

Abstract

The socialization of men and women in Ghana is understood as conferring either patrilineal or matrilineal rights, privileges and responsibilities. Yet, previous studies that explored the causes of domestic and marital violence in sub-Saharan Africa and Ghana paid less attention to kin group affiliation and how the power dynamics within such groups affect marital violence. Using the 2008 Ghana Demographic and Health Survey and applying OLS techniques, this study examined the causes of physical, sexual and emotional violence among matrilineal and patrilineal kin groups. Socio-economic variables that capture *feminist* and *power* theories were not significantly related to physical sexual and emotional violence. Variables that tap both cultural and life course epistemologies of domestic violence were significantly related to physical, sexual and emotional violence among married women in patrilineal kin groups. Policy makers must pay attention to kin group affiliation in designing policies aimed at reducing marital violence among Ghanaian women.

Keywords: Kinship; Domestic violence; Matrilineal; Patrilineal; Feminist; Ghana

Introduction

Domestic violence of which marital violence is part cuts across class, race, ethnicity and cultures. Marital violence takes many forms, but the most explored include physical, emotional (psychological) and sexual violence (WHO, 2012). While most common acts of physical violence include slapping, hitting, kicking and beating, sexual assault often occurs as a result of forced sexual intercourse and sexual coercion. Emotional violence, on the other hand, involves insults, scorch, constant humiliation, bullying and threats of harm. Although a worldwide problem, marital violence appears to be more widespread in sub-Saharan Africa (McCloskey, et al., 2005; Andersson, et al., 2007; Koenig, et al., 2003; Uthman, et al., 2009). A comparative analysis of 141 studies in 81 countries shows that partner assault is highest for women in sub-Saharan Africa, with a shocking proportion of 66 per cent of women subjected to physical and sexual assault (WHO, 2013). Kishor and Johnson (2004) also indicate that the percentage of ever-partnered women who reported experiencing any physical or sexual violence by their current or most recent male partner was highest in Zambia, where 48 per cent was recorded for physical violence, and 17 per cent was noted for sexual violence. A South African survey recorded 4 out of 10 females between the ages of 13–23 to be at risk of experiencing intimate partner violence (Swart et al., 2002). As well, a survey in the southwestern part of Nigeria indicates that lifetime prevalence of female partner abuse is 64 per cent in the rural region, whereas the rate is 70 per cent in the urban areas (Balogun, et al., 2012).

The situation in Ghana is not very different from what is witnessed elsewhere in Africa. For instance, a nationwide survey in 1998 showed that 72 per cent of women in Ghana had been exposed to intimate partner violence (Coker-Appiah and Cusack, 1999). The Women and Juvenile Unit, WAJU, of the Ghana Police Services reported 360 cases of wife beating in 1999;

385 in 2000; 648 in 2001; and 3622 in 2002 respectively (Amoakohene, 2004). In 2010, the total number of domestic and marital violence was reported as 109,784 cases from the Domestic Violence and Victims Support Unit (Ghana News Agency, 2010). The trend clearly shows an increase in the incidence and prevalence of domestic and marital violence against women in Ghana, yet not many studies have explored questions of violence and what predisposes women in Ghana to such acts. Further, we do not know how marital and domestic violence differ among patrilineal and matrilineal kin groups in Ghana.

Kinship can be assumed as a cultural practice and institution that offers a means for socialization and inheritance. In Ghana, the socialisation of men and women is understood as conferring either patrilineal or matrilineal rights on personhood, not both (Kutsoati and Morck, 2012). The embodiment of Ghanaian women is also a constellation of several factors including the sociocultural, which constitute the socialisation of women into mainstreaming acceptance of self as inferior (Offei-Aboagye 1994; Cantalupo et al. 2006). This form of socialization culminates into socio-cultural privileges, rights and responsibilities, which are associated with the matrilineal, or patrilineal (Oppong, 1972). Contrary to traditions in patrilineal ethnic groups, the matrilineal ethnic groups observe that the succession of political, economic, social rights and responsibilities are traced through the descents of women belonging to the kin group (Ferrara, 2007).

Given that the power dynamics vary within these groups and that women are treated differently, it is contended that the rates of violence will be significantly different for the two kin groups similar to the socio-cultural factors that underpin such violence. Focusing on women's matrilineal and patrilineal relations, this study examines the factors that expose married women to domestic violence in Ghana. Exploring these questions is relevant especially when domestic

and marital violence have been linked to death and life-threatening injuries (Wadman and Muelleman, 1999; Adinkra, 2008; Richard, 2010) depression, suicidal tendencies, sexually transmitted infections, unwanted pregnancy, abortion and stress (Stark and Flitcraft, 1996; Garcia-Moreno, 2006; WHO, 2013).

Theoretical perspectives

Current theoretical frameworks that explain marital violence include those that link it to personality characteristics (such as *individual-level* and *life course theories*), and those that explain domestic and marital violence as a symptom of a larger societal problem (*feminist* and *power theories*).

