

Pregnancy Intentions among Adolescents and Young Adults in Nigeria; A National Population-Based Cross-Sectional Study

Esther P. Odey¹ and M.D. Dairo²

^{1,2}Department of Epidemiology and Medical Statistics, University of Ibadan, Nigeria

Abstract

Background: An increase in sexual activity among teenagers and adolescents is a trend all over the world; two to five of ten adolescents have had sexual intercourse as early as 14-18 years of age. Adolescents' pregnancy are most times assumed to be unintentional. However, these assumptions may not always be applicable as there may be other situations that could propel an intentional act of getting pregnant at a very young age. The objectives of this study are to determine the prevalence of unwanted pregnancy among adolescents, factors associated with pregnancy among them and to determine the pregnancy intentions of adolescents and young adults in Nigeria.

Methodology: This study is a secondary analysis of data from the Nigeria's 2018 National Demographic and Health Survey. The sample for 2018 NDHS was a stratified sample carried out in two stages; the occurrence of pregnancy and pregnancy intention, alongside the explanatory variables across fertility intention was reported their percentages. Chi-square and Fisher's exact test at 95% confidence interval was used to test association between categorical outcomes and explanatory variables from the data. The level of significance was set at 0.05, and multivariate analysis was performed using binary logistics analysis.

Results: Pregnancy among adolescent and young adults aged 15-24 years in Nigeria was 40%. The binary logistics regression revealed that age (OR=1.55, p=0.002), level of education (OR=0.51, p<0.001), religious beliefs (OR=4.30, p<0.001), marital status (OR=7.74, p<0.001) and women who have ever delayed or avoided a pregnancy (OR=0.59, p<0.001) had significant association with the intention of pregnancy. More so, higher odds of intended pregnancy were seen among women in the North Western region (OR=2.54, p<0.001) and lowest among women in the South-South region (OR=0.40, p<0.001) and South-Western region (OR=0.64, p<0.001).

Conclusion: Therefore, adolescent pregnancy in Nigeria is still at an alarming frequency. Some basic socio-economic factors have an association with pregnancy occurrence and the intention to get pregnant among the study population.

Keywords: Adolescent, Pregnancy, Pregnancy Intentions

Abstrait

Contexte: L'augmentation de l'activité sexuelle chez les adolescentes et les adolescents est une tendance mondiale ; deux à cinq adolescents sur dix ont eu des rapports sexuels dès l'âge de 14 à 18 ans. La plupart du temps, on suppose que la grossesse des adolescentes n'est pas intentionnelle. Cependant, ces hypothèses ne sont pas toujours applicables car il peut y avoir d'autres situations qui pourraient propulser un acte intentionnel de tomber enceinte à un très jeune âge. Les objectifs de cette étude sont de déterminer la prévalence des grossesses non désirées chez les adolescentes, les facteurs associés à la grossesse chez elles et de déterminer les intentions de grossesse des adolescentes et des jeunes adultes au Nigéria.

Méthodologie: Cette étude est une analyse secondaire des données de l'Enquête nationale sur la démographie et la santé du Nigéria de 2018. L'échantillon de l'Enquête nationale sur la démographie et la santé de 2018 était un échantillon stratifié réalisé en deux étapes ; la survenue de la grossesse et l'intention de grossesse, ainsi que les variables explicatives sur l'intention de fécondité ont été rapportées en pourcentage. Le test du chi carré et le test exact de Fisher à 95% d'intervalle de confiance ont été utilisés pour tester l'association entre les résultats catégoriels et les variables explicatives des données. Le niveau de signification a été fixé à 0.05 et une analyse multivariée a été réalisée à l'aide d'une analyse logistique binaire.

