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FACTORS ASSOCIATED WITH TEENAGE PREGNANCY IN SOUTHWEST NIGERIA

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ABSTRACT

Background: Teenage pregnancy is a major contributor to maternal and child mortality, and to the vicious cycle of ill-health and poverty worldwide and thus, requires urgent intervention. This cross-sectional study therefore assessed the prevalence and contextual factors associated with teenage pregnancy in southwest Nigeria.

Method: A total of 350 consenting teenagers between ages 13 and 19 were recruited using a multi-stage sampling technique. The validated semi-structured questionnaire was used to elicit information on socio-demographic characteristics of teenagers, risk factors and prevalence of teenage pregnancy.

Results: The mean age \pm SD of the respondents is 16.79 ± 1.52 years. Majority (341, 97.4%) of them were single. More than a quarter (28%) of the girls were sexually active with over half sexual debut occurring at age 16 and thereafter, while, pleasure was the most cited reason (59.2%) for engaging in sexual intercourse. The prevalence of teenage pregnancy and childbirth was 7.7% and 3.4% respectively, with over half (59.3%) of the pregnancy resulting into an abortion.

Individual and socio-economic factors such as age, early marriage, ethnicity, lack of formal education, family disruptions, poverty, early sexual debut, sex for financial gains, having pregnant sibling, use of alcohol, social media naive and a positive attitude towards premarital sex significantly increase the vulnerability of girls to becoming pregnant.

Conclusion: The findings of this study show that though numerous, these contextual factors are largely modifiable through effective policy and interventions on early marriage, comprehensive sexuality education, ensuring girls enrolment in schools, community poverty alleviation programmes targeted at vulnerable girls and families as well as addressing gender norms that expose girls unduly.

INTRODUCTION

In African context, like many other parts of the world, the act of procreation is a responsibility of grown up young adults who have been found to be physically, economically, emotionally, spiritually and perhaps psychologically matured. A teenager or teen is a young person whose age falls within the range of 13 – 19 years [1]. Therefore, teenage pregnancy is a pregnancy in females under the age of 20 [2].

Teenage pregnancy has been recognized globally as a perturbing issue that requires urgent intervention [3]. Annually, an estimated 21 million girls aged 15 to 19 years and 2 million girls aged under 15 years become pregnant in low and middle-income countries [4] with about 18.5 million of these girls becoming a mother before reaching age 20 each year. According to the United Nations Population Fund in 2013, the highest prevalence of teenage pregnancy in the world is found in the Sub-Saharan African countries. In actual fact, fourteen out of fifteen countries with more than 30% prevalence globally are Sub-Saharan African countries [5].

In Nigeria, nearly one-quarter (23%) girls aged 15 – 19 years have begun child bearing in 2013 with a significant difference between

rural/urban distributions. This figure was as high as 32% in the rural communities. In addition, teenage pregnancy is highest in the northwest zone (36%) and lowest in south east and south west (8% each) [6].

In Niger, 87% of teen women surveyed were married and more than half had given birth to a child before the age of 18 [7]. In a 2016 Uganda study, it was reported that lower educational level, age at the start of contraceptive and having sexually active siblings as well as pregnant siblings are risk factors associated with teenage pregnancy. The educational level of majority was secondary (62.4%), while 49.6% have ever used contraceptives [8]. In South Africa, among female youth, 19.2% reported a teenage pregnancy while only 3% was intended and 6.7% had ever terminated a pregnancy, while 5.8% of male youth indicated that they had impregnated a girl when they were between age 12-19 years [9]. Meanwhile, in the Giyani municipal of Limpopo province, in South Africa, high school teenage girls reported psychosocial variables such as inadequate sexual knowledge (61%), changing attitudes towards sex (58.9%) and peer pressure (56.3%) as major factors to high pregnancy rate [10].

While evidence suggests that there has been an overall progress in reducing the incidence of teenage pregnancy globally from 65 births per 1000 women in 1990 to 47 births per 1000 women in 2015. However, with the greatest proportional increases in Sub-Saharan Africa, projections indicate that the number of teenage pregnancies will increase at the global level by 2030 [5]. As at 2013, all six countries with an increased rate among the 15 countries with a high prevalence of pregnancy among girls less than 18 years of age are in sub-Saharan Africa which include Madagascar (15 per cent), Liberia (13 per cent), Niger (10 per cent), Chad (6 per cent), Mali (3 per cent) and Malawi (2 per cent) [5].