Feminist theories on domestic violence, including marital violence highlight themes such as gender, power and male supremacy. A feminist understanding of violence in marital relationships thus focuses on society's construction of gender relations, in which sexism is front and center (MacKinnon, 2006; Hearn, 2012; 2013; Williamson, 2010; Dragiewicz & DeKeseredy, 2012). Domestic and marital violence is a means through which masculine identities are constructed insofar as to maintain and restore domination over feminine identities (Anderson, 1997, 2009, 2013; Kimmel, 2002; Kimmel, 2011; Kimmel and Aronson, 2008). According to McPhail et al. (2007) and Yoder (1992), partner violence is mainly a result of societal emphasis on male-domination and power, in which men are compelled to use aggression and bully to maintain their authority and rule. Notions of male supremacy are so ubiquitous within cultures around the world (Price, 2005), including Ghana. Specifically, women's marital experiences in Ghana are shaped by social expectations of subordination to men, where it is expected that males dominate and control in order to assert manhood (Ampofo, 1993; Ofei-Aboagye, 1994; Amoakohene, 2004). Additionally, societal practices such as wife inheritance

and Trokosi (wife slavery) are some ways for enacting marital violence (Osam, 2004; Ababio, 2000), in which members of the larger family, and kin-relations are a part of enforcing these sociocultural practices on women. In the same vein, women in Ghana experience such sociocultural practices along ethnic lines, and this is broadly espoused through the matrilineal and patrilineal kinship relations (Nukunya, 1992). The matrilineal and patrilineal kinship relations are associated with unique sociocultural norms and practices that emphasize the extent of male domination and control (Ampofo, 2001). Because the matrilineal kinship groups (such as the Fantis and Ashantis, known as the Akans) maintain the succession of chieftaincy, political, and economic rights through women and their descents, there is some level of respectability and power for women belonging to this kinship group (Oppong, 2009). For this reason, it seems women belonging to matrilineal kin groups are less often subjected to sociocultural practices that place them at risk for marital and domestic humiliation and abuse. For instance, Tenkorang and Owusu (2013) have found that Akan women are exposed to lower levels of sociocultural norms that maintain male control and subsequent coercive first sexual encounter, compared to Ewe and Ga women, who trace their ancestry through males, and are also highly at risk for experiencing sociocultural practices such as Trokosi that maintain male sexual violence. In all, while these societal practices work to keep women's bodies and sexualities under control, they are consistent with feminist conceptualization of domestic and marital violence which nails structural norms and sociocultural institutions as having the largest influence on the problem.

Related to the feminist theory is the power theory. Proponents of power theory argue that social circumstances of inequality or lopsided family relations maintain power on the part of an individual, which could result in tensions and aggression (Sagrestano, Heavey & Christensen, 1999). For example, power could be conferred through socioeconomic statuses and educational

levels (Garcia Moreno, et al., 2005; Abramskey, et al., 2011), in addition to social rights (WHO, 2012; see also Achampong & Sampson, 2010). This assertion by power theorists directly correlates with many studies across sub-Saharan African countries, including Ghana, which demonstrate that partners with equal power relations, in terms of their economic statuses experience very low levels of aggression and abuse (see Anderssen et al., 2012; Jewkes, 2002; Jewkes, Levin and Penn-Kekana, 2002). The economic situation of women in Ghana has raised converging views among scholars such as Mann and Takyi (2009), with Tenkorang, Yeboah and Owusu (n.d) in particular attributing Ghanaian women's poor economic statuses to inadequate credit and loan facilities to support their local businesses. Nonetheless, Ferrara (2007) maintains that the descent rules for inheritance enshrined within Ghanaian societies give some women more economic leverage such as their right to share lands and properties with their kinsmen, and this is evident in matrilineal societies (unlike patrilineal societies), where women are recognized as carriers of progeny (Busia, 1968). With these power dynamics, it could be suggested that the economic power that is conferred on women belonging to the matrilineal side (compared to women who belong to the patrilineal side) serves as a 'check' against male-domination, as posited by power theorists.

Life course and family violence theories argue that previous exposure to family violence is central to domestic and marital violence in the future. Those who support life course theories focus on childhood experiences of violence and problem-solving skills of individuals, especially within the domestic and marital sphere (Riggs & O'Leary, 1996; Dutton, 1995; Holtzworth-Munroe, et al., 2000). It is also suggested that individuals learn to use violence to resolve disputes during stressful situations, either through past experiences of domestic violence or as eyewitness to previous episodes of family violence (Riggs, Caulfield, & Street, 2000; Lewis &

Fremouw, 2001; Gass, Stein & Williams, 2011). In Ghana, the acceptance of violence as a way of resolving marital conflicts is commonplace, and considered as part and parcel for a 'healthy' relationship, hence, placing women at greater risk for experiencing marital abuse (Karim, 2008; King, 2006). While it has been demonstrated through research that the acceptance and justification for marital violence differ along ethnic lines (Tenkorang, Yeboah & Owusu, n.d), it could also be suggested that childhood experiences of domestic violence will be different among kinship groups as well.

