© Kamla-Raj 2016 J Hum Ecol, 55(3): 141-151 (2016)
PRINT: ISSN 0970-9274 ONLINE: ISSN 2456-6608 DOI: 10.31901/24566608.2016/55.03.02

Risky Sexual Behavior and Condom Use among Youth in Botswana

William K. A. Agyei*1 and Tina Abrefa-Gyan2

**ICollege of Liberal Arts, Norfolk State University,700 Park Avenue, Norfolk, VA 23504 U.S.A.

Phone: 757-823-8023 Fax: 757-823-8167, E-mail: wkagyei@nsu.edu

2Ethelyn R. Strong School of Social Work,Norfolk State University,700 Park Avenue,

Norfolk, VA 23504 U.S.A.

E-mail: tabrefa-gyan@nsu.edu

KEYWORDS Age. Botswana. Contraception. Sexually Risky Behaviors. Students. Young People

ABSTRACT This paper examines the risky sexual behavioral patterns and condom use among the young people in Botswana. A multi-stage sampling design was adopted in selecting a sample of 331 (129 males and 202 females) students aged 17-24 years old at the University of Botswana Gaborone, Botswana. The data were collected through a structured self-administered questionnaire. Two-thirds of the sample (N=217; 66%) reported that they were sexually active. Almost half and a quarter of the sexually active respondents had multiple sexual partners and casual sex respectively in the year prior to the study. Also, a third had unprotected sex during the month prior to the survey. Perceived condom use self-efficacy (M=24.32, SD=4.09) differed among those who had urban verses rural upbringing t(3.915, df=205, p<.001). There is an urgent need to include the avoidance of risky sexual behaviors in the ongoing HIV/AIDS campaign for the young people in Botswana.

INTRODUCTION

In general, the HIV/AIDS epidemic has global consequences and a lot is being done by many governments around the world to suppress the repercussions of this ailment. As a result of these efforts in the areas of advancement in medical technology and public health initiatives to help improve the quality of life of people living with HIV/AIDS across the globe, HIV/AIDS is no longer a death threat but rather a chronic disease that can be managed with improved access to social support and the consequent improvement in the quality of life of PLWA (Abrefa-Gyan et al. 2015a; Abrefa-Gyan et al. 2015b; Abrefa-Gyan et al. 2015c). Nevertheless, the African region, specifically sub-Saharan Africa has been hit hardest by the HIV virus (Center for Disease Control and Prevention [CDC] 2016; Central Intelligence Agency [CIA] 2016). According to the CIA (2016), in the sub-Saharan Africa region, the adult prevalence rates are disproportionately higher in the Southern African countries like Botswana (25.16%), Lesotho (23.39%), and South Africa (18.92%) compared to the rates in in West African countries like Ghana (1.47%), Cote d'Ivoire (3.46%) and Cameroon (4.77%).

Condom use self-efficacy is a widely accepted concept that serves as a protective factor for reducing the spread of HIV and other Sexually Transmitted Infections (STIs). Some studies have found a relationship between the high prevalence of HIV among the Ugandan university students and alcohol consumption, and the likelihood of both males and females to engage in sexually risky behaviors, such as inconsistent use of condom and having multiple partners (Miskulin et al. 2009; Choudhry et al. 2014; Noubiap et al. 2015); and factors (sexual coercion) that relate to a risky sexual behavior among the college students in Uganda (Agardh 2011). Noubiap et al. (2015) also indicated that males and urban dwellers are more likely to have their first sexual encounters before they turn 18 years. However, female urban dwellers are more likely to have an earlier sexual debut (Tadesse and Yakob 2015). Women are also prone to having sex without condom and the rate of infections among them are relatively higher than their male counterparts (Patra and Singh 2015; Tadesse and Yakob 2015). Studies in Botswana (Patra and Singh 2015; Lama 2016) and Ethiopia (Fentahun and Mamo 2014) found that alcohol use/abuse predicted engagement in risky sexual behaviors while another study in Tanzania indicated a relationship between condom use and HIV infection prevention (Ukwuani 2003).

There is a plethora of evidence in the literature that suggest condom use as a protective

factor for HIV/AIDS prevention (Fehr 2014). Fehr et al. (2014) conducted a comprehensive literature review of the academic search using CINAHL and MEDLINE databases and the keywords: "college students, university students, youth, condom negotiation, condom, barriers, obstacles, sex, sexual behavior, and relationships. Similarly, Stroeken et al. (2012) conducted a systematic review of the literature from the period of 2000-2010 on youths who had dropped out of school in Southern and Eastern Africa. Their study revealed that youths who were outof-school were likely to engage in risky sexual behavior, had early sexual debut, had a low perception of STIs/HIV, report more lifetime sexual partners, and inconsistent condom use. Another comprehensive review of the literature of condom use in Africa revealed a strong relationship between poverty and condom use (Anwar et al. 2008). The researchers found the following as the barriers to condom use: "(a) relationship dynamics; (b) perception of risk; and (c) gender roles". Yet, the literature on the factors that predict the condom use efficacy in a specific Southern African country like Botswana is limited (Agyei et al. 2014). Therefore, this study sought to examine the factors influencing the use of condom among the young university students in Botswana.

