



# Understanding the Socio-demographic Factors Surrounding Young Peoples' Risky Sexual Behaviour in Ghana and Kenya

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## Abstract

Globally, young people in sub-Saharan Africa continue to be the population at the greatest risk for sexually transmitted infections (STIs) such as HIV and AIDS, Syphilis, and Gonorrhoea. Research has shown significant relationship between young peoples risky sexual behaviours and their vulnerability to these STIs. The study examined risky sexual behaviours among the youth in Ghana and Kenya in relation to socio-demographic characteristics. The paper uses data from the 2014 Demographic and Health Surveys of Ghana and Kenya. Young people between the ages of 15 to 24 years who were not married or living with a man/woman were included in the study. They comprised 2545 females and 1437 males from Ghana and 3546 females and 4317 males from Kenya. Descriptive analyses and binary logistic regression estimation technique were used to analyse the data. While awareness of AIDS was universal among the youth of both countries, utilisation of condoms on last penetrative sex was low. Risky sexual behaviour among young people was significantly associated with age, level of education, wealth status and religion. Among males and females in Ghana, the odds of sexual risk taking behaviour were higher among those who were employed than those who were unemployed. The reverse of this, however, occurred in Kenya, where males and females who were employed were less likely to engage in risky sexual behaviours than their counterparts who were unemployed. Our findings underscore the need for the relevant stakeholders in the two countries; Ministries of Health, Ghana/KenyaHealth Service, and NGOs concerned with sexual and reproductive health of young people, to intensify education on consistent and proper use of condoms and, position condom use as an acceptable behaviour especially among young people who are sexually active; with multiple partners and who may have STIs. Health literacy, which is the degree to which individuals have the capacity to obtain, process, and understand basic health information and services to make appropriate health decisions, should be given priority. The governments of the two countries, especially Kenya, should promote youth entrepreneurship to reduce unemployment and strengthen job creation as a way of ensuring that young people engage on productive economic activities. With productive economic activities, females for instance may not have to engage in transactional multiple sexual relationships which is risky and, therefore, predisposes them to STIs such as gonorrhoea and HIV.

**Keywords** Young people · Ghana · Kenya · Risky sexual behaviour · HIV and AIDS

## Introduction

Young people in sub-Saharan Africa continue to be the population at the greatest risk for Sexually Transmitted Infections (STIs) including HIV and AIDS [1, 2]. This has been attributable to, among other things, their involvement in some risky sexual practices such as early sexual debut [3], having multiple sexual partners [4], engaging in unprotected sexual intercourse (non-use of condoms) [5], and engaging in sex with older partners [6]. Among young males in sub-Saharan Africa who have ever had sexual intercourse, more than 20% have multiple partners, compared with about 10% for females [7, 8]. Condom use at last sexual intercourse has

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increased among youth, but levels of use are still insufficient to substantially reduce the risk of STIs [9, 10].

Research has shown significant relationship between young people's risky sexual behaviour and their vulnerability to STIs including HIV and AIDS [11–13]. Females are disproportionately affected by the effects of risky sexual behaviours partly due to the fact that physical maturation occurs earlier in young women than in young men, and also emotional and psychological readiness for the potential consequences of sexual activity occur much later than menarche [14]. In some sub-Saharan African countries, young men have first sexual intercourse before reaching physical maturity, while doing so is often related to engaging in risky behaviours [14–16].

We selected Ghana and Kenya because of the similarities and variations in their demographic profiles as well as the patterns of risky sexual behaviours of the youth. For instance, in 2010, while Kenya's youthful population was 21%, Ghana's youthful population aged 15–24 was 20% [7]. Kenya (1968) and Ghana (1969) were the first two countries in sub-Saharan Africa to develop a national population policy meant to monitor population and health indices including risky sexual behaviours [7]. Both countries experienced declines in their prevalence rates of HIV and AIDS. For instance, infection from surveillance surveys in Ghana showed a decline: 3.6% in 2003, 3.2% in 2004, 2.7% in 2005 and 1.9% in 2007 [17] while that of Kenya also declined: 15.0% in 2001, 6.7% in 2003, 6.1% in 2005 and 5% in 2006 [17]. However, in 2014, both countries saw increases in, HIV prevalence rates of 2.0% and 6.0% for Ghana and Kenya respectively [18, 19].

