



Identifying Gender Differences in Ghanaian University Students' Sexual Practices, Attitudes and Knowledge Regarding HIV

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ABSTRACT University students in Ghana, as in elsewhere in Africa are reported to be engaging in lifestyles that put them at risk of HIV infection. This study was conducted to examine possible gender differences in the knowledge, attitudes, and behaviors related to HIV among university students. A self-administered questionnaire was used to collect data from 181 randomly selected Ghanaian university students. The results showed that over half (52%) of the participants were sexually active and had engaged in various sexual practices including unprotected sexual intercourse. About 63% had used condom in their previous sexual activity prior to the study and 76% indicated that they were intending to use condoms in the future. Approximately three-quarters (71%) of the participants did not perceive themselves at risk for HIV infection. Gender differences were observed in HIV knowledge, sexual risk behaviour and attitudes towards persons with HIV/AIDS. This research provides additional insights that may be used to develop effective HIV prevention strategies in Ghana.

INTRODUCTION

Ghana, a democratic country in West Africa, has a population of approximately 24 million people (Ghana Statistical Service [GSS] 2012). Ghana's first case of HIV was diagnosed and reported in 1986, and at the end of that year 26 cases were reported (Awusabo-Asare 1995). As of 2011, the HIV prevalence has decreased to 1.5%, about 12,077 individuals were infected with HIV/AIDS; 14,165 of them newly infected from the previous year and 225,478 people were living with HIV (Ghana AIDS Commission 2012). Although the prevalence of HIV infection and AIDS cases in Ghana is relatively low compared with other West African countries, the HIV epidemic in Ghana continues to be considered as a generalized epidemic (United Nations Programme on HIV/AIDS [UNAIDS] 2012).

Young people between 15 and 24 years of age account for nearly half of all new HIV infections worldwide (UNAIDS 2012). Students in institutions of higher education, majority within

the age of 20–24, are reportedly at an increased risk of acquiring sexually transmitted infections (STIs) and HIV and experiencing unwanted pregnancies than the general public, owing to their higher levels of unsafe sexual practices (Akintola et al. 2012; Mutinta and Govender 2012). This has therefore become reproductive health issue worldwide (Lewis et al. 2009) and could be attributed to the fact that university students are considered educated, well informed and could take decisions concerning their reproductive health and wellbeing (Lewis et al. 2009).

Although they are considered educated and well informed, university students in Ghana, as in elsewhere in Africa are reported to be engaging in lifestyles that put them at risk of HIV infection (Tagoe and Aggor 2009). This can be explained by the fact that the university environment offers a great opportunity for risky sexual behaviours (Pettifor et al. 2009; Akintola et al. 2012; Mutinta and Govender 2012). Some research conducted among students in institutions of higher education shows that these students had adequate knowledge about HIV/AIDS, know where to access HIV counselling and testing services, but majority of the students had not tested for HIV (Tagoe and Aggor 2009; Oppong Asante 2013; Oppong Asante and Oti-Boadi, 2013). Consistent with these studies is the one conducted by Asante and Doku (2010) among university students in Ghana which indi-

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cated that 82% of their sample were sexually active but only 42% reported to have used condom in their last sexual intercourse prior to the study.

Although there are research conducted among secondary school students as well as university students on condom use, HIV knowledge, misconception in HIV knowledge and attitude towards People Living with HIV/AIDS (Sallar 2009; Tagoe and Aggor 2009; Asante and Doku 2010; Oppong Asante 2013; Oppong Asante and Oti-Boadi 2013), there is paucity of research within the Ghanaian context addressing the complex relationship between attitudes, sexual practices and knowledge on HIV among university students by gender. Increasing knowledge and awareness of HIV/AIDS can be a powerful means of fostering positive attitudes and building safe practices among students in institutions of higher education in Ghana. Therefore a clearer understanding of students' attitudes, sexual practices and knowledge regarding HIV could be crucial in the planning and implementation of interventions for young adults.