More years of schooling (high level of education) and confidence in getting a male partner among young women increased the odds of condom use (Guiella and Madise 2007). Using a structural equation modeling, Cai et al. (2013) found that consistent condom use was predicted by motivation and behavioral skills and indirectly by information which was mediated by behavioral skills. These authors recommended that HIV/AIDS related interventions must incorporate motivation and behavioral skill improvement. On the other hand, French and Holland (2013) determined condom negotiation skill as the mediator between self-efficacy and condom use. In their study, condom use self-efficacy was related to condom negotiation strategy, withholding sex, and increased condom use. Among men and women, assertive condom negotiation skills strongly related to condom use. In another study, the authors examined the relationship between "condom influence strategies (CIS)" (Holland and French 2012) and perceived condom use among the college students. The results showed that assertive CIS predicted condom use among both men and women but men reported more levels of condom use than women.

Research Questions and Hypotheses:

- Do young men and women in Botswana vary in their sexual conduct and condom use?
 - Hypothesis: There is no variation in sexual conduct and condom use among young men and women in Botswana.
- Does age differ by three groups of condom users (always, sometimes, and never) among youth in Botswana?
 Hypothesis: Age does not differ across the three groups of condom users (always, sometimes, and never).
- Will perceived condom use self-efficacy differ across demographic factors? Hypothesis: Perceived condom use selfefficacy is the same across the demographic factors.
- 4. Do demographic factors (age, marital status, gender, mother/father's education, geographical location, and having a history of STIs) relate with perceived condom use self-efficacy?

Hypothesis: There is no relationship between the demographic factors (age, marital status, gender, mother/father's education, geographical location, and having a history of STIs) and perceived condom use self-efficacy.

METHODOLOGY

The analyses presented in this paper are based on data from a survey conducted at the University of Botswana, Gaborone, Botswana in 2013. The study population consisted of undergraduate male and female students between the ages of 17-24 years old. A multi-stage probability proportionate to the size-sampling design was adopted in selecting the sample of 396 students (202 females and 194 males). Data collection was carried out through the use of structured self-administered questionnaire. For details of study design and sampling procedure, see Agyei et al. (2014). Information on the knowledge of non-HIV STIs and their symptoms, sexual activity, number of sexual partners, use/nonuse of condoms, self- reported infection with non-HIV STIs and HIV, and unintended pregnancies, as well as socio-demographic characteristics were collected during the survey. Sixty-five respondents were excluded from the final sample because some of them were older than 24 years old and also because of missing data. The final sample size was 331 (202 females and 129 males) with a mean age of 20.1 years (SD=1.36).

Dependent Variable

(Risky sexual behavior) Risky sexual behavior is a subject discussed frequently in HIV and non-HIV STIs research particularly in connection with the young people. Hubbs-Trait and Garmon (1995) grouped risky sexual behaviors in AIDS era into three categories: (1) participation in any one of the sexual activities that involve passage of bodily fluids (2) lack of condom use during such activities, and (3) inadequate discrimination rules for choosing sexual partners (that is, having sexual encounters with multiple partners or with partners who have had multiple partners). The occurrence of any one of these risky behaviors further increases an individual's overall total risk. Risky sexual behavior is defined as a combination of multiple sexual partners and the non-use of condoms. Three questions were used to capture risky sexual behavior. The first was, "How many sexual partners have you had in the past year?" Response categories ranged from: "none, one, two, three, more than three." Second, respondents were asked about the frequency of condom use. "Do you use any condoms during sexual intercourse?" Response categories included: "always, sometimes, never." Third, a control item, "Have you recently (in the past month) had unprotected sex? With response categories: "yes, no." Intentions to use condoms were measured through one single-scale item ("Do you plan to use condom before you have sexual intercourse?") with response categories "never, rarely, about half of the time, always" and one item ("Do you plan to use condoms at your next sexual intercourse?") with the response categories "Yes, Not sure, No". Young people who used condoms consistently were considered to be protecting themselves against contracting HIV and non-HIV STIs as well as unintended pregnancies.

Independent Variables

Demographic variables included the respondent's age, gender, and rural/urban upbringing. Sexual behavior variables included contracep-

tive use at first sex, contracted an STI, and steady girlfriend/boyfriend. Parental variable included both parent's educational level.

Statistical Analysis

Data were analyzed using SPSS/PASW version 22. Bivariate analyses were conducted using correlation analysis, t-tests, and chi-square statistic which provided summary statistical indices for the respondents. The association between risky sexual behaviors and various independent variables such as age, gender, multiple sexual partners, unprotected sex, casual sex, and contraceptive use at first sex were provided by the chi-square statistic. In addition, the association between condom use self-efficacy and other predicting factors such as urban/rural upbringing, parental education, history of an STI and steady boyfriend/ girlfriend were provided by the t-test. To further investigate how well the predictor variables relate to the perceived condom use self-efficacy, a hierarchical multiple regression correlation (MRC) was utilized. The assumptions of linearity, normally distributed errors, and uncorrelated errors were checked and adequately met.