Résultats: La grossesse chez les adolescentes et les jeunes adultes âgés de 15 à 24 ans au Nigéria était de 40%. La régression logistique binaire a révélé que l'âge (OR = 1.55, $p=0.002$), le niveau d'éducation (OR = 0.51, $p < 0.001$), les croyances religieuses (OR = 4.30, $p < 0.001$), l'état matrimonial (OR = 7.74, $p < 0.001$) et les femmes ayant déjà retardé ou évité une grossesse (OR = 0.59, $p < 0.001$) avaient une association significative avec l'intention de grossesse. De plus, les probabilités de grossesse envisagée étaient plus élevées chez les femmes de la région du Nord-Ouest (OR = 2.54, $p < 0.001$) et les plus faibles chez les femmes de la région du Sud-Sud (OR = 0.40, $p < 0.001$) et de la région du Sud-Ouest (OR = 0.64, $p < 0.001$).

Conclusion: Par conséquent, la grossesse chez les adolescentes au Nigéria est toujours à une fréquence alarmante. Certains facteurs socio-économiques de base ont une association avec la survenue d'une grossesse et l'intention de tomber enceinte au sein de la population étudiée.

Mots-clés: Adolescente, Grossesse, Intentions de grossesse

Introduction

Adolescent pregnancy is a global urgency with need for adequate attention. Adolescents' age ranges from 10-19 years according to WHO [14], characterized by incompletely developed bodies that may not be able to bear the pains and complications of pregnancy and childbirth [7].

In developed countries, a decline in maternal mortality preceded a decrease in adolescent pregnancy and child marriage over the years [6]. However, in low and middle-income countries, where adolescents have been observed to constitute a large portion of the entire population, most of these adolescents have had some sort of sexual experience [7]. Every year, about 2 million girls who are less than 15 years of age get pregnant in developing countries and in Nigeria, a considerable number of the child bearing population are adolescents; adolescent pregnancy has been on the increase and sadly, this has been shown to be one of the causes of discontinuation of their educational pursuit [2], poor nutrition of children aged under five years [11].

Globally, about 16 million adolescents give birth yearly and almost one million of these adolescent

girls are aged 15 and below. Amongst this number of adolescent mothers, the pregnancy is intentional as a result of teenage marriage [5]. Unintended pregnancy and abortion among adults and adolescents are also well noted challenges well aware to the Nigerian government [15]. However, whether it was unwanted or pregnancy within the marital context, adolescent pregnancy is still one of the major causes of maternal mortality globally [4].

Adolescents pregnancy are most times assumed to suggest or even conclude they were unintentional and by chance. However, these assumptions may not always be applicable as there may be situation that could warrant an intentional act of getting pregnant at a very young age.

Early marriage is very typical of developing countries and has been one of the major promoters of adolescent pregnancy especially for those with lesser educational attainments. Low educational attainment increases the odds of adolescent pregnancy and is more prominent in rural areas than in urban areas and the increased the pressure to embrace motherhood [3]. The objectives of this study are to determine the pregnancy intentions and associated factors among adolescents in Nigeria. Exploration of these factors may reveal useful clues to reduce the prevalence of adolescent pregnancy in these settings

Methods

Data Source

The primary purpose of the 2018 NDH Sisto provide updated estimated of basic demographic indicators. The NDHS collected basic information on fertility, family planning methods, maternal and child health including breastfeeding practices, nutrition of mother and child, domestic violence among women, awareness on HIV/AIDS, STIs and other major health related issues. One of the key objectives of the 2018 survey was the provision of current and reliable data on maternal and child healthcare including fertility, mortality, nutritional status of mothers and children, fertility among adolescent and young adult in Nigeria. Data collected by NDHS is meant to assist in analyzing basic information to influence decision makers in developing strategies to improve health of the people in the country. The 2018 NDHS also provides indicators that are relevant to the Sustainable Development Goals (SDGs) for Nigeria. Data sets from the Nigeria Demographic and Health Survey 2018 [9]. Is a nationally representative survey conducted by the Nigerian Population Commission. NDHS data are generally and freely available on

request online from ICF International, USA (www.dhsprogram.com).

Study Population

Nigeria is the most populated African country with a population of about 200 million people. The country is located in the Gulf of Guinea and lies on Africa's west coast. Nigeria occupies 923,768 km of land bordering Cameroon, Chad, Benin and Niger. She has over 250 ethnic groups spread across the country, the official language in the country is English. However, the major indigenous languages of the country are Yoruba, Igbo, and Hausa/Fulani. It has 36 states including the Federal Capital Territory and 774 local government areas. The country is divided broadly into six geopolitical zones, namely South West (SW), South East (SE), South South (SS), North West (NW), North East (NE), and North Central (NC) [8].

