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Research Article

Knowledge of Sexually Transmitted Infections and Socio-Demographic Factors Affecting High Risk Sex among Unmarried Youths in Nigeria

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Abstract

Background: Despite a relatively high level of knowledge of sexually transmitted infections (STIs), including HIV/AIDS and unwanted pregnancy, in Nigeria, 8 out 10 youths indulge in unsafe sex such as casual and multiple sexual partnerships, sex without condom, early sexual debut and most of them do not know their HIV status.

Objective: The main objective of this study is to examine the linkage between knowledge of sexually transmitted infections and high risk sex among unmarried youths in Nigeria as well as identifying individual factors that may influence the knowledge-behaviour gaps.

Methods: The study employed a secondary data from the 2013 Nigeria Demographic and Health Survey (NDHS). A sample of 7,744 females and 6,027 males aged 15-24 years were utilized in his study making 13,771 altogether. The data were analyzed using frequency distribution and logistic regression.

Results: The results show that both male (92.2%) and female (93.6%) have accurate knowledge of sexually transmitted infections. Nevertheless, the prevalence of high risk sexual behavior is high among Nigerian youths; this is evident as 77.7% (female) and 78.4% (male) are engaging in high risk sexual behavior. Both Socio-demographic and socio-economic factors were statistically significantly related with high risk sexual behaviour among male and female.

Conclusion: The study concludes that there is high level of knowledge of sexually transmitted infections among unmarried youths in Nigeria and the knowledge doesn't translate to practice. Generally, the practice of high risk sex is high among unmarried youths but higher among male youths. There is need to further examine the factor that is making knowledge about STIs and HIV/AIDS not translate to practice.

Keywords

Knowledge; High risk; Youth; Sexual behaviour; Nigeria

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Introduction

Globally, each year about 340 million new cases of Syphilis, Gonorrhoea, Chlamydia and Trichomoniasis occur in men and women aged 15-24; overall, prevalence rates continue to rise in most countries. The majorities of infections/diseases are sexually transmitted related [1]. These statistics are more appalling as only 15% of female and 10% of male knew their HIV/AIDS status [2,3].

Nigeria with over 180 million populations and a median age of 18 years is indisputably a youthful population. The 15-24-year-olds constitute about 19 percent of the total population. National Baseline Youth Survey [4] estimates the population of this age-group at 64 million, with almost equal proportion among the sexes. About 32% of these youths are sexually active, and about 51% of the female and 49% of males have two or more sexual partners and had their last sexual intercourse with using condom [2]. Despite a relatively high level of knowledge of Sexually Transmitted Infections (STIs), including HIV/AIDS and unwanted pregnancy, 80% yet indulge in unsafe sex such as casual and multiple sexual partnerships, sex without condom, early sexual debut and most of them do not know their HIV status [2,5].

Sexually active youths in Nigeria are susceptible to sexually transmitted Infections, HIV/AIDS and unwanted pregnancy due to high practice of unsafe sex [6]. The plight of youths in sexual and reproductive health raises serious concerns because of the issues associated with high risk sexual behaviour such as HIV/AIDS which is high, unwanted pregnancies estimated at about 14 million per year, unsafe abortion at 24 per 1000 women, adolescent fertility that is estimated at 122 per 1000 births and unmet needs of contraception estimated at 16% [2]. High-risk sexual behavior exposes youths to the risk of unwanted pregnancy and other sexually transmitted infections (STIs). Despite their knowledge about the consequences of their actions, the numbers of unmarried youth in Nigeria engaging in this act continue to be on the rise. Also studies have shown that majority of unmarried youth have knowledge of high risk sex at one time or other [7]. It is expected that knowledge about high risk sex should translate to practice but this assertion totally deviated from what is obtainable among unmarried youth in Nigeria. Therefore, there is a major concern on why high knowledge of healthy sexual and reproductive health behaviour does not translate to practice.

It is important to acknowledge that several studies have identified factors associated with high risk sex and knowledge of sexually transmitted infections among young people in Nigeria [6,8-10]. However, their findings are limited to either factor predisposing young people to high risk sex or on knowledge of protective behavior. None of these studies was able to link knowledge to behaviour. This study is therefore an attempt to identify the gap between knowledge of sexually transmitted infections and practice of high risk sex by juxtaposing individual knowledge, their socio-demographic factors and high risk sex. Hence, this study tends to examine linkage between knowledge of sexually transmitted infections and high risk sex among unmarried youths in Nigeria as well as identifying individual factors that may influence the knowledge-behaviour gaps.