RESULTS

Socio-demographic Characteristics of the Respondents

The socio-demographic characteristics of the respondents are presented in Table 1. Females were more heavily represented than males in the sample (61% vs 39%). Nearly all (98%) of the young people were single and only 6 (2%) were married. All of the married individuals in the sample were females. The proportion of adolescents (17-19 years old) was 36.7 percent and that of the young adults (20-24 years old) was 63.3 percent. Approximately seventy-eight percent identified themselves with Christianity. Of the 217 (66%) who were sexually active at the time of the survey, forty-four percent were males and fiftysix percent females. In terms of multiple sexual partners in the past year (that is: 2 or more), males (24.9%) had a slight edge over their female counterparts (23.5%). A significantly larger proportion of females (38.8%) compared to males (27.1%) reported having unprotected sex in the past month before the survey.

Table 1: Selected socio-demographic characteristics of the respondents

Socio-demographic	Me	ale	Fen	nale	Total		
variables	No.	%	No.	%	No.	%	
Age							
17-19	53	43.1	66	32.7	119	36.7	
20-24	70	56.9	136	67.3	206	63.3	
(missing values)	6				6		
Marital Status							
Single	122	100	196	97.0	318	98.0	
Married	0		6	3.0	6	2.0	
(missing values)	7				7		
Religion							
None	21	16.3	7	3.5	28	8.5	
Yes	87	67.4	172	85.1	259	78.2	
Other	21	16.3	23	11.4	44	13.3	
Sexually Active							
Yes	96	75.0	121	60.2	217	66.0	
No	32	25.0	80	39.8	112	34.0	
(missing values)	1		1		2		
Multiple Sexual Partners in the Past Year	•		•		-		
Yes	53	55.2	50	41.3	103	47.5	
No	43	44.8	71	58.7	144	52.5	
(missing Values)	33	. 1.0	81	20.7	144	32.3	

Sex before the Age of 15

A relatively small proportion (8.9%) of the sexually active respondents reported having had sex before age 15. With a high percentage of the males initiating sexual activity compared to their female counterparts (19.6% for males and 1.0% females). Sex before age 15 has both social and physiological implications for young people. Early sexual debut before age 15 is considered socially precocious (Rwenge 2000; Dimbuene and Kuate-Defo 2010; Doyle et al. 2012). Physiologically, it exposes young people to increased risk of contracting STIs including HIV (Olasode 2007). According to WHO (2000), young people

who begin sexual activity early appear more likely to have sex with high risk partners or multiple partners and are less likely to use condoms.

Multiple Sexual Partners, Unprotected Sex, and Casual Sex

Approximately 48.4 percent of the sexually active respondents reported having had multiple sexual partners in the year prior to the study. Table 2 shows that 24.9 percent reported having had two sexual partners, 8.5 percent had three sexual partners, and 15.0 percent had more than three sexual partners. The chi-square test in Table 2 reveals a significant difference between

Table 2: Sexual risk behavior among sexually active respondents (N=217)

		To	tal	Female		Male		
		N	%	N	%	N	%	
How many sexual partners	None	14	6.6	5	4.1	9	9.8	$\chi^2 = 3 \ 0.799$
have you had in the	One	96	45.1	66	54.5	30	32.6	df=4
past year?	Two	53	24.9	36	29.8	17	18.5	$p = .000^{\circ}$
	Three	18	8.5	8	6.6	10	10.9	-
	More than three (4 missing)	32	15.0	6	5.0	26	28.3	
Have you recently (in	Yes	68	32.7	47	39.2	21	24.7	χ^2 (con.corr.)=4.064
the past month) had	No	140	67.3	73	60.8	64	75.3	ďf=ì
unprotected sex?	(9 missing)							$p = .000^*$
Apart from your current	Yes	51	25.6	11	9.5	40	48.2	χ^2 (con.corr.)=36.033
(dating) partner, do you	No	148	74.4	105	90.5	43	51.8	df = 1
have sexual intercourse with somebody else?	18 missing)							$\mathbf{p} = .000^*$

 $^{^*}P < 0.001$

female and male respondents ($\chi^2 = (4) = 30.799$, p = .000). Males (57.7%) were significantly more likely than females (41.4%) to have had multiple partners in the past year before the survey.

Table 2 also provides information on unprotected sex and casual sex partners. Almost thirty-three (32.7%) percent of the sexually active respondents reported having had unprotected sex during the past month. Among those who had protected sex (N = 140), 73 (52.1%) were females while 67 (47.9%) were males. Unprotected sex exposes young people to the risk of contracting STIs including HIV. It also exposes young females to unintended pregnancy and early childbearing. A significant proportion of the females reported unprotected sex than the males (39.2% vs 24.7%, and $\chi^2(1) = 4.064$, p = .000). Slightly over a quarter of the respondents reported having had casual sex in the year prior to the study. Males were more likely than females to have had casual partners (48.2% males vs 9.5% females; $\chi^2(1) = 36.033, p = .000$.

