ORIGINAL PAPER

Coerced First Sexual Intercourse Among Women in Ghana: Evidence from the Demographic and Health Survey

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Abstract   Using the 2008 Demographic and Health Survey, and applying logit and log-normal hazard models, this study examined the determinants and timing of coerced first sexual intercourse among women aged 15–49 years in Ghana. Results indicate statistically significant relationships between demographic and sociocultural variables on the likelihood and timing of coerced first sexual intercourse among Ghanaian women. Married women were significantly less likely to report coercion at first sex, but had a faster timing to coerced first sex compared to the never married. Older women were significantly less likely to report coerced first sex, compared to younger women. Similarly, women who had their sexual debut at younger ages were more likely to say they were forced, compared to those who experiencing theirs at older ages. While Ewe and Ga Adangbe women were more likely to report coerced first sex, compared to Akans, traditionalists were less likely to do so, compared to Christians. This study highlights the need for critical appraisal of the cultural interpretation of violence and for future studies to explore the causes of this phenomenon.

Keywords   Ghana · First sexual intercourse · Coercion · Log-normal models · Demographic and Health Survey

Introduction

First sexual intercourse marks an important transition to adulthood, especially when experienced outside of marriage. The age at which people experience first sex is more crucial given that early sex is linked to subsequent risk behaviors such as

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nonuse of condoms and multiple sexual partnerships with implications for HIV transmission (see Odu et al. 2008; Hulton et al. 2000; Zulu et al. 2002; Erulkar 2004). While there is evidence of risky consensual sex at the first experience, anecdotal evidence, in particular from qualitative studies, paints a gloomy picture of an increasing trend in coerced or unwanted sex, especially among females (Jeejeebhoy and Bott 2003; Erulkar 2004; Koenig et al. 2004; Peterman et al. 2011). In Uganda, for instance Geary et al. (2008) report that females experience their first sexual encounter not only out of curiosity and affection for their respective male partners, but also out of coercion including physical force, verbal pressure and sex as obligation for marriage. Similarly, in Kenya, Erulkar (2004) concludes that nonconsensual sex forms part of the early sexual experiences of women but is often overlooked and sometimes considered a normal and forgivable occurrence. The situation is not very different in Ghana where nearly 25 % of sexually experienced females in Takoradi, Sunyani and Tamale, three of the biggest cities in the country, reported that their first sexual experience involved rape or force, with others mentioning deceit and verbal coercion as reasons for experiencing sexual intercourse the first time (Glover et al. 2003).

Although, the evidence points to an increasing trend in coercion and violence at the first sexual experience for females in developing countries and sub-Saharan Africa to be specific, not many studies have explored this phenomenon. As argued by Jeejeebhoy and Bott (2003), available evidence on nonconsensual and coerced sexual intercourse is from some few countries in specific regions of Africa with majority of these studies from South Africa, and those bedeviled with political and ethnic conflicts. This study contributes to the scant but growing body of literature by examining the determinants and timing of coerced first sexual intercourse among Ghanaian women using the 2008 Ghana Demographic and Health Survey.

Background

Defining sexual coercion irrespective of the timing of the occurrence may be challenging given the diverse circumstances surrounding such acts, and the fact that they are heavily influenced by cultural and social norms (Geary et al. 2008; Moore et al. 2007; Jeejeebhoy and Bott 2003). As argued by Moore et al. (2007), sexual coercion may range from sexual intercourse that is nonconsensual to sex that is consensual but unwanted. The experiences of women in sub-Saharan Africa regarding coerced sexual intercourse are varied. Data from Ghana, Nigeria, Uganda and South Africa reflect variations in coercive sexual behaviors including physical force (rape) or threatening to force someone into sex, verbal abuse, enticing or deceiving someone into having sex and sexual trafficking (Glover et al. 2003; Ajuwon et al. 2001; Geary et al. 2008). In all these, however, the victims are denied the opportunity to make choices or pursue options devoid of physical and social consequences (see Heise et al. 1999; Jeejeebhoy and Bott 2003). Women who are victims of sexual violence or coercion have usually cited the perpetrators as members with whom they are familiar or share some level of intimacy, including husbands, boyfriends, peers and other members of society considered authority

figures, such as religious leaders, teachers, employers and family members (Santhya et al. 2007; Jeejebhoy and Bott 2003; Borwankar et al. 2008).