Data and Methods:

Data for this study come from the most recent version of the Ghana Demographic and Health Survey (GDHS, 2008). The GDHS is a nationally representative dataset administered by the Ghana Statistical Service (GSS) and Macro International, and the fifth in such surveys of the Global Demographic and Health Surveys Program. GDHS aims at monitoring the population and health conditions of Ghanaians, and is a follow-up on the 1988, 1993, 1998 and 2003 surveys (Ghana Statistical Service, 2009). Specifically, detailed information regarding fertility, nuptiality, nutritional status of women, infants and children, sexual activity, HIV/AIDS awareness and other sexually transmitted infections are included in the GDHS. Quite recently, the GDHS added high quality data on domestic violence. The domestic violence module provides information on women's experience of interpersonal violence including acts of physical, sexual and emotional attacks. Questions on domestic violence were asked from ever-married women. The GDHS built specific protections into the questionnaire in accordance with the World Health Organization's ethical and safety recommendations on domestic violence (see WHO, 2001). The GDHS used a multi-stage sampling procedure where households were first selected from Enumeration Areas (EAs) and then individuals selected from households. Thus,

the sample for this study is limited to 1835 ever married women aged 15-45 years who answered questions on domestic violence. This is further divided into 811 women who were categorized as identifying with matrilineal kin groups and 1024 identifying with patrilineal kin groups.

Measures

Three major dependent variables that capture different dimensions of violence against women are employed: *physical violence*, *sexual violence* and *emotional violence*. Physical violence is a scale measure created from a series of questions that asked respondents if: *husband ever pushed shook or threw something at them; if husband ever slapped them; if husband ever kicked or dragged respondents; ever tried to strangle or burn respondents; if husband ever threatened or attacked with knife or gun and if husbands ever twisted respondents' arms or pull their hair*. *Sexual violence* is also a scale created from two questions that asked women if their *husbands ever physically forced sex when not wanted and if husbands ever forced any other sexual acts when not wanted*. Emotional violence was created from three questions that asked women if their *husbands had humiliated them, had threatened them with any harm and had insulted or made them feel bad*. Response categories for all variables are dichotomous (yes=1 and No=0) and Principal Component Analysis (PCA) was used to create all scales. Reliability coefficients for physical, sexual and emotional violence scales are 0.775, 0.640 and 0.653 respectively. Positive values on these scales indicate higher physical, sexual and emotional violence, while negative values represent lower physical, sexual and emotional violence respectively.

Explanatory variables are categorized into three main blocks: *socio-economic variables* that border on and are relevant to feminist and power theories of domestic and marital violence. These include the educational background of women coded (no education=0, primary

education=1, secondary education=2 and higher education=3), employment status of respondents coded (Not employed=0; employed=1) and wealth status, a composite index based on the household's ownership of a number of consumer items including television and a car, flooring material, drinking water, toilet facilities etc. coded (poorest=0; poorer=1; middle=2; richer=3; richest=4). Some *socio-cultural variables* that capture cultural epistemologies of domestic and marital violence are also introduced. These include questions on *wife beating* and *husband's control and domineering attitudes*. The former is an index created from questions that asked women if they consider wife-beating justified: *if they go out without telling their husbands, neglects the children, argue with their husbands, refuses to have sex with their husbands, and burns the food*. We obtain the latent construct, justification for wife-beating (a scale measure) using Principal Component Analysis. Reliability coefficient (Cronbach's Alpha) for this scale is 0.813. Positive values on the scale indicate higher levels of justification for wife-beating, while negative values indicate otherwise. Husband's control or domineering attitudes was also created using PCA from variables that asked women if *their husbands get jealous on seeing them talk with other men, husband accuses respondents of unfaithfulness, husband does not permit wife to meet her girlfriends, husband tries to limit respondent's contact with family, husband insists on knowing where respondent is, husband doesn't trust respondent with money, refuses or denies sex with the respondent*. Reliability coefficient (Cronbach's Alpha) is 0.690. Positive values on the scale indicate higher levels of control by husbands of respondents, while negative values indicate lower levels of control.

Two other variables are introduced as *life-course and family violence variables*. These include if 'respondent's father ever beat her mother' coded (no=0, yes=1, don't know=2) and if respondent's husband drinks alcohol also coded (no=0, yes=1). religion coded (Christians=0;

Muslims=1; Traditional=2; No religion=3), rural/urban residence (urban=0; rural=1), region of residence (Greater Accra=0; Central=1; Western=2; Volta=3; Eastern=4; Ashanti=5; Brong Ahafo=6; Northern=7; Upper East=8; Upper West=9) and age of respondents were all introduced as control variables.

