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ORIGINAL PAPER

Sexual Coercion Among Students at the University of Cape Coast, Ghana

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Published online: 11 January 2017

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Abstract Sexual coercion refers to strategies that result in an individual engaging in sexual activity against his or her will. Ecological factors influence the way sexual interactions occur; however, the relationship between these factors and sexual coercion has not been explored among university students in Ghana. The purpose of this study was to examine sexual coercion among university students in Ghana by specifically examining individual-level factors (age, gender, sexual debut, age differential with first partner, being in an intimate relationship, history of abortion, and past experiences with transactional sex) and the experience of forced and coerced sex. Residential students at the University of Cape Coast were invited to participate and completed a survey on a tablet computer. Questions included demographics; sexual and reproductive health experiences and knowledge; and attitudes and experiences with abortion. Bivariate and multivariate analyses were used to examine individual-level factors associated with experiences of sexual coercion and forced sex. There were 480 females and 556 males that completed the survey; 26.3 and 16.4% reported having had intercourse either because they were forced or coerced, or when they were "very unwilling". These students were more likely to be female (OR 3.5), to have had an abortion (OR 2.9), and to have engaged in transactional sex (OR 1.9). Many University of Cape Coast students are experiencing forced or coerced sex. Programs targeting both female and male students as both

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victims and perpetrators of sexual violence in this population are sorely needed. Primary prevention of sexual violence is one promising field.

Keywords Sexual coercion · Forced sex · Ghana · University students

Introduction

Sexual violence is a global public health problem affecting individuals around the world (National Sexual Violence Resource Center 2004). Current estimates suggest that nearly one in four women may experience sexual violence by an intimate partner (Jeweks et al. 2002) and almost half of all women in Africa will experience either intimate partner violence or non-partner sexual violence during their lifetime (García-Moreno 2013). Sexual violence is defined as "any sexual act, attempts to obtain a sexual act, or acts to traffic for sexual purposes, directed against a person using coercion, harassment or advances made by any person regardless of their relationships to the victim, in any setting..." (National Sexual Violence Resource Center 2004; p. 4).

Two common tactics used by perpetrators are coercion and force. Sexual coercion refers to an array of strategies such as threats of violence, verbal threats and insistence, deception, or economic conditions that leave an individual with a lack of an ability to choose not to engage in sex, while forced sex involves the use of physical force and violence (Heise et al. 1995). Both sexual coercion and forced sex result in sexual activity against an individual's will. The reported prevalence of coerced first intercourse varies from less than 10% in studies conducted in various countries (Abma et al. 1998; Dickson et al. 1998; Ajuwon et al. 2001a, b; Mulugeta et al. 1998) to 20 to 40% of all women in sub-Saharan Africa (Glover et al. 2003; Somse et al. 1993; Buga et al. 1996; Matasha et al. 1998; Rwenge 2000; Caceres et al. 2000).

Beyond prevalence estimates, qualitative work from sub-Saharan Africa has reinforced the important role that coercion plays in persuading young women to engage in sexual intercourse (Ajuwon et al. 2001a, b; Hulton et al. 2000; Wood et al. 1998). In Ghana, it has been reported that for almost 25% of sexually experienced females in three urban centers, their first sexual experienced was either forced or coerced (Glover et al. 2003).

Ensuring a university education for women is one way to reduce poverty, improve health, and allow female students to achieve their full potential. Universities have a responsibility to provide and maintain a safe environment for all who study and work on campus (Singh et al. 2015). However, research has documented that gender-based violence is widespread on many university campuses, in diverse settings worldwide (Black et al. 2011; Fisher et al. 2000). For example, in the United States, it is estimated that one in five students will experience a sexual assault during their college career, and rates are higher for women than men (Black et al. 2011). Experiencing and fearing violence restricts female students' movements and activities while enrolled in university, and can limit their ability to participate fully (Singh et al. 2015). While documented in diverse settings around the world, forced sexual activity among university students



in low-income settings is not as well understood as sexual violence among university students in high-income settings, due in part to limited awareness, stigma, and both the ethical and methodological challenges associated with researching sexual coercion (National Sexual Violence Resource Center 2004). What little research has been done disproportionately represents high-income settings (Erulkar 2004), and males' experience with sexual coercion have been all but ignored (Jejeebhoy and Bott 2003). The experiences of university students in low- and middle- income countries, including Ghana, are, therefore, almost completely absent from the literature.