Unfortunately, complications during pregnancy and childbirth are the leading cause of death for teenage girls aged 15 to 19 years globally [11]. In addition, it often leads to economic and social consequences including stigma or rejection, intimate partner violence, discontinuation of education, unemployment which often perpetuate the cycles of poverty [1, 12]. This study therefore assessed the prevalence and contextual factors associated with teenage pregnancy in southwest Nigeria.

Specific Objectives:

- (a) To determine the prevalence of teenage pregnancy in this setting.
- (b) To identify the contextual factors associated with teenage pregnancy in this setting.

METHODOLOGY

This cross-sectional study was carried out in Osogbo City, the capital of Osun state, South-West Nigeria. The target population was females between age 13 and 19 years. A validated structured questionnaire was used to elicit information on socio-demographic

characteristics of teenagers, risk factors and prevalence of teenage pregnancy. Trained research assistants helped respondents in responding adequately to the questions. Pre-testing was done using 20 respondents at Ede local government area. This was done to ensure clarity and to make necessary adjustment based on the outcome. Ethical approval to carry out the study was obtained from the ethical review committee of the Federal Teaching Hospital, Ido-Ekiti.

A total of 350 consenting teenagers were recruited into the study using a multi-stage sampling technique.

Stage 1: A state in Southwest Nigeria was selected using a one-time ballot.

Stage 2: A local government was selected using simple random sampling from existing thirty.

Stage 3: Households were systematically selected from various areas within the selected local government. Any girl children below age 13 years and above 19 years were excluded from the study while the next probable household was included in the study.

The questionnaires were then administered to those who consented.

Sample Size Estimation: Sample size calculation was based on 95% confidence interval, 0.05 precision and prevalence rate. A prevalence of 23% as reported in the 2013 Nigerian Demographic and Health Survey was used. Using Leslie Fischer's formula for population >10,000, the formula for sample size calculation is: $n = Z^2PQ/d^2$ [13].

$$n = Z^2PQ/d^2$$

Where:

n = minimum sample size, d = degree of precision (taken as 0.05),

Z = standard normal deviation at 95% confidence interval which is 1.96,

P = proportion of the target population (estimated at 23% which is $23.0/100 = 0.23$),

Q = alternate proportion (1-P) which is $1-0.23 = 0.77$

$$n = \frac{(1.96)^2 (0.23) (0.77)}{(0.05)^2} = 272$$

Also, adding a 5% non-response rate, $5/100 \times 272 = 14$

Thus, minimum sample size (n) is $14 + 272 = 286 = n$

Statistical analysis: Data was statistically analyzed using Statistical Package for the Social Sciences (SPSS) for windows version 23.0 software (SPSS Inc., Chicago, IL, USA). Data were expressed as Mean \pm Standard Deviation (SD). Frequency counts were generated for all variables and statistical test

of significance was performed with Chi-Square test. Significance was fixed $P < 0.05$ and highly significance when $P < 0.01$.

RESULTS

Socio-demographic data: A total of 350 respondents participated in the study. The mean age \pm SD is 16.79 ± 1.52 years. Majority (341, 97.4%) of them were single as at the time of survey. Just above half (182, 52.0%) were Christians. A significant proportion (76.6%) were from a monogamous setting, with a similar proportion (85.4%) of the home been fed by the Father. Only a minority (14, 4.0%) were not enrolled in school/had no formal education as at the time of the survey.