The researchers presented the results by gender since the literature suggested differences in engagement in the risky sexual behaviors between males and females. The results in Table 2 show some striking differences between male and female respondents. For example, 28.3 percent of the sexually active male respondents had more than 3 sexual partners compared to 5.0 percent for their female counterparts. In addition, 48.2 percent of the males had casual sex compared to 9.5 percent for the females. On the other hand, 39.2 percent of the females had unprotected sex compared to 24.7 percent of the males in the month before the survey.

Table 3 shows that age, gender, upbringing, and education of the mother did not make any significant difference in participants' sexual risk behavior. However, participants with a father who had no tertiary education were more likely to engage in risky sexual behavior (t (156) = -2.362, p = .019). Participants who had contracted non-HIV STIs did not differ in their sexual risk behavior from participants who had not contracted STIs. This indicated that STIs was also not associated with sexual risk behavior. Participants with the correct information about STIs were significantly less likely to engage in risky sexual behavior (r = .159, p = .024). Interestingly, participants with a high perceived condom use selfefficacy were more likely to demonstrate risky behaviors (r = -.206, p = .003).

Table 3: Sexual risk behavior by predictor variables

ie 3: Sexua	i risk benav	ie 5: Sexuai fisk benavior by predictor variabies	r variables						
	Age	Gender	Urban vs. rural upbringing	Tertiary vs. non-tertiary education of mother	Tertiary vs. non-tertiary education of father	Had STIs vs. no STIs	nowing about STIs	Information about STIs	Perceived condom use self-efficacy
nal risk nvior n=5.08	r =021 p = .768	t = df = 1	-1.858 t =096 96 df =197 .065 p = .924	t = - df = 180 p =	.421	t = -1.948 df = 198 p = .053	r =089 p = .208	r =159 r = p = .024* p = .024*	r =206 p = .003**

Perceived Condom Use Self-efficacy

Respondents who reported that they always planned to use a condom were less likely to report unprotected sex ($\chi^2(1) = 37.64$, p = .000) than their counterparts who did not always plan their condom use. Similarly, respondents who planned to use a condom during their next sexual encounter were less likely to report unprotected sex ($\chi^2(1) = 16.03$, p = .000) than their counterparts who did not.

Table 4 shows that age and gender did not result in statistically significant differences in the perceived condom use self-efficacy. Participants who grew up in urban areas had significantly higher scores in perceived condom use self-efficacy (t (205) = 3.195, p = .000) and so did participants who had a mother with tertiary education (t (188) = -2.242, p = .026) or a father with tertiary education (t (188) = -2.306, p = .022). Par-

ticipants who reported that they have not contracted non-HIV STIs had significantly higher perceived condom use self-efficacy scores (t (206) = -2.167, p = .031). Having a boyfriend/girl-friend did not result in statistically significant differences in the perceived condom use self-efficacy.

In this study, it was hypothesized that age, marital status, gender, mother/father education, geographical location, having a history of STIs, religion, and having a steady girl/boyfriend relate to the outcome variable, perceived condom use self-efficacy. Therefore, the null hypothesis that these set of predictors did not relate to the perceived condom use self-efficacy was tested using a hierarchical Multiple Regression Correlation (MRC) analysis. Means and standard deviations as well as the results of the analysis are presented in Table 5. The results of the correlations indicated associations between the per-

Table 4: Perceived condom use self-efficacy by predictor variables

	Age	Gender	Urban vs. rural upbringing	Tertiary vs. non- tertiary education of mother	Tertiary vs. non- tertiary education of father	Had STIs vs. no STIs	Steady boyfriend/ girlfriend vs. not
Perceived condom use	r =007	t = .25	2 t = 3.915	t = -2.242	t = -2.306	t =2.167	t =948
self-efficacy Mean=24.32, SD=4.09	p = .921			df = 188 $p = .026*$		df = 206 p = .031*	df = 203 $p = .344$
*P < 0.05	**P < 0.00	01					

Table 5: Means, standard deviation, and correlations for perceived condom use self-efficacy and predictors

Variable	М	SD	1	2	3	4	5	6	7	8	9
Perceived condom use Self Efficacy	25.105	4.126	028	011	.019	309*	.033	.138**	039	143***	.064*
Predictors											
 STD Status/histor 	y		-	273*	170***	.102	.083	.015	078	004	.342
Gender				-	.193***	.095	.073	061	.080	027	216**
3. Age					-	.076	136***	098	.184***	.050	073
4. Geographical location						-	189***	126**	**107	.031	101
Mother/father las education year	st						-	.344	.087	.041	.107
6. Highest mother/ father education								-	128***	013	.135***
Religion									-	.068	.013
8. Marital status										-	080
9. Have girl/boyfriend	d										-

Note: *p < .001, *** p < .01, **** p < .05

ceived condom use self-efficacy and most of the predictor variables (see Table 5 for specific results). Standardized betas among the predictor variables were low, below .8. Therefore, multicollinearity was not a problem. The regression equation with the set of predictors in relation to the outcome variable, perceived condom use self-efficacy, was significant with an F(9, 199) =3.472, p = .001, adjusted $R^2 = 1.06$ (a medium effect size according to Cohen et al. (2003). Therefore, the null hypothesis that 'there is no relationship between perceived condom use selfefficacy and the set of predictors was rejected. The researchers accepted the alternative hypothesis that age, marital status, gender, mother/father's education, geographical location, having a history of STIs, religion, and having a steady girl/boyfriend relate to the outcome variable, perceived condom use self-efficacy.

