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Intimate partner violence among mothers of sick newborns in Ghana

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Abstract

Intimate Partner Violence (IPV) is a major public health problem estimated to affect 15–71% of women worldwide. We sought to elicit IPV risks among mothers of sick newborns in Ghana. As part of a broader study on postpartum depression, we conducted semi-structured surveys of 153 women in a mother-baby unit, assessing demographics, depression, social support, and IPV with the present partner. 46% of mothers reported some form of violence, mostly emotional (34%), followed by physical (17%) and sexual (15%). The study highlights the frequency of perinatal IPV and the associated risk factors of depression and poor social support.

Keywords

intimate partner violence; depression; Ghana; sub-Saharan Africa; social support; perinatal mental health

Intimate Partner Violence (IPV) is a global public health problem, which affects mainly women. The World Health organization (WHO), through their multi-country study, estimated the lifetime prevalence of IPV to be 15–71%, making it the most common form of violence against women (Garcia-Moreno et al. 2006). The consequences on the emotional, physical, sexual/reproductive, and mental well-being of the woman and her family are enormous (World Health Organization/London School of Hygiene and Tropical Medicine 2010; Amoakohene 2004). Despite this impact, there is limited data from sub-Saharan Africa about the prevalence or comorbidities associated with IPV in the perinatal period. We

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conducted interviews among Ghanaian mothers with sick infants to identify prevalence and comorbid risk factors associated with perinatal IPV. Through such work, researchers can provide insights and awareness for professional caregivers in health and social services in other low-resource countries while also contributing to international social science understanding of the cultural contributions to violence against women. We collected data within a health care setting, but our larger focus on mental health, violence, and social support will be of interest to a broad international audience.

IPV is defined as a pattern of abusive behavior by a partner in an intimate relationship. The abuse may involve emotional aggression (belittling, isolation, intimidation, humiliation, controlling, stalking, restricting access to information and assistance), physical aggression (beating, slapping, choking, or threat of physical violence), or sexual coercion or force (World Health Organization/London School of Hygiene and Tropical Medicine 2010; Garcia-Moreno et al. 2006; Heise, Ellsberg, and Gottemoeller 1999). Repercussions from IPV can include injuries or even death from assault; mental health disorders including depression, anxiety, post-traumatic stress disorder, and psychosis; and physical health problems including chronic pain, infections, and headaches among other disorders (Heise, Ellsberg, and Gottemoeller 1999; American College of Obstetricians and Gynecologists 2012; Abramsky et al. 2011). Violence during pregnancy is not uncommon and is associated with adverse pregnancy outcomes including unintended pregnancy, low birth weight, and fetal death (Abramsky et al. 2011; Makayoto et al. 2013; Stockl, Watts, and Kilonzo Mbawambo 2010).

Data for IPV in sub-Saharan African is quite limited; while IPV is present worldwide, it also has cultural variations based on traditions and customs within different countries (Amoakohene 2004). In Ghana, the most recent data available is from the 2008 Demographic and Health Survey which is a nationally-representative household study. In that survey 45% of women reported a history of either physical or sexual violence and between 35–40% reported physical, sexual, or emotional abuse from their husband or partner (Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro 2008). One of the complicating factors is that in Ghana, like many countries, there are cultural factors which encourage violence against women, and many advocates have encouraged increased attention to this topic (*Breaking the Silence & Challenging the Myths of Violence Against Women and Children in Ghana: Report of a National Study on Violence* 1999; Amoakohene 2004; Dennis-Antwi and Dapaah 2010). As part of a broader study on post-partum depression, we sought to quantify the frequency of IPV in the perinatal period and to understand potential risk factors and comorbidities. Since violence has consequences the health, social, and economic well-being of mothers and children, clarifying the frequency violence during pregnancy is an important prerequisite to improving the safety of vulnerable populations.

Materials and Methods

We conducted this study in Kumasi, Ghana at the inpatient Mother-Baby-Unit (MBU) of the Komfo Anokye Teaching Hospital (KATH). The hospital is a major tertiary hospital associated with the Kwame Nkrumah University of Science and Technology (KNUST). The

Mother-Baby unit is the site of care for premature infants and newborns with early postnatal illness and has 4500 admissions annually (KATH 2010). The Committee on Human Research Publication and Ethics of KNUST and the Institutional Review Board at the primary author's U.S. institution [omitted here to blind authorship] reviewed and approved the study.