Table 1

Socio-demographic data of respondents (n = 350)

Variables	Frequency (%)
Age Group (years)	
13 – 15	76 (21.7)
16 – 19	274 (78.3)
Marital Status	
Single	341 (97.4)
Married	8 (2.3)
Cohabiting	1 (0.3)
Religion	
Christianity	182 (52.0)
Islamic	165 (47.1)
Traditional	3 (0.9)
Tribe	
Hausa	4 (1.1)
Igbo	28 (8.0)
Yoruba	311 (88.9)
Others	7 (2.0)
Family setting	
Monogamous	268 (76.6)
Polygamous	82 (23.4)

Level of Education	
No formal Education	4 (1.1)
Secondary Education	286 (81.7)
Tertiary Education	60 (17.1)
Household head	
Male	299 (85.4)
Female	51 (14.6)
Mother's Occupation	
Artisan	35 (10.0)
Trader/Small Business	143 (40.9)
Public Servant	102 (29.1)
Technician	6 (1.7)
Teacher	18 (5.1)
Unemployed	10 (2.9)
Self employed	18 (5.1)
Private sector worker	6 (1.7)
Student	4 (1.1)
House wife	8 (2.3)
Currently enrolled in School	
Yes	336(96.0)
No	14 (4.0)
Type of School	
Private	160 (45.7)
Public/Government	176 (50.3)
Not enrolled in school	14 (4.0)
Reason not enrolled in school (n=14)	
Awaiting admission	5 (35.7)
No interest	2 (14.3)
No money	7 (50.0)

Table 2
Teenagers' sexual activity and contraceptive use (n = 350)

Variables	Frequency (%)
Age at Menarche (years)	
10 – 12	150 (42.9)
13 – 15	189 (54.0)
>15	11 (3.1)
Ever had sexual Intercourse	
Yes	98 (28.0)
No	252 (72.0)
Age at Sexual Debut (n =98)	
<13	4 (4.1)
13 – 15	34 (36.7)
>15	54 (55.1)
No response	6 (6.1)
Reason for sex (n =98)	
Economic reason (I need money)	16 (16.3)
For pleasure/Fun	58 (59.2)
For marriage	3 (3.1)
Seeking love	20 (20.4)
Persuasion	1 (1.0)
Do you have a boyfriend? (n =350)	
Yes	98 (28.0)
No	199 (56.9)
No response	53 (15.1)
If yes, how old is your boyfriend? (n =98)	
<16	5 (5.1)
16-19	21 (21.4)
20-24	44 (44.9)
25-29	15 (15.3)
30&above	5 (5.1)
No response	7 (7.4)
Modern contraceptive Use (n =98)	
Yes	71 (20.3)
No	279 (79.7)

Table 3*Teenage Pregnancy and abortion prevalence among respondents (n = 350)*

Variables	Frequency (%)
Ever had pregnancy?	
Yes	27 (7.7)
No	333 (92.3)
Age at pregnancy (years)	
<16	3 (11.1)
16 – 19	24 (88.9)
Ever terminated a pregnancy? (n =27)	
Yes	16 (59.3)
No	11 (40.7)
Frequency of Abortion (n =16)	
Once	13 (81.3)
Twice	2 (12.5)
Thrice	1 (6.2)
Where did you have the pregnancy terminated? (n =16)	
Hospital	7 (43.8)
Self-medication	3 (18.8)
Pharmacy store	2 (12.5)
A nurse	1 (6.2)
Traditional birth Attendant	1 (6.2)
No response	2 (12.5)
Do you have child or children? (n = 350)	
Yes	12 (3.4)
No	338 (96.6)
If yes, how many children? (n = 12)	
1	10 (83.3)
2	1 (8.3)
No response	1 (8.3)
If yes, at what age did you have your first child? (n = 12)	
<16	1 (8.3)
16 - 19	9 (75.0)
No response	2 (16.7)

Table 4*Family structure and sex education among respondents (n = 350)*

Variables	Frequency (%)
Do you live in same house with your both parents?	
Yes	312 (89.1)
No	38 (10.9)
Do your parents live together? (n =350)	
Yes	320 (91.4)
No	22 (6.3)
No response	8 (2.3)
Do you think having sexual intercourse can get you pregnant? (n =350)	
Yes	307 (87.7)
No	23 (6.6)
No response	20 (5.7)
Do you think sexual intercourse before marriage is a sin?	
Yes	282 (80.6)
No	41 (11.7)
No response	27 (7.7)
If Yes, why? (n = 282)	
Religious belief	222 (78.7)
Self-decision	60 (21.3)
Do you have any pregnant siblings? (n =350)	
Yes	98 (28.0)
No	234 (66.9)
No response	18 (5.1)
Has any of your parents ever discussed sex issues with you? (n =350)	
Yes	175 (50.0)
No	166 (47.4)
No response	9 (2.6)
If yes, who discussed it? (n = 175)	
Father only	25 (14.3)
Mother only	142 (81.1)
Father & Mother	8 (4.6)
Have you heard about contraceptives? (n =350)	
Yes	169 (48.3)
No	159 (45.4)
No response	22 (6.3)
If yes, what type do you know? (n =169) * Multiple responses	
Female Condom	49 (29.0)
Male condom	82 (48.5)
Injectable	33 (19.5)
Withdrawal	14 (8.3)
Pill	85 (50.3)
IUCD	35 (20.7)