There is substantial evidence in sub-Saharan Africa and other low-income settings that sexual coercion and violence are rife among married couples with mostly females as the victims (Glover et al. 2003; Khawaja and Hammoury 2008; Adhikari and Tamang 2010; Puri et al. 2011). The irony, however, is that, in spite of their vulnerability to violence and coercion, married women have little protection from the law (Stafford 2008). Ghana passed its long-awaited Domestic Violence Act (DV Act 732) on February 22, 2007. Although a step in the right direction, especially toward reducing physical and sexual abuse against women, the lawmakers exempted marital rape with the explanation that criminalizing forced sex within marriage contravenes Ghanaian culture and customs (Stafford 2008). Actually, demonstrations had gone on in Ghana, particularly among religious groups, against the mere conceptualization of rape within marriage.

Sexual intercourse, either experienced for the first time or multiple times under physical force or any form of coercion, can be traumatic and may have dire consequences on both the reproductive and psychological health of the victims (Heise et al. 1999; Atherton and Metcalf 2004; Khawaja and Hammoury 2008). A study of adolescent girls in Uganda indicates that respondents who reported coercion at their first sexual experience were significantly less likely to engage in safer sexual behaviors (using a condom during sexual intercourse and sticking to a single sexual partner) and more likely to have reported at least one genital tract infection symptom (see Koenig et al. 2004). Also, victims of sexual coercion are known to develop emotional and psychological problems including depression, stress, feelings of worthlessness and thoughts of suicide (Boyer and Fine 1992; Heise et al. 1999; Khawaja and Hammoury 2008; Atherton and Metcalf 2004).

The factors that predispose women to sexual coercion and violence operate at both the individual and structural levels. At the structural or institutional level, the social and cultural environment in most sub-Saharan African countries, including Ghana, makes women extremely vulnerable to coercion during sexual intercourse. These include gender inequity, which is rooted in the traditions and customs of most African people, and is reflected in how women are socialized and expected to behave in sexual relationships (Bowman 2003; Amoakohene 2004). Women are often socialized to believe in the superiority of men and accept violence as a means of resolving conflicts within relationships (UNICEF 2000; Brent et al. 2000; Jeejebhoy and Bott 2003; Borwankar et al. 2008). The gender inequity and power imbalances that characterize most sexual relationships are inextricably linked to the limited educational and training opportunities for women, culminating in their continuous dependence on men (UNICEF 2000; Brent et al. 2000).

Other individual level factors identified as correlates of sexual coercion among women include age, educational attainment, age at sexual initiation, marital status, ethnicity, place and region of residence (Peterman et al. 2011; Santhya et al. 2007; Erulkar 2004). For instance, past research has found higher proportions of coerced sex among women in urban areas compared to rural areas (Moore et al. 2007). There is evidence that early sexual encounters at younger ages are usually forced, making younger women more vulnerable to such acts than older women (Koenig et al. 2004;

Santhya et al. 2007). In particular, Geary et al. (2008) report that Ghanaian females who had their sexual debut earlier than 12 years were significantly more likely to say it was forced compared to those who experienced their sexual debut between the ages of 12–14 years. Recent evidence also shows that sexual coercion is not limited to the never married and that increasingly, married women are faced with such problems as well (African Population and Health Research Center (APHRC) 2010; Chigbu et al. 2010; Santhya et al. 2007). Yet the evidence in Malawi shows that married women were less likely to report coerced first sex at union (Moore et al. 2007). The extant literature indicates strong socioeconomic and cultural influences on sexual experience and safer sexual behaviors (Tenkorang et al. 2009; Kongnyuy and Wiysonge 2007; Ukwuani et al. 2003). For instance, Brent et al. (2000) found Ugandan women with secondary or higher levels of education had greater or equal influence over sex as their male partners. Women who are empowered (educated, wealthy and employed) have been found to be more assertive on their sexual and reproductive rights, and better at negotiating for safer sexual intercourse than their colleagues who are less empowered (Brent et al. 2000; Hallman 2004; Jukes et al. 2008). Consistent with this perspective, some studies have documented a negative relationship between SES and forced sex (see Adudans et al. 2011; Moore et al. 2007), although others report a positive relationship between the two variables (see Santhya et al. 2007). Regarding ethnicity and religion, we note that different norms govern the sexual conduct of the various ethnic and religious groups in Ghana (Gyimah et al. 2010; Tenkorang et al. 2011) and that sexual violence is rooted in the religious ethos and traditional values of some ethnic groups in Ghana. Thus, in line with previous research, we sought to investigate the correlates of sexual coercion or forced sex encountered at the first experience among women in Ghana. The study makes an important contribution by also examining the timing of coerced first sex as it has implications for policy directions.