The MRC results in Table 6 indicate that the first set of predictors (mother/father's last education year, marital status, STI status/history, gender, religion, geographical location, age, and mother/father's highest education) accounted for 13.6% variance in the perceived condom use self-efficacy $R^2 = 13.6$, F (8, 200) = 3.926, p < .01. When the girlfriend/boyfriend status was added to the first set of predictors, the variance accounted for in the outcome variable (13.6%) was not significant and the R^2 change is 0.000, indicating that the addition of this variable did not contribute to the variance explained by the set of predictors in the outcome variable. Geographical location (where the respondents grew up till the age of 15) significantly correlated with the perceived condom use self-efficacy (B = -1.671, *p*<.001). Thus, those who live in the city/urban areas scored 1.671 points more than those who live in towns, villages, and cattle posts/lands on the perceived condom use self-efficacy. It is possible that those who lived in the city were more exposed to condoms and will likely use them compared to their counterparts who were in towns, villages, and cattle posts/lands.

Overall, geographical location related to the perceived condom use self-efficacy and all the set of predictors combined also associated with the perceived condom use self-efficacy. The beta weights presented in Table 6 indicate the contribution of the entire set of predictors to the perceived condom use self-efficacy.

DISCUSSION

This study examined risky sexual behaviors and the use of condoms to help prevent HIV and other Sexually Transmitted Infections (STIs) among the young people in Botswana. The study also determined possible differences in risky sexual behavior and condom use across the socio-demographic factors. Study results were similar to the findings in the literature. In this study, the following null hypotheses were tested and rejected; 1) there was no variation in the sexual conduct and condom use among young men and women in Botswana, 2) age does differ across the three groups of condom users (always, sometimes, and never), 3) perceived condom use self-efficacy is the same across demographic factors, and 4) there is no relationship between the demographic factors (age, marital status, gender, mother/father's education,

Table 6: Hierarchical multiple regression analysis summary for nine set of predictors and perceived condom use self-efficacy

Variable	В	SEB	b	R^2	R ² Change	95% CI for B.
Step 1				.136	.136	
STD status/history	.710	.460	.104			197-1.617
Age	.202	.539	.070			191595
Gender	.179	.539	.023			884-1.243
Geographical location	-1.671	.362	316*			-2.384958
Religion	133	.183	050			494228
Marital status	507	.266	126			-1.031018
Highest mother/father education	.211	.139	.108			063486
Mother/father last education year	086	.153	041			388216
Constant	22.769	4.502				13.891-31.647
Step 2				.136	.000	
Have girl/boyfriend	017	.611	002			-1.222-1.188
Constant	22.796	4.618				13.689-31.903

Note: *p < .001

geographical location, and having a history of STIs) and perceived condom use self-efficacy.

In this study, although only approximately nine percent of the respondents became sexually active before the age of 15, there is a need for providing reproductive health information targeting young people before that age. While this rate appears to be much lower than what was reported in some other sub-Saharan African countries, (for example, Dimbuene and Kuate-Defo 2011; Doyle et al. 2012; Mutinta et al. 2013) it is still in the range of sexual debut among the young people in the region. Under-reporting might have contributed to the low rate, as sexual activity among young people is considered socially undesirable or unacceptable. Young people and especially females often under-report sexual behavior, but males sometimes over-report it (Marston and King 2006; Beguy et al. 2009; Plummer and Wight 2011; Doyle et al. 2012).

It is well documented in the literature that risky sexual behavior predisposes young people to contracting STIs including HIV (Agyei et al. 1992, 2002; Kaaya et al. 2002; Todd et al. 2004; Olasode 2007; Dimbuene and Kuate-Defo 2011; Doyle et al. 2012; Mutinta et al. 2013). The researchers' results showed that about a half and slightly over a quarter of the sexually active respondents have had multiple sexual partners and casual sex respectively in the year prior to the study. And approximately a third of the respondents had unprotected sex during the month prior to the study. Male respondents were significantly more likely than their female counterparts to have had multiple sexual partners. Similarly, male respondent were more likely than females to have had casual intercourse during the previous 12 months. On the other hand, female respondents were significantly more likely than their male counterparts to have unprotected sex. This finding may be attributed to the fact that some of the female respondents engaged in sexual relations with older partners (professionals/ business-men) for material/financial gain to improve their lifestyles. In such a situation, it becomes rather difficult for them to negotiate condom use and in many cases they agree to have sex without condoms (Kalichman et al. 2006; Dinkelman et al. 2008; Wamoyi et al. 2014).

A number of studies in some of the sub-Saharan African countries revealed that female students engage in risky sexual practices as a means of acquiring social status among their peers. Because these practices (multiple sexual partners, casual partners, and unprotected sex) provide them access to material goods such as cell phones, clothes and laptops from their partners. In other words, the female students are influenced by the culture of consumerism (Kuate-Defo 2004; Breier 2010; Mutinta and Govender 2012; Erinosho et al. 2012).

