

# Intimate partner violence and reproductive health of women in Kenya

E. Emenike<sup>1</sup> MSc, S. Lawoko<sup>2,3</sup> MSc, PhD & K. Dalal<sup>4</sup> MSc

<sup>1</sup> Master's Student, <sup>2</sup> Lecturer, <sup>4</sup> Course Coordinator and Doctoral Student, Department of Public Health Sciences, Karolinska Institute, Stockholm, <sup>3</sup> Senior Researcher, Stockholm Centre for Public Health, Stockholm, Sweden

EMENIKE E., LAWOKO S. & DALAL K. (2008) Intimate partner violence and reproductive health of women in Kenya. *International Nursing Review* 55, 97–102

**Background:** Reproductive age represents an augmented risk of intimate partner violence (IPV) despite its occurrence in women of all ages. IPV has been associated with various reproductive health outcomes (e.g. terminated pregnancies and infant mortality), although multi-country studies indicate that the findings may not be consistent across all cultures.

**Study aim and method:** The current work describes the association between IPV and reproductive health of women in Kenya using the Demographic and Health Survey of 2003.

**Results:** A significant association between physical/emotional/sexual abuse of women and negative reproductive health outcomes such as terminated pregnancies and infant mortality was identified. In addition, IPV exposure was associated with use of family planning methods and high fertility.

**Conclusion and recommendations:** Practitioners in the healthcare sector should inquire about abuse. Provision of counselling services and information regarding IPV effects on reproductive outcomes as well as referring abused women to relevant institutions is recommended in secondary prevention of IPV and to improve the reproductive health status of abused women.

*Keywords:* Intimate Partner, Kenya, Reproductive Health, Violence

## Introduction

There has been an increased awareness of the implications of key demographic, social and behavioural factors for women's health status. One such area that has received global recognition is the impact of domestic violence on women's health and quality of life in general. Recent estimates from African countries indicate a lifetime prevalence of between 25% and 48% (i.e. 48% in Zambia, 47% in Kenya, 34% in Egypt, 30% in Uganda and 25% in South Africa) and an annual prevalence ranging between 10% and 26% (Jewkes et al. 2002; Kishor & Johnson 2004; Koenig et al. 2003; Mwenesi et al. 2003). These figures are comparable

with data from other developing countries such as Cambodia, India, Haiti and Nicaragua where the lifetime prevalence of domestic violence ranges between 17% and 52%, and the annual prevalence between 13% and 21% (Ellsberg et al. 2000; Gage 2005; Kishor & Johnson 2004).

Intimate partner violence (IPV) has profound effects on women's physical and psychosocial health outcomes. Findings from Africa suggest that physically assaulted women are likely to sustain injuries ranging in severity from bruises to fractured bones (Koenig et al. 2003; Mwenesi et al. 2003). Further, abused women are likely to report various forms of psychological morbidity such as depression and anxiety (Aidoo & Hapham 2001; Campbell 2002; Mayeya et al. 2004). Reports on the health consequences of IPV seem to follow a similar pattern in non-African countries (Campbell et al. 2002; Golding 1999; Heise & Garcia-Moreno 2002; Koss 1990; Petersen et al. 2001; Plichta et al. 2004;

*Correspondence address:* Stephen Lawoko, Stockholm Centre for Public Health, Vastgotagatan 2, PO Box 17533, SE-118 91 Stockholm, Sweden. Tel: 46-8-7373609; Fax: 46-8-7373880; E-mail: stephen.lawoko@sll.se.

Tjaden & Thoennes 2000; Tolman & Rosen 2001). Moreover, data from non-African countries suggest that female victims of IPV face social isolation in the form of restricted access to community services, constrained relationship with healthcare providers and employers (Heise & Garcia-Moreno 2002; Plichta et al. 2004), and are more likely to adopt behaviours that present health risks such as substance abuse, alcoholism and suicide attempts (Heise & Garcia-Moreno 2002; Plichta et al. 2004; Roberts et al. 2005; Silverman et al. 2001).

Although IPV occurs to women of all ages, reproductive age represents an augmented risk. IPV has therefore been linked to reproductive health outcomes such as terminated or undesired pregnancies, child loss during infancy, use of family planning methods and high fertility in Africa (Kishor & Johnson 2004) and elsewhere (Garcia-Moreno et al. 2005; Jejeebhoy 1998; Kishor & Johnson 2004; Rose et al. 2000). Multi-country studies suggest, however, that the findings are not consistent across all cultures. For instance, undesired pregnancies were not associated with IPV in Haiti, and use of contraceptives was not related to IPV in India, while these variables *were* associated with IPV in Zambia, Colombia, Cambodia, Peru and Egypt (Kishor & Johnson 2004). These findings warrant an assessment of IPV and its association with reproductive health outcomes in each unique culture.