Data and Methods

Data from the 2008 Ghana Demographic and Health Survey (GDHS) were used for this study. The GDHS is a nationally representative dataset administered by the Ghana Statistical Service and Macro and the fifth in such surveys of the Global Demographic and Health Surveys Program. The DHS provides high-quality quantitative data on domestic violence and quite recently has incorporated modules on the circumstances surrounding the first sexual experience of both men and women. The 2008 GDHS employed a two-staged stratified sample frame where systematic sampling with probability proportional to size was applied. Face-to-face interviews were conducted with 4,568 women aged 15–49 years. For the purposes of this study, however, the analytic sample was reduced to about 2,155 sexually active women.

Measures

Two major dependent variables that relate to coercion at the first sexual experience of respondents were employed and analyzed. First, respondents were asked 'The

first time you had sexual intercourse, would you say you had it because you wanted to, or because you were forced to have it against your will?' Response categories for this variable included 'Yes' and 'No.' Thus, women who reported that force had been used at the first sexual experience were classified as having had coerced sexual intercourse (see Koenig et al. 2004). The other dependent variable is a timing variable that asked 'How old were you the first time you were forced to have sexual intercourse or perform any other sexual acts?' Respondents provided their ages at first sexual intercourse in completed years. Those who had not experienced forced sex at the time of the survey were right-censored.

Independent variables included in the analysis were organized into demographic, economic and sociocultural variables. Demographic variables include age of respondents (measured in completed years), marital status coded as (never married = 0, married = 1, divorced/separated = 2) and age at first sexual intercourse, coded (15 years and below = 0, 16 years and above = 1, at union = 2). Socioeconomic variables include the educational background of respondents, coded (no education = 0, primary education = 1, secondary/higher education = 2), employment status, coded (not employed = 0, employed = 1), and wealth status, coded (poorest = 0, poorer = 1, middle = 2, richer = 3, richest = 4). Besides these socioeconomic variables, we include other cultural variables such as ethnicity (Akan = 0, Ga Adangbe = 1, Ewe = 2, Northern ethnic groups = 3) and religion (Christians = 0, Muslims = 1, Traditionalists = 2). We also control for confounding variables such as place of residence (rural = 0, urban = 1) and region of residence (Southern Ghana = 0, Northern Ghana = 1).

Statistical Analysis

We used a binary logit model to analyze the categorical dependent variable, 'first intercourse was wanted or forced,' and log-normal hazard models for the timing variable, 'age at first forced sexual activity.' Logit models are built under the assumption of independence of subjects, but the GDHS has a hierarchical structure with respondents nested within survey clusters that could potentially bias the standard errors. STATA 11.SE that provides an outlet for handling this problem is used by imposing on our models a 'cluster' variable, usually the identification numbers of respondents at the cluster level. This in turn adjusts the standard errors producing statistically robust parameter estimates (see Cleves et al. 2004; Tenkorang and Owusu 2010).

We also employed a parametric model allowing us not only to make inferences about the timing of first forced sexual activity, but also to simultaneously examine the independent effects of the selected covariates on the timing of first forced sexual intercourse. Specifically, a log-normal hazard model is used given that previous research has established that it is a better fit for underlying distribution of first sexual intercourse, and provides both higher log-likelihood ratios for nested models and lower AIC[1] statistics for non-nested models (see Tenkorang and Maticka-Tyndale

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[1] AIC (Akaike Information Criterion), a statistic proposed by Akaike (1974) is used for judging the best-fitting parametric model. According to Akaike (1974), the best-fitting model is the one with the lowest AIC statistic. AIC is defined as -2 (log likelihood) $+ 2$ $(k + c)$ where k is the number of model covariates and c is the number of model-specific distributional parameters.

2008; Tenkorang et al. 2009). We obtain time ratios available in STATA to show how fast or slow women belonging to a particular group experience first forced sexual intercourse, compared to those in a reference group. A time ratio less than one indicates faster timing of first forced sexual intercourse, while that greater than one indicates slower timing. In acknowledgement of the differences existing among individuals within our sample and to ensure statistically robust parameter estimates, we introduce a frailty (unobserved heterogeneity) term into our hazard models.