Objective

The objective of this study therefore is to explore the sexual practices, attitudes and knowledge regarding HIV among students sample from a university in Accra, Ghana. Findings from this study add to the body of knowledge on HIV and STIs by exploring the gender dimensions of university students' sexual practices, attitudes and knowledge regarding HIV/IDS. The findings of this study could also inform health promotion practitioners on developing culturally sensitive interventions to curtail the spread of HIV/AIDS among young adults who are at a greater risk for HIV infection.

MATERIAL AND METHODS

Design and Participants

A descriptive correlational, cross-sectional design using anonymous self-administered questionnaire survey was used for data collection. Undergraduate university students were recruited into the study as they were entering the university campus. The chosen university offers predominantly undergraduate with few postgraduate programmes. A convenience sam-

ple of 205 students participated in the study (out of 236 students that were approached). After eliminating unsuitable and incomplete questionnaires, analyses presented in this paper were conducted on a sample of 181 participants with ages ranging from 18–32 years. The sample size represents 87% of response rate. Participant selection criteria included the following: (a) a registered student (b) voluntary participation in the study and (c) aged 18 years and above.

Measures

A self-administered questionnaire was utilized in this study. The questionnaire was pilot-tested with a sample of ten students and modified to ensure that it addressed the research aims and objectives. Questions included information on participant's socio-demographic variables, sexual behaviours, HIV/AIDS knowledge and Attitudes toward HIV/AIDS.

Demographic Characteristics

Socio-demographic variables included gender, age, marital status, age of first sexual debut, the type of secondary school attended (government funded or private), current living arrangement for schooling and perceived socio-economic status.

Sexual Behaviours

Five questions were asked to explore students' sexual practices. These included questions such as whether they have had sex in the last month, whether they had used condoms consistently prior to the study, whether they had used condoms in their last sexual intercourse and whether they would use condoms in future sexual activity (all scored as: No = 0 and Yes = 1) and the number of sexual partners that they have (scored as: No sexual partner = 0; one sexual partner = 1; two sexual partners = 2; three or more sexual partners = 3). These questions were used individually in the analyses and not as an overall measure of sexual practice.

HIV/AIDS Knowledge

The HIV knowledge questionnaire (HIV-KQ-18) (Carey and Schroder 2002) was used to measure knowledge of HIV/AIDS. It was made up of

18 items with questions on general knowledge on transmission, prevention and treatment of HIV/AIDS. The scale is rated on a true or false response with the range of possible scores being 0-18. A higher score is indicative of greater knowledge and conversely a lower score on the HIV-KQ-18 is indicative of a lower general knowledge of HIV/AIDS. The HIV-KQ-18 is internally consistent (.91), and the cronbach alpha score for this study was .72.

Attitude towards HIV/AIDS

The AIDS Attitude Scale (AAS) (Froman et al. 1992) which is made up of 21 items was used to measure students' attitudes towards HIV along two dimensions: empathy and avoidance. The empathetic items are questions which denote a therapeutic and positive view points towards HIV/AIDS (for example "I think patients with AIDS have the right to the same quality of care as any other patient), while avoidance subscale is made up of stigmatic and negative statements (for example "I have little sympathy for people who get AIDS from sexual promiscuity). The empathetic sub-scale is made up of 8 items whereas the avoidance sub-scale is constituted by 13 items. The scale is rated on a 6-point Likert type ranging from 6 (strongly agree) to 1 (strongly disagree) with no neutral rating. For the purpose of this study, two response categories were created for all items on the scale: agree and disagree. 'Agree' thus represents (strong agree, moderately agree, and agree) and disagree represents (strong disagree, moderately disagree, and disagree). The overall cronbach alpha for the AAS was .93. In the present study, the cronbach alpha coefficient was .85 for all the 21 items.