Gender Scripts

Work throughout sub-Saharan Africa has consistently demonstrated that gender scripts, or sociocultural factors related to gender, influence the way interactions regarding sexual activity occur, often resulting in gender roles that disenfranchise females and make them vulnerable to sexual violence (Kalichman et al. 2005; Farmer et al. 1996; Jewkes et al. 2001a, b; Blanc 2001; Rao Gupta and Weiss 1993; Havanon 1996; Barnett and Stein 1998). In post-colonial Africa, while there have been many socio-political and economic changes since the end of colonial rule, many of the social norms around sexual behaviors, such as courtship and marriage, sexual freedoms and family, remain largely conventional (Norman et al. 2016). For instance, past research in Africa has indicated that: (1) there is poor communication regarding sexual matters in adolescent relationships (Moore et al. 2007) which results in males making assumptions about females' sexual desires; (2) males make assumptions about a female's sexuality that excuses sexual violence (Moore et al. 2007); (3) females in intimate relationships are more likely to experience sexual coercion (Bingheimer and Reed 2014); and (4) poor or nonexistent social and legal penalties result in sexual coercion and forced sex occurring without serious consequences for the perpetrator. Although data from the West African nation of Ghana are limited, there are indications that premarital sex is common, as is coercion. Researchers have suggested that Ghanaian women—especially young women—are expected to behave passively, which inhibits their ability to negotiate condom usage (Osei et al. 2014; Darteh et al. 2014) and sexual intercourse (Darteh et al. 2014). Further, studies have reported that many women in Ghana are socialized to be submissive when it comes to sexual activity, as well as to avoid behavior indicating they might be interested in sex (Archampong and Baidoo 2011). In such a setting, men who have been accused of forcing sex, or raping, women have been acquitted on the grounds that the women did not resist strongly enough (Archampong and Baidoo 2011), contributing to a culture where sexual violence is tacitly permitted.

Ecological models recognize that individuals are shaped by the interplay of a number of factors including macro-level factors as well as individual-level factors (Bronfenbrenner 1979). The *World Report on Violence and Health* (Krug et al. 2002) proposes using a four-level ecological model to discuss and evaluate sexual violence; individual-level influences, interpersonal relationship-level influences, community-level influences, and societal-level influences. Individual-level factors



are the inner part of this model and are characteristics of an individual, such as biological characteristics and personal history, that make them susceptible to being a victim or perpetrator (Centers for Disease Control and Prevention 2004). Individual-level factors such as age at first intercourse (Moore et al. 2007; Jewkes et al. 2002), age differential with partner (Moore et al. 2007), being in an intimate partner relationship (Blanc et al. 2013; Van Decraen et al. 2012), and past experiences with traumatic sexual experiences have been noted to impact sexual coercion in sub-Saharan Africa (Andersson et al. 2004). For instance, previous work has suggested that Ghanaian women who have their sexual debut before the age of 15 are more likely to report their first sexual experience as having been coerced, and those who are educated and employed are less likely to report having had coerced intercourse (Tenkorang and Owusu 2013). In other settings, it is known that university students are among the highest risk groups for both sexual violence and dating violence victimization (Hines and Palm Reed 2015). However, among university students in Ghana, individual-level risk factors for sexual coercion have not been explored.