Results

Table 1 provides a univariate description of dependent and independent variables, and the characteristics of the women included in the analysis. Results indicate that while about 86 % of the respondents aged 15–49 described their sexual debut as wanted, close to 14 % described theirs as coerced. On the average, respondents experienced coerced first sex at 17 years. The majority of the respondents had secondary/higher education, and most of them were also employed. However, about 22 % indicated they constitute the poorest, compared to the 19 % who reported their wealth status as 'richest.' The Christians and Akans form the largest religious and ethnic groups in Ghana, respectively, and this is reflected in the sample as well. Approximately 74 % of the women were currently married; about 15 % had never married, and 11 % had married formerly. Not surprising, most women had their sexual debut outside of marriage, although about 17 % reported experiencing first sex at marital union.

Table 2 provides a bivariate analysis of selected independent variables with the dependent variables. Results show socioeconomic variables as significantly associated with both the likelihood and timing of coercion at first sexual activity. For instance, compared to the poorest, women belonging to the richest wealth quintile were more likely to report coercion at first sexual activity, but a slower timing of the event. Similarly, women with some educational background (primary/secondary/higher) were significantly more likely to report coercion at their first sexual encounter, yet a slower timing of the event, compared to women with no education. On the contrary, women who were employed were less likely to report coerced first sexual intercourse, albeit a faster timing of the event compared to those without employment.

The results also show Ga Adangbe women as significantly more likely to experience coercion at their first sexual encounter, compared to Akan women. Compared to Christians, women affiliated to the traditional African religion were significantly less likely to experience coerced sex at their first sexual encounter, but it was women belonging to 'other' religious denominations that had a faster timing to coercion at the first sexual experience. Demographic variables such as marital status, age at first sex and respondents' age were significantly associated with both the likelihood and timing of coerced sexual intercourse. Compared to the never married, married and formerly married women, although less likely to experience coercion at first sexual intercourse, had a faster timing to the event. Also, women who had their first sexual experience at union or within marriage were less likely to

Table 1 Characteristics of women aged 15–49 in study sample, Ghana, 2008

Dependent and Independent variable	
First intercourse was wanted or forced?	
Wanted	85.7
Forced	14.3
Mean age at first forced sexual activity	17.0
Socioeconomic	
Wealth quintile	
Poorest	22.2
Poorer	19.2
Middle	18.6
Richer	20.8
Richest	19.2
Educational background	
No education	27.9
Primary	21.4
Secondary/higher	50.7
Employment status	
Not working	14.0
Working	86.0
Sociocultural	
Ethnic background	
Akan	45.4
Ga Adangbe	6.2
Ewe	13.4
Northern	31.3
Other	3.8
Religious affiliation	
Christian	74.8
Muslim	16.2
Traditional	5.3
Other	3.7
Demographic	
Marital status	
Never married	14.9
Currently married	74.1
Formerly married (divorced, separated)	11.0
Age of respondents	
15–24	25.6
25–34	38.0
35–44	26.9
45 and above	9.5

Table 1 continued

Age at first sexual intercourse	
15 and below	18.2
16 and above	64.5
At Union	17.4
Other controls	
Place of residence	
Urban	42.2
Rural	57.8
Region of residence	
Southern Ghana	75.5
Northern Ghana	24.5

Northern, Upper East and Upper West regions are classified as 'Northern Ghana,' while Greater Accra, Central, Western, Brong Ahafo, Volta, Eastern and Ashanti regions are grouped as 'Southern Ghana'

Table 2 Bivariate associations between selected independent and outcome variables

	Odds ratios (SE)	Time ratios (SE)
Socioeconomic		
Wealth quintile		
Poorest (ref)	1.00	1.00
Poorer	.825 (.167)	.979 (.031)
Middle	1.09 (.198)	.995 (.029)
Richer	1.36 (.261)	.999 (.027)
Richest	1.76 (.318)***	1.05 (.028)**
Educational background		
No education (ref)	1.00	1.00
Primary	1.49 (.291)**	1.07 (.034)**
Secondary/higher	2.01 (.301)***	1.14 (.030)***
Employment status		
Not working (ref)	1.00	1.00
Working	.630 (.092)***	.826 (.018)***
Sociocultural		
Ethnic background		
Akan (ref)	1.00	1.00
Ga Adangbe	1.80 (.400)***	.977 (.034)
Ewe	1.22 (.215)	.998 (.027)
Northern	.997 (.139)	1.02 (.021)
Other	1.12 (.364)	1.07 (.049)
Religious affiliation		
Christian (ref)	1.00	1.00
Muslim	1.21 (.186)	.974 (.022)
Traditional	.274 (.125)***	.973 (.059)
Other	.945 (.326)	.867 (.045)***