The risky sexual behaviors exhibited by both male and female respondents are similar to the findings from other studies in the sub-Saharan African region (Zuma et al. 2010, 2011; Dimbuene and Kuate-Defo 2011; Doyle et al. 2012; Mutinta and Govender 2012; Mutinta et al. 2013). Young peoples' risky sexual behaviors are influenced by socio-cultural and economic factors. This indicates that their environment and living arrangements play an important role in their risky sexual behaviors. The university environment from which our sample was drawn provides an opportunity for risky sexual behaviors (Mutinta and Govender 2012; Mutinta et al. 2013). Students tend to engage in risky sexual behaviors because they are sexually adventurous due to the fact that they are free from parental/guardian control (Breier 2010; Mutinta and Govender 2012). In general, young people engage in risky sexual behaviors without paying attention to the consequences of their actions. Nevertheless, the consequences of risky sexual behaviors which may include unintended pregnancy, STIs including HIV as well as other reproductive health problems impact society as a whole in terms of the resources (Alubo 2001).

The study findings on the relationship between demographic factors (age, marital status, gender, mother/father's education, geographical location, and having a history of STIs) and the perceived condom use self-efficacy are consistent with the literature (Miskulin et al. 2009; Choudhry et al. 2014; Tadesse and Yakob 2014; Noubiap et al. 2015; Patra and Singh 2015). Thus, those who are younger, females, have parents with less education, live in urban centers, and have a history of STI infections are less likely to use condoms. This attitude poses a major threat to the setting which is already overburdened with the repercussions of HIV/AIDS.

CONCLUSION

The risky sexual behaviors examined are those that expose the young people to the risk

of contracting sexually transmitted infections including HIV, unintended pregnancy, and other reproductive health problems. They include having multiple sexual partners, casual partners, and unprotected sex (non use of condom). The results revealed that nearly half and slightly a quarter of the sexually active respondents have had multiple sexual partners and sexual intercourse with somebody other than their regular boyfriend/girlfriend respectively in the year prior to the study. And one out of three of them have had unprotected sex during the month before the survey.

With regards to condom use self-efficacy, the results further indicated that parental education (tertiary) and urban upbringing are the two main predictors of condom use. Respondents whose mother/father attained a tertiary education had significantly higher scores in perceived condom use self-efficacy than their counterparts whose parents did not attain a tertiary education. Similarly, respondents with an urban upbringing had significantly higher scores in perceived condom use self-efficacy than their rural counterparts.

Respondents who always planned to use a condom and those who planned to use a condom at their next sexual encounter were not involved in unprotected sex. While both male and female respondents reported risky sexual behaviors in terms of multiple sexual partners, unprotected sex, and casual sexual partners, males displayed a more risky behavior than females as they were more likely to report concurrent sexual intercourse with somebody other than their current partner.

RECOMMENDATIONS

The researchers' results showed that despite a national campaign to reduce the spread of HIV/AIDS and non-HIV STIs in Botswana, youths continue to engage in risky sexual behaviors. This indicates that providing information alone to the young people is not sufficient to motivate them to practice safe sex. Consequently, the national HIV/AIDS campaign program should place emphasis on exposing young people to the health benefits of reducing the number of sexual partners, sexual fidelity, and condom use.

Given the relatively high level of sexual risk taking among young people, efforts should be made to establish health clinics which will cater for young peoples' reproductive health needs. Such clinics should combine sex education, STI diagnosis and treatment as well as family planning services, including condom use that focuses on condom negotiation skills and self-efficacy.

Effective, robust interventions and policies need to be adopted by university authorities to ensure that young people/students who are prone to engaging in risky sexual behaviors like having unprotected sex are educated about the reproductive health consequences of their behaviors. These authorities may consider providing incentives for demonstrating risk-free or engaging in less risky sexual behaviors among the young university students.

ACKNOWLEDGEMENTS

This was a collaborative study involving Norfolk State University, Norfolk, VA, U.S.A. and the University of Botswana, Gaborone, Botswana during Professor William K.A. Agyei's tenure at the Department of Population Studies as a Fulbright Scholar in the 2012-2013 academic year at the University of Botswana. The authors are deeply grateful to the research supervisor and the research assistants who involved themselves so enthusiastically in the research project. The researchers also thank the students who volunteered to participate in the study. The research reported here was funded by the Faculty of Social Sciences, University of Botswana, Gaborone, Botswana.

REFERENCES

Abrefa-Gyan T, Wu L, Lewis MW 2015a. Social support and support group among people with HIV/AIDS in Ghana. Social Work in Health Care, 1-17. doi:10.1080/00981389.2015.1084969.

Abrefa-Gyan T, Cornelius LJ, Okundaye JN 2015b. Gender and children as the moderators of the relationship between social support and quality of life: An empirical study of people living with HIV/AIDS in Ghana. Social Work in Public Health, 30: 550-558. doi: 10.1080/19371918.2015.1071611.