In summer 2011, we purposefully sampled mothers with a hospitalized infant in the MBU. Inclusion criteria included age 18 and older, willingness to participate, and ability to understand English or the local language (Twi). Trained medical student research assistants conducted the study and when necessary used a health care professional (nurse, student nurse, or physician) as a translator if the patient did not speak English. We piloted the semi-structured survey with psychiatrists, pediatricians, family physicians, and other women's health experts in Ghana and the United States for cultural appropriateness and content. The survey included demographics, pregnancy history, prenatal care, and delivery data as well as screens for intimate partner violence, depression, social support, and health care decision-making. We obtained written consent from participants and provided mothers with free photographs of their baby as a token incentive for participation.

We based the demographic questions on the Ghana Demographic and Health Survey (GDHS) household questionnaire (Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro 2008). To capture economic status, we asked women to describe the money their family has compared to other families as "below average," "average," or "above average." This single question has been validated in Ghana as a way to rapidly assess socioeconomic status, particularly for research; the results have been shown to have excellent correlation with results from the much more detailed and longer Demographic and Health Survey questionnaires which are used in governmental sampling (van Bodegom et al. 2009). Investigators have noted that rapid appraisal provides compared with the Demographic and Health Survey used to construct a wealth index

Using the survey, researchers assessed IPV via 12 screening questions from the GDHS's 2008 household survey on health, which had been adapted from the Conflict Tactics Scale (CTS). The CTS has been used internationally to assess family violence and has specifically been tested in Africa (Antai 2011). We included three questions which identified physical violence, seven which screened for emotional abuse, and two which asked about sexual violence. We asked these questions with specific reference to the patient's current or most recent husband or partner.

To measure depression, we utilized the Patient Health Questionnaire (PHQ-9), which has been shown to have good reliability and validity among community-based postpartum women in Ghana (Weobong et al. 2009). A PHQ score of less than 5 indicates no evidence of depression; scores of 5–9 suggest mild depression; a score above 10 suggests moderate or severe depression and is the cutoff generally used to predict depression among clinical cohorts (Gilbody et al. 2007).

Since social support is very different among cultures, we chose to identify a measurable source of social support among postpartum women. In Ghana, it is common for women to

live with their mother, mother-in-law, or another relative after delivery, who usually provides support over the first few weeks or months of the infant's life. We used a yes/no question to identify whether a woman would be moving in with family members after hospital discharge.

From the literature, we identified independent variables which correlated with IPV. We conducted bi-variable analysis (chi-squared for categorical variables and ANOVA for continuous variables) to evaluate the relationship between reported abuse and these independent risk factors, including young age, low education, low financial status, maternal depression, and high maternal parity (Bowman 2003). We also evaluated additional factors associated with IPV in this population including unemployment, rural residence, lack of control over health decisions, desire for current pregnancy, and social support. All the variables were combined in a multivariable logistic regression to control for potential confounders. We set level of significance was set at 0.05. All variables had less than 3% missing data.

Results

A total of 153 mothers participated in the study. Demographics and descriptive variables concerning the women are shown in Table 1. The mean age of women was 28 years. Two thirds lived in an urban setting and 80% were employed. Three quarters delivered vaginally and 95% delivered in a hospital setting.

Seventy (46%) of women reported at least one type of IPV. Overall, 52 (34%) of women reported emotional abuse, 26 (17%) reported physical abuse, and 23 (15%) described sexual abuse. (Figure 1) Demographic factors including maternal age, education, financial status, urban versus rural residence, current employment, and parity did not predict IPV. Significantly more women with depression reported violence with their current partner than non-depressed women (54% versus 26%, $p=0.006$). Mothers who anticipated living with relatives in the postpartum period were significantly less likely to report IPV than women not anticipating this social support (41% versus 68%, $p=0.009$). The mother's involvement in her own health care decisions and her desire for the most recent pregnancy did not predict IPV. (Table 2)

In multivariable analysis we controlled for all the demographic and risk factors described above and found that depression and poor social support continued to be significant predictors for IPV (Table 3). Women with mild depression (OR:3.44, CI:1.30–9.08, $p=0.013$) or moderate/severe depression (OR:3.51, CI:1.35–9.15, $p=0.01$) as well as lack of social support (OR:3.89, CI:1.37–11.05, $p=0.011$) had higher IPV odds than women without these risks.