Methods

This study utilized a secondary data that was based on cross

sectional design. The 2013 National Demographic Health Survey (NDHS) is a nationally representative probability sample of women aged 15-49. A weighted probability sample of 40,680 households was selected for the 2013 NDHS. The sample was selected using a stratified, three-stage cluster design. The sample for the 2013 NDHS was designed to provide population and health indicators at national, zonal, and state levels. Administratively, Nigeria was divided into states. Each state was subdivided into local government areas (LGAs), and each LGA was divided into localities. A total of 38,948 women's ages 15-49 and 17,359 men's aged 15-49 were interviewed in NDHS 2013. After restricting the sample to female and male aged 15-24 years, a sample of 7,744 female and 6,027 male respondents were eventually utilized in the study making 13,771 altogether.

The data was analyzed adopting univariate, bivariate and multivariate measures. Univariate analysis was based on frequency distribution of selected variable that are related to this study in the dataset. Bivariate analysis was employ in other to show the association between knowledge and high-risk sex. Chi-square test was preliminarily used to show this association. Lastly, multivariate analysis was employed to predict socio-demographic factors influencing high risk sex and logistic regression analysis was used to achieve this objective.

The dependent variables: The outcome variable of this study was high risk sex. In the DHS, high risk sex was defined as having sexual intercourse with somebody who was neither a spouse nor a cohabiting partner in the 12 months prior to the survey. Overall, a Respondent was considered engaging in high risk sex if he/she had sex before 18 years, have more than one sexual partners, did not use condom during the most recent sexual intercourse and if respondent did not know his/her HIV status.

The independent variables: The predictor variables in this study include knowledge of sexually transmitted infections and socio-demographic factors. Knowledge of sexually transmitted infections was generated using two variables which are: Ever heard of a sexually transmitted infection; and ever heard of HIV/AIDS. These two variables were merged together to form accurate knowledge, some knowledge and poor knowledge.

Analysis and Results

Tables 1 and 2 show how the dependent variable and independent variables are measured respectively, the parameters used to measure high risk sex and knowledge of STIs.

Table 1: Measures of high risk sex.

Variables	Male N=6,027	Female N=7,744
Condom used during last sex		
No	42.1	56.4
Yes	57.9	43.6
Multiple sexual partners		
One	36.1	62.7
More than one	63.9	37.3
Mean	**3**	**2**
Age at first sex		
Below 18	49.2	56.5
18+	50.8	43.5
Mean	**17**	**17**
HIV status		
No	90.2	84.5
Yes	9.8	15.5

Source: Data Computed from NDHS 2013

Socio-demographic characteristics of the respondents

Table 3 below shows summary of socio-demographic characteristics of male and female respondents, whose age falls between 15-24 years. The table shows that 62.2% of male and 50.5% of female were between 18 and 24 years prior to the survey. Seven out of ten of male and female (71.5% and 68.2% respectively) in the study never had sex.

Place of residence shows that 47.1% of male resides in urban area while 56.3% of female resides in urban area. Almost half of male respondents were practicing Islam as a religion with 49.8% while more than half of female respondent practicing Christianity as religion (65.6%).

Wealth index shows that 46.9% of male were from rich household and female 57.0% were from rich household. Most of the youth in this study have secondary school education with 67.1% for male and 73.6% for female.

Table 2: Measures of knowledge of sexually transmitted infections.

Variables	Male N=6,027	Female N=7,744
Ever heard of STI		
No	7.5	6.2
Yes	92.5	93.8
Ever heard of AIDS		
No	7.8	6.4
Yes	92.2	93.4

Source: Data Computed from NDHS 2013

Table 3: Socio-demographic characteristics of respondents.