Sample size

A total of 42,121 eligible women, aged 15–49 years, were interviewed in the 2018 NDHS. For the sake of this study however, the sample size was restricted to a total of 15,284 which included adolescent and young adults aged 15–24 years. Young adults were defined as those aged 15–24 years' in previously published studies on adolescents and young adults.

Sampling procedure

The sample for 2018 NDHS was a stratified sample carried out in two stages. Nigeria is divided into thirty-six states in which there are subdivisions into various Local Government Area (LGAs) and each LGA divided into wards while each locality was subdivided into Enumeration Areas (EAs). Stratification was achieved by separating each of the thirty-six states into urban and rural areas. A total of seventy-four sampling strata were derived and samples were then selected in every stratum through a two-stage selection; in the first stage, 1,400 EAs were selected. Household in each EA were listed out which served as a sampling frame for the second stage.

In the second stage, a fixed number of thirty households was selected in every cluster via systematic sampling, this resulted in a total sample size of 42,000 households. The 2018 NDHS included all women age 15–49 in the sample households. Those who were either permanent residents of the selected households or visitors who stayed in the households the night before the survey were eligible to be interviewed [9].

Data Analysis

The Individual Recode Data obtained from the 2018 Nigeria Demographic and Health Survey was imported into STATA version 16 for analysis. The information of women aged 15–24 years was extracted from the data, for the purpose of the analysis. Pregnancy among the respondents was determined using three variables “M10”—wanted pregnancy when got pregnant, “V228”—ever terminated a pregnancy and “V213”—currently pregnant; the women were categorized as ever pregnant if they responded yes to any of “ever terminated a pregnancy” or “currently pregnant” or those who responded to the question of pregnancy intention when they got pregnant.

The proportion of adolescents' pregnancy and pregnancy intention, along side the explanatory variables across pregnancy intention was reported in percentages. Chi-square and Fisher's exact test was used, at 95% confidence interval to test association between categorical outcomes and explanatory variables from the data. The level of significance was set at 0.05, and multi variate analysis was performed using binary logistics analysis. However, prior to this, a likelihood ratio test (LRT) was used to select variables that were significant at 10%, in the process of model building. All variables were weighted during analysis.

Ethical Consideration

The analysis was done using publicly available data from demographic health surveys. The survey protocol was reviewed and approved by the National Health Research Ethics Committee of Nigeria (NHREC) and the ICF Institutional Review Board.

All DHS surveys are approved by ICF international as well as an Institutional Review Board (IRB) in the host country to make sure that the protocols are in compliance with the U.S. Department of Health and Human Services regulations for the protection of human subjects. After all questionnaires were finalized in English, they were translated into Hausa, Yoruba, and Igbo. The 2018 NDHS used computer-assisted personal interviewing (CAPI) for data collection. All participants gave informed consent before taking part in the survey. In this study, further ethical approval was not necessary as the analysis was based on secondary data available in the public domain in anonymized form.

Results

Prevalence of pregnancy among adolescent and young adults in Nigeria (Table 1)

The table presents the distribution of 15,284 adolescents and young women by previous pregnancy. The prevalence of pregnancy among adolescents and young adults was quite high (40%), as about two in five had ever been pregnant.

Table 1: Prevalence of pregnancy among adolescents and young women aged 15–24 years

	Frequency N=15284	(Weighted %)
Ever gotten pregnant		
Yes	6172	40.4
No	9111	59.6
Fertility Intention ¹		
Intended	4724	87.2
Unintended	697	12.9

¹– 751 missing

Characteristics of respondents (Table 2)

The age of respondents was normally distributed, with a mean of 21 ± 2.1 years. A larger percentage (78%) of these respondents were in the 20-24 years age group and currently living with their partner as at the time the study was carried out. Education was low among the respondents, as majority (62%) had primary or no formal education. Three out of five (63%), participants were self-employed. The participants also practiced Islam majorly (71%), and 29% practiced Christianity. Exposure to media was very low among amongst respondents (22%).