Vasectomy	4 (2.4)
Ever used modern contraceptives?	
Yes	58 (16.6)
No	292 (83.4)
What type of modern contraceptive have you used? * Multiple responses	
Female Condom	8 (2.3)
Male condom	28 (8.0)
Injectable	7 (2.0)
Pill	8 (2.3)
IUCD	7 (2.0)
What age did you first use contraceptive?	
< 16	13 (3.7)
16 -19	33 (9.4)
No response	12 (3.4)

Table 5*Social media & Alcohol use among respondents (n = 350)*

Variables	Frequency (%)
Do you consume alcohol?	
Yes	45 (12.9)
No	305 (87.1)
Does pressure from your friends make you do things you don't want to do?	
Yes	61 (17.4)
No	289 (82.6)
Do you use any Social media e.g Facebook, twitter etc?	
Yes	320 (91.4)
No	30 (8.6)
Do you have or own a mobile phone?	
Yes	309 (88.3)
No	41 (11.7)
Do you have or own a laptop/tablet/i-pad?	
Yes	89 (25.4)
No	261 (74.6)

Table 6
Factors influencing rates of teenage pregnancy (n = 350)

Variable	Prevalence of Teenage Pregnancy	χ^2	P-value	Odd ratio
Age				
13 – 15	0 (0)	8.12	0.004	6.79
16 - 19	27 (9.9)			
Tribe				
Hausa	2 (50.0)	11.31	0.010	
Igbo	1 (3.6)			
Yoruba	24 (7.7)			
Others	0 (0)			
Family Setting				
Monogamous	20 (7.5)	0.102	0.750	
Polygamous	7 (8.5)			
Education				
Formal Education	25 (7.2)	10.16	0.001	12.840
No Formal Education	2 (50.0)			
Household head				
Female	9 (17.6)	8.27	0.004	2.931
Male	18 (6.0)			
Mother's employment status				
Unemployed	4 (40.0)	15.07	0.001	5.913
Employed	23 (6.8)			
Age at sexual debut (years)				
<13	2 (50.0)	8.26	0.016	
13 – 15	4 (11.8)			
>15	21 (38.9)			
Reason for Sex				
Economic reason	8 (50.0)	8.20	0.042	
Pleasure	14 (24.1)			
Marriage	2 (66.7)			
Seeking love	3 (15.0)			
Family disruption				
Yes	13 (34.2)	42.04	0.001	0.90
No	13 (4.5)			
Attitude toward Premarital sex				
Positive	10 (24.4)	18.28	0.001	
Negative	16 (5.7)			
Undecided	1 (3.7)			
Pregnant Sibling				
Yes	15 (15.3)	11.04	0.004	
No	11 (4.7)			
Can't say	1 (5.6)			
Ever received sex education				

Yes	16 (7.1)	0.36	0.548	
No	11 (8.9)			
Alcohol Use				
Yes	12 (26.7)	26.05	0.001	7.030
No	15 (4.9)			
Peer pressure				
Yes	6 (9.8)	0.47	0.494	
No	21 (7.3)			
Uses Social Media				
Yes	20 (6.3)	11.24	0.001	
No	7 (23.3)			
Own a Mobile Phone				
Yes	21 (6.8)	3.124	0.077	
No	6 (14.6)			

DISCUSSIONS

Prevalence of Teenage Pregnancy: In this study, more than a quarter of the girls were sexually active with more than half sexual debut occurring at age 16 and above. About one in ten of teenagers have been pregnant as at the time of the survey and about 3.4% prevalence of childbirth while more than half of the pregnancy resulted into abortion. This finding, although lower comparably to those reported in Uganda [8], Niger [7], South Africa [9] and lower than the national prevalence in Nigeria [6], It is similar to prevalence reported for the zone in 2013 [6]. However, in a country with over 180 million population, 7.7% pregnancy rate among teenagers constitutes an issue of great concern given its on toward effect on the individual teen, family, society and the national economy. Although, a significant proportion of the sexually active girls have ever used a modern contraceptive method, the similar rate of unwanted pregnancy observed among those that used and those who did not might be connected to inconsistent use. There is therefore a dearth of sexuality education and contraception among the teenagers.