Little has been published in Africa regarding the relationship between IPV and reproductive health, not least in Kenya. Yet such information may contribute to the growing literature in the field in Africa and may inform policy interventions to manage violence, and to improve the reproductive health of women in Kenya.

Therefore, the aim of this study was to assess the association between IPV and reproductive health outcomes of women in Kenya. Specifically, the association between IPV and use of family planning methods, fertility, terminated pregnancy and infant mortality was scrutinized.

## Methods

### Sampling design

This study is based on the Kenyan Demographic and Health Survey of 2003 (KDHS 2003). Financed by the United States Agency for International Development and implemented by the Kenyan Central Bureau of Statistics (KCBS) in collaboration with the ministry of health and the Kenyan medical research institute, the KDHS 2003 covered the entire nation. The survey utilized a two-stage sampling design. Based on the list of the enumeration areas covered in the 1999 census, 400 clusters of areas (129 urban areas and 271 rural areas) were selected in the first phase. The second phase involved systematic sampling of households from a national database at the KCBS. Women

residents or visitors at the sampled households during the survey were eligible for recruitment for the KDHS. A more detailed description of the sampling procedure is reported in the KDHS 2003 final report (Otieno & Opiyo 2003).

### Subjects

All women 15–49 years of age residents or visitors at the sampled household at the time of the survey were eligible for participation (a total of 8195 women). The domestic violence module, however, was only administered to one woman in the household, randomly chosen, in compliance with the World Health Organization's (WHO) ethical and safety recommendations for research on domestic violence (WHO 2001). Thus, data on domestic violence were obtained from 5878 women, constituting 98% of those eligible for participation in the study. For the purpose of this study, only women ever (currently or formerly) married/having a partner and who responded to the domestic violence module ( $n = 4312$ ) were included to study the association between IPV and reproductive health outcomes.

### Measure

A comprehensive questionnaire covering demographic and health issues was administered to the eligible women. The questionnaire covered women's background, reproductive health, access to reproductive facilities, fertility preferences, child care and nutrition, child mortality, adult mortality, awareness of and precaution against sexually transmitted diseases, marriage and sexual behaviour, and domestic violence.

For the current paper, the questions on domestic violence and reproductive health were of primary interest.

Reproductive health (the dependent outcome variable in this study) was measured using the following indicators:

- 1 family planning preference (participants were asked if they had ever used any of the following methods – folkloric, traditional, or modern),
- 2 terminated pregnancy (i.e. if the respondent has ever experienced a terminated pregnancy),
- 3 infant mortality (defined as death of an infant before first birthday), and
- 4 fertility (number of live births).

Intimate partner violence (the independent variable in the study) was assessed using a modified and previously validated version of the Conflict Tactic Scale (Strauss 1990), where IPV is defined as exposure to one or several of the following experiences perpetrated by a husband/partner ever:

- 1 pushing, shaking or throwing something at her,
- 2 slapping her or twisting her arm,
- 3 punching or hitting her with something harmful,
- 4 kicking or dragging her,

- 5 strangling or burning her,
  - 6 threatening her with a weapon (e.g. gun or knife),
  - 7 attacking her with a weapon,
  - 8 humiliating her in public,
  - 9 threatening her or someone close to her,
  - 10 forced sexual intercourse, and
  - 11 other sexual act when undesired.
- Thus, the questions covered physical (1–7), emotional (8,9) and sexual (10,11) abuse.

### Ethical considerations

The WHO recommendations for research on domestic violence aim to ensure women's safety while maximizing disclosure of actual violence, promoted, among other means, by offering adequate training and support to field workers together with informed consent and guarantee of privacy to respondents (WHO 2001). The survey procedure (e.g. organization and sampling methods) and instruments used in the KDHS 2003 received ethical approval from the Institutional Review Board of Opinion Research Corporation (ORC) Macro International Incorporated, a demographic, health, and market research and consulting company based in New Jersey, USA.

### Statistical analysis

Cross-tabulation was used to study the association between the dependent and independent variables, and significant levels were tested using chi-squared test. Because age may be associated with both reproductive health and IPV, age-adjusted associations between IPV and reproductive health indicators were calculated using logistic regression analyses. The SPSS version 13.0 statistics program was used for all analyses. Statistical significance was assumed at  $P < 0.05$ .