Data Analysis

The Ordinary Least Squares technique was employed given that the dependent variables are continuous. Analyses were preceded by diagnostic tests to establish whether variables met the assumptions of the planned regression model. The linear regression model is built under the assumption of independence of subjects but the GDHS has a hierarchical structure with respondents nested within survey clusters which could potentially bias the standard errors. STATA 12.0 which 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 (Cleves et al. 2004; Tenkorang and Owusu, 2010). A positive beta coefficient for any of the covariates indicates high violence, while negative coefficients show low violence.

Results

Table 1 presents a univariate distribution of outcome and predictor variables. Results indicate that both physical and sexual violence are higher in patrilineal than matrilineal societies. However, women from matrilineal societies report higher emotional violence compared to those in patrilineal societies. Descriptive analyses also show some socio-economic differences among women from the matrilineal kin groups compared to those in patrilineal kin groups. For instance,

while almost half of women in patrilineal societies indicated having no formal education, only 11% from matrilineal societies indicated so. Regarding wealth, we observe that 38.3% of women in patrilineal societies are in the poorest wealth quintile compared to 6.8% in matrilineal societies. Turning to the cultural variables, it is clear that women in patrilineal societies justify wife-beating and report relatively higher control by husbands compared to those in matrilineal societies. Majority of women (92.5%) from the matrilineal kin group identify as Christians compared to 58.2% from the patrilineal societies. Also quite a substantial difference exists among urbanized women from matrilineal societies (45.5%) compared to those from patrilineal societies (33.4%).

Bivariate associations are presented in Table 2. Results do not show strong statistical associations between socio-economic predictors and the various measures of violence. We note however, that notwithstanding the higher levels of sexual violence among women with primary and secondary education in both matrilineal and patrilineal kin groups, higher education reduces sexual and emotional violence among women in patrilineal societies. Women who justified wife-beating and reported higher levels of dominance by husbands experienced higher levels of physical and emotional violence in both matrilineal and patrilineal kin groups, and higher levels of sexual violence in only patrilineal societies. It is observed further that coefficients for these variables are relatively larger for women in patrilineal than matrilineal kin groups. Women, in particular, those from patrilineal kin groups who witnessed family violence (father beating mother) reported higher levels of physical, sexual and emotional violence. Also, women with husbands who drank alcohol reported higher levels of physical, sexual and emotional violence in both matrilineal and patrilineal kin groups. Some religious differences are observed. Compared

to Christians, Muslim women reported lower sexual and emotional violence in patrilineal and matrilineal kin groups respectively but higher emotional violence in patrilineal kin groups.

Multivariate results are presented in Tables 3, 4 and 5. Two separate multivariate models are built each for matrilineal and patrilineal kin groups. The first model includes socio-cultural predictors with demographic variables controlled and the second model adds socio-economic predictors. Consistent with the bivariate findings we observe that socio-economic predictors are not strongly associated with the various measures of violence. We find however that compared to those with no education women with primary and secondary education reported higher sexual violence. Also, compared to the poorest, poorer women from matrilineal kin groups reported lower levels of emotional violence. Turning to the socio-cultural predictors, we note that unlike the bivariate analysis where justification for wife-beating was statistically significant, it was not in the multivariate analyses. Consistent with the bivariate analyses, we find that women who reported stronger domineering attitudes by their husbands experienced higher levels of physical and emotional violence in both matrilineal and patrilineal kin groups. This is different for sexual violence where only women from the patrilineal kin groups reported higher violence. It is also clear that exposure to family violence made a difference in patrilineal and not matrilineal kin groups as women who saw their fathers beat their mothers reported higher physical and sexual violence compared to those who did not witness such violence. Compared to those whose husbands do not, women whose husbands drank alcohol experienced all three types of violence in both matrilineal and patrilineal kin groups. Some demographic/control variables were statistically associated with violence. For instance, rural women from patrilineal kin groups experienced less physical violence compared to urban women. Compared to Christians, Muslim women from patrilineal kin groups reported higher emotional violence.

Discussion

Marital violence or what is commonly referred to as domestic violence is a global problem which is widespread, present in every country and cuts across boundaries of culture, class, education, income, ethnicity and age (Panda and Agarwal, 2005; Dienye and Gbeneol, 2008; Oyeridan and Isiugo-Abanihe, 2005; Kishor and Johnson, 2006). Marital violence is acknowledged as a violation of the fundamental human rights of victims or potential victims, and an obstacle to achieving gender equity especially in sub-Saharan Africa where patriarchy is commonplace (ICRW, 2009). Besides, such violence undermines human development goals and has health and psychosocial consequences that can negatively impact Ghana's chances of attaining the Millennium Development Goals. Notwithstanding, the menace has received less attention from researchers. At the moment, we do not clearly understand what perpetuates violence among married women in Ghana, and there are virtually no studies on how marital violence interacts with kin group affiliation in sub-Saharan Africa including Ghana. We fill this void in the literature. The finding that physical and sexual violence are rife in patrilineal compared to matrilineal societies is consistent with theoretical expectations and is testament to how differences in the gender ordering within these kin groups can influence interpersonal relationships and domestic violence. It corroborates earlier assertions that perhaps the level of respectability for women in matrilineal societies is high and level of patriarchy low compared to women in patrilineal societies. However, the higher levels of emotional violence in matrilineal societies may be indicative that patriarchy as expressed in the two respective kin groups takes different forms. While emotional violence precedes physical and sexual violence (O'Leary, 1999), it is possible to conclude that the restraining force of matriarchal norms, for instance, their

recognized status as carriers of the lineage (Busia, 1968), serves as an important check on male partners from inflicting physical bodily harm on their female partners.