Associations with Sexual Coercion

The experience of sexual coercion and forced sex has been associated with many negative outcomes, including physical, mental health, and reproductive and sexual health morbidity (Garcia-Moreno et al. 2006). For example, an association between coerced first sex and unwanted pregnancy has been found in studies in the United States (Brown and Eisenberg 1995; Cokkinides et al. 1999; Curry et al. 1998; Dietz et al. 1999; Gazmararian et al. 1995; Boyer and Fine 1992; Butler and Burton 1990; Roosa et al. 1997; Stewart and Cecutti 1993), India (Martin et al. 1999) and sub-Saharan Africa (Jewkes et al. 2001a, b; Hof and Richters 1999). Also, studies have established associations between coercion and other negative reproductive health outcomes such as sexual risk raking (i.e., multiple sexual partners, unprotected sex), abortion (Garcia-Moreno et al. 2006; Dartnall and Jewkes 2013), reduced contraceptive use (Gubhaju 2002), gynecological problems including vaginal bleeding, urinary tract infections and pelvic inflammatory disease (Blum and Mmari 2004), and the risk of contracting sexually transmitted infections (STIs) (Manlove et al. 2001) including HIV (Luke and Kurz 2002; Varga 2003) in sub-Saharan Africa. While abortion is not necessarily a negative outcome, and may be an indicator of sexual autonomy (Rominski et al. 2014), given the high rate of unsafe abortion low-income settings, for many women, the experience of inducing an abortion opens her up to a host of negative health outcomes, including death (Say et al. 2014). Further, while having multiple sexual partners is not in and of itself a negative outcome, it does increase the risk of contracting sexually transmitted infections (Mah and Halperin 2008).

Purpose

Sexual coercion and forced sex are related to a number of intertwining ecological factors and can have dire health consequences. Despite the research done thus far,



there is a gap in the literature on how university students in sub-Saharan Africa are impacted by sexual coercion and forced sex and how factors at multiple levels influence their experiences. Based on the ecological model and the extant literature about individual-level factors, this study examined the experiences of students at the University of Cape Coast in Ghana regarding sexual coercion with an emphasis on the association with individual-level factors such as age, gender, sexual debut, age differential with first partner, current intimate partner relationship, and past experiences with sexual events specifically, abortion and transactional sex.

Data and Methods

Setting

Data for the study were collected from January to March, 2015 from a sample of resident students at the University of Cape Coast (UCC) in Ghana, one of the twelve public universities in Ghana. UCC has a total population of about 24, 000 pursuing various academic programs. The University has eight official halls of residence and hostels, which accommodate more than 6000 residential students. The University accommodates all first year students in the traditional halls of residence, and continuing students make their own arrangements for accommodation. Prior to beginning study procedures, the survey received ethical clearance from the Institutional Review Board of the University of Michigan and was approved by the University of Cape Coast.

Sampling

A quota was assigned to each hall based on the population of each hall of residence. A list of room numbers for each hall was generated, and rooms to include in the survey were randomly selected via a random number generator. Five research assistants, who were Ghanaians fulfilling their national service, were trained in the objectives of the survey. The research assistants approached each randomly selected room and explained the study to the first resident they encountered. Those students who agreed to participate were handed the tablets hosting the survey. The research assistants waited outside the room of each participant so they were available to the participants should any questions arise, but to ensure privacy, were not in the participants' rooms while they were completing the survey. The participants were ensured privacy by being the only person in their room while taking the study. Further, the research assistants could not view the responses of the participants once the participant completed the survey and no identifying information was collected. All participation was completely anonymous, and students could terminate their participation at any time without the research assistants being made aware of this. All participants were provided with an informational sheet describing the study, and providing contact for both the investigators and service providers on campus (e.g., campus sexual assault center) where they could seek services if they needed to. Each survey took about 30 min.



Measures

The questionnaire was developed by the international research team, made up of researchers from the United States and Ghana, and pilot tested among similar-aged students who studied at a different tertiary-level institution located in the same city in Ghana. Slight modifications were made to the survey based on these pilot tests. The survey was self-administered on tablet computers using DroidSurvey software.