Previous termination of pregnancy (10%), and use of substances to delay or avoid a pregnancy (19%) was low among the respondents. Some of these respondents (31%) feel that distance to their health facility is a problem, and 71% of these respondents live in rural communities.

Regional distribution of respondent’s demographic characteristics (Table 3)

The distribution of adolescents and young adults throughout the six geopolitical zones covers both ever pregnant or not. Adolescents and young adults residing in the North East and North West had a higher frequency married or living with partners, while majority of those from the Southern regions were not married or living with any partner.

Adolescents from the Southern region had

Table 2: Showing the characteristics of respondents (women aged 15-24 years)

	Frequency (weighted %)	N=5421
Age of respondents (21±2.10)*		
15–19years	1210	22.3
20–24years	4211	77.7
Marital Status		
Not living with partner	487	9.0
Living with partner	4934	91.0
Level of Education		
Primary or none	3374	62.2
Secondary	1912	35.3
Tertiary	135	2.5
Occupation¹		
Unemployed/Others	753	24.3
Employed	394	12.7
Self employed	1958	63.0
Religion		
Christian	1567	28.9
Islam	3823	70.5
Others	31	0.6
Exposure to media		
No	4256	78.5
Yes	1165	21.5
Ever terminated a pregnancy		
No	4885	90.1
Yes	536	9.9
Ever delayed or avoided a pregnancy		
No	4393	81.0
Yes	1028	19.0
Distance to health facility		
Not a problem	3753	69.2
A problem	1668	30.8
Place of residence		
Urban	1581	29.2
Rural	3840	70.8
Region of residence		
North Central	755	13.9
North East	1136	21.0
North West	2295	42.3
South East	340	6.3
South South	392	7.2
South West	503	9.3

*Mean ± SD; ¹–N=3107

more Tertiary education than those from all the Northern regions. Similarly, the Southern women had higher exposure to media and contraceptive use. Islamic religion was practiced among higher frequency of the Northern respondents than Christianity and vice versa across all the Southern states, however, the Islam religion still has a significant number among members of the South west region.

It is also important to note that pregnancy termination had a significant frequency of occurrence across all regions, however it was highest among