Table 2 continued

	Odds ratios (SE)	Time ratios (SE)
Demographic		
Marital status		
Never married (ref)	1.00	1.00
Currently married	.313 (.041)***	.710 (.017)***
Formerly married (divorced, separated)	.443 (.090)***	.705 (.027)***
Age of respondents		
15–24	1.00	N/A
25–34	.450 (.067)***	N/A
35–44	.383 (.062)***	N/A
45 and above	.419 (.099)***	N/A
Age at first sexual intercourse		
15 and below (ref)	1.00	N/A
16 and above	.781 (.125)	N/A
At union	.372 (.093)***	N/A
Other controls		
Place of residence		
Urban (ref)	1.00	1.00
Rural	.607 (.072)***	.980 (.017)
Region of residence		
Southern Ghana (ref)	1.00	1.00
Northern Ghana	.926 (.334)	1.02 (.021)

Odds ratios are adjusted for clustering, and robust standard errors are presented in brackets

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

say it was coerced, compared to those with their first sexual encounter at age 15 and below. In addition, older women were significantly less likely to report their first sexual experience as coerced compared to younger women.

While the bivariate results are important, they only provide the gross effects of our independent variables on the outcome variables. The multivariate models presented in Tables 3 and 4, however, indicate the net effects of the independent variables. Three multivariate models are presented in both tables. Model 1, which is the base model, includes socioeconomic variables (wealth, education and employment status) plus other controls (region and place of residence). Model 2 adds sociocultural variables (religion and ethnicity) to the base model, and model 3 adds demographic variables (marital status, age and age at first sex).

A glance at the table indicates that the effects of education and employment status as described in the bivariate models are retained even after controlling for sociocultural variables. Women with some education, although more likely to report coercion at first sexual intercourse, have a slower timing to the event (see Tables 3, 4). On the contrary, women who were employed were less likely to report coerced sexual intercourse at the first encounter, but experience the event faster. The results

Table 3 Multivariate logit models of forced sex among Ghanaian women aged 15–49, 2008

	Model 1 AOR (SE)	Model 2 AOR (SE)	Model 3 AOR (SE)
Socioeconomic			
Wealth quintile			
Poorest (ref)	1.00	1.00	1.00
Poorer	.722 (.160)	.694 (.152)	.689 (.152)
Middle	.811 (.172)	.831 (.178)	.854 (.189)
Richer	.886 (.241)	.917 (.251)	.934 (.252)
Richest	1.01 (.278)	1.06 (.285)	1.30 (.361)
Educational background			
No education (ref)	1.00	1.00	1.00
Primary	1.63 (.353)**	1.51 (.328)	1.23 (.282)
Secondary/higher	1.97 (.390)***	1.93 (.390)***	1.40 (.292)
Employment status			
Not working (ref)	1.00	1.00	1.00
Working	.700 (103)***	.717 (.108)**	1.01 (.170)
Sociocultural			
Ethnic background			
Akan (ref)		1.00	1.00
Ga Adangbe		1.81 (.403)***	1.65 (.373)**
Ewe		1.42 (.256)**	1.47 (.260)**
Northern		1.11 (.284)	1.10 (.287)
Other		1.05 (.380)	.950 (.347)
Religious affiliation			
Christian (ref)		1.00	1.00
Muslim		1.33 (.271)	1.38 (.282)
Traditional		.373 (.180)**	.367 (.177)**
Other		1.09 (.406)	1.13 (.412)
Demographic			
Marital status			
Never married (ref)			1.00
Currently married			.504 (.083)***
Formerly married (divorced, separated)			.773 (.194)
Age of respondents			
15–24 (ref)			1.00
25–34			.600 (.108)***
35–44			.534 (.107)***
45 and above			.620 (.165)
Age at first sexual intercourse			
15 and below (ref)			1.00
16 and above			.656 (.109)***
At union			.415 (.109)***

