FACTORS ASSOCIATE WITH TEENAGE PREGNANCY AND CHILDBEARING IN NIGERIA

By

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Abstract
Teenage pregnancy and childbearing seem to be continuing unabated in Nigeria despite efforts to reduce the rates. While many studies have focused on health, social and economic implications of teenage pregnancy and childbearing, studies on determinants of teenage pregnancy and childbearing have been minimal. Hence, this study examines factors associated with teenage pregnancy and childbearing in Nigeria. Using the 2013 Nigeria Demographic and Health Survey (NDHS) data; a sample of 7,819 female teenagers who were pregnant as at the time of the survey or having had a child in the last five years preceding the survey were used and analyzed. The analyses were performed using descriptive and logistic regression analyses. The results found that the incidence of teenage pregnancy and childbearing reduced as educational levels, wealth status, and age at first sex increased. The study concluded that education, wealth status and age at first sex hold great potentials in reducing the incidence of teenage pregnancy and childbearing in Nigeria.

Keywords: Teenage, pregnancy, childbearing, premarital

Introduction

Teenage pregnancy, the pregnancy that occurs to a young person between thirteen to nineteen years has become a major social and health problem in Nigeria in the recent times (Jatau, 2011). This is because of its association with higher morbidity and mortality for both the mother and child (National Population Commission [NPC] & ICF Macro, 2009; Jimoh & Abdul, 2004; Nili, Rahmati, & Sharifi, 2002; Woldemichael, 2002). Several studies have reported an increase in pregnancy complications associated with teenage pregnancy (Jimoh & Abdul, 2004; Nili, et al., 2002; Ezegwui, Ikeako & Ogbuefi, 2012) such as anemia, pregnancy induces hypertension, preterm labour, obstructed and prolonged labour, unsafe abortion, and high incidence of operative deliveries due to physical immaturity of the pelvis of the teenage mothers as well as low birth weight babies, and even death (Henry, Ugboma, Obuna, Ndukwe, & Ejikeme, 2012; Koster, Kemp, & Offei, 2001). Social consequences of teenage pregnancies include cases of dropping out of school (Federal Ministry of Health, 2011), child abandonment, abortion and loss of skill and opportunities to find a job due to little or no education (Alika, 2012) among others.

The incidence of teenage pregnancy is fast declining in the developed countries, with the lowest incidence of 3 percent in Sweden (Gilda, Finer, Bankole, Eilers, & Singh, 2015). However, in other developing countries particularly African countries; the incidence ranged from 3.7 percent to 22.9 percent of all pregnancies (Adekanle, Adeyemi & Odu, 2008). Nigeria has the highest rate of teenage pregnancy in Africa. About 22.9 percent of the world's teenage pregnancies in 2010 were from Nigeria (National Population Commission (NPC) [Nigeria] & ICF Macro, 2009; WHO, 2010). According to World Bank (2008) and NPC & ICF International (2014), 23 percent of young women age 15-19 have begun childbearing; 18 percent have had a child while 5 percent were pregnant with their first child.

The incidence of teenage pregnancy varied greatly between the Northern and Southern geo-political zones in Nigeria. Teenage pregnancy rates are higher in the Northern parts of the country than in the Southern parts: in the north, one (1) in every three (3) teenage girls, whereas in the south – one (1) out of every ten (10) girls (NPC & ICF, 2014). Among the geo-political zones, teenage pregnancy ranges from 8 percent in the South West and South East to 36 percent in the North West (NPC & ICF International, 2014). In addressing these variations, the Federal and State Governments have embarked on programmes and strategies aimed at teaching teens how to handle peer pressure to have sex, using contraception, engaging in sex abstinence, and promoting sex education. However, achieving these aims still remains illusion in Nigeria.

To understand causes of teenage pregnancy and childbearing in Nigeria and other parts of the world, several studies have linked teenage pregnancy with African traditional society (Treffers, 2003; UNFPA, 2003). This is because women often marry at a very young age (Henry et al., 2012) and childbearing occurred early and within marriage (Ezra & Gurmu, 2002). In Nigeria, premarital teenage pregnancy has increased and more teenage girls are getting pregnant (Channels, 2013). Many studies have linked declining age at first menstruation (menarche), increasing age at marriage, increasing premarital teenage sexual activity (Ajala, 2014; Mersal, Esmat & Khalil, 2013; Kyei, 2012), cohabitation (UNICEF, 2001), age at first sexual intercourse and educational levels (Chau-Kuang, Ward & Abdullah, 2013), low or ineffective use of contraceptives (Were, 2007) as risk factors in teenage pregnancy and childbearing.