Table 3: Regional distribution of respondents' demographic characteristics

	Region						Total
	North Central (% row)	North East (% row)	North West (% row)	South East (% row)	South South (% row)	South West (% row)	
Age of respondents							
15–19years	179 (15.0)	328 (27.5)	458 (38.4)	79 (6.6)	99 (8.3)	50 (4.2)	1193
20–24years	753 (17.9)	1020(24.3)	1389(33.0)	296 (7.0)	370 (8.8)	378 (9.0)	4206
Marital Status							
Not living with partner	88 (15.9)	115 (20.8)	52 (9.4)	89 (16.1)	142 (25.6)	68 (12.3)	554
Living with partner	844 (17.4)	1233(25.5)	1795(37.1)	286 (5.9)	327 (6.8)	360 (7.4)	4845
Level of Education							
Primary or none	452 (13.8)	1078(32.9)	1534(46.8)	65 (2.0)	58 (1.8)	89 (2.7)	3276
Secondary	442 (22.3)	250 (12.6)	293 (14.8)	290 (14.6)	397 (20.0)	309 (15.6)	1981
Tertiary	38 (26.8)	20 (14.1)	20 (14.1)	20 (14.1)	14 (9.9)	30 (21.1)	142
Occupation¹							
Unemployed/Others	357 (41.8)	278 (32.6)	47 (5.5)	64 (7.5)	81 (9.5)	27 (3.2)	854
Employed	51 (13.7)	46 (12.4)	81 (21.8)	37 (10.0)	36 (9.7)	121 (32.5)	372
Self employed	224 (12.2)	381 (20.8)	687 (37.5)	151 (8.2)	179 (9.8)	210 (11.5)	1832
Religion							
Christian	466 (26.2)	191 (10.7)	61 (3.4)	372 (20.9)	425 (23.9)	265 (14.9)	1780
Islam	466 (13.1)	1157(32.4)	1774(49.7)	2 (0.1)	8 (0.2)	162 (4.5)	3569
Others	-	-	12 (24.0)	1 (2.0)	36 (72.0)	1 (2.0)	50
Exposure to media							
No	720 (16.9)	1223(28.7)	1646(38.7)	216 (5.1)	239 (5.6)	213 (5.0)	4257
Yes	212 (18.6)	125 (11.0)	201 (17.6)	159 (13.9)	230 (20.1)	215 (18.8)	1142
Ever terminated a pregnancy							
No	838 (17.2)	1198(24.6)	1656(34.0)	358 (7.4)	426 (8.7)	396 (8.1)	4872
Yes	94 (17.8)	150 (28.5)	191 (36.2)	17 (3.2)	43 (8.2)	32 (6.1)	527
Ever delayed or avoided a pregnancy							
No	733 (16.8)	1135(26.0)	1701(38.9)	224 (5.1)	329 (7.5)	251 (5.7)	4373
Yes	199 (19.4)	213 (20.8)	146 (14.2)	151 (14.7)	140 (13.7)	177 (17.3)	1026
Distance to health facility							
Not a problem	549 (15.2)	733 (20.3)	1384(38.3)	267 (7.4)	346 (9.6)	333 (9.2)	3612
A problem	383 (21.4)	615 (34.4)	463 (25.9)	108 (6.0)	123 (6.9)	95 (5.3)	1787
Place of residence							
Urban	215 (15.1)	200 (14.0)	349 (24.5)	246 (17.3)	139 (9.8)	275 (19.3)	1424
Rural	717 (18.0)	1148(28.9)	1498(37.7)	129 (3.3)	330 (8.3)	153 (3.9)	3975

women in the North West region. In contrast, distance to health facility posed as a challenge across the Northern regions than the Southern regions.

The regional distribution of the respondents could influence the outcome of pregnancy. This is because marital status, educational level, religion and contraceptive use were discovered to have significant association to pregnancy occurrence and intention

as shown in tables 6 and 8.

Association between demographics and obstetric characteristics of respondents and their pregnancy intention (Table 4).

There is a statistically significant association between fertility intention and explanatory variables, except with those who had ever terminated a pregnancy.

Table 4: Showing the association between demographics and obstetric characteristics of respondents and pregnancy intention

	Pregnancy Intention			p-value
	Unintended (%)	Intended (%)	Total (%)	
Age of respondents				
15 – 19 years	208 (17.4)	985 (82.6)	1193 (22.1)	< 0.001 **
20 – 24 years	562 (13.4)	3644 (86.6)	4206 (77.9)	
Marital Status				
Not living with partner	318 (57.4)	236 (42.6)	554 (5.1)	< 0.001 **
Living with partner	452 (9.3)	4393 (90.7)	4845 (94.9)	
Level of Education				
Primary or none	177 (5.4)	3099 (94.6)	3276 (60.7)	< 0.001 **
Secondary	568 (28.7)	1413 (71.3)	1981 (36.7)	
Tertiary	25 (17.6)	117 (82.4)	142 (2.6)	
Occupation				
Unemployed/Others	139 (16.3)	715 (83.7)	854 (27.9)	0.009 **
Employed	82 (22.0)	290 (78.0)	372 (12.2)	
Self employed	286 (15.6)	1546 (84.4)	854 (27.9)	
Religion				
Christian	592 (33.3)	1188 (66.7)	1780 (33.0)	< 0.001 **
Islam	160 (4.5)	3409 (95.5)	3569 (66.1)	
Others	18 (36.0)	32 (64.0)	50 (0.9)	
Exposure to media				
No	483 (11.4)	3774 (88.7)	4257 (78.9)	< 0.001 **
Yes	287 (25.1)	855 (74.9)	1142 (21.2)	
Ever terminated a pregnancy				
No	703 (14.4)	4169 (85.6)	4872 (90.2)	0.285
Yes	67 (12.7)	460 (87.3)	527 (9.8)	
Ever delayed or avoided a pregnancy				
No	502 (11.5)	3871 (88.5)	4373 (81.0)	< 0.001 **
Yes	268 (26.1)	758 (73.9)	1026 (19.0)	
Distance to health facility				
Not a problem	549 (15.2)	3063 (84.8)	3612 (66.9)	0.005 **
A problem	221 (12.4)	1566 (87.6)	1787 (33.1)	
Place of residence				
Urban	287 (20.2)	1137 (79.9)	1424 (26.4)	< 0.001 **
Rural	483 (12.2)	3492 (87.9)	3975 (73.6)	
Region of residence				
North Central	127 (13.6)	805 (86.4)	932 (17.3)	< 0.001 **
North East	96 (7.1)	1252 (92.9)	1348 (25.0)	
North West	57 (3.1)	1790 (96.9)	1847 (34.2)	
South East	129 (34.4)	246 (65.6)	375 (7.0)	
South South	240 (51.2)	229 (48.8)	469 (8.7)	
South West	121 (28.3)	307 (71.7)	428 (7.9)	