Evidence also shows that risky sexual behaviour is not uncommon among young people in Ghana and Kenya. For instance, in terms of sexual partnerships, 9.6% and 7.9% of young people engaged in multiple sexual partner relationships in Ghana and Kenya respectively [18, 19]. Condom use at last sexual intercourse was also found to be 34.2% and 68.9% among male youth in Ghana and Kenya respectively while 14.9% and 37.5% of condom was found among female youth in the two countries [18, 19]. The results imply that while multiple sexual partnership exists among young people of these countries, condom use was low especially among females. There are increasing reports of youth engaging in or accessing commercial sex workers in both Ghana and Kenya [18, 19]. This is in spite of the fact that social customs in these countries discourage premarital sex and commercial sex work [20]. This points to the existence of risky sexual behaviours among the youth in the young people in the countries hence the need to understand the sexual risk behaviour of these young people.

A number of studies have been conducted at the inter-country level on risky sexual behaviours among young people [17, 21]. These studies have focused on selected

sociodemographic factors and their effects on risky sexual behaviour. For instance, the study by Berhan and Berhan [21] focused on level of education and economic status and risky sexual behaviour among males using data from DHS from 2003 to 2009. Awusabo-Asare and Annim [17] also examined risky sexual behaviour among the general populations of Ghana and Kenya focusing on wealth status as a principal determinant and paying little attention to other sociodemographic determinants. Evidence from available literature shows absence of evidence on the determinants of risky sexual behaviour of young people in these two countries in spite of their levels of sexual activity. To contribute to the discourse on risky sexual behaviours of young people, this paper examines the socio-demographic correlates of risky sexual behaviours of young people in Ghana and Kenya and issues which are generally neglected in the present literature.

## Methods

### Data Sources

For over 20 years, the Demographic and Health Survey (DHS) has collected household-based data in developing countries. Using a cross-sectional design with large nationally representative samples, surveys are administered in each developing country that employs similar questionnaires and the same measures. In the majority of these studies, a two-stage cluster sampling design with households in urban and rural strata has been used to recruit study participants. The DHS is designed to provide adequate data to monitor the population and health situation. DHS gathers information on sexual activity, fertility, antenatal care, delivery care and post-natal care, contraceptive use, child health, family planning, HIV and AIDS, malaria, and nutrition.

Our study used data from the 2014 DHS of Ghana and Kenya. The Ghana Statistical Service (GSS) and the Kenyan National Bureau of Statistics (KNBS) carried out the surveys with technical support from ICF International through the MEASURE DHS programme. In the 2014 version, 9,396 women between the ages 15 and 49 and 4388 men between the ages of 15–59 from 12, 831 households covering 427 clusters were interviewed throughout Ghana. In the case of Kenya 31,079 women and 16,338 men from 40,300 households covering 1612 clusters were interviewed. The response rate for both Ghana and Kenya was 97% [20, 21]. For the purpose of this study, only young people between the ages of 15 to 24 years who were not married or living with a man/woman were considered, the sample of 2545 females and 1437 males from Ghana and 3546 females and 4317 males from Kenya respectively. Permission to use the data set was

given us by the MEASURE DHS following the assessment of a concept note.

## Study Variables

The outcome variable employed for this study was risky sexual behaviour. This was derived from ‘the number of other sexual partners’ [5, 22, 23]. The outcome variable was originally coded 1 = “1 or more” and 0 = “0” but was recoded as 1= “Risky” and 0= “Not risky”. Eight explanatory variables were used in the study – age, wealth index, education status, residence, religion, occupation, ever heard of AIDS, and condom use at last sex. Age was captured as, 15–19 and 20–24. Wealth index was categorized into poorest, poorer, middle, richer and richest. Education was classified into four categories: no education, primary education, secondary education and higher education. Type of residence was grouped as urban and rural. Religion was recoded as Christian, Islam, Traditional/spiritual/other, and no religion. Occupation was coded as unemployed and employed. Ever heard of AIDS and condom use at last sex were also coded as ‘no’ and ‘yes’ respectively.

## Data Analysis

The outcome variable was a dichotomous variable. As such, a discrete choice model was employed to show how the explanatory variables correlated with the outcome variable.

Specifically, the binary logistic regression was employed given that this technique is appropriate for dichotomous variables. A key assumption underlying the binary logistic regression model is that the dependent variable should be dichotomous in nature and that the data should not have any outlier. The complex design used to collect the data was also built into the analysis to account for the two-stage design. All analyses were conducted using STATA version 13. Results were also weighted to offset the biases of under and oversampling as well as reporting associated with national surveys.