Other factors associated with high rate of teenage pregnancy in Nigeria include loss of the elders' traditional social controls over sexual behaviour of the teenagers (Bauni, 1990; Ocholla-Ayayo et al., 1990), the collapse of the extended family structure (Iheanacho, 2004), societal approval of teenage sexual relationship and premarital pregnancy as a sign of fruitfulness before marriage (Bamiwuye, 2014), poverty (Hanes, 2012), sexual abuse and rape, and the effect of globalization, modernization, urbanization and education on the sexuality (Richter & Mlambo, 2005). Ajala (2014) also reported religious beliefs and ignorance. In spite of these studies; studies on factors influencing teenage pregnancy and childbearing in Nigeria have been minimal. What factor associate with persistent increase in teenage pregnancy and childbearing in Nigeria despite programmatic efforts to reduce the rates? Thus, the aim of the study is to examine factors influencing teenage pregnancy in Nigeria.

Data and Method

Data from the 2013 Nigeria Demographic and Health Survey (NDHS) were used for the study. The survey used enumeration areas (EAs) prepared by National Population Commission (NPC) for the 2006 Population Census of the Federal Republic of Nigeria as the sampling frame. The primary sampling unit (PSU) for the survey was regarded as a cluster on the basis of EAs. The sample was selected using a three-stage cluster design consisting of 904 clusters, 372 in urban areas and 532 in rural areas. Data were gathered from 33,385 women in the reproductive age (15-49 years). The data for females between aged 13-19 years at the time of the survey were obtained from the NDHS dataset. Overall, 7,819 female teenagers were used as the weighted sample size and were analyzed. Weighting factor provided by measure DHS was applied in the data management to account for oversampling of some sections of the population.

Study variables and measurements

The response variable for this study is teenage pregnancy and childbearing. This is defined as women who have had a child or pregnant. The variable is dichotomized into 1 and 0; that is, coded as one (1) if respondent reported either being pregnant or had a child at the time of the survey and zero (0) otherwise. Explanatory variables include age, education, age at first sex, place of residence, region, religion, wealth status, marital status, type of marriage and family type. The inclusion of the above explanatory variables was carefully determined by the reviewed literature.

Data analysis

The data were analyzed using descriptive and inferential statistics. Descriptive analysis was used to describe the background characteristics of the data. The Chi-Square was used to test for statistical significance of variables at 5 percent level. Binary logistic regression model was used to establish the effect of explanatory variables on teenage pregnancy and motherhood. Results were displayed in tables.

Results

The results in Table 1 showed that 26 percent of the teenagers who have had a child or pregnant were aged 15 years. While 58 percent had secondary education, 28 percent had no formal education. Fifty-eight percent were rural dwellers, 53 percent and 47 percent were Muslim and Christians respectively. A high proportion of the teenagers were single (70 percent), 31 percent were from North West and 42 percent were in the highest wealth status. Fifty-seven percent had first sexual intercourse between ages 12 to 15 years. While three in every five (60 percent) married between 12 and 15, three-quarter (75 percent) were from monogamous family type.

Table 1: Percentage distribution of study sample by background characteristic

VARIABLES	FREQUENCY	PERCENTAGES
Total	**7,819**	**100.0**
Age groups		
15	2020	25.8
16	1466	18.8
17	1380	17.7
18	1786	22.8
19	1166	14.9
Mean age	**16.8**	
Educational level		
No education	2169	27.8
Primary	952	12.2
Secondary	4570	58.4
Higher	126	1.6
Place of Residence		
Urban	3308	42.3
Rural	4,511	57.7
Religion		
Christians	3624	46.6
Islam	4091	52.6
Traditional/others	67	0.8
Marital Status		
Unmarried	5,507	70.4
Married/living with partner	2,251	28.8
Widow/Separated/Divorced	60	0.8