Data Collection and Procedures

Ethical approval was obtained from Regent University College Accra, Ghana and the participating university, with permission letter issued to the researchers to proceed with the study. The questionnaire was self-administered since the research participants could read and write English language. Written informed consent was obtained from the participants before the administration of the questionnaire after explaining the purpose of the study, the risk involved, the duration of the exercise and potential bene-

fits of the research. Confidentiality of the participants was maintained at all times during the data collection process. To ensure anonymity, no form(s) of identifiers were on the questionnaire and the participants were informed that participation was voluntary and they could withdraw from the study at any stage if they so desire, without any consequences or explanation to the researcher. The questionnaire was completed by the students within an average period of 20 minutes. The participants did not receive any form of inducement or reimbursement for their participation in the study.

Data Analysis

The completed questionnaires were checked for completeness and data was entered into Microsoft excel 2007 spreadsheet and imported into the Statistical Package for the Social Sciences version 21.0 (SPSS Inc., Chicago IL, USA) for data analysis. Standard descriptive statistics were used to describe some of the findings. The results were summarized using percentages for categorical variables and means (*M*) and standard deviations (*SD*) for continuous variables. The Pearson Chi-square (χ^2) was used to explore the gender differences among the variables in the study. Additionally, an independent t-test was used to examine whether any difference exist between males and females on overall HIV knowledge and attitudes towards HIV/AIDS. All statistical tests were performed using two-tailed, and a $p < 0.05$ were considered statistically significant.

RESULTS

Socio-demographic Characteristics

Table 1 shows the characteristics of the sample in the study. Of the 181 participants, the mean age was 23.35 years ($SD = 3.96$, $Range = 18-32$). Over half of the participants were females ($n = 99$, 55%). Approximately 93% of the participants were not married (never married), a higher number of the participants (53%) had completed a government funded secondary schools and just a third (33.1%) stayed with relatives. Over half (56%) of the respondents were between the ages of 21-25 years. Only 4% of the participants personally know someone living with HIV/AIDS.

Table 1: Socio-demographic information of the participants (N = 181)

Characteristics	N	%
<i>Gender</i>		
Male	82	45.3
Female	99	54.7
<i>Ages (M =23.35, SD =3.96) Range: 18–32</i>		
18-20 years	56	30.9
21-25 years	101	55.8
26 years and over	24	13.3
<i>Marital Status</i>		
Single	99	54.7
In a relationship	69	38.1
Married	13	7.2
<i>Perceived Socio-economic Status</i>		
Low	14	7.7
Medium	128	70.8
High	39	21.5
<i>Age of First Sex</i>		
15 years and younger	25	14.3
16-17 years	83	48.1
18 years and above	68	37.6
<i>Type of Secondary School Attended</i>		
Government school	85	53.0
Private funded school	96	47.0
<i>Residence for Educational Purpose</i>		
Family and relatives	60	33.1
University hostel	67	37.1
Rented alone	35	19.3
Rental in a group	19	10.5

Association between Gender and Risky Sexual Behaviours

Sex differences on risky sexual behaviours among the students are shown in Table 2. Over 85% of the sample had first sex by age 16 years or older and over half (52%) of the participants were sexually active in the past one month prior to the study. Of the participants who answered the question on condom use, 112(62.3%) had

used condom in their previous sexual encounters, 45(25.0%) had more than two sexual partners and 138 (76.3%) indicated that they would use condom in the future. Over two-thirds of the participants (71.2%) did not perceive themselves to be at risk for HIV infection, as only 28.8% indicated that they were at risk for HIV infection.

Sexual behaviours between the sexes were similar except on four items: age of first sex, consistent condom use, ability to buy a condom and requesting a partner to use a condom. There was a significant difference on the age of first sex ($p < 0.001$). Only 15% of the participants had first sex before the age of 15 years but more females (49.5%) had their sexual debut between the ages of 16-18 compared to 46.3% of males in the same age group. Additionally, 42.4% of females had their first sexual intercourse after the age of 18 as compared to 31.7% of males. There were also sex differences in consistent condom use (45.1% males, 31.3% females; $p < 0.01$), having the confidence to buy a condom from a pharmacy shop (75.6% males, 63.6% females; $p < 0.01$) and ability to request a sexual partner to use condom (68.3% males, 56.6% females; $p < 0.01$). These results suggests that compared with females, male students were more likely to use condom consistently, and had confidence to buy a condom and ask their sexual partners to use condom during a sexual activity.