Variables	Male N=6,027	Female N=7,744
Current age of respondents		
Below 18	37.8	49.5
18-24	62.2	50.5
Mean	**19 years**	**18 years**
Sexual activity		
Never had sex	71.5	68.2
Active in the last 4 weeks	8.9	11.1
Not active in the last 4 weeks	19.6	20.7
Place of residence		
Urban	47.1	56.3
Rural	52.9	43.7
Religion		
Christianity	49.2	65.6
Islam	49.8	33.3
Traditionalist	1.0	1.1
Wealth index		
Poorest	15.3	6.6
Poorer	15.9	12.9
Middle	21.9	22.5
Richer	23.7	26.8
Richest	23.2	31.2
Highest educational level		
No education	14.1	8.3
Primary	11.5	9.5
Secondary	67.1	73.6
Higher	7.3	8.6
Employment status		
Not working	53.6	71.2
Working	46.4	28.8

Source: Data Computed from NDHS 2013

Employment status shows that more than half (53.6%) of male respondents were not working while 46.4% were currently working as at the time of survey. With respect to female, the table reveals that 71.2% of female were not working while 28.8% were working as at the time of survey.

Pattern of risky sex among youths and selected variables

Table 4 below shows pattern risky sex among youths in relation to selected variables. The table reveal that the proportion of youths engaging in risky sexual behaviour decreases as wealth status increases. Also in relation to education, proportion of youths engaging in risky sexual behaviour decreases as youth's level of education increases. Place of residence shows that 8 out of every 10 youths in urban areas have engaged in risky sexual behaviour.

Knowledge of sexually transmitted infections among youths and selected variables

Table 5 presents the knowledge of sexually transmitted infections

Table 4: Pattern of risky sex among youths and selected variables.

Variables	High risk	
	Male	Female
Wealth index		
Poorest	91.7	89.9
Poorer	82.7	77.7
Middle	74.3	75.1
Richer	73.8	77.0
Richest	75.1	77.6
Education		
No education	95.3	92.4
Primary	79.2	76.5
Secondary	75.9	76.4
Higher	67.1	75.8
Place of residence		
Urban	78.6	79.2
Rural	78.1	75.7
Total	**78.4**	**77.7**

Table 5: Knowledge of sexually transmitted infections among youths and selected variables.

Variables	Accurate Knowledge	
	Male	Female
Sexual activity		
Never had sex	89.7	91.7
Active in the last 4 weeks	99.1	98.3
Not active in the last 4 weeks	98.0	97.5
Wealth index		
Poorest	79.6	73.7
Poorer	87.7	86.7
Middle	94.2	92.9
Richer	96.1	96.9
Richest	97.7	98.4
Education		
No education	75.0	66.8
Primary	86.6	83.5
Secondary	95.9	97.3
Higher	99.5	99.4
Place of residence		
Urban	96.7	97.9
Rural	88.1	88.1
Total	**92.2**	**93.6**

and selected variable. The aim of this is to show levels of knowledge of sexually transmitted infections among youths with some selected variables. The table shows that almost all (99.5%) male and (98.3%) female respondents that are sexually active had accurate knowledge of sexually transmitted infections. In relation to wealth index, the table shows that as wealth increases knowledge of sexually transmitted infections also increases among youths. Likewise, education, the table reveals that as youth's education increases the levels of knowledge of sexually transmitted infections also increase. The table also shows that 9 out of every 10 youths in urban area had accurate knowledge of sexually transmitted infections.

Knowledge of sexually transmitted infections and risky sex

Table 6 shows cross tabulation knowledge of sexually transmitted infections on high risk sexual behavior of respondents. The table reveals that there is association between knowledge of sexually transmitted infections and high risk sexual behavior as eight (8) out of every ten youth either male or female have accurate knowledge of sexually transmitted infections are practicing high risk sexual behaviour.

Logistic regression of socio-demographic and high risk sex

In Table 7 below the logistic regression model was used to estimate

Table 6: Percentage distribution of respondents' knowledge of sexually transmitted infections and risky sex.

Variables	Male		Female	
	Risky sex			
Knowledge of STIs	High Risk (n) %	Low Risk (n) %	High Risk (n) %	Low Risk (n) %
Poor Knowledge	(447) 94.7	(25) 5.3	(438) 89.0	(54) 11.0
Accurate knowledge	(4275) 77.0	(1279) 23.0	(5577) 76.9	(1674) 23.1
	χ^2=38.32, P<0.00**		χ^2=18.37, P<0.00**	

**Significant at P<0.05

Table 7: Logistic regression odds ratios an association between socio-demographic factors and risky sex.