Discussion

In our study of mothers of sick newborns in Kumasi, Ghana, 46% said they had suffered IPV in their current relationship which is consistent with prior reports of violence in sub-Saharan Africa (Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro 2008; World Health Organization/London School of Hygiene and Tropical Medicine 2010;

Makayoto et al. 2013; *Breaking the Silence & Challenging the Myths of Violence Against Women and Children in Ghana: Report of a National Study on Violence* 1999; Ntaganira et al. 2008). While IPV is seen world-wide, it is generally thought to be less common in highly industrialized nations (Garcia-Moreno et al. 2006; Thompson et al. 2006; Pallitto et al. 2013). Our findings show a significantly higher rate of IPV than previously-published reports of IPV during pregnancy in Nigeria and Tanzania but our queries asked about abuse with the current partner and was not limited to the perinatal period (Iliyasu et al. 2013; Stockl, Watts, and Kilonzo Mbwambo 2010).

The highest percentage of abused women in our study suffered from emotional/psychological violence. This follows the pattern observed in the GHDS 2008 survey where 33% of women had suffered emotional IPV with their current partner and matches findings in Nigeria, Kenya, and Liberia (Iliyasu et al. 2013; Makayoto et al. 2013; Allen and Devitt 2012). The sequelae from emotional abuse can be as or more damaging than those from physical violence, and without physical injuries can be a hidden problem within the society (Marshall 1999; Amoakohene 2004). Emotional abuse may not be recognized as a problem but as a Mauritanian (African) proverb describes: “A cutting word is worse than a bowstring, a cut may heal, but the cut of the tongue does not” (Netaob 2000s).

Thirteen percent of women in this study reported sexual violence which is higher than that described by the report of the Ghana Health Service (Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro 2008). This may reflect the child-bearing population we were interviewing or could suggest a link between violence and adverse pregnancy outcomes as this has been extensively described by other researchers (Boy and Salihu 2004; Sharps, Laughon, and Giangrande 2007). IPV is a sensitive subject which encroaches on an individual’s private life; many people take this to mean that others should not question or comment about such issues. Interestingly, during this study, several health providers (both nurses and physicians) who were privy to the contents of the questionnaire expressed great discomfort at the idea of asking mothers about sexual violence. We were told by these providers that “this does not occur” in Ghana and so they felt it was inappropriate to query women with such questions. The fact that such a large percentage of women did share these experiences with us would argue against these widespread cultural beliefs that sexual violence does not occur in this country.

In many countries, there are traditional practices which may be abusive toward women but which are widely accepted by both genders. For example, some areas of Ghana still practice widowhood rites which punish or limit the rights of women after spousal death (Amoakohene 2004; *Breaking the Silence & Challenging the Myths of Violence Against Women and Children in Ghana: Report of a National Study on Violence* 1999). While female genital mutilation is less common in Ghana, it is still pervasive in several other African countries. Many countries support forced marriage or promote marriage of young children. Women and men have both internalized societal messages and may be equally likely to believe violence can be justified based on violations of cultural or social expectations (*Breaking the Silence & Challenging the Myths of Violence Against Women and Children in Ghana: Report of a National Study on Violence* 1999; Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro 2008). Some studies have

shown women to be even more likely than men to justify violence such as wife-beatings due to a wife's disrespect of a partner, providing late meals, or refusing sexual intercourse (Fawole, Aderonmu, and Fawole 2005). Findings from a detailed study of violence against women and children in Ghana using interviews and focus groups show widespread blaming of the victim—by both men and women (*Breaking the Silence & Challenging the Myths of Violence Against Women and Children in Ghana: Report of a National Study on Violence* 1999). While in some countries such as the United States, a male batterer may be seen as the aggressor, in some countries in Africa, the male may be excused by the culture (Bowman 2003).