Furthermore, our study illustrates the internal workings of the patriarchy. For instance, significant scores show that women in matrilineal societies are advantaged in terms of greater economic and educational access, compared to women in patrilineal societies. This finding from our study clearly demonstrates that the patriarchy institutionalizes measures purposely to disadvantage women and render them socioeconomically vulnerable; an assertion faithfully espoused by feminist scholars, for example, Bryson (2003), Myers, et al. (1998), Bennet (2006), etc. Although, there is no positive correlation between women's wealth and emotional, physical, and sexual violence in this study, women's educational levels proves to be the singular most powerful tool against domestic violence, particularly in patrilineal societies. This result from our study is consistent with power theories that emphasize that socio-economic vulnerability/disparities on the part of most women creates power imbalance, by which enabling conditions for violence in marital relationships are perpetuated. The effect of education on domestic violence is considered by scholars such as Sen (1999), Jewkes (2002) as that which causes a formative effect on the person, thus conferring life time skills that help women resist and negotiate disagreements in their marriages.

The impact of male dominance on the various dimensions of violence is instructive. We take particular note of the strong effects of male dominance on sexual violence in patrilineal societies. These findings provide an interesting practical expression for feminist conceptual lenses on domestic violence which posits that domestic violence is sexed, and gendered, with the patriarchy as the strongest predictor. D'cruze & Rao (2005) and Johnson & Ferraro (2000) consider patriarchy as a system of male supremacy, male domination and control, male power,

male rule and authority that work to keep sexed females, and gendered women under inferior and subordinate status. And, this inferior status is justified through violence towards feminine bodies, in addition to keeping women under control. It is therefore not surprising that our study reports higher levels of control in patrilineal societies, and throughout our data description and analysis (at univariate, bivariate, and multivariate levels), we realise that male dominance is the strongest attitudinal factor for higher rates of emotional, physical, and sexual violence within marriages. Thus questions of male power, and male superiority are at the heart of domestic and marital violence as many other scholars, for instance, Badcock, et al., (1993), Dunkle, et al. (2004), and Anderson & Umberson, (2001) have shown in their works.

Results from this study also establish a strong association with life course variables and marital violence as women affirmed that past experiences of family violence increased their risk of experiencing domestic violence, more so in patrilineal societies. Our findings indicate low levels of violence for matrilineal compared to patrilineal societies, implying that children in these societies do less often witness wife beating by their fathers, compared to those in patrilineal societies. Edleson (1999), Steinberg, et al. (1993) and Kitzman, et al. (2003) note that children witnessing domestic violence could lead to behavioural, emotional, and cognitive-functioning problems during their formative years. Understanding the impact of marital violence on children, particularly those in patrilineal societies is important if developmental problems are to be addressed from a social policy perspective.

Our finding of a strong positive relationship between husband's alcohol/drinking behaviors and marital violence (both physical and sexual abuse) is supported by studies elsewhere (Soler, Vinayak & Quadagno, 2000; Wilt & Olson, 1996; Pandey, Dutt & Banerjee, 2009; Oladepo, Yusuf & Arulogun, 2011; Kiss et al. 2012). While it is difficult to determine the

independent role of husband's alcohol use on marital violence, Pandey, Dutt & Banerjee (2009) observed that alcohol use may sometimes provide socially acceptable reasons for husbands beating their wives.

Several policy lessons emerge from this study. First, it is clear that policy makers cannot prescribe a single homogenous intervention for dealing with intimate-partner among married women in Ghana. Interventions that pay particular attention to kin group affiliation are needed. Second, it is important to empower women and enhance their independence and assertiveness by encouraging formal education. Providing women with such opportunities could help in correcting the power imbalances that characterize marital unions and dealing with the cultural barriers that constrain women's ability to seek equality in their relationships.

Despite the interesting findings, there are some limitations worth acknowledging. The use of cross-sectional data means we are unable to draw causal connections between independent and dependent variables. Concerns have also been raised about the reliability of surveys based on self-reports especially when they border on sensitive issues like violence within marriages. It is thus possible that physical, sexual and emotional violence will be under-reported especially among married couples given the stigma and other related consequences attached to reporting such incidence in most African societies. Notwithstanding, including a module on marital violence, and the circumstances surrounding such incidence is useful given the general lack of large scale quantitative studies on this subject, especially for Ghana.