The instrument was designed to understand sexual and reproductive health among university students broadly and therefore had four sections: background (12 questions), knowledge and attitude of sexual and reproductive health (37 questions), sexual and reproductive health risk perception (5 questions), and abortion experience and attitudes (33 questions). To address the purpose of this study, we will focus specifically on sexual coercion and forced sex. The sexual coercion and forced sex questions were part of the knowledge and attitudes of sexual and reproductive health section.

The demographic section included questions about age in years, gender, year and field of study, religion, and ethnicity. Following the demographic questions, participants were asked if they had ever had a boyfriend/girlfriend and if so, at what age did they have their first boyfriend/girlfriend. They were also asked if they currently had a boyfriend/girlfriend.

Participants were asked if they had ever had sexual intercourse. Those who answered yes were asked a series of questions about their sexual debut, as well as their most recent episode of sexual intercourse. Participants were also asked how willing they were to have intercourse with three response options; very willing, somewhat willing, or not at all willing. Participants were further asked whether they used a condom or any other form of contraception during both first and most recent intercourse. Those who answered yes to another form of contraception were asked which form, and those who answered they did not use another form were asked for what reason(s). We subtracted the reported age of the participant when they first had sex from the age of their partner to generate a variable of the age differential between the participant and their partner at first sex.

Similar to Bingheimer and Reed (2014), later in the survey, all participants, regardless of if they had responded that they had had sexual intercourse, were asked, "Has anyone ever physically forced, hurt or threatened you into having sexual intercourse?" Students who answered in the affirmative were asked the relationship of this person to them.

Participants were asked if they, or a female partner for males, had ever had an abortion. Participants were also asked if they had "ever received anything (money, gifts, favor, etc.) in exchange for being in a relationship or having sexual intercourse?" Those who answered in the affirmative were asked what they received.

Participants who answered they had been forced, hurt or threatened into having sex, as well as those who reported they were "very unwilling" to have sex on either their first or most recent time having sex were considered to ever have engaged in sexual intercourse against their will. This was used as the dichotomous outcome variable for multivariate analysis.



Statistical Analysis

Data were analyzed using Stata 10.0 (Stata Corp., College Station, TX). Descriptive statistics were calculated using frequency, mean, and standard deviation. To assess differences between male and female participants, crosstabs with Chi Square analysis to determine bivariate association was used, except where the cell size was too small (< 5), in which case Fisher's exact test was used. A p value of .05 was taken as statistically significant. Those variables found to be significantly associated with ever having had coerced intercourse in bivariate analysis were entered into a multivariate logistic regression model. Those variables which remained significantly associated were included in the final model and results are presented as odds ratios.

Results

Demographic Characteristics

A total of 480 females and 556 males completed the survey. The participants had a mean age of 21.1 years (SD 2.2 years) and the majority (76.0% females, 68.2% males) reported having a boyfriend/girlfriend at some time in their lives. The vast majority of the participants identified with a Christian religion, with Pentecostal/ Charismatic having the largest proportion (39%).

The majority of the female participants (n = 260, 54.2%) reported currently having a boyfriend and 124 of the female participants (25.8%) reported having had sexual intercourse. Fewer males (38.5%) currently had a girlfriend, but more (n = 242, 44.2%) reported having had sexual intercourse.

Of those who reported having had sexual intercourse, more males than females reported they were "very willing" the first time they had intercourse. Only 18% of females were very willing, and almost 42% reported they were "not at all willing". Further information on the participants can be found in Table 1.

Almost 10% of males and more than 20% of females reported having been forced to have sexual intercourse at some time in their lives. Significantly more females than males reported they had ever been forced into sex (Table 2).

The person who initiated this forced sex was almost always someone the participant knew, and was a stranger in less than 2% of the cases for males and less than 10% of the cases for females. For more than half the females and 40% of the males, the person who forced them to have sex was a friend or acquaintance, while a boyfriend/girlfriend was the perpetrator for 45.5% of the males and almost 17% of the females.