Table 3 continued

	Model 1 AOR (SE)	Model 2 AOR (SE)	Model 3 AOR (SE)
Other controls			
Place of residence			
Urban (ref)	1.00	1.00	1.00
Rural	.741 (.132)	.805 (.144)	.860 (.154)
Region of residence			
Southern Ghana (ref)	1.00	1.00	1.00
Northern Ghana	1.31 (.233)	1.26 (.317)	1.45 (.360)
Log pseudo likelihood	−.858.838	−.843.081	−.811.040
Model significance (Wald chi-square)	41.92 (9)***	69.05 (16)***	145.28 (23)***
Pseudo R-square	.022	.033	.070

Odds ratios are adjusted for clustering, and robust standard errors are presented in brackets

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

also showed Ewe and Ga Adangbe women as more likely to report coerced first sex, compared to Akans. Meanwhile, it is women affiliated with traditional African religion who were less likely to report coerced first sex compared to the Christians.

Model 3 of Tables 3 and 4 indicates that demographic variables, in particular marital status, made the most significant contribution in explaining the likelihood and timing of coerced sex among women in Ghana. This is evinced by the drastic reduction in the log pseudo-likelihood ratios and the increase in the pseudo R-square between models 3 and 4 (see Table 3). Also, in model 4, we witness that the frailty (unobserved heterogeneity) term that was hitherto significant became nonsignificant when demographic variables were included (see Table 4).

Further analysis revealed that it was the marital status variable that reduced the frailty term to nonsignificance. A significant frailty term means that there are some unobserved individual level factors that may help in explaining the timing of coerced first sex among women in Ghana. On the contrary, a nonsignificant frailty term means that variables in the model adequately explain variance in the timing of first sex. It is evident that when demographic variables were added, the socioeconomic variables lost significance, yet the sociocultural variables retained their statistical significance (see Table 3). In Table 4, however, the effects of wealth and employment status were statistically robust even after including demographic variables, indicating slower timing to coerced first sex for the richest women compared to the poorest and a faster timing for the employed, compared to the unemployed. Married women continued to be less likely to report that their first sexual encounter was coerced, albeit a faster timing, compared to the never married. Respondents who experienced their first sexual encounter in marriage were all significantly less likely to report that it was coerced, compared to those experiencing the event outside of marriage. Older respondents were less likely to report that their first sex was coerced compared to younger ones. Ethnicity and religion also continued to maintain their statistical significance even after controlling for demographic variables.

Table 4 Multivariate hazard models of forced sex among Ghanaian women aged 15–49, 2008

	Model 1 ATR	Model 2 ATR	Model 3 ATR
Socioeconomic			
Wealth quintile			
Poorest (ref)	1.00	1.00	1.00
Poorer	.990 (.037)	.983 (.037)	1.03 (.044)
Middle	1.01 (.040)	.997 (.039)	1.05 (.046)
Richer	1.01 (.040)	.998 (.040)	1.01 (.045)
Richest	1.07(.046)	1.07 (.046)	1.11 (.054)**
Educational background			
No education (ref)	1.00	1.00	1.00
Primary	1.06(.038)	1.05 (.039)	.992 (.040)
Secondary/higher	1.12 (.038)***	1.12 (.039)***	1.02 (.039)
Employment status			
Not working (ref)	1.00	1.00	1.00
Working	.841 (.026)***	.845 (.016)***	.925 (.022)***
Sociocultural			
Ethnic background			
Akan (ref)		1.00	1.00
Ga Adangbe		.976 (.036)	.962 (.037)
Ewe		1.01 (.030)	.999 (.032)
Northern		1.09 (.042)**	1.02 (.043)
Other		1.15 (.066)**	1.08 (.067)
Religious affiliation			
Christian (ref)		1.00	1.00
Muslim		.959 (.029)	.976 (.033)
Traditional		.996 (.062)	.936 (.062)
Other		.961 (.053)	.984 (.061)
Demographic			
Marital status			
Never married (ref)			1.00
Currently married			.735 (.021)***
Formerly married (divorced, separated)			.725 (.034)***
Other controls			
Place of residence			
Urban (ref)	1.00	1.00	1.00
Rural	1.01 (.026)	1.01 (.027)	1.03 (.030)
Region of residence			
Southern Ghana (ref)	1.00	1.00	1.00
Northern Ghana	1.08 (.029)***	1.02 (.039)	1.05 (.045)
Number of failures	269	269	269
Log pseudo likelihood	−197.240	−191.421	−108.331