** - significant at 5%

Observably, fertility intention was high among women across all socio-demographic characteristics, except the South South region, where there was an almost equal distribution in fertility intention.

Determinants of fertility intention (Table 5)

In the adjusted model, women who were aged 20–24 years had a higher odd of intending their pregnancy than those in the 15 – 19 years age group [aOR:

1.55; 95% CI: 1.17 – 2.06]. Similarly, those who were living with their partners [aOR: 7.74, 95% CI: 5.95 – 10.06,] and those practicing Islam (aOR: 4.30; 95% CI: 3.23 – 5.74) had higher odd of intending their pregnancy. Those who were self-employed also had higher odds of intending their pregnancy than those who were unemployed/practiced other occupation (aOR:1.61;95% CI:1.23–2.12).

Table 5: Binary Logistics Model on Correlates of Pregnancy Intention among Women aged 15-24 years

	Adjusted Odds ratio	95% CI	p-value
LEVEL1 (Socio-demographic factors)			
Age of respondents			
15 – 19 years	1	-	
20 – 24 years	1.55	(1.17–2.06)	0.002
Marital Status			
Not living with partner	1	-	
Living with partner	7.74	(5.95–10.06)	<0.001
Level of Education			
Primary or none	1	-	
Secondary	0.51	(0.39–0.68)	<0.001
Tertiary	0.57	(0.29–1.12)	0.101
Occupation			
Unemployed/Others	1	-	
Employed	0.85	(0.62–1.17)	0.322
Self employed	1.61	(1.23–2.12)	0.001
Religion			
Christian	1	-	
Islam	4.30	(3.23–5.74)	<0.001
Others	1.41	(0.48–4.13)	0.527
Exposure to media			
No	1	-	
Yes	1.01	(0.77–1.32)	0.207
LEVEL2 (Obstetric factors)			
Ever terminated a pregnancy			
No	1	-	
Yes	0.87	(0.60–1.25)	0.445
Ever delayed or avoided a pregnancy			
No	1	-	
Yes	0.59	(0.46–0.75)	<0.001
LEVEL3 (Community factors)			
Distance to health facility			
Not a problem	1	-	
A problem	0.82	(0.64–1.06)	0.128
Place of residence			
Urban	1	-	
Rural	1.03	(0.78–1.37)	0.832
Region of residence			
North Central	1	-	
North East	1.38	(0.94–2.03)	0.104
North West	2.54	(1.50–4.30)	0.001
South East	0.78	(0.52–1.16)	0.215
South South	0.40	(0.27–0.58)	<0.001
South West	0.64	(0.44–0.94)	0.023

Women who have secondary education [aOR: 0.51; 95% CI: 0.39 – 0.68], and women who have ever delayed or avoided a pregnancy [(0.59; 95% CI: 0.46 – 0.75)] had a lower odd of intending their pregnancy. Women in the North Western region had a higher odd of intending their pregnancy than those in the North Central region (aOR:2.54;95% CI: 1.50–4.30) while those in the South South region [aOR: 0.40CI: 0.27 – 0.58] and South Western region (aOR: 0.64; 95% and 0.44 – 0.94) had lower odds.