Bivariate Analysis

All participants were asked, "Has anyone ever physically forced, hurt or threatened you into having sexual intercourse?" regardless of how they answered the question about if they had ever had sexual intercourse. In a cross-tabs analysis, 13 participants who answered that they had not heard of sexual intercourse reported



Table 1 Participant characteristics and bivariate association with ever being forced or coerced into sex

Characteristic	Males $(n = 556)$	Females $(n = 480)$
Age*		
17–18	2.0	4.8
19–20	36.5	47.5
21–22	40.1	33.1
23–24	15.1	9.0
25+	5.2	4.6
Year in school		
First year	79.7	69.6
Second year	11.0	18.3
Third year	4.0	7.5
Fourth year or higher	5.4	4.4
Religion***		
Pentecostal/charismatic	35.3	39
Methodist	18.0	14.6
Catholic	13.5	13.8
Other Christian	15.1	12.1
Presbyterian	9.7	13.3
Other	1.8	1.3
Marital status***		
Never-married	93.9	95.8
Ever-married	6.1	4.2
Ever had boy/girlfriend***		
Yes	68.2	76
No	31.5	23.3
Currently have boy/girlfriend***		
Yes	38.5	54.2
No	29.7	22.3
Heard of sexual intercourse***		
Yes	85.4	81.0
No	13.8	18.8
Sexually experienced		
Yes	44.2	25.8
No	41.2	54.6
Rather not say	14.6	19.6
First time having $sex^{***}(n = 242 \text{ males}; 117 \text{ fema.})$	les)	
Not at all willing	14.5	41.9
Somewhat willing	37.2	40.2
Very willing	48.3	17.9
Ever forced to have sex	9.8	21.0

^{*} p value > .1; *** p value > .001



Table 2 Participants who have experienced forced sex		Males (n = 556)	Females (n = 480)
	Forced into having sex***	9.9	21.0
	Perpetrator**		
	Friend/acquaintance	40	54.5
	Boyfriend/girlfriend	45.5	16.8
	Stranger	1.8	9.9
	Teacher/lecturer	3.6	5.9
** <i>p</i> value >.05; *** <i>p</i> value >.001 Associations are within group differences	Family member	0	5.9
	Rather not say	7.3	1.0

they had been forced to have sexual intercourse. Further, 63 who answered they had never had sexual intercourse and 20 who said they would rather not say if they had ever had sexual intercourse answered that they had been forced to have sexual intercourse. These cross-tabs can be seen in Table 3.

Similarly, when looked at together, 25 participants reported that the first time they had sexual intercourse, they were "not at all willing", and yet they answered no when asked, "Has anyone ever physically forced, hurt or threatened you into having sexual intercourse?" Cumulatively, 126 females (26.3%) and 91 males (16.4%) have had sex either because they were forced or coerced, or when they were "very unwilling" (Table 4).

Multivariate Analysis

When entered into a multivariate regression model, several factors continued to be associated with the outcome variable, ever being forced or coerced into having

Table 3 Cross Tabulation of coercion against ever had sexual intercourse and willingness of first sex

	Ever physically forced, hurt, or threatened into having intercourse NO	Ever physically forced, hurt, or threatened into having intercourse YES
Have you ever had sexual intercourse		
No	427	63
Yes	292	74
Rather not say	149	20
Thinking about the first time you had sexual intercourse, would you say you were		
Not at all willing	53	30
Somewhat willing	119	18
Very willing	112	26



Characteristic	Males			Females			
	Never coerced (total n = 465)	Coerced (total n = 91)	p value	Never coerced (total n = 354)	Coerced (total n = 126)	p value	
1st sex before age 15	19 (4.1%)	6 (6.6%)	.529	23 (6.5%)	2 (1.6%)	.174	
1st partner >4 years older	63 (13.5%)	6 (6.6%)	.047	33 (9.3%)	32 (2.5%)	<.001	
Ever terminated a pregnancy	17 (3.7%)	17 (18.7%)	<.001	8 (2.3%)	12 (9.5%)	.022	

Table 4 Characteristics of respondents by if they were ever forced, coerced, or when they were very unwilling

sexual intercourse. These factors were: being female, reporting ever having participated in an abortion (for females having had an abortion and for males having a female partner who had an abortion) and reporting ever being given gifts or money in exchange for sex. The other variables which were associated in bivariate analysis (age, 1st partner being more than 4 years older and ever having a boy/girlfriend) failed to remain significantly associated (Table 5).