Wealth status		
Lowest	2898	37.1
Medium	1645	21.0
highest	3275	41.9
Region		
North Central	1154	14.8
North East	1189	15.2
North West	2428	31.1
South East	893	11.4
South South	1032	13.2
South West	1120	14.3
Age at first sex		
<12	103	3.1
12-15	1905	57.1
16+	1329	39.8
Mean age	**7.35**	
Age at Marriage		
<15	910	39.4
15+	1401	60.6
Mean age	**15.0**	
Type of family		
Monogamous	1683	75.1
Polygamous	557	24.9

Bivariate Analysis

Table 2 shows associations between selected socio-economic and demographic characteristics and teenage pregnancy and childbearing. The result showed a significant relationship between age and teenage pregnancy and childbearing (χ^2 = 837.7, p< 0.05). An increase in age of respondents is associated with an increase in proportion of teenage pregnancy and childbearing. There is a significant relationship between teenagers who have had a child or pregnant and educational level (χ^2 = 1200.0, p< 0.05). The proportion of teenagers who have had a child or pregnant declined as educational level increases. Rural women had higher proportion of teenagers who have had a child or pregnant (31 percent) than their counterparts in urban area (9 percent). Teenage pregnancy and childbearing is higher among Muslims (31 percent) than Christians (11 percent) and Traditionalists (15 percent). Wealth status is another factor that showed a significant association with the proportion of teenagers who have begun childbearing or pregnant. Also, the proportion of teenagers who had a child or pregnant reduces as wealth status increases. The proportion that had a child or pregnant from monogamous family was 67 percent compared to their counterparts from polygamous family (66 percent). With respect to age at first sexual intercourse, the result showed that pregnancy and childbearing was higher among teenagers whose age at first sexual intercourse were between ages 12 and 15 (56 percent) than their counterparts between ages 8 and 11 (52 percent) and between ages 16 and 19 (39 percent).

Table 2: Cross-tabulation of Teenage Pregnancy and Motherhood by selected Characteristics in Nigeria.

VARIABLES	**Have had a Child or Pregnant**	
	No	**Yes**
Total	**78.30**	**21.70**
Age groups	(837.67)**	
15 (n=2020)	95.01	4.99
16 (n=1466)	87.10	12.90

17 (n=1380)	78.15	21.85
18 (n=1786)	64.33	35.67
19 (n=1166)	59.87	40.13
Educational level	(1200.0)**	
No education (n=2170)	53.78	46.22
Primary (n=952)	69.21	30.79
Secondary (n=4570)	91.28	8.72
Higher (n=126)	98.34	1.66
Place of Residence	(439.885)**	
Urban (n=3308)	90.77	9.23
Rural (n=4511)	69.16	30.84
Religion	(479.751)**	
Christians (n=3624)	89.02	10.98
Islam (n=4091)	68.76	31.24
Traditional/others (n=67)	85.22	14.78
Wealth status	(669.829)**	
Lowest (n=2898)	62.80	37.20
Medium (n=1645)	79.50	20.50
Highest (n=3275)	91.41	8.59
Region	(648.634)**	
North Central (n=1154)	81.38	18.62
North East (n=1189)	69.50	30.50
North West (n=2428)	65.33	34.67
South East (n=893)	92.27	7.73
South South (n=1032)	88.22	11.78
South West (n= 1120)	92.29	7.71
Age at first sex	**(96.252)****	
8-11 (n= 103)	47.95	52.05
12-15 (n=1905)	44.35	55.65
16-19 (n=1329)	61.27	38.73
Age at Marriage	**(10.97)***	
10-14 (n=910)	29.97	70.03
15-19 (n=1401)	35.42	64.58
Type of family	(1.08)	
Monogamous (n=1683)	32.52	67.48
Polygamous (n=557)	34.27	65.73

*Note: The figures in parentheses indicate the values of Chi-square. * = p<0.01, **p<0.05,*