The proportion of pregnancy occurrence indifferent regions of Nigeria (Fig 1)

The proportion of pregnancy occurrence among

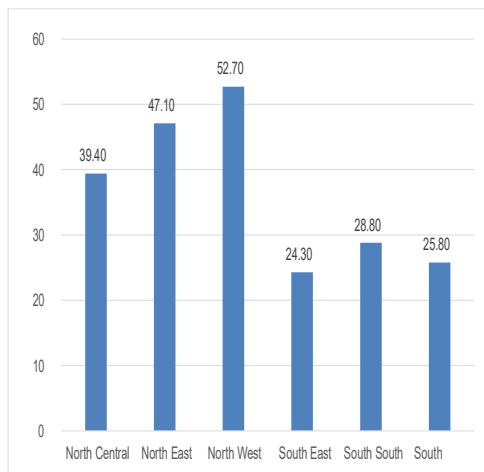


Fig.1: Occurrence of pregnancy among adolescents and young adults by regions of

adolescent was as presented in the bar chart. The region with the high occurrence of pregnancy among adolescents and young adults is the North-Western, North-Central and North-East region of Nigeria. Meanwhile the South-East, South-West and South-South region had a comparatively lower prevalence.

Discussion

Pregnancy among adolescent and young adults aged 15-24 years in Nigeria (2018) was assessed in this study and the prevalence was found out to be 40%. From findings in this study, several demographic characteristics of women influenced the outcome of pregnancy among them, adolescents between ages 20-24 had a higher occurrence of pregnancy compared to young adults within age of 15-19 years. This is consistent with findings by [3] where younger adolescents have been revealed to have lesser tendency to get pregnancy compared to young adults.

Based on regional distribution, the education among the respondents was majorly primary and

secondary level in the Northern regions while the secondary level of education was higher in all Southern regions. With the exception of the North central where there was an even distribution based on religion, all those belonging to Islam religion had the higher frequency of pregnancy in the Northern regions while Christians had higher frequency of ever pregnant respondents across all Southern regions. Other factors such as exposure to media, use of contraceptive or family planning and urban residence had decreased the occurrence pregnancy among the respondents in all the regions of Nigeria.

The educational level of adolescents from primary to secondary was observed to decrease the percentage of pregnancy occurrence amongst them, therefore the more educated a teenager was, the less the desire for pregnancy occurrence and the less the odds for intending pregnancy. Use of any family planning method or contraceptive use was seen to have a negative association with intending pregnancy and religion was also associated to adolescent pregnancy, women and adolescents belonging to the Islamic religion were observed to have a higher prevalence of adolescent pregnancy. This is similar to studies by [10] where it was stated that the intentions for pregnancy among adolescents and young adults was prominent among the Islamist because of their high regard for early marriage.

Therefore, the intention to be pregnant being one of the core foci of this study was seen to be associated with socio-economic factors surrounding the respondents. Women of age group 20-24 years had higher odds of intending pregnancy than women aged 15-19 years. Intentional pregnancy had higher odds among women living with their partners [12] with less formal education [1] women who practiced Islam than those of other religion and those living in either of the Northern regions of the country [15].

Recommendations

Sexual and reproductive health concerns of adolescents and young adults such as contraceptive use and family planning methods should be prioritized by the government and policy making bodies immensely to curb the health challenges it brings. In-depth sex education in schools and educational institutions should also be encouraged proper decisions making among women and adolescents. Higher educational pursuit was seen to be protective of adolescent pregnancy, therefore education should be encouraged among adolescents and women generally especially in the Northern regions of the country.

Furthermore, adolescents' girls who have dropped out of school due to pregnancy should be encouraged by the academic institutions to return to continue their educational pursuit after period of nursing their babies, this would reduce the frequency of total school drop outs from school among adolescents.