To account for differences in probability because of clustering in the sampling design of DHS surveys in general, sample weights are usually recommended if the aim is to estimate national prevalence. However, it has been argued by DHS experts that if a study aims primarily at investigating associations between variables (as is the case in the current study), weighted data are inappropriate (Rutstein & Rojas 2003). Thus, results presented here will be based on the unweighted actual observations.

### Results

Table 1 shows the proportion of women exposed to IPV (total), and by reproductive health indicators. Of all participants ( $n = 4312$ ), a significant proportion had experienced physical (38%), emotional (24%) and sexual (14%) abuse by an intimate partner. Exposure to physical abuse was more common among women using folkloric and modern family planning methods than among peers using traditional methods and those not using

**Table 1** Proportion of women exposed to intimate partner violence (IPV) by reproduction health indicators

Variable (N)	Physical IPV		Emotional IPV		Sexual IPV	
	n	%	n	%	n	%
Family planning method						
None (1632)	568	34.8	320	19.6	166	10.0
Folkloric (20)	11	55.0	6	30.0	3	15.0
Traditional (329)	104	31.6	74	22.5	37	11.2
Modern (2331)	979	42.0	638	27.4	400	17.2
Terminated pregnancy						
Yes (619)	275	44.4	186	30.0	98	15.8
No (3692)	1386	37.5	851	23.0	507	13.7
Infant mortality						
Yes (1122)	552	49.2	354	31.6	188	16.8
No (2929)	1059	36.2	654	22.3	391	13.4
Number of births ever						
Less than three (1757)	542	30.8	341	19.4	211	12.0
Three or more (2555)	1120	43.8	697	27.3	395	15.5
All participants (4312)	1662	38.0	1038	24.0	606	14.0

$N$  is the total number within category,  $n$  is the number within category exposed to IPV, % is the proportion within category exposed to IPV.

any method at all ( $P < 0.001$ ). In addition, exposure to emotional or sexual violence was more frequent among women using family planning methods than among peers not using any method ( $P < 0.001$ ). Women exposed to physical, emotional or sexual violence were also more likely to have experienced a terminated pregnancy ( $P < 0.001$ ). Further, women who had previously lost one or more children were more likely to have experienced physical, emotional or sexual abuse ( $P < 0.001$ ). Finally, a higher proportion of women with three or more live births had ever been exposed to physical, emotional or sexual violence than peers with fewer than three births ever ( $P < 0.001$ ).

Table 2 shows the age-adjusted associations between IPV and reproductive health indicators expressed as odds ratios. As shown by the odds ratios and their confidence intervals, using any family planning method, having an experience of terminated pregnancy, having an experience of infant mortality and having three or more births ever were associated with an increased vulnerability to physical and emotional violence after adjusting for age effects in a logistic regression. In addition, using a family planning method and having an experience of infant mortality were associated with increased exposure to sexual violence after adjusting for age effects.

### Discussion

The findings of the current study suggest a relationship between IPV and reproductive health of abused women in Kenya.

**Table 2** Age-adjusted associations (using logistic regression) between exposure to intimate partner violence (IPV) and reproductive health indicators: odds ratios (OR) and their confidence intervals (CI)

Variable	Family planning OR (CI)	Terminated pregnancy OR (CI)	Infant mortality OR (CI)	Having at least three children OR (CI)
Physical IPV	1.236 (1.086–1.406)*	1.241 (1.042–1.478)*	1.652 (1.432–1.906)*	1.628 (1.398–1.897)*
Emotional IPV	1.419 (1.221–1.650)*	1.302 (1.075–1.577)*	1.483 (1.266–1.736)*	1.293 (1.085–1.542)*
Sexual IPV	1.684 (1.390–2.040)*	1.116 (0.879–1.417)	1.250 (1.029–1.520)*	1.210 (0.977–1.500)

\*Statistically significant at  $P < 0.01$ .

Consistent with findings from Cambodia, Haiti and Dominican Republic (Kishor & Johnson 2004), we found a higher prevalence of IPV among women who had ever experienced a terminated pregnancy. Similarly, women with a prior experience of physical, emotional or sexual abuse were more likely to have experienced an infant mortality, corroborating results from Zambia, Egypt, Cambodia, Nicaragua and India (Kishor & Johnson 2004). These findings may be suggesting that the experience of violence by women during pregnancy or after the birth of a child may jeopardize the pregnancy or life of the infant. A plausible explanation could be that the physical or psychological consequences of IPV may impair maternal ability to cater for her unborn child's or infant's nutrition, health and other needs. Results linking maternal psychological distress to poor pregnancy outcomes (Mulder et al. 2002) seem to support this view. IPV has also been suggested to lead to deliberate termination of pregnancy (Glander et al. 1998), which could also be a manifestation of emotional withdrawal and loss of hope in being able to care for the eventual newborn child. Further research is warranted, however, to study more closely the link between IPV-related psychological stress, prenatal/postnatal child care and terminated pregnancy/infant mortality.