Gender Differences in HIV Knowledge

The distribution of HIV knowledge by sex is presented in Table 3. The levels of knowledge on transmission of HIV between sexes were sim-

Table 2: Association between gender and HIV/AIDS related sexual behaviours of the students (n = 181)

Characteristics	Overall 1%	Males (n =82) (%)	Females (n=99) (%)	Chi-square (χ^2)
<i>Age of First Sex</i>				24.41***
15 years and younger	15.0	22.0	8.1	
16-17 years	47.9	46.3	49.5	
Above 18 years	40.6	31.7	42.4	
Have had sexual intercourse in the past one month	51.6	47.6	55.6	3.45
Used condom during your last sexual activity	62.8	65.9	59.6	2.25
Use condom consistently	38.2	45.1	31.3	10.94**
Would you use condom in the future	76.3	76.8	75.8	.54
Number of sexual partners (two or more)	25.0	24.4	25.6	4.19
Will feel confident to buy condom from the pharmacy	69.6	75.6	63.6	9.03**
Would be able to tell sexual partner to use a condom	62.5	68.3	56.6	7.84**
Consider yourself to be at risk of HIV infection	28.8	29.3	28.3	.06

ilar except for the question on whether a person can get HIV from oral sex (68.7% females, 58.5% males; $p < 0.05$). There was some significant difference on items assessing prevention and control of HIV between sexes such as pulling out the penis before a man ejaculates keeps a woman from getting HIV during sex (74.7% females, 54.9% males; $p < 0.001$), people who have been infected with HIV quickly show serious signs of being infected (78.6% females, 64.8% males; $p < 0.01$), a woman cannot get HIV if she has sex during her period (72.8% females, 64.6% males; $p < 0.05$), a natural skin condom works better against HIV than does a latex condom (46.5% females, 37.8% males; $p < 0.05$) and taking a test for HIV one week after having sex will tell a person if she/he has HIV (54.9% males, 43.4% females; $p < 0.01$). Overall, there was a significant

difference in HIV knowledge, with females ($M = 11.75$, $SD = 2.36$) being more knowledgeable than males ($M = 9.05$, $SD = 1.86$), $t(181) = 3.16$, $p = 0.02$.

Gender Differences in Attitudes towards Persons with HIV/AIDS

The results of the comparative analysis of the responses to the attitudes towards HIV/AIDS scale between males and females students are reported in Table 4. On the Avoidance/Intolerance sub-scales, more females (89.9%) than males (81.7%) disagreed with the statement: 'I think people who are IV drug users deserve to get AIDS' ($\chi^2 = 7.59$, $p < .01$). Similarly more than 60.6% of females compared with 48.8% males disagreed with the statement that 'If I found out

Table 3: Knowledge regarding HIV/AIDS among the sample (N = 181)