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Table 1: A univariate distribution of selected dependent and independent variables

Variables	Matrilineal (N=810)	Patrilineal (N=1014)
Physical violence	-.0254	.0210
Sexual violence	-.0433	.0350
Emotional violence	.0052	-.0039
Education		
No Education	10.7	48.5
Primary Education	25.2	21.2
Secondary Education	60.7	27.2
Higher Education	3.3	3.1
Wealth status		
Poorest	6.8	38.3
Poorer	20.6	19.6
Middle	24.0	14.1
Richer	25.8	14.5
Richest	22.8	13.5
Employment status		
Not Employed	9.0	12.6
Employed	91.0	87.4
Mean score for wifebeating	-.0831	.0705
Mean score for husband controls	-.0191	-.0083
Respondent's father ever beat mother		
No	81.3	81.1
Yes	12.2	13.0
Don't Know	6.5	5.8
Husband drinks alcohol		
No	62.6	61.4
Yes	37.4	38.6
Religion		
Christians	92.5	58.2
Moslems	2.8	27.2
Traditionalists	1.0	9.7
No religion	3.6	4.9
Type of place of residence		
Urban	45.5	33.4
Rural	55.5	66.6
Region of residence		
Greater Accra	11.1	12.3
Central	14.8	1.5
Western	18.2	3.5
Volta	.70	16.0
Eastern	11.7	7.6
Ashanti	28.6	5.8
Brong Ahafo	14.1	6.5
Northern	.70	46.9
Mean age of respondent	33.2	32.3

Table 2: Zero-order OLS Coefficients for physical and sexual violence among women aged 15-49

Variables	Physical abuse		Sexual abuse		Emotional violence	
	Matrilineal	Patrilineal	Matrilineal	Patrilineal	Matrilineal	Patrilineal
Education	β	β	β	β	β	β
No Education	0	0	0	0	0	0
Primary Education	.049 (.127)	.047 (.092)	.137 (.069)**	.206 (.098)**	.176 (.119)	.078 (.087)
Secondary Education	-.095 (.112)	-.080 (.076)	.179 (.057)***	.156 (.083)*	.074 (.110)	.004 (.082)
Higher Education	-.208 (.203)	-.232 (.164)	.271 (.225)	-.136 (.048)***	-.169 (.185)	-.394 (.087)***
Wealth status						
Poorest	0	0	0	0	0	0
Poorer	-.211 (.187)	-.058 (.094)	-.047 (.155)	.141 (.102)	-.375 (.177)**	.014 (.099)
Middle	-.168 (.189)	-.031 (.109)	-.029 (.154)	.015 (.110)	-.222 (.194)	-.012 (.105)
Richer	-.179 (.185)	.045 (.108)	-.075 (.147)	.064 (.112)	-.206 (.186)	.103 (.110)
Richest	-.157 (.192)	-.062 (.056)	-.050 (.149)	-.004 (.091)	-.350 (.185)*	-.079 (.097)
Employment status						
Not Employed	0	0	0	0	0	0
Employed	.101 (.092)	.003 (.104)	.012 (.092)	.142 (.115)	-.016 (.112)	.125 (.089)
wife beating justified	.074 (.0360)**	.102 (.038)***	-.006 (.029)	.084 (.040)**	.093 (.037)***	.121 (.034)***
Husband controls	.341 (.070)***	.346 (.061)***	.070 (.055)	.265 (.063)***	.493 (.089)***	.458 (.050)***
Respondent's father ever beat mother						
No	0	0	0	0	0	0
Yes	.197 (.119)*	.413 (.141)***	.256 (.148)*	.425 (.147)***	.223 (.123)*	.289 (.114)***
Don't Know	.188 (.149)	-.029 (.123)	-.142 (.056)***	-.116 (.056)**	.178 (.174)	-.036 (.156)
Husband drinks alcohol						
No	0	0	0	0	0	0
Yes	.406 (.075)***	.274 (.073)***	.141 (.071)**	.269 (.081)***	.595 (.080)***	.257 (.068)***
Religion						
Christians	0	0	0	0	0	0
Moslems	-.251 (.143)*	-.001 (.080)	.204 (.267)	-.151 (.073)**	-.354 (.125)***	.168 (.078)**
Traditionalists	.196 (.295)	.044 (.120)	-.234 (.075)***	.064 (.146)	.423 (.430)	-.082 (.112)
No religion	.444 (.322)	-.130 (.110)	.303 (.270)	.062 (.154)	.032 (.194)	.137 (.183)
Type of place of residence						
Urban	0	0	0	0	0	0
Rural	-.072 (.068)	-.136 (.076)	-.025 (.063)	.053 (.079)	.073 (.073)	-.097 (.080)
Region of residence						
Greater Accra	0	0	0	0	0	0
Central	.032 (.166)	.029 (.298)	.002 (.090)	.328 (.427)	.087 (.151)	.058 (.371)
Western	-.239 (.146)	-.180 (.149)	.176 (.115)	-.131 (.112)	-.144 (.131)	-.180 (.204)
Volta	.456 (.632)	-.162 (.139)	-.204 (.140)	.191 (.152)	.228 (.422)	-.164 (.132)
Eastern	-.167 (.149)	-.205 (.133)	.047 (.084)	.063 (.164)	-.115 (.148)	-.131 (.156)
Ashanti	.066 (.147)	-.240 (.140)	.010 (.068)	-.061 (.142)	.211 (.127)	-.193 (.160)
Brong Ahafo	-.022 (.162)	-.235 (.137)	.253 (.126)**	-.123 (.135)	.150 (.158)	-.147 (.163)
Northern	-.240 (.154)	-.010 (.121)	-.079 (.061)	-.021 (.097)	-.328 (.159)**	.019 (.119)
Age of respondent	.001 (.004)	.006 (.004)	-.003 (.004)	-.001 (.004)	-.002 (.004)	.004 (.004)