Females were over three times as likely as their male counterparts to report ever experiencing forced or coerced sex. Those who had an abortion themselves, or participated in an abortion, were almost three times as likely to report experiencing forced or coerced sex, and those who had engaged in transactional sex were almost twice as likely.

Discussion

In this study, the experience of sexual violence amongst residential students at the University of Cape Coast was investigated, focusing on individual-level factors. This is not to suggest that there are not many factors at different levels which are

Table 5	Multivariate	logistic	regreccion :	with having	evnerience	coerced	sev as outo	ome variable
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	Bivariate OR (95% CI)	Multivariate OR (95% CI)
Age > 22 years	1.7 (1.2–2.3)	_
1st partner > 4 years older	3.7 (2.0-6.5)	
Ever had boy/girlfriend	2.6 (1.7-3.9)	
Female	1.8 (1.3–2.5)	3.4 (2.1-5.5)***
Having participated in an abortion	4.9 (2.8–8.6)	2.9 (1.5-5.7)**
Having engaged in transactional sex	1.8 (1.1–2.9)	1.9 (1.2–3.2)*

^{*} p < .05; ** p < .01; *** p < .001



important to investigate in order to understand and prevent sexual violence in a given community, such as the peer and community-level contributors to sexual violence. We fully recognize the necessity of investigating each level of an ecological model in order to improve sexual violence prevention (Casey and Lindhorst 2009). Given how little is known about sexual violence amongst university students in Ghana, this preliminary investigation into the individual-level factors associated with sexual violence victimization was designed as a first step to investigate the ecological model.

While it is often public opinion that sex between young, unmarried people is consensual (Erulkar 2004), our study finds that for a number of students at the University of Cape Coast, this is not the case. More than 26% of females and 16% of males have had an experience of sexual intercourse when they felt they were forced or coerced, or when they were not at all willing. The perpetrator of this nonconsensual sex was, for the most part, someone the person knew; their boyfriend/girlfriend, an acquaintance, or a family member. For almost 10% of the females who experienced forced or coerced sex, it was with a stranger. These findings are similar to findings from other studies in Ghana where the perpetrator of forced or coerced sex is most likely to be a boyfriend, husband, or "family friend"; someone a woman knows (Adjei et al. 2015). These findings are also similar to findings from other countries. The World Health Organization multi-country study on domestic violence and violence against women (2005) found that rates of forced first sex ranged from .4-30.0% and were often related to early marriage (World Health Organization 2005). The rates of sexual coercion and forced sex reported here are slightly higher than those described in a study of 38 universities across the globe, which found 2.3% of female participants reported forced sex and 24.5% reported verbal sexual coercion in their dating relationships (Hines 2007).

This research also underscores the need to see males as potential victims of sexual coercion: 91 out of 465 men in our sample (16.4%) reported being forced or coerced into intercourse at some point in their lives, although it is not known from these data whether this coercion was in the context of a heterosexual relationship. This finding is also consistent with Hines (2007) multi-national university study which found that men also experience forced sex (2.8%) and sexual coercion (22.0%). While our study supports earlier findings (Ohene et al. 2015) which indicate Ghanaian women are at a higher risk of sexual violence than men, interventions to address sexual violence need to include men as well, validating their experiences in a setting where the current law does not allow men to be identified as victims of rape, and where male homosexuality is against the law (Norman et al. 2016).