## Results

### Bivariate Analysis

The socio-demographic and risky behaviour variables are shown in Tables 1 and 2 for females and males respectively. Most of the males and females in both countries were 15–19 years old. Christianity was the most dominant religion in the two countries for both males and females. More than 54% and 68% of females in Ghana and Kenya respectively were unemployed compared to 60% and 54% of the males who were employed in Ghana and Kenya respectively. More

**Table 1** Socio-demographic background and risky sexual behaviour—females

Variable	Ghana (n=2545)		Kenya (n=3546)	
	N	%	N	%
Age				
15–19	1531	60.2	2347	66.2
20–24	1014	39.8	1199	33.8
Residence				
Urban	1387	54.5	1330	37.5
Rural	1158	45.5	2216	62.5
Wealth index				
Poorest	397	15.6	473	13.3
Poorer	474	18.6	657	18.5
Middle	548	21.5	776	21.9
Richer	581	22.9	685	19.3
Richest	545	21.4	955	27.0
Educational status				
No education	98	3.9	62	1.7
Primary	446	17.5	1437	40.5
Secondary	1881	73.9	1694	47.8
Higher	120	4.7	353	10.0
Religion				
Christian	2081	81.8	3285	92.7
Islam	390	15.3	227	6.4
Traditional/spiritual/other	28	1.1	8	0.2
No religion	45	1.8	26	0.7
Occupation				
Unemployed	1387	54.5	2421	68.3
Employed	1158	45.5	1125	31.7
Ever heard of AIDS				
No	71	2.8	17	0.5
Yes	2474	97.2	3529	99.5
Number of other sexual partner				
0	1503	59.1	2584	72.9
1 or more	1042	40.9	961	27.1
Condom use at last sex* G(n=1003) K(n=940)				
No	806	80.3	408	43.4
Yes	197	19.7	532	56.6

\*sample size used in the regression includes only those who had had intercourse

males (51.2%) and females (54.5%) were living in urban areas in Ghana than in Kenya—males (36.6%) and females (37.5%). Although the highest proportion of the young people had secondary level education in both countries the proportions were higher for both males (76.3%) and females (73.9%) in Ghana than in Kenya—males (44.5%), females (47.8%).

About 60% of males and 80% of females in Ghana did not use condoms on their last sexual encounters, whilst a

**Table 2** Socio-demographic background and risky sexual behaviour—males

Variable	Ghana (n = 1437)		Kenya (n = 4317)	
	N	%	N	%
Age				
15–19	885	61.7	2541	58.9
20–24	549	38.3	1776	41.2
Residence				
Urban	734	51.2	1593	36.9
Rural	700	48.8	2724	63.1
Wealth index				
Poorest	291	20.3	659	15.3
Poorer	270	18.8	810	18.8
Middle	284	19.8	974	22.6
Richer	332	23.2	1045	24.2
Richest	257	17.9	829	19.2
Educational status				
No education	45	3.1	60	1.4
Primary	235	16.4	1946	45.1
Secondary	1094	76.3	1923	44.5
Higher	60	4.2	388	9.0
Religion				
Christian	1084	75.6	3845	89.1
Islam	254	17.7	311	7.2
Traditional/spiritual/ other	27	1.9	9	0.2
No religion	69	4.8	152	3.5
Occupation				
Unemployed	571	39.8	2002	46.4
Employed	863	60.2	2315	53.6
Ever heard of AIDS				
No	30	2.1	18	0.4
Yes	1404	97.9	4299	99.6
Number of other sexual partner				
0	965	67.3	2496	57.8
1 or more	469	32.7	1821	42.2
Condom use at last sex* G(n = 440) K(n = 1664)				
No	263	59.8	431	25.9
Yes	177	40.2	1233	74.1

\*sample size used in the regression includes only those who had had intercourse

higher proportion of males (74.1%) and females (56.6%) in Kenya reported condom use at last sex. While more males in Kenya (42.2%) reported multiple sexual partnerships than males in Ghana (32.7%), more females in Ghana (40.9%) were in multiple sexual relationships than their counterparts in Kenya (27.1%). The result shows that similar proportions of males and females were in the poorer and middle wealth quintiles in the two countries. At least 97% of both males and females in both countries had ever heard of AIDS.