Note: *p<.1; **p<.05; ***p<.01; robust standard errors are in brackets.

Table 3: Multivariate OLS Coefficients for physical violence among women aged 15-49

Variables	Matrilineal		Patrilineal	
	Model 1	Model 2	Model 3	Model 4
Education	β	β	β	β
No Education		0		0
Primary Education		-.030 (.114)		.007 (.098)
Secondary Education		-.129 (.113)		-.080 (.088)
Higher Education		-.200 (.253)		-.125 (.197)
Wealth status				
Poorest		0		0
Poorer		-.159 (.167)		-.052 (.089)
Middle		-.141 (.163)		-.106 (.117)
Richer		-.147 (.166)		-.090 (.128)
Richest		-.141 (.186)		-.197 (.136)
Employment status				
Not Employed		0		0
Employed		.205 (.113)		.016 (.114)
Wife beating justified	.040 (.035)	.037 (.038)	.048 (.037)	.041 (.037)
Husband controls	.289 (.066)***	.291 (.067)***	.304 (.058)***	.307 (.060)***
Respondent's father ever beat mother				
No	0	0	0	0
Yes	.084 (.115)	.091 (.117)	.292 (.133)**	.284 (.132)**
Don't Know	.142 (.129)	.144 (.126)	-.041 (.116)	-.035 (.177)
Husband drinks alcohol				
No	0	0	0	0
Yes	.296 (.068)***	.285 (.070)***	.239 (.068)***	.233 (.069)***
Religion				
Christians	0	0	0	0
Moslems	-.117 (.195)	-.131 (.158)	-.018 (.079)	-.034 (.087)
Traditionalists	.120 (.336)	.109 (.295)	-.023 (.127)	-.070 (.126)
No religion	.304 (.172)	.274 (.309)	-.092 (.113)	-.182 (.118)
Type of place of residence				
Urban	0	0	0	0
Rural	-.044 (.065)	-.094 (.081)	-.187 (.083)**	-.266 (.107)***
Region of residence				
Greater Accra	0	0	0	0
Central	-.010 (.172)	-.045 (.176)	.172 (.289)	.134 (.266)
Western	-.153 (.147)	-.211 (.152)	.076 (.145)	-.023 (.144)
Volta	.343 (.612)	.288 (.564)	-.037 (.143)	-.097 (.143)
Eastern	-.118 (.153)	-.132 (.158)	-.039 (.132)	-.130 (.130)
Ashanti	.019 (.160)	.006 (.164)	-.117 (.136)	-.190 (.135)
Brong Ahafo	-.013 (.164)	-.069 (.167)	-.070 (.137)	-.164 (.140)
Northern	-.142 (.194)	-.203 (.203)	.051 (.134)	-.049 (.128)
Age of respondent	.004 (.003)	.002 (.004)	.010 (.004)	.006 (.005)
R-squared	.123	.133	.110	.116
Model significance	4.09 (17)***	2.90 (25)***	3.44 (17)***	2.83 (25)
Number of observations	811	811	1014	1014

Note: *p<.1; **p<.05; ***p<.01; robust standard errors are in brackets.

Table 4: Multivariate OLS Coefficients for sexual violence among women aged 15-49