Multivariate

Table 3 presents the multivariate analysis of the selected socio-economic and demographic variables and teenage pregnancy and childbearing. Using binary logistic regression to predict the likelihood of the effects of explanatory variables on response variable, the response variable was coded "1" if teenagers reported having a child or pregnant (teenage pregnancy and childbearing) and "0" if teenagers reported not having a child or pregnant. Three models were simulated. Having controlled for age, education, and region of residence, the result in Model 1 showed that the odds ratio of teenage pregnancy and childbearing increases significantly with the age of the teenagers ($p < 0.05$). Teenagers whose ages are 19, 18, 17 and 16 years were 32.9, 15.0, 7.5, and 3.6 times respectively more likely to have reported teenage pregnancy and childbearing than their counterparts aged 15. The likelihood of teenage pregnancy and childbearing was lower among teenagers with primary education (0.6 times) secondary

education (0.1 times) and higher educational level (0.01) than teenagers with no education. Also, while teenagers from South East and South West were 0.6 and 0.7 times less likely to have reported teenage pregnancy and childbearing than their counterparts from North Central. Teenagers from North East, North West and South South were 1.5, 1.9, and 1.5 times more likely to have reported teenage pregnancy and childbearing than teenagers from North Central. The result in Model 2 showed that the odds ratio of teenage pregnancy and childbearing increases significantly with the age of the teenagers ($p < 0.05$). Teenagers who were aged 16, 17, 18, 19 years were 2.9, 5.6, 10.5, and 20.8 times respectively more likely to have reported teenage pregnancy and childbearing compared to their counterparts aged 15 years (RC). There is a significant association between education and teenage pregnancy and childbearing ($p < 0.05$). The result showed that the likelihood of teenage pregnancy and childbearing reduced as educational level increases. Also, place of residence is significant with the likelihood of having a child or pregnant ($p < 0.05$). The likelihood of teenage pregnancy and childbearing among rural teenagers is 1.5 times higher than among teenagers in urban area. Muslims were 1.9 times more likely to have reported teenage pregnancy and childbearing than Christians ($p < 0.01$). There is a relationship between age at first sex and the likelihood of reporting teenage pregnancy and childbearing. The likelihood of reporting teenage pregnancy and childbearing declined as age at first sex increased and the relationship is significant at age 16-19 years ($p < 0.01$). While holding all explanatory variables constant in Model 3, the result showed a significant relationship between age and teenage pregnancy and childbearing. The odds ratio of teenage pregnancy and childbearing among teenagers aged 19 was 39.9 times more than those aged 15. Also, the result revealed that teenagers who have experienced first sex between ages 12-15 and 16 -19 were 0.73 times and 0.26 times respectively less likely to have reported teenage pregnancy and childbearing than their counterparts between ages 8 and 11 years ($P < 0.05$). The result also showed that teenagers who married between 15 -19 years are 0.47 times less likely to have reported teenage pregnancy and childbearing than those who married between 10-14 years. The result also revealed that teenagers from the North East and North West were 0.51 times and 0.52 times less likely than teenagers from North Central to have reported teenage pregnancy and childbearing. However, the South East (2.6 times), South South (1.5 times) and South West (1.3 times) were more likely to have reported teenage pregnancy and childbearing than their counterparts in the Northern Central of the country.

Table 3: Multivariate Analysis Showing the Odds Ratio from Logistic Regression Model of Teenage Pregnancy and Childbearing with 95 percent Confidence Interval (C.I.)

VARIABLES	**Model 1**		**Model 2**		**Model 3**	
	Odds ratio	**95 percent (C.I)**	**Odds ratio**	**95 percent (C.I)**	**Odds ratio**	**95 percent (C.I)**
Age groups						
15 (RC)						
16	3.57*	2.71 - 4.72	2.93*	2.11 - 4.05	4.80*	3.23 - 7.14
17	7.48*	5.75 - 9.74	5.59*	4.08 - 7.66	9.59*	6.45 - 14.26
18	15.00*	11.69 - 19.24	10.51*	7.74 - 14.26	17.63*	11.95 - 26.00
19	32.97*	25.21 - 43.11	20.82*	14.87 - 25.15	39.85*	24.91 - 63.74
Educational level						
No education (RC)						
Primary	0.63*	1.26 - 2.18	1.68*	1.27 - 2.22	1.54	1.09 - 2.19
Secondary	0.11*	0.56 - 0.95	0.54*	0.40 – 0.71	1.12	0.75 - 1.67
Higher	0.01*	0.02 - 0.39	0.03**	0.00 - 0.23	0.40	0.02 - 6.78
Region						
North Central (RC)						
North East	1.52 *	1.21 - 1.92	0.99	0.73 – 1.36	0.51**	0.31 - 0.82