In Ghana women traditionally are the ones to take care of the domestic chores and child-rearing but they are also expected to earn money and help with the upkeep of the household. Traditionally the man is the head of the house, and in many families, men carry decision-making power over many aspects of the woman's life including economic, social, and health endeavors (*Breaking the Silence & Challenging the Myths of Violence Against Women and Children in Ghana: Report of a National Study on Violence* 1999; Amoakohene 2004). In many countries, the culture of violence starts in childhood; in Ghana, for example, nearly 80% of children had experienced beatings by a guardian by the age of 13 (*Breaking the Silence & Challenging the Myths of Violence Against Women and Children in Ghana: Report of a National Study on Violence* 1999). When children witness violence as regular part of life, they are likely to grow up accepting it as normal behavior. Officials from the World Health Organization (WHO) have pointed out that women living in countries with traditional gender roles and where social norms are supportive of violence are known have an increased risk for IPV (World Health Organization/London School of Hygiene and Tropical Medicine 2010).

In our research, maternal age, education, employment, and finances were not protective against IPV. Prior research has shown that young age, low education, and low socioeconomic status are risk factors for IPV so our lack of association may be due to low sample size (World Health Organization/London School of Hygiene and Tropical Medicine 2010; Thompson et al. 2006). The finding that depression was significantly correlated with a report of IPV with the current partner is interesting. In this cross-sectional study, we cannot assert that IPV is the cause of the depression, but IPV is known to be associated with worse maternal mental health including depression and post-traumatic stress disorder and is seen more commonly among women who commit suicide during pregnancy and the postpartum (Heise, Ellsberg, and Gottemoeller 1999; Gold et al. 2012). In addition, the WHO has identified depression as a known risk factor for IPV so the relationship may be multidirectional (World Health Organization/London School of Hygiene and Tropical Medicine 2010).

It is of concern that these mothers of sick infants reported high levels of IPV as violence against the mother has been associated with worsened child health outcomes including acute illness, malnutrition, mortality, and behavioral problems (Abramsky et al. 2011; World Health Organization/London School of Hygiene and Tropical Medicine 2010). According to data from multiple low income countries including several in sub-Saharan Africa, infants in

households with maternal IPV have significant delays in growth and higher rates of infant mortality (Rico et al. 2011; Silverman et al. 2011).

Our study has several limitations including the small sample size and convenience sampling strategy. Our focus on mothers of sick newborns means results may not be generalizable to the broader population. There could have been loss of information during translation, and there could be limited understanding of some questions by the participants. Like any study based on self-report, there is likely some recall and reporting bias, and since IPV involves a sensitive and personal topic, results may not reflect true incidence; however, given the sensitivity of the questions, we would anticipate under-rather than over-reporting of these events. Alcohol consumption, former abuse, and past trauma are predictors of IPV which were not measured in this research but are mentioned in the literature as factors associated with IPV and should be considered in future studies (World Health Organization/London School of Hygiene and Tropical Medicine 2010; Hellmuth et al. 2013; Thompson et al. 2006). We did evaluate related factors such as depression and social support as well as the collection of both demographic and pregnancy information which help to put the results in context.

Only within the past couple of decades have governments and police forces recognized IPV as a serious public health and human rights issue (Pallitto et al. 2013). Ghana passed the Domestic Violence Act in 2007 and has established a plan of action to promote reduction of IPV (Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro 2008). The Ghanaian government household health study included questions about domestic violence in 2008 which provided baseline epidemiologic information (Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro 2008). However, it is unknown what impact these measures have had on overall prevalence as IPV tends to be a hidden issue and not reported (Bowman 2003; Dennis-Antwi and Dapaah 2010). According to a report on IPV in Ghana from the 1990s, most reports of physical violence and forced sex were shared with immediate family members but not with policy or other officials (*Breaking the Silence & Challenging the Myths of Violence Against Women and Children in Ghana: Report of a National Study on Violence* 1999).