Under Ghana's penal code, rape, attempted rape, and other nonconsensual sex crimes are punishable by imprisonment. In practice, however, perpetrators of rape or coercion are rarely punished, and it is the burden of the victim to demonstrate a lack of consent by, among other things, showing scratches or bites on the perpetrator, providing witnesses who heard the victim screaming and protesting, and immediate reporting of the act (Archampong and Baidoo 2011). Further, only females can be raped, according to the current law. There is a general lack of reporting of sexual violence among victims in Ghana. Among children who had been subjected to



sexual abuse, families were often unwilling to prosecute the perpetrator, especially when the rape ended in a pregnancy, as the wellbeing of the unborn child was considered a higher priority than that of the victim (Morhe and Morhe 2013). These structural factors reinforce the need to continue to focus on broader sociocultural factors related to sexual violence.

As has been found in other settings, being the victim of coerced, forced, or unwanted sex is associated with experiencing other negative health consequences. One of these health consequences that was specifically related to our findings here are unwanted pregnancy (Silverman et al. 2007; Pallitto et al. 2005) and abortion (Hall et al.,2014). Other studies have corroborated these results by finding that coercion, rape, and sexual assault have been the cause of pregnancy and a subsequent abortion (Hall et al. 2014). However, due to the nature of these data, causal pathways between forced and coerced sex and abortion cannot be discerned and this remains an important area of future investigation.

Being involved in transactional sex has been shown to reduce women's ability to negotiate condom use and to be empowered in other ways to control her sexual health (Ankomah 1999). However, the subject of transactional sex would benefit from more intensive research as previous work has shown that it is not always a negative for the woman. While previous work has conceptualized transactional sex as women being forced into these relationships in order to survive, some more recent work has demonstrated that transactional sex is common not only among the poorest women, but among the wealthier strata in societies. Rather than relying on favors and income generated from sexual relationships, women are able to secure luxuries rather than necessities from these relationships (Leclerc-Madlala 2003). Beyond simple consumer goods, these relationships also allow women to make social contacts which enable them to secure economic independence (Ankomah 1999). Transactional sex has been described as an assertion of power, rather than an abdication of power, in societies where female sexuality is highly regarded and as a socially acceptable way for Ghanaian women to "improve their status" (Baba-Djara et al. 2013). In this study, however, transactional and forced or coerced sex are found to be related. Similarly to the experience of abortion, the nature of the relationship between transactional sex and forced or coerced sex are related cannot be determined by the current study, and for this reason, both longitudinal and qualitative research is important.

While programs to improve sexual and reproductive health targeted to young people often stress the importance of abstinence until marriage, these programs have been shown to be ineffective (Stanger-Hall and Hall 2011), and they completely overlook those individuals who are not willingly having sex. Programs which only teach abstinence are not responding to the realities for many of these participants and seemingly overlook young people's experiences with violence and coerced sex (Erulkar 2004). Programs which tell young women to refuse men's advances as their only way to protect themselves against unplanned and unwanted pregnancies, as well as STIs, ignore the realities for many of these young women. Youth in Ghana need unbiased education about how to protect themselves from STIs as well as unwanted pregnancies within the context of a values-based primary prevention program. These youth need to be made aware of their fundamental human rights as



it relates to sexuality and reproductive health. Further, programs which are explicitly directed at reducing sexual violence are sorely needed for this population, including primary prevention strategies. Primary prevention refers to educating everyone about sexual violence including cultural factors, risk factors, and postassault care in an effort to educate them before they experience an episode of sexual violence (Centers for Disease Control and Prevention 2004). These programs are especially important in contexts such as Ghana, where violence is deeply entrenched in tradition and culture and serves to keep women subservient and compliant (Amoakohene 2004) creating and perpetuating a culture which is supportive of sexual violence. Primary prevention programs have proliferated among university campuses in the United States and have demonstrated efficacy in addressing rapesupportive beliefs and attitudes among participants (Anderson and Whiston 2005; Brecklin and Forde 2001) and increasing awareness of sexual violence. However, since sexual violence is determined by broader societal- and community-level factors, cultural adaptations are needed in order to increase the applicability to the university context in Ghana and other regions of the world. For example, in places where it is socially unacceptable for a woman to explicitly state she wants to have sexual intercourse, gaining consent is more nuanced than some programs developed for North American college students make it out to be. Moreover, recent calls to action have focused on expanding primary prevention efforts to encompass the broader ecological framework by also addressing peer and community contexts (Casey and Lindhorst 2009). It is imperative that processes are developed to expand primary prevention programs from high-income countries to low- and middleincome countries.