Question with correct response	Overall 1%	Males (n = 82) (%)	Females (n = 99) (%)	Chi-square (χ^2)
Coughing and sneezing do not spread HIV	75.1	74.4	76.8	2.24
A person can get HIV by sharing a glass of water with someone who has HIV	78.5	76.8	79.8	.70
A woman can get HIV if she has anal sex with a man	65.7	66.2	68.7	2.52
All pregnant women infected with HIV will have babies born with HIV	72.7	69.5	73.7	1.19
People are likely to get HIV by deep kissing, putting their tongue in their partner's mouth, if their partner has HIV	59.1	57.3	60.6	.61
Having sex with more than one partner can increase a person's chance of being infected with HIV	75.9	75.6	75.8	.02
A person can get HIV by sitting in a hot tub or a swimming pool with a person who has HIV	52.5	46.3	48.5	.25
A person can get HIV from oral sex.	64.4	58.5	68.7	6.02*
<i>Knowledge about Prevention and Control</i>				
Pulling out the penis before a man climaxes keeps a woman from getting HIV during sex	62.5	54.9	74.7	23.59***
Showering, or washing one's genitals/private parts, after sex keeps a person from getting HIV	71.8	73.2	70.7	.41
People who have been infected with HIV quickly show serious signs of being infected	71.3	64.8	76.8	9.68**
There is a vaccine that can stop adults from getting HIV	46.4	48.8	44.4	1.02
A woman cannot get HIV if she has sex during her period	69.1	64.6	72.8	4.13*
There is a female condom that can help decrease a woman's chance of getting HIV	59.1	57.3	60.6	.60
A natural skin condom works better against HIV than does a latex condom	42.5	37.8	46.5	4.13*
A person will not get HIV if she or he is taking antibiotics	51.4	47.6	49.5	.20
Taking a test for HIV one week after having sex will tell a person if she/he has HIV	48.6	54.9	43.4	7.05**
Using vaseline or baby oil with condoms lowers the chance of getting HIV	79.0	80.5	77.8	.59

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 4: Differences in Attitudes towards HIV/AIDS between males and females students (N = 181)

<i>Question with correct response</i>	<i>Overall l%</i>	<i>Males (n =82) (%)</i>	<i>Females (n=99) (%)</i>	<i>Chi-square (χ^2)</i>
<i>Avoidant/Intolerant Items</i>				
Most people have AIDS have only themselves to blame				5.57*
Agree	28.2	23.2	32.3	
Disagree	71.8	76.8	67.7	
Most people who have AIDS deserve what they get				.02
Agree	82.9	82.9	82.8	
Disagree	17.1	17.1	17.2	
HIV positive should not be put in rooms with other patients				2.14
Agree	28.7	25.6	31.3	
Disagree	71.3	74.4	68.7	
If I had to have contact with someone with AIDS, I would worry about putting my family and friends at risk of contracting the disease				3.44
Agree	40.9	36.6	44.4	
Disagree	59.1	63.4	55.6	
Young children should be removed from the home if one of the parents is HIV positive				.09
Agree	23.8	23.2	24.2	
Disagree	76.2	76.8	75.8	
I think people who are IV drug users deserve to get AIDS				7.59**
Agree	13.8	18.3	10.1	
Disagree	86.2	81.7	89.9	
I think women who give birth to babies who are HIV positive should be prosecuted for child abuse				4.13*
Agree	20.4	24.4	82.8	
Disagree	79.6	75.6	17.2	
Homosexuality should be illegal				.49
Agree	67.4	65.9	68.7	
Disagree	32.6	34.1	31.3	
If I found out that a friend of mine was a homosexual, I would not maintain the friendship				7.61**
Agree	44.8	51.2	39.4	
Disagree	55.2	48.8	60.6	
I'm worried about getting AIDS from social contacts with someone				4.40*
Agree	33.1	37.8	29.3	
Disagree	66.9	62.2	70.7	
Children or people who get AIDS from blood transfusions are more deserving of treatment than those who get it from IV drug abuse				0.04
Agree	39.8	40.2	39.4	
Disagree	60.2	59.8	60.6	
I would be worried about my child getting AIDS if I knew that one of his teachers was a homosexual				1.55
Agree	45.9	48.8	43.4	
Disagree	54.1	51.2	56.6	
I have little sympathy for people who get AIDS from sexual promiscuity				0.12
Agree	44.2	43.9	44.4	
Disagree	55.8	56.1	55.6	
<i>Empathetic Items</i>				
I think patients with AIDS have the right to the same quality of care as any other patient				0.33
Agree	70.7	72.0	69.7	
Disagree	29.3	28.0	30.3	
It is especially important for hospital patients with AIDS to be treated in a caring manner				0.49
Agree	72.9	74.4	71.7	
Disagree	27.1	25.6	28.3	

Table 4: Contd....