Table 4 continued

	Model 1 ATR	Model 2 ATR	Model 3 ATR
Model significance (Wald chi-square)	125.17 (9)***	131.51 (16)***	297.69 (18)***
Frailty (theta)	.721 (.226)***	.744 (.230)***	.039 (.100)

Adjusted time ratios are presented with standard errors in brackets

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

Discussion and Conclusions

Forced sex or sexual intercourse experienced under coercion is a global public health challenge given the associated risks with other life-threatening reproductive health problems including unplanned pregnancies and HIV infection. While consensual intercourse at the first sexual experience is common among women, including those in sub-Saharan Africa, a growing body of evidence point to reports of coercion and violence characterizing the sexual debut of other women, particularly those in developing countries (Koenig et al. 2004; Glover et al. 2003; Erulkar 2004). Like women in other parts of the world, Ghanaian women are vulnerable to sexual violence or coercion (see Moore et al. 2007; Glover et al. 2003). Yet, very few to no studies have examined the correlates of coerced sexual intercourse among women in Ghana. This study contributes to the existing body of literature by examining the determinants and timing of coerced first sex among women aged 15–49 in Ghana.

A significant finding is that married women compared to the never married were significantly less likely to report they experienced coerced first sex. The finding, however, is not consistent with some other studies that have indicated higher prevalence of forced sex among married women in developing countries (see Santhya et al. 2007; Jejeebhoy and Bott 2003; Glover et al. 2003; Khawaja and Hammoury 2008), more so as the increasing prevalence of coerced sex seems not to be accompanied by an increase in self-reports of coercion. This observation suggests some support for other studies that point to possible underreporting of sexual coercion and violence among married women in particular (see Peterman et al. 2011; Population Council 2004).

There are plausible reasons why married women may not report forced sex or any form of coercion surrounding sexual intercourse with their partner. First, even if experienced before marriage (especially as we do not know the timing of marriage and when coercion occurred), the mere mention of sexual coercion, in particular rape, by a woman to her prospective husband, or for that matter, anyone else, may place a relationship leading to marriage at a higher risk of dissolution (Anarfi 1993; Mensah 2011). Generally, the Ghanaian society expects every adult to be married and largely frowns on divorce (Van Der Geest 1976; Mba and Aboh 2010; Anarfi 1993). In their married state, women would have achieved a key social expectation and may be rather looking forward to, and focusing on their marital life affairs and

its sine qua non, than discuss potentially stressful sexually related encounters that may jeopardize their marriage (Anarfi and Owusu 2011).

Second, the notion or concept of forced sex or coercion within marriage may be lost on most Ghanaian women given that they are socialized into believing that sexual intercourse, no matter the form and nature legitimizes and concretizes marital unions (Amoakohene 2004; Ofei-Aboagye 1994). Informed by both traditional notions and largely Judeo Christian and other religious influence of sexual socialization, sex within marriage is typically regarded as a duty, particularly for the woman in Ghana (see Anarfi and Owusu 2011). The fact that marital rape was expunged from the Domestic Violence Act with the reason that it contravenes the traditional values and customs of the Ghanaian people may legitimize coerced or forced sexual relations within marital unions, making married women highly vulnerable and unlikely to report when it occurs. Nevertheless, the finding that coerced first sex is experienced early among married women or that the timing is faster is consistent with studies in Latin America, the Caribbean and some parts of South Asia where the data also suggest that sexual coercion is early, often within the first 2 years of marriage (Population Council 2004). The finding also corroborates Antwi-Boasiako's (2011) study of two communities in Tema, Ghana, which indicated that in the early years of marriage, women are not expected to exercise any sexual restraints.

Past research has shown that women of a younger age are at an increased risk of experiencing forced or coerced sex (see Erulkar 2004; Kishor and Johnson 2004; Coker and Richter 1998; Fawzi et al. 2005), and is consistent with our findings. Jejeebhoy and Bott (2003) mentioned for instance that threats, trickery or deception are some of the ways by which younger women are exposed to forced or coerced sex at their first experience.

The finding that Ewe and Ga Dangbe women are more likely to experience coerced first sex, compared to the Akans, may provide further insights into the sociocultural dimensions of sexual coercion among women in Ghana. The Ewes and Ga Dangbes follow the patrilineal descent system and reside predominantly in the Volta and Greater Accra regions of Ghana, respectively. Compared to the matrilineal Akan, the patrilineal system attributes more power to males and establishes male dominance over women (Ampofo 2001). Thus, the sexual control and sexual abuse of women could be perpetuated through the institutional beliefs and structures of patrilineage, manifest in male dominance and control in personal relationships, which translate into sexual violence against women (Ampofo 2001; Awusabo-Asare et al. 1993).