**Table 3** Logistic regression from risky sexual behaviour among females in Ghana and Kenya

Variables	Ghana	Kenya
	Odds Ratio (95% CI)	Odds Ratio (95% CI)
Occupation		
Unemployed	Ref	Ref
Employed	1.1 (0.29–4.29)	0.70 (0.40–1.22)
Age		
15–19	Ref	Ref
20–24	0.09 (0.01–0.78)**	0.28 (0.16–0.52)***
Wealth index		
Poorest	Ref	Ref
Poorer	1.23 (0.24–6.31)	1.02 (0.49–2.12)
Middle	3.15 (0.39–25.17)	1.83 (0.82–4.09)
Richer	3.30 (0.24–46.41)	2.20 (0.87–5.56)*
Richest	0.94 (0.76–11.65)	2.14 (0.87–5.26)*
Education		
No education	Ref	Ref
Primary	3.13 (0.57–17.26)	2.24 (0.91–5.53)*
Secondary	8.94 (1.86–42.88)**	10.16 (3.59–28.73)***
Higher	1	24.08 (4.33–133.89)***
Residence		
Urban	Ref	Ref
Rural	0.91 (0.16–5.30)	1.36 (0.76–2.45)
Religion		
Christian	Ref	Ref
Islam	0.71 (0.13–3.90)	0.12 (0.05–0.25)***
Traditional/spir- itual/other	1	1
No religion	0.09 (0.02–0.46)**	0.61 (0.15–2.45)

Reference, \*p < 0.1, \*\* p < 0.05, \*\*\*p < 0.001

### Multivariate Analysis

Results of the regression analyses are shown for females in Table 3 and for males in Table 4. The relationship between socio-demographic characteristics and risky sexual behaviour was significant; for age and level of education among females in Ghana and Kenya; for wealth quintile among females in Kenya and Males in Ghana; and for religion among females in Ghana and Kenya and males in Kenya.

The probability of engaging in risky sexual behaviour was higher for males between 20–24 years in Ghana (OR 1.39, 95% CI 0.79–2.44) and Kenya (OR 1.06, 95% CI 0.33–3.39) than those between 15–19 years. Among males (OR 1.27, 95% CI 0.68–2.39) and females (OR 1.1, 95% CI 0.29–4.29) in Ghana, the odds of sexual risk taking behaviour were higher among the youth who were employed than those who were unemployed. The reverse of this, however, occurred in Kenya, where males (OR 0.31, 95% CI 0.06–1.52.) and females (OR 0.70, 95% CI 0.40–1.22) who were employed

**Table 4** Logistic regression from risky sexual behaviour among males in Ghana and Kenya

Variables	Ghana OR (95% CI)	Kenya OR (95% CI)
<b>Occupation</b>		
Unemployed	Ref	Ref
Employed	1.27 (0.68–2.39)	0.31 (0.06–1.52)
<b>Age</b>		
15–19	Ref	Ref
20–24	1.39 (0.79–2.44)	1.06 (0.33–3.39)
<b>Wealth index</b>		
Poorest	Ref	Ref
Poorer	1.83 (0.81–4.15)	1.76 (0.28–11.09)
Middle	1.60 (0.71–3.61)	0.92 (0.19–4.50)
Richer	2.94 (1.23–7.01)**	1.42 (0.26–7.67)
Richest	1.80 (0.622–5.22)	2.04 (0.26–15.85)
<b>Education</b>		
No education	0.57 (0.11–3.02)	1
Primary	Ref	Ref
Secondary	0.87 (0.42–1.79)	1.17 (0.36–3.79)
Higher	1.80 (0.60–5.42)	0.66 (0.11–3.82)
<b>Residence</b>		
Urban	Ref	Ref
Rural	1.47 (0.81–2.67)	1.97 (0.61–6.30)
<b>Religion</b>		
Christian	Ref	Ref
Islam	1.23 (0.66–2.26)	0.24 (0.60–0.96)**
Traditional/spiritual/other	0.54 (0.65–4.50)	1
No religion	1.53 (0.63–3.75)	0.26 (0.05–1.24)*

Ref reference, \* $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\* $p < 0.001$

were less likely to engage in risky sexual behaviours than their counterparts who were unemployed.