<i>Question with correct response</i>	<i>Overall 1%</i>	<i>Males (n =82) (%)</i>	<i>Females (n=99) (%)</i>	<i>Chi-square (χ^2)</i>
I feel more sympathetic toward people who get AIDS from blood transfusions than those who get if from IV drug abuse				4.38*
Agree	63.5	68.3	59.6	
Disagree	36.5	31.7	40.4	
A homosexual hospital patient's partner should be accorded the same respect and courtesy as the partner of a heterosexual patient				0.99
Agree	33.1	35.4	31.3	
Disagree	66.9	64.6	68.7	
Hospital patients with AIDS should be treated with the same respect as any other patient				5.07*
Agree	66.3	61.0	70.7	
Disagree	33.7	39.0	29.3	
I am sympathetic toward the misery people have with AIDS experience*				4.67*
Agree	64.6	69.5	60.6	
Disagree	35.4	30.5	39.4	
I would like to do something to make life easier for people with AIDS				0.07
Agree	70.2	69.5	70.7	
Disagree	29.8	30.5	29.3	
I would do everything I could to support people with AIDS				.08
Agree	65.2	65.9	64.4	
Disagree	34.8	34.1	35.6	

*p < .05; **p < .01

that a friend of mine was a homosexual, I would not maintain the friendship ($\chi^2 = 7.61, p < .01$). Additionally, more females (82.8%) compared with 24.4% males agreed that women who give birth to babies who are HIV positive should be prosecuted for child abuse ($\chi^2 = 4.13, p < .05$). Only 37.8% of males and 29.3% of females agreed that they were worried about getting AIDS from social contacts with someone ($\chi^2 = 4.40, p < .05$). Furthermore more males (76.8%) than females (71.8) disagreed with the statement: 'Most people who have AIDS have only themselves to blame' ($\chi^2 = 5.57, p < .05$)

A significant difference was observed with regards to three statements on the Empathetic sub-scale. Majority of males (69.5%) and females (60.6%) students affirmed that they were sympathetic toward the misery people have with AIDS experience ($\chi^2 = 4.67, p < .05$). Also more males (68.3%) than females (59.6%) agreed to the statement that I feel more sympathetic toward people who get AIDS from blood transfusions than those who get it from IV drug abuse ($\chi^2 = 4.38, p < .05$). However, more females (70.7%) as compared to 61.0% of males agreed that hos-

pital patients with AIDS should be treated with the same respect as any other patient ($\chi^2 = 5.07, p < .05$). Over all, males and females did not differ in their attitudes towards HIV/AIDS [$t(541) = 0.78, p > 0.05$].

DISCUSSION

The study was conducted to explore gender differences in sexual practices, attitudes and knowledge regarding HIV among university students enrolled in two private university colleges in Accra, Ghana. Over two-thirds (71.8%) of the participants did not perceive themselves to be at risk of HIV infection, although 52% indicated to have had sexual intercourse prior to the study. This is similar to a study conducted among university students in Namibia where on the average only 38.5% of the sample considered themselves to be a risk of becoming infected with HIV (de Beer et al. 2012). Perceived risk for HIV infection was low as majority of the students had used condom. This shows that students who perceived themselves at low risk of contracting STI were not engaging in high risk

behaviours (Roberts and Kennedy 2006). However, since over 92% of the participants were single and never married, this should be an issue of concern. In developing any interventions for students, it is better to assume that everyone is at risk of acquiring STIs including HIV (Tagoe and Aggor 2009).