The medical profession in Ghana should be sensitive to the risk for physical, psychological, and sexual abuse by intimate partners against women as nearly half of the women in this study reported IPV with their current partner. Health visits for antenatal, pregnancy, and postpartum care may provide an opportunity for providers to assess for IPV risks and evaluate the safety of both the mother and child. Understanding the broader cultural context in which such behaviors develop can allow for a sensitive approach to supporting women at risk and changing social norms so that violence is no longer an acceptable practice.

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Figure 1.
Type of intimate partner violence reported (total n=153)

Table 1

Demographics of mothers by intimate partner violence status* (total n=153)

Demographics	NO IPV n (%)	+ IPV n (%)n (%)	p-value
Maternal age in years (n=152)			
-- Mean (standard deviation)	28 (+/-6)	28 (+/-6)	0.573
Education			
-- None or primary school	28 (34%)	25 (36%)	0.333
-- Junior High School / Middle school	30 (36%)	31 (44%)	
-- Senior High School / Secondary or above	25 (30%)	14 (20%)	
Financial status			
-- Below average	33 (40%)	36 (51%)	0.148
-- At or above average	50 (60%)	34 (49%)	
Residence			
-- Rural	28 (34%)	22 (31%)	0.762
-- Urban	55 (66%)	48 (69%)	
Employment (n=149)			
-- Working	66 (83%)	58 (83%)	0.800
-- Not working	14 (18%)	11 (17%)	
Parity			
-- Mean (standard deviation)	1.9 (+/-2.0)	1.7 (+/1.7)	0.463
-- Range (0-9 live births)			

* Percentages are rounded so may not equal 100%. Missing data was <3% for all variables and missing values are not included in tabulation.

† p<0.05

Table 2Risk factors for mothers by intimate partner violence status^{*} (total n=153)

Descriptive variables	No IPV	+ IPV	p-value
Depression Screen (PHQ-9) [†]			
-- None	34 (41%)	12 (17%)	0.006
-- Mild	23 (28%)	27 (39%)	
-- Moderate/Severe	26 (33%)	31 (44%)	
Social Support (relatives to help postpartum) [†]			
-- Yes	74 (89%)	51 (73%)	0.009
-- No	9 (11%)	19 (27%)	
Mother Involved in Own Health Decisions			
-- Yes	53 (64%)	43 (62%)	0.845
-- No	30 (36%)	26 (38%)	
Pregnancy Desired at that Time			
-- Yes	48 (52%)	45 (48%)	0.415
-- No (desired later or not at all)	35 (58%)	25 (42%)	

^{*} Percentages are rounded so may not equal 100%. Missing data were <1% for all variables and missing values are not included in tabulation.

[†] p<0.05

Table 3

Odds of intimate partner violence among postpartum mothers*

Variable	Odds Ratio	95% Confidence Interval	p-value
Maternal age (increasing)	1.03	0.95–1.12	0.476
Education			
-- None/primary	1.00	--	--
-- Middle	1.58	0.65–3.86	0.317
-- Secondary or above	0.87	0.29–2.59	0.800
Financial status			
-- Below average	1.00	--	--
-- Average or above	0.77	0.34–1.71	0.517
Residence			
-- Urban	1.00	--	--
-- Rural	0.81	0.36–1.82	0.608
Employment			
-- Not Working	1.00	--	--
-- Working	0.96	0.37–2.51	0.929
Parity (increasing)	0.82	0.61–1.10	0.191
Depression Screen [†]			
-- None	1.00	--	--
-- Mild	3.44	1.30–9.08	0.013
-- Moderate/Severe	3.51	1.35–9.15	0.010
Social Support [†]			
-- Yes	1.00	--	--
-- No	3.89	1.37–11.05	0.011
Mother Involved in Own Health Decisions			
-- Yes	1.00	--	--
-- No	0.68	0.31–1.50	0.339
Pregnancy Desire			
-- Wanted Pregnancy Then	1.00	--	--
-- Wanted Later/Not at All	0.85	0.38–1.90	0.688

* Based on multivariable logistic analysis controlling for all of the listed factors.

[†] p<0.05