Alternatively, a traditional practice called 'trokosi' (in the Ewe language) or 'Woryokwe' (in the Dangbe language) is quite common in both the Volta and Greater Accra regions where the Ewes and Ga Adangbes reside (Ababio 2000; Amoah 2007). According to Amoah (2007:9), 'Trokosi' comes from two words, 'Tro' meaning God and 'Kosi' translated as virgin, slave or wife. The practice demands that women, in particular young girls, be given as slaves to priests of specific shrines to appease the gods or spirits of crimes perpetrated by some family members. There are sordid accounts of young girls, usually called 'trokosi girls' subjected to sexual exploitation and violence to the extent that the practice has been

identified with forced sexual relations especially among young women in both the Volta and Greater Accra regions (Amoah 2007; Ababio 2000). Although practiced by some ethnic groups in Ghana, 'trokosi' or 'Woryokwe' and other cultural practices alike have their religious significance and are mostly revered by adherents of the traditional African religion. Thus, it was expected that the traditionalists, compared to the Christians, will be more likely to experience coerced first sex, but the results indicated otherwise. This finding may not be surprising, however, as practices that subject young women to sexual exploitation among followers of the African traditional religion are usually rationalized with their religious and cultural significance and thus may be underreported.

Meanwhile, some studies have found the differences among religious groups in Ghana as largely a reflection of socioeconomic disparities (see Gyimah et al. 2008, 2010). The traditionalists are usually less educated, much poorer and more likely to reside in the rural areas compared to the Christians. Parts of our results have shown that women who are empowered as in those highly educated and wealthy are rather more likely to experience forced sex, albeit a slower timing of the event compared to the less educated and poor who are usually exposed to such vulnerabilities. This observation may confirm the assertiveness of empowered women (educated and wealthy) who are more likely to report forced sex and a possible underreporting of coerced sex among women that are less empowered yet more vulnerable to sexual violence. Despite the possibility of underreporting, Anarfi and Owusu (2011) also observed that adherents of traditional religion in Ghana are more careful not to engage in socially deviant sexual practices such as 'forcing women to bed,' for fear of instant retribution from their gods, compared to Christians who have less rigid sexual norms and expectations (see Gyimah et al. 2010).

Generally, the findings highlight the need for cultural and personal definitions of violence. By drawing in some contested areas such as ethnic and religious influences, this study lends support to the need for a critical appraisal of the cultural interpretation of violence and for future studies to explore and provide detailed explanation on this phenomenon. The findings raise important policy implications including the need to empower women, in particular married women, to report cases of sexual violence. This can be enhanced by liberalizing and expanding the scope of the Domestic Violence Act to include cases of sexual coercion and marital rape. While empowering women legally through legislation, they also need to be empowered socially and economically through formal education and wealth creation. The findings also highlight sociocultural practices among specific ethnic groups that elevate their risks of coerced or forced sexual intercourse. 'Trokosi' and other forms of servitude that seek to sexually exploit young girls and women must be punished. Thus, policy makers need to enact and enforce laws that criminalize acts that expose women, especially young women, to any form of violence including sexual violence.

In spite of these important findings and policy directions, some limitations of this paper are worth noting. The use of cross-sectional data limits the interpretation of our findings. Although inferences can be made about associations between dependent and independent variables, causal inferences cannot be drawn. As argued by Jejeebhoy and Bott (2003), the conceptualization and operationalization of 'force' or 'coercion' in surveys such as the DHS is problematic as it may not

capture women, in particular young women, who engage in transactional sexual relations and those who are pressured by their partners to submit to sexual intercourse as a way of showing commitment to their relationships. As it stands, it is more probable that response to questions about forced sex or sexual coercion may only include accounts of circumstances that involved actual manifestation of force among women. Notwithstanding, the attempt to include a module on sexual violence and the circumstances surrounding the sexual debut of women is useful given the general lack of large scale quantitative studies on this subject (Jejeebhoy and Bott 2003). Some scholars have questioned the reliability of surveys based on self-reports especially when they border on sensitive issues like sexual behaviors (Plummer et al. 2008; Zaba et al. 2004). However, Cleland et al. (2004) argue that self-reported data continue to provide essential insights into research on sexuality despite their shortcomings.

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