References

1. Achema G., Emmanuel A. and Moses A.O. 2015. Factors responsible for teenage pregnancy and its implication on adolescent health and education: Perception of secondary school students in Nigeria. *Int. Journal of Med. and Health Research* Vol 1 (2): 48-51 ISSN: 2454-9142.
2. Action Health Incorporated (2011) "Insights into Early Marriage and Girls' Education in Northern Nigeria", Action Health Incorporated, Lagos, Nigeria
3. Ajala A.O. Factors associated with teenage pregnancy and fertility in Nigeria. *Journal of Economics and Sustainable Development*. ISSN2222-1700 (Paper) ISSN 2222-2855 (Online) Vol.5, No.2, 2014.
4. Atchison C.J., Cresswell J.A., Kapiga S., Nsanya M.K., Crawford E.E., Mussa M., Bottomley C., Hargreaves J.R and Doyle A.M. Sexuality, fertility and family planning characteristics of married women aged 15 to 19 years in Ethiopia, Nigeria and Tanzania: a comparative analysis of cross-sectional data. *Reproductive Health* (2019) 16:6 <https://doi.org/10.1186/s12978-019-0666-0>.
5. Iyanda A.E., Dinkins BJ, Osayomi T., Adeusi T.J., Lu Y. Oppong J.R. Fertility knowledge, contraceptive use and unintentional pregnancy in 29 African countries: a cross-sectional study. *International Journal of Public Health* (2020) 65:445–455 <https://doi.org/10.1007/s00038-020-01356-9>(0123456789(-, -volV)(0123456789, -).volV).
6. Kassa G.M., Arowajolu A.O., Odukogbe A.A. and Yalew A.W. Prevalence and determinants of adolescent pregnancy in Africa: a systematic review and Meta-analysis. *Reproductive Health* (2018) 15:195.
7. Krugu J.K., Mevissen F.E., Prinsen A. and Ruiter R.A. Who's that girl? A qualitative analysis of adolescent girls' views on factors associated with teenage pregnancies in Bolgatanga, Ghana. *Reproductive Health* (2016) 13:39 DOI 10.1186/s12978-016-0161-9
8. National Population Commission, Nigeria. Population and Housing Census of the Federal Republic of Nigeria: National and State Population and Housing Tables, Priority Tables (Volume 1); 2006. Available from: <https://www.scirp.org>. 20. [Last accessed on 10 Apr 2020].
9. Nigeria Demographic and Health Survey. National Population Commission Abuja, Nigeria The DHS Program ICF Rockville, Maryland, USA. 2018.
10. Ohonsi A.O. and Attah R.A. 2010. Obstetric Outcome of Teenage Pregnancy in Kano, North-Western Nigeria. *West African Journal of Medicine*; 29(5): 318–322.
11. Olodu M.D., Adeyemi A.G., Olowookere S.A. and Esimai O.A. 2019. Nutritional status of under-five children born to teenage mothers in an urban setting, south-western Nigeria. *BMC Res Notes* Vol 12:116. <https://doi.org/10.1186/s13104-019-4147-x>
12. Salami K.K., Ayegboyin M. and Adedeji I.A. 2014. Unmet social needs and teenage pregnancy in Ogbomosho, South-western Nigeria. *African Health Sciences* Vol 14 Issue 4. Pp 959- 966.
13. Shiffman J., Kunnuji M., Shawar Y.R. and Robinson R.S. International norms and the politics of sexuality education in Nigeria. *Globalization and Health* (2018) 14:63 <https://doi.org/10.1186/s12992-018-0377-2>.
14. WHO Adolescent Pregnancy. Geneva: World Health Organization; 2014. Available from: <http://www.who.int/mediacentre/factsheets/fs364/en/>
15. Yaya S, Amouzou A, Uthman O.A., Ekholuenetale M., Bishwajit G, Udenigwe O., Hudani A. and Shah V. Prevalence and determinants of terminated and unintended pregnancies among married women: analysis of pooled cross-sectional surveys in Nigeria. *BMJ Glob Health* 2018; 3:e000707. doi:10.1136/bmjgh-2018-000707

Received = 03/12/2021

Accepted = 29/11/2023