Limitations

This study has some important limitations. First, as with any survey, it is based on self-report. We have no way to verify the veracity of the responses. While selfadministered computer-based surveys are thought to elicit more truthful answers than other forms of survey administration (Hewett et al. 2004), the reported figures are self-reported and must be interpreted with caution. Some students who reported they had never heard of sexual intercourse, as well as some who said they had never had sexual intercourse, reported they had been forced or coerced into sexual intercourse. This could indicate a less than perfect understanding of the questions, questions which were not worded in a manner to elicit consistent results, or a reluctance of participants to answer questions about their own sexuality in a forthright manner. However, past research has cautioned that females who report they are sexually inexperienced are also at risk of forced and coerced sex and thus purposefully omitting them from studies may result in misleading results (Bingheimer and Reed 2014). Further, sexual coercion is a culturally sensitive topic, and given the absence of well-established and validated measures of this phenomenon in Ghana, what constitutes sexually coercive behavior is difficult to measure. In settings where intercourse is viewed as the prerogative of a male and the duty of the female, the line between normal and coercive sexual relations may be hard to define (Koenig et al. 2004). In addition, no work to date has attempted to



quantify the potential for coerced male homosexual sex in Ghana, especially between older men and young boys, an extremely taboo subject that—if better understood—could shed light on alternative ways that males can be sexually victimized. Qualitative work would be helpful to delve more deeply into these issues. It was also assumed in the survey that women were victimized by male partners, which may or may not be true. It will be important in future work to allow for all genders, including those who identify as transgendered, to be both victims and perpetrators in order to gain a deeper understanding of this topic in this setting. Furthermore, the survey was developed to measure many facets of these participants' sexual and reproductive health and not specifically as a study of sexual violence. While we did ask multiple questions about sexual violence in order to offer participants' more than one opportunity to report these experiences as is standard in the field of sexual violence to maximize reporting, the number of participants who reported experiencing sexual coercion may be an underestimate. It is also important to note that these participants are all university students, by definition a privileged group. These findings are likely not generalizable to the population of Ghana as a whole. Finally, there were potential individual-level factors which were not measured in this study such as a history of child sexual abuse, gender identity, and sexual orientation. It has also been demonstrated that individuals who have experienced forced or coerced sex are at higher risk of STIs including HIV, multiple and high-risk sex partners, and no condom use (Stockman et al. 2013). Thus, future work examining the full range of ecological factors that might be associated with sexual coercion and forced sex among university students in Ghana, including structural factors at the University- and country-level, is needed.

Conclusion

In this study of 1042 University of Cape Coast students, 26.3% of females and 16.4% of males reported ever having been forced or coerced into, or being "very unwilling" to have, sexual intercourse. Those students who reported experiencing forced or coerced sex were more likely to be female, have had an abortion, and to have engaged in transactional sex. Further work is needed to investigate this phenomenon further and to develop culturally appropriate primary prevention interventions to prevent sexual coercion among this population. These primary prevention programs need to target all genders, of all ages, as both victims and perpetrators. In addition to expanding the law to include men as potential victims of rape, reducing the burden of proof for rape may encourage victims to come forward. Changing the current burden of proof, and ensuring that victims of rape are believed, would be an important step to changing the culture of sexual violence in Ghana. In Ghana, sexual violence is currently considered a "mundanacity", an almost normal, everyday, and ubiquitous phenomenon and men are socialized to take sex when and how they want it, without the explicit consent of their partner (Amoakohene 2004). Until these programs and changes in the law address



nonconsensual sex, it will be difficult to change society's perception that the victim is at fault for these experiences.

Compliance with Ethical Standards

All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments. The survey and all study procedures received ethical clearance from the Institutional Review Board of the University of Michigan (HUM00092213) and was approved by the University of Cape Coast.

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