Contextual Risk Factors for Teenage Pregnancy: Teenage pregnancies in this study are ascribable to several individual and socio-economic factors.

Individual factors: Teenagers were more likely to become pregnant after their sixteenth birthday. This is consistent with other researches [14, 15]. The likelihood of teenage pregnancy more than doubled as age increased by one year in South and East Africa [14]. This further confirms this period in the life of an Adolescent as a turbulent one as the girls are more aware of their bodies. Expectedly, married girls were more likely to become pregnant before age 20. This is in line with the report from Tanzania [16] and Northern Nigeria [17]. Within the marital setting in most communities in Africa, Nigeria inclusive, it is expected that the wife will resume procreation as soon as possible. This is a major contributory factor to high teenage pregnancy in the northern part of the country where early marriage is acceptable [17].

Early sexual debut is another strong predictor of teenage pregnancy. This is also in similarity with previous findings from other African countries [16, 17, 18, 19 & 20].

We also found that teenagers that use Alcohol have increased likelihood of been pregnant.

Alcohol use has been reported to increase girls' vulnerability to unwanted pregnancy for the main reason that it impairs reasoning [18].

Socio-economic factors: Teenagers not enrolled in schools or without formal education were found to be about thirteen times more likely to resume motherhood than their peers in school. According to previous findings [8, 14, 19 & 20] teenagers who dropped out or have no formal education are susceptible to teenage pregnancy due to poverty level, idleness and other social strives.

Another strong predictor of teenage pregnancy was sex for economic reason. In this study, those who engaged in sex for money were more likely to be pregnant. Previous findings from Tanzania [16] and South Africa [18] illustrate how teenagers become pregnant for financial gains or to get government support. High prevalence of pregnancy among these poor girls might not be unconnected to the fact that they are less likely to negotiate safe sex like their peers who engaged in sex for love or pleasure. In addition, such girls cannot afford or has limited access to contraceptives.

Family disruptions such as parents not living together, children living apart from parents or single parenthood is highly associated with teenage pregnancy. This study is similar to other studies [19 & 20] and in contrast to that reported by Odimegwu and Mkwananzi (2016) where family disruption had no effect in West Africa.

In addition, having a pregnant sibling tend to influence others as they follow their sibling's footsteps [8]. This often perpetuates household poverty, overcrowding, lack of educational attainment and consequently, lack of useful skills for independent adult life. According to Odimegwu & Mkwananzi (2016), low socio-economic status of parents

particularly mothers increases the chance of becoming pregnant for teenagers due to lack of access to basic needs which may expose them to exploitation. Notably, this finding is in contrast to some others [8] who found that teenagers staying with their mothers alone are more protected from unwanted pregnancy as the single mother provides sex education early in order to break the cycle of poverty or whatsoever led to her separation.

Finally, rate of teenage pregnancy was significantly different across the tribes. Teenagers from the Hausa ethnic group were more likely to be pregnant before their twentieth birthday. This is in line with the report from Northern Nigeria [6, 17]. This further informs us that teenage pregnancy is deeply rooted in cultures. Early marriage has been reported as a major contributory factor to high teenage pregnancy among the Hausa community [17].

CONCLUSION

The findings of this study show that individual and socio-economic factors such as age, early marriage, ethnicity, lack of formal education, family disruptions, poverty, early sexual debut, sex for financial gains, having pregnant sibling, use of alcohol, social media naive and a positive attitude towards premarital sex significantly increase the vulnerability of girls to becoming pregnant. Though numerous, they are largely modifiable through effective policy and interventions on early marriage, comprehensive sexuality education, ensuring girls enrolment in schools, community poverty alleviation programmes targeted at vulnerable girls and families as well as addressing gender norms that expose girls unduly.

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