Variables	Matrilineal		Patrilineal	
	Model 1	Model 2	Model 3	Model 4
Education	β	β	β	β
No Education		0		0
Primary Education		.168 (.079)**		.139 (.106)
Secondary Education		.254 (.0780***)		.128 (.097)
Higher Education		.452 (.275)		.037 (.114)
Wealth status				
Poorest		0		0
Poorer		-.048 (.168)		.145 (.110)
Middle		-.066 (.158)		.002 (.125)
Richer		-.114 (.157)		.074 (.186)
Richest		-.084 (.174)		.050 (.160)
Employment status				
Not Employed		0		0
Employed		.029 (.099)		.182 (.124)
Wifebeating	-.006 (.031)	.001 (.033)	.059 (.040)	.062 (.041)
Husband controls	.046 (.060)	.044 (.059)	.244 (.061)***	.241 (.062)***
Respondent's father ever beat mother				
No	0	0	0	0
Yes	.233 (.146)	.242 (.149)	.351 (.138)***	.362 (.140)***
Don't Know	-.128 (.059)**	-.109 (.059)	-.060 (.057)	-.040 (.059)
Husband drinks alcohol				
No	0	0	0	0
Yes	.137 (.075)*	.145 (.076)**	.175 (.074)***	.161 (.077)**
Religion				
Christians	0	0	0	0
Moslems	.152 (.242)	.154 (.234)	-.066 (.077)	-.036 (.085)
Traditionalists	-.217 (.127)*	-.198 (.170)	.044 (.144)	.099 (.149)
No religion	.287 (.258)	.317 (.262)	.090 (.142)	.185 (.146)
Type of place of residence				
Urban	0	0	0	0
Rural	-.046 (.073)	-.028 (.072)	-.001 (.102)	.029 (.138)
Region of residence				
Greater Accra	0	0	0	0
Central	.013 (.097)	.044 (.103)	.338 (.427)	.331 (.410)
Western	.203 (.134)	.232 (.142)	-.031 (.143)	-.046 (.154)
Volta	-.160 (.165)	-.203 (.173)	.195 (.166)	.190 (.158)
Eastern	.110 (.097)	.112 (.104)	.118 (.179)	.106 (.179)
Ashanti	.012 (.080)	.009 (.085)	-.030 (.138)	-.020 (.135)
Brong Ahafo	.244 (.129)*	.269 (.135)**	-.104 (.143)	-.047 (.148)
Northern	-.032 (.106)	.007 (.144)	-.086 (.124)	-.031 (.117)
Age of respondent	-.002 (.004)	-.002 (.004)	-.002 (.004)	-.002 (.004)
R-squared	.0377	.0467	.0772	.0859
Model significance	1.62 (17)**	1.07 (25)	2.14 (17)***	1.71 (25)**
Number of observations	811	811	1014	1014

Note: *p<.1; **p<.05; ***p<.01; robust standard errors are in brackets.

Variables	Matrilineal		Patrilineal	
	Model 1	Model 2	Model 3	Model 4
Education	β	β	β	β
No Education		0		0
Primary Education		.162 (.110)		.045 (.089)
Secondary Education		.093 (.110)		.051 (.091)
Higher Education		.058 (.214)		-.165 (.114)
Wealth status				
Poorest		0		0
Poorer		-.382 (.156)***		.022 (.095)
Middle		-.202 (.170)		-.068 (.110)
Richer		-.113 (.171)		-.029 (.136)
Richest		-.225 (.191)		-.165 (.114)
Employment status				
Not Employed		0		0
Employed		.049 (.106)		.221 (.091)***
Wifebeating	.033 (.035)	.041 (.036)	.043 (.033)	.037 (.033)
Husband controls	.431 (.084)***	.433 (.085)***	.418 (.049)***	.424 (.049)***
Respondent's father ever beat mother				
No	0	0	0	0
Yes	.055 (.110)	.037 (.111)	.153 (.107)	.153 (.109)
Don't Know	.193 (.131)	.188 (.128)	.019 (.131)	.042 (.132)
Husband drinks alcohol				
No	0	0	0	0
Yes	.455 (.078)***	.433 (.085)***	.288 (.066)***	.274 (.067)***
Religion				
Christians	0	0	0	0
Moslems	-.180 (.140)	-.158 (.141)	.186 (.078)***	.203 (.082)***
Traditionalists	.359 (.368)	.369 (.337)	-.150 (.112)	-.155 (.112)
No religion	-.179 (.175)	-.201 (.181)	.151 (.172)	.126 (.156)
Type of place of residence				
Urban	0	0	0	0
Rural	.111 (.066)	.140 (.083)	-.090 (.088)	-.142 (.116)
Region of residence				
Greater Accra	0	0	0	0
Central	-.033 (.151)	-.031 (.161)	.165 (.340)	.118 (.322)
Western	-.105 (.124)	-.113 (.133)	.024 (.165)	-.092 (.171)
Volta	-.052 (.359)	-.114 (.355)	-.073 (.126)	-.149 (.131)
Eastern	-.151 (.137)	-.170 (.146)	-.014 (.151)	-.101 (.152)
Ashanti	.100 (.134)	.090 (.140)	-.159 (.142)	-.235 (.149)
Brong Ahafo	.115 (.161)	.091 (.168)	-.072 (.150)	-.138 (.158)
Northern	-.352 (.197)	-.409 (.213)	-.026 (.123)	-.100 (.127)
Age of respondent	.003 (.004)	.003 (.004)	.004 (.004)	.004 (.004)
R-squared	.220	.232	.171	.182
Model significance	7.26 (17)***	6.39 (25)***	7.82 (17)***	6.40 (25)***
Number of observations	811	811	1014	1014

Note: *p<.1; **p<.05; ***p<.01; robust standard errors are in brackets.