Abrefa-Gyan T, Cornelius LJ, Okundaye JN 2015c. Socio-demographic factors, social support, quality of life, and HIV/AIDS in Ghana. *Journal of Evidence-Informed Social Work*, 1–11. doi: 10.1080/23761407.2015.1018033.

Agardh A, Odberg-Pettersson K, Östergren P 2011. Experience of sexual coercion and risky sexual behavior among Ugandan university students. *Public Health*, 11(527): 1-12.

- Agyei WKA, Plattner LE, Bainame K, Campbell, EK, Nkwe N, Mukamaambo EP, Ntsabane T 2014. Prevalence of Non-HIV Sexually Transmitted Infections Among Youth in Botswana. Paper Presented at the 2014 Southern Demographic Association Annual Meeting. Memphis, TN, 15-18 October 2014.
- Agyei WKA, Biritwum RB, Ashitey GA, Hill RB 2002. HIV/AIDS awareness and sexual behavior among young people in Ghana. *Ghana Medical Journal*, 36(3): 94-101.
- Agyei WKA, Epema EJ, Lubega M 1992. Contraceptive and prevalence of sexually transmitted diseases among adolescents and young adults in Uganda. *International Journal of Epidemiology*, 21(5): 981-988.
- Alubo O 2001. Adolescent reproductive health practices in Nigeria. *African Journal of Reproductive Health*, 5(3): 109-119.
- Anwar I, Sami M, Akhtar N, Chowdhury ME, Salma U, Rahman M, Kohlinsky M 2008. Inequity in maternal health-care services: Evidence from home-based skilled-birth-attendant programmes in Bangladesh. *Bulletin of the World Health Organization*, 86(4): 252–259.
- Beguy JA, Kabiru CW, Ndera EN, Ngeware MW (2009). Inconsistencies in self-reporting of sexual activity among young people in Nairobi, Kenya. *Journal of Adolescent Health*, 45(6): 595-601.
- Breier M 2010. Dropout or Stop Out at the University of the Western Cape. Cape Town: HSRC Press.
- Cai Y, Ye X, Shi R, Xu G, Shen L, Ren J, Huang H 2013. Predictors of consistent condom use based on the information-motivation-behavior skill (IMB) model among senior high school students in three coastal cities in China. *Biomed Central Infectious Diseas*es, 13(262): 1-8. doi: 10.1186/1471-2334-13-262.
- Centers for Disease Control and Prevention 2016. Effect of Antiretroviral Therapy on Risk of Sexual Transmission of HIV Infection and Super Infection. From http://www.cdc.gov/hiv/topics/treatment/resources/factsheets/art.htm (Retrieved on 5 May 2016).
- Central Intelligence Agency 2016. The World Fact Book. From https://www.cia.gov/library/publications/resources/the-world-factbook/geos/cm.html (Retrieved on 9 May 2016).
- Choudhry V, Agardh A, Stafström M, Östergren P 2014. Patterns of alcohol consumption and risky sexual behavior: A cross-sectional study among Ugandan university students. *Public Health*, 14: 1-22. doi: 10.1186/1471-2458-14-128.
- Cohen J, Cohen P, West SG, Aiken LS 2003. Applied Multiple Regression/ Correlation Analysis for the Behavioral Sciences. 3rd Edition. Mahwah, NJ: Lawrence Erlbaum Associates Publishers
- Dimbuene ZT, KuateDefo B 2011. Risky sexual behavior among people in Cameroon: Another look at family environment. *Journal of Biosocial Science*, 43(1): 129-153.
- Dinkelman T, Lam D, Leibbrandt M 2008. Linking poverty and income shocks to risky sexual behaviour: Evidence from a panel study of young adults in Cape Town. South African Journal of Economics, 76: 52-74.