North West	1.98 *	1.59 - 2.47	1.12	0.82 – 1.52	0.52**	0.32 - 0.84
South East	0.66***	0.48 - 0.91	0.74	0.49 - 1.12	2.59	0.69 - 9.76
South South	1.46**	1.13 - 1.88	0.81	0.58 - 1.12	1.16	0.51 - 2.67
South West	0.71	0.52 - 0.96	0.56**	0.38 – 0.80	1.34	0.57 - 3.17
Place of Residence						
Urban (RC)						
Rural			1.49**	1.18 - 1.88	1.33	0.90 - 1.96
Religion						
Christians (RC)						
Islam			1.87*	1.42 – 2.47	0.90	0.54 - 1.51
Traditional/others			0.82	0.29 – 2.32	0.59	0.16 - 2.16
Wealth status						
Lowest (RC)						
Medium			1.07	0.85 - 1.35	1.35	0.97 - 1.88
highest			0.82	0.62 - 1.09	1.09	0.68 - 1.74
Age at first sex						
8-11 (RC)						
12-15			0.92	0.54 - 1.54	0.73	0.30 - 1.75
16-19			0.30*	0.18 - 0.52	0.26**	0.10 - 0.65
Age at Marriage						
10-14 (RC)						
15-19					0.47*	0.35 - 0.63
Type of family						
Monogamous (RC)						
Polygamous					0.98	0.76 – 1.26

*Notes: RC means Reference Category, * = p<0.01, **p<0.05, ***p<0.10*

Discussion

The findings revealed high incidence of teenage pregnancy and childbearing among teenagers from the North East, North West and South South as well as North West. This was in line with Allan Guttmatcher Institute (2004) that, incidence of teenage pregnancy and childbearing varies from one region of Nigeria to the other and even in the same region. The study also found an increasing incidence of teenage pregnancy and childbearing among teenagers as their age increases. This lends credence to previous study by Ekefre, Ekanem, & Esien (2014) which found a steadily increase in the incidence of teenage pregnancy and childbearing between the ages of 16 and 17 and between the ages of 17 and 18. However, this may not be unconnected with poverty, age at first sex, and current level of sexual activity. The study also found a direct significant relationship between age at first sex and incidence of teenage pregnancy and childbearing. It was revealed that teenage pregnancy and childbearing is higher among those who had first sex before age 15. The incidence was higher among teenagers in rural areas than in urban areas. This finding corroborates the 2008 Nigeria Demographic and Health Survey (NDHS) report that incidence teenage pregnancies are common in rural areas of Nigeria. The finding also revealed that the incidence of teenage pregnancies declined with increasing level of education. Previous studies by Duze & Mohammed (2006); Al Riyami, Afifi & Mabry (2004) have also shown inverse relationship between teenage pregnancy and level of education. This implies that education is an important factor of teenage pregnancy and childbearing. However, this finding contradicts that of Njogu, Rutenberg, & Ekouevi (1990) that reported an increasing level of education as teenage pregnancy and childbearing increased. Time lag, improvement in modern medicine, widespread of sex education across the country and so on, might have contributed to the observed relationship in this study. The finding further revealed an association between incidence of teenage pregnancy and childbearing and wealth status.

Other studies have made similar observations (Ayele, 2013) that teenage pregnancy and childbearing is higher in economically poor households and that teens from poorest households are more likely to become pregnant than from the wealthiest households. The study also showed a high incidence of teenage pregnancy among teenagers who were Muslims than Christians.

Conclusion

There is high incidence of teenage pregnancy and childbearing in Nigeria particularly in rural areas among teenagers who are poor and with low level of education. While economic factors may be major determinants of the incidence of teenage pregnancy, it is noteworthy to find that religion played a significant role in the proportion of teenage pregnancy and childbearing. Thus, all efforts should be geared towards ensuring that both economic and religious factors are addressed. More awareness on the health, social and economic effects of teenage pregnancy should be created through sex education and information mobilization and dissemination.

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Brief Biographic

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