing till late ages as reported in Isiugo-Abanihe (1994) or may be for the benefits accrued to early childbearing as commonly depicted in traditional African societies.

Lastly, this study found that Muslims and Christian Hausa/Fulani women had the youngest median ages of 17 and 20 years respectively while the Igbo and Yoruba women on the minimum were aged 20 before their first birth. This variations in the ages at first birth however could partly be attributed to the traditions and beliefs that encourages young age entry into marital unions and as well at first birth which is typical of the Northern regions as reported in similar studies conducted in Nigeria (Akpan and Ikpotokin, 2012). This authors identified the Northern region where the Hausa/Fulani ethnic group is affiliated to have higher proportion of women with lower ages at first birth in the geo-political zones. Additionally, the Muslims and Christians particularly the Catholics faith support for childbearing only in the Holy marital unions further explained reasons for young ages at first birth initiation especially among the Hausa/Fulani ethnic groups. This is corroborated by the findings from Haloi and Limbu (2013).

CONCLUSION

Having found across the various ethnic affiliations that the Hausa/Fulani women irrespective of their socio-economic status such as educational and household wealth status, place of residence and religion types, still had the least median ages at first birth. This necessitate the need to channel fertility regulating programmes typical for this ethnic group in order to help them through the informative, educative and communicative programmes adopt better behavioural attitudes. This will help foster higher ages at first birth and thereby reduce the lifetime years that women from this ethnic groups will have to complete their reproduction years and as well reduce the number of children ever born. This, therefore will strengthen the existing fertility regulating policies and help curtail the fertility levels of Nigeria as a whole.

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