- Doyle AM, Mavadzenge SN, Plummer SL, Ross DA 2012. The sexual behaviour of adolescents in sub-Saharan Africa: Patters and trends from national surveys. *Tropical Medicine and International Health*, 17(7): 796-807.
- Erinosho O, Isiugo-Abanihe U, Joseph R, Dike N 2012. Persistence of risky sexual behaviours and HIV/AIDS: Evidence from qualitative data in three Nigerian communities. *African Journal of Reproductive Health*, 16(1): 113-123.
- Fentahun N, Mamo A 2014. Risky sexual behaviors and associated factors among male and female students in Jimma zone preparatory schools, South West Ethiopia: Comparative study. *Ethiopian Journal of Health Sciences*, 24: 60-68. doi: http://dx.doi.org/10.4314/ejhs.v24i1.8.
- Fehr SK, Vidourek RA, King KA 2014. Intra-and interpersonal barriers to condom use among college students: A review of the literature. *Sexuality and Culture* 19: 103–121. doi 10.1007/s12119-014-9249-y.
- French SE, Holland KJ 2013. Condom negotiation strategies as a mediator of the relationship between self-efficacy and condom use. *Journal of Sex Research*, 50(1): 48-59. doi: 10.1080/00224499. 2011. 626907.
- Holland KJ, French SE 2012. Condom negotiation strategy use and effectiveness among college students. *Journal of Sex Research*, 49(5): 443-453. doi: 10.1080/00224499.2011.5658128
- Hubbs-Tait L, Garmon LC 1995. The relationship of moral reasoning and AIDS knowledge to risky sexual behavior. Adolescence, 30 (119): 549-564.
- Kaaya SF, Fisher AJ, Mbwambo JK, Schaalma H, Aaro LE, Klepp KI 2002. A review of studies of sexual behavior of school students in sub-Saharan Africa. Scandinavian Journal of Public Health, 30(2): 148-160.
- Kalichman SC, Simbayi LC, Kagee A, Toefy Y, Jooste S, Cain D, Cherry C 2006. Associations of poverty, substance use, and HIV transmission risk behaviors in three South African communities. Social Science and Medicine, 62: 1641-1649.
- Kuate-Defo B 2004. Young people's relationships with sugar daddies and sugar mummies: What do we know and what do we need to know? *African Journal of Reproductive Health*, 8(1): 13-37.
- Lama TP, Kumoji EK, Ketlogetswe D, Anderson M, Brahmbhatt H 2016. Alcohol Consumption and Risky Sexual Behavior Among Persons Attending Alcohol Consumption Venues in Gaborone, Botswana. From http://www.ncbi.nlm.nih.gov/pubmed/26450847> (Retrieved on 6 May 2016).
- Marston C, King E 2006. Factors that shape young people's sexual behaviour: A systematic review. *Lan*cet, 368: 1581-1586.
- Miskulin M, Miskulin I, Puntaric D, Mujkic A, Milas J, Bosnjak N 2009. The characteristics of sexual behavior and extent of condom usage among sexually active Croatians from Eastern Croatia. *Journal of Turkish-German Gynecological Association*, 10: 142-147.
- Mutinta G, Govender K, Gow J, George G 2013. An Investigation of students' risky sexual behavior at Kwazulu-Natal University, Durban, South African.

- American Journal of Sexuality Education, 8(3): 121-139
- Mutinta G, Govender K 2012. The social environmental determinants of students' sexual risk behavior and HIV prevention at the University of KwaZulu Natal. The Journal of Human Ecology, 38(1): 17-29.
- Noubiap JJN, Nansseu JRN, Ndoula ST, Wang B, Jingi AM, Bigna JJR, Aminde LN, Fokom Domgue J 2015. Prevalence and correlates of HIV risky sexual behaviors among students attending the Medical and Social Welfare Center of the University of Maroua, Cameroon. *Research Notes*, 8(635): 1-11. doi: 10.1186/s13104-015-1638-2.
- Olasode OA 2007. Sexual behaviour in adolescents and young people attending sexually transmitted disease clinic, Ile Ife, Nigeria. *Indian Journal of Sexual Transmitted Diseases*, 28(2): 83-86.
- Patra S, Singh RK 2015. Knowledge and behavioural factors associated with gender gap in acquiring HIV among youth in Uganda. *Journal of Public Health Research*, 4: 101-108.
- Plummer ML, Wight D 2011. Young People's Lives and Sexual Relationships in Rural Africa: Findings from a Large Qualitative Study in Tanzania. Lanham, Maryland: Lexington Books.
- Rwnege M 2000. Sexual risk behaviors among young people in Bamenda, Cameroon. *International Family Planning Perspectives*, 26(3): 118-123, 130.
- Stroeken K, Remesb P, De Kokerc P, Michielsenc K, Van Vossolec A, Temmermanc M 2012. HIV among out-of-school youth in Eastern and Southern Africa: A review. AIDS Care 24: 186-194.

- Tadesse G, Yakob B 2015. Risky sexual behaviors among female youth in Tiss Abay, a semi-urban area of the Amhara Region, Ethiopia. *Plos One*, 10(3): 1-16. doi:10.1371/journal.pone.0119050.
- Todd J, Changalucha J, Ross DA, Mosha F, Obasi AL, Plummer M, Balira R, Grosskurth H, Mabey DC, Hayes R 2004. The sexual health of pupils in years 4 to 6 of primary schools in rural Tanzania. Sexually Transmitted Infections, 80(1): 35-42.
- Ukwuani FA, Tsui AO, Suchindran CM 2003. Condom use for preventing HIV infection/AIDS in sub-Saharan Africa: A comparative multilevel analysis of Uganda and Tanzania. *Journal of Acquired Immune Deficiency Syndromes*, 3: 203-213.
- Wamoyi JM, Wight D, Remes P 2015. The structural influence of family and parenting on young people's sexual and reproductive health in rural northern Tanzania. Culture, Health and Sexuality, 17(6): 718-732.
- World Health Organization 2000. The content of young people's sexual relations. *Reproductive Health Resources*, 53: 2-4.
- Zuma K, Mzolo T, Makonko E 2011. Determinants of age at sexual debut and associated risks among South African youths. African Journal of AIDS Research, 10(3): 189-194.
- Zuma K, Setswe G, Ketye T, Mzolo T, Rehle T, Mbelle N 2010. Age at sexual debut: A determinant of multiple partnership among South African youth. African Journal of Reproductive Health, 14(1): 47-54.

Paper received for publication on June 2016 Paper accepted for publication on August 2016