Variables	Male		Female	
	Risky sex			
	Odds ratio	Standard error	Odds ratio	Standard error
Age of respondents (RC=Below 18)				
18+	5.51**	0.6590	3.18**	0.2520
Place of residence (RC=Urban)				
Rural	1.33**	0.1405	1.30**	0.1125
Wealth index (RC=Poorest)				
Poorer	1.14	0.3055	1.63**	0.2858
Middle	1.57	0.3893	1.68**	0.3128
Richer	1.66**	0.4276	1.69**	0.3197
Richest	1.36	0.3690	1.61**	0.3165
Highest level of education (RC=No Education)				
Primary	3.23**	0.9843	1.79**	0.3668
Secondary	2.91**	0.7666	1.37	0.2812
Higher	3.2**	0.9549	0.93	0.2331
Religion (RC=Christianity)				
Islam	0.23**	0.0304	0.29**	0.0345
Traditionalist	0.91	0.2827	1.09	0.4687
Employment status (RC=Not working)				
Working	2.12**	0.1906	1.39**	0.1076
Constant	0.02**	0.0073	0.072**	0.0176

** Significant at P<0.05

odd for high risk sexual behavior controlling for socio-demographic characteristics. The odd ratio for high risk sexual behaviour and low risk sexual behaviour given that other variables in the model are held constant were estimated.

The table reveals that age of respondents for youth that are age 18 years and above are more likely to engage in high risk sex and this is significant in this study for both sexes. Place of residence a show that youth that resides in rural area are more likely to engage in high risk sex and is significant in this study for both sexes. Wealth index shows significant relationship with high risk sex for both sex that falls into poorer, middle, richer and richest household are more likely to engaged in high risk sexual behaviour but not significant for male in poorer, middle and richest category.

Considering highest level of education, the results show that youth with primary, secondary and tertiary education are more likely to engage in high risk sexual behaviour but not significant for female in secondary and higher category. Religion reveals that youth that are affiliated with Islamic and traditional religion are less likely to engage in high risk sexual behaviour but only significant for respondents with Islam affiliation in this study. Employment status shows that youth that are working are more likely to engage in high risk sexual behaviour and it is significant in this study.

Discussion

The study revealed that majority of the youths have knowledge of sexually transmitted infections. This agrees with the findings in previous studies conducted in Sokoto Nigeria, Gasa and Zhemgang districts of Bhutan [5,11]. This study found out that Eight (8) out of every ten youths is engaging in high risk sexual behaviour preceding the survey. The figure of unsafe sex among unmarried youths in this study is similar to findings in the study conducted in India [12]. Also the study discovered that males are more likely to have more than one sexual partners compared to their female counterpart. This is shown in the proportion of male that had more than one sexual partner compared with female. This is in line with study conducted in Nigeria and selected countries in sub-Saharan Africa that reported that males are more likely to have more than one sexual partner [8,9].

As regards the knowledge of sexually transmitted infections and high-risk sexual behaviour, the study found that male and female that had knowledge of sexually transmitted infections are more likely to engage in high risk sex. This is in concordance with a study conducted in Sokoto Nigeria that reported a relationship between knowledge of HIV infection and condom use during sex among drivers [5].

The study found out that socio-demographic factors are significantly associated with high risk sexual behaviour. Socio demographic factors such as age of youth, place of residence, religion affiliation, household wealth index, level of education and employment status. These findings were similar to previous studies in Africa [1,8,12-14].

Conclusion

The study concludes that there is high level of knowledge of sexually transmitted infections among unmarried youths in Nigeria. The practice of risky sex is high among unmarried youths but higher among male youths as male tend to have more sexual partner compare to their female counterpart. Knowledge of sexually transmitted infection is very high among youth but higher among female in the study population.

Socio-demographic factors are responsible for high risk sexual behaviour among youths. Also knowledge of sexually transmitted infections has significant impact with respect to high risk sex among both sexes.

Contribution

High risk sex has negative impact on the health status of anyone that is exposed. Youths been an integral population of Nigeria is currently at disadvantage and this is affecting the labour force participation of the country which in turn tarried the economy stability.

Knowledge of STIs is high as well as the practice of high risk sex; the study was able to identify socio-demographic variables as the determinant of gap in knowledge of practicing of high risk sex.

Limitation

This study utilized secondary data which made some questions asked indirectly. Researcher couldn't express the knowledge-gap in practice of high risk sex well. Hence proxy questions were used to infer some conclusions. Area of further research will be to conduct qualitative research that will give more insight to why high knowledge of STIs and HIV/AIDS doesn't translate to practice after socio-demographic variables are held constant.

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