For females, the highest probability of engaging in risky sexual behaviour were found among those in the middle (OR 3.15, 95% CI 0.39–25.17) and richer (OR 3.30, 95% CI 0.24–46.41) wealth quintiles in Ghana and those in the two highest wealth quintiles (richer: OR 2.20, 95% CI 0.87–5.56; richest OR 2.14, 95% CI 0.87–5.26) in Kenya. For males, those in the two highest wealth quintiles in both countries were all at least 140% more likely to engage in risky sexual behaviours than the poorest. Among males in Ghana (OR 1.47, 95% CI 0.81–2.67) and Kenya (OR 1.97, 95% CI 0.61–6.30) and females (OR 1.36, 95% CI 0.76–2.45) in Kenya, rural dwellers were more likely to engage in risky sexual behaviour than those living in urban areas.

There was no discernable pattern between education and risky sexual behaviour among males and Ghana and Kenya and females in Ghana, but the probability of engaging in risky sexual behaviour increased with level of education

among females in Kenya. While there was no significant difference in the probability of engaging in sexual risk taking behaviour between females with no education and those with higher education in Ghana, males with higher education were less likely to engage in risky sexual behaviours than those with primary education in Ghana.

## Discussions

The paper sought to contribute to the discourse on risky sexual behaviours of young people by examining the socio-demographic correlates of risky sexual behaviours of young people in Ghana and Kenya.

Even though knowledge of AIDS was universal among males and females in both countries, it was realised that risky sexual behaviour among the youth was quite high. Males and females in Ghana generally did not use condoms during their last sexual intercourse. This finding points to the fact that level of STIs/HIV risk perception among the youth, especially those in Ghana was low [24, 25].

We found that in Ghana, the proportion of females engaging in multiple sexual partnerships was more than that of males. More males than females, however, were engaged in multiple sexual relationships in Kenya. The results, may therefore, be validation of the gender bias concerning multiple sexual partners, where such behaviours are implicitly condoned for males but condemned for females in Kenya [26, 27]. Our results, however, contradicts previous arguments that multiple sexual behaviours are allowed for males but condemned for females in Ghana [17, 28].

The fact that the probability of engaging in multiple sexual behaviours was higher in rural areas for males in both Kenya and Ghana than those in urban areas, may be due to the fact that the traditional practice of condoning multiple sexual partnerships for males is more prevalent in the rural areas of the two countries than in their urban centres as found in previous studies [21, 29]. Our findings show that males in the two highest wealth quintiles in both countries were more likely to engage in risky sexual behaviours. This observation is consistent with findings from a previous study where men residing in wealthier households were more likely to report having multiple sexual partners [29].

In Kenya, we found that the odds of engaging in risky sexual behaviour were higher for both males and females who were unemployed than those who were engaged in active employment. An implication of being unemployed may be the inability of the young people to get money to take care of their personal needs, especially for those who might have been out of school and fending for themselves. The quest to meet personal needs especially on the part of the females therefore probably led them to engage in multiple sexual relationships in order to raise enough money

to take care of themselves as opined by Silas et al. [22] and Scott et al. [30].

Despite the significant findings we made, the limitation of the cross-sectional data used is worth mentioning. By relying on a cross-sectional data, it is impossible to account for unobserved heterogeneity. Moreover, associations found between risky sexual behaviour and some of the explanatory variables may vary over time.

## Conclusion

Risky sexual behaviour among the youth was significantly associated with age, level of education, wealth status and religion. Among males in Ghana and Kenya and females in Kenya, rural dwellers were more likely to engage in risky sexual behaviour than those living in urban areas. While awareness of AIDS was universal among the youth of both countries, utilisation of condoms on last penetrative sexual was low. Among males and females in Ghana, the odds of sexual risk taking behaviour were higher among the youth who were employed than those who were unemployed. The reverse of this, however, occurred in Kenya, where males and females who were employed were less likely to engage in risky sexual behaviours than their counterparts who were unemployed.

Our findings underscore the need for the Ministries of Health of Kenya and Ghana and other relevant stakeholders in the two countries concerned with sexual and reproductive health of young people, to promote consistent and proper use of condoms among the youth engaging in risky sexual behaviour as a way of reducing their risk of contracting STIs including HIV and AIDS. Also interventions targeted at promoting responsible sexual behaviour among the youth should effectively address social and peer group norms that put pressure on the youth to engage in risky sexual behaviours.

Governments of the two countries, especially Kenya, should promote programmes and policies that would offer employment opportunities for the youth especially females. With these programmes and policies, the youth especially females might not engage in risky sexual behaviours such as transactional sex which is risky and, therefore, predisposes them to STIs.

## Compliance with Ethical Standards

**Conflict of interest** The authors declare that they have no competing interests.

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