The study indicates that 63% of the students had used condom in their previous sex. The rate of condom use in this study is relatively higher than other studies conducted among both public and private university students in Ghana (Tagoe and Aggor 2009; Asante and Doku 2010). A South African study conducted among university undergraduate students found that 52% of the students were sexually active (Hoque and Ghuman 2012) and over 90% had used condom as a contraceptive in their previous sexual activity. Other studies conducted in Nigeria and Uganda indicated that 54% and 70% of their sample (university students) were sexually active (Omoteso 2006; Sekirime et al. 2001). Divergence of the findings in this study to other study populations could be attributed to lack of appropriate sex education and differential individual health beliefs.

Gender difference was also observed between males and females on overall HIV knowledge, with females being more knowledgeable than males. This supports previous finding in Ghana (Oppong Asante 2013) and Nigeria (Chng et al. 2005) which revealed sex differences in HIV knowledge among university students. This result also contradicts the findings of (Durojaiye 2011) which revealed no gender differences on HIV knowledge and attitudes among university students in Nigeria. The gender differences found in this study could be attributed to individual health beliefs and health seeking behaviours, thus making females more concerned about their health more than males (Oppong Asante 2013). Additionally, it could be possible that more female students in our study could be willingly ready to respond and discuss issues related to their health and wellbeing including HIV and AIDS.

Students in general, expressed a mixed attitude towards AIDS and people living with HIV/AIDS, as majority of the participants believed that people with HIV/AIDS should not be blamed but rather be treated with the same respect as any other patient. Meanwhile, over 82% of the students indicated that people with HIV deserve

what they get. These seemingly contradictory findings could be attributed partly, to the fact that most Ghanaian students get into contact with people with HIV/AIDS only through the media (Benefo 2004). Only 4% of the students indicated to have known someone living with HIV personally. This result appears to show that there may be a gap between Ghanaians students' knowledge of HI/AIDS and their emotional response to people living with AIDS.

There were however, differences in the perception of male and female students on the individual items but not on the overall score on the AIDS attitude scale. The sources of such gender differences remains to be examined, but we can speculate that it could be as a result of general sex differences in empathy or experience. According to Miers (2000), for instance, in many societies of the world, females are socialized to be caring, nurturing and empathetic among others. Another possible explanation for such difference could be that women are seen to be primary health care givers, and as such may be more likely exposed to individuals who are ill (including People living with HIV and AIDS) than men (Ntata et al. 2008).

CONCLUSION

In conclusion, this study conducted among private university students revealed a high level of HIV/AIDS knowledge. Findings of the study also showed that majority of the students were sexually active, and had engaged in various sexual practices including unprotected sexual intercourse. The study also highlighted some gender differences in sexual risk behaviours and tolerant attitudes towards HIV and people living with AIDS. Health promotion education programmes should not be limited attitudinal changes toward HIV and People Living with HIV but should also address knowledge provision, sexual risk behaviours and gender differences adequately to effectively ensure safer behaviour.

RECOMMENDATIONS

This study recommends that future research involving nationally representative sample of equal number of male and females that examines the interaction between such sexual risk behaviours and HIV knowledge in other Ghanaian universities (both private and public ones) is need-

ed. A more qualitative approach to explore the motivations for some of the sexual behaviours that were investigated in this study would be needed.

LIMITATIONS

This study has some limitations and as such the results must be interpreted cautiously. First, this was cross-sectional in nature; therefore conclusions about causal relationship cannot be made. Second, the study was based on self-report of participants, which could lead to misunderstanding of some questions as well as bias. However, anonymity of the questionnaire might have encouraged students to be honest in answering the questions. Third, the data was sampled conveniently from only two private universities in Ghana with a small sample size; hence the generalizability of the result to the general tertiary students with similar age and in different regions in Ghana is limited. The study also failed to ask about the type of sexual partners, thus information about whether students engaged in sexual activity with boyfriend/girlfriend, and or commercial sex workers is not known. Finally, we used an attitude towards HIV/AIDS scale that had some items that may not be measuring attitudes towards HIV but about attitudes towards homosexuality in general. Despite these limitations, this study had contributed to fill some of the gaps in literature and provided relevant source of information for researchers and health promotion practitioners.

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