Despite being at increased risk of terminated pregnancies and experiencing infant mortality, abused women exhibited a higher fertility rate (i.e. were more likely to have more than three births) than women who had never been abused. These results are in line with findings from other countries (Ellsberg et al. 1999; Kishor & Johnson 2004) and may be demonstrating a lack of autonomy among abused women in decisions regarding reproduction. Other findings indicating shorter birth intervals and unwanted births among abused women (Kishor & Johnson 2004) seem to support this view.

The results suggest an association between use of family planning methods and increased vulnerability to IPV, corroborating

findings from Cambodia, Haiti and the Dominican Republic (Kishor & Johnson 2004), but contradicting data from Colombia, where IPV exposure was associated with restricted use of family planning methods (Pallitto & O'Campo 2004). The discrepancy may be because of cultural differences in men's attitudes towards women's use of contraceptives in different societies. While in more liberal societies the use of contraceptives is more likely to be accepted, conservative societies may regard such behaviour as alien to social norms in that society. Further research comparing men's and women's attitudes towards the use of contraceptives and the correlation with IPV exposure in different societies is warranted.

The findings of the current study have some implications for policy and reproductive health care. For many women in developing countries, a visit to a health clinic for reproductive or child health services may be their only contact with the healthcare system. The healthcare sector, particularly nursing and midwifery, can capitalize on this opportunity by ensuring a supportive and safe environment for clients by inquiring about abuse and helping women to receive the care they need. Provision of counselling opportunities from within the reproductive healthcare unit as well as information on the reproductive health consequences of IPV, or referring victims of violence to other helpful institutions, e.g. police, lawyers, etc., is recommended in secondary prevention of IPV and to improve the reproductive health of IPV victims. However, there are some barriers that may militate against this action. Most providers and healthcare personnel share the same social and cultural environment with their clients, and they may themselves have been involved in IPV either as victims or as perpetrators (Garcia-Moreno 2002), suggesting that a change in attitude towards IPV among healthcare providers is warranted as a first step and should be an integral part of care providers' ongoing education.

### Design strengths and limitations

The KDHS 2003 has some important advantages when compared with other surveys undertaken in Kenya. First, it is nationally representative, allowing for conclusions to cover the entire nation. Second, the methodology is in line with ethical standards for research as approved by the Institutional Review Board of ORC Macro International Incorporated. Furthermore, interviewers were trained to adhere to regulations for interview completion in accordance with the WHO's recommendations for safety in the collection of domestic violence data. However, the weakness of the cross-sectional design of the current and most previous studies deserves some acknowledgement. Such study designs do not allow for causal inferences to be drawn. For example, we cannot say with certainty that a terminated pregnancy was a result of IPV. It is not completely unlikely that a terminated pregnancy could have led to IPV. Likewise, one could argue that loss of an infant in the family could have elicited violence from the husband/partner. Studies with a longitudinal design are necessary to confirm the direction of causality, i.e. IPV preceding negative reproductive health outcomes. Thus, the results reported here and in other cross-sectional studies should be interpreted with caution.

### Acknowledgements

We are most grateful to the MEASURE DHS for providing us with the data set. In addition, we would like to acknowledge all individuals and institutions in Kenya who were involved in one way or another in the implementation of the KDHS.

### References

- Aidoo, M. & Hapham, T. (2001) The explanatory models of mental health amongst low-income women and health care practitioners in Lusaka, Zambia. *Health Policy and Planning*, **16** (2), 206–213.
- Campbell, J. (2002) Health consequences of intimate partner violence. *Lancet*, **359** (9314), 1331–1336.
- Campbell, J., et al. (2002) Intimate partner violence and physical health consequences. *Archives of International Medicine*, **162** (10), 1157–1163.
- Ellsberg, M., Pena, R., Herrera, A., Liljestrand, J. & Winkvist, A. (1999) Wife abuse among women of childbearing age in Nicaragua. *American Journal of Public Health*, **89** (2), 241–244.
- Ellsberg, M., Pena, R., Herrera, A., Liljestrand, J. & Winkvist, A. (2000) Candies in hell: women's experience of violence in Nicaragua. *Social Science and Medicine*, **51** (11), 1592–1610.
- Gage, A. (2005) Women's experience of intimate partner violence in Haiti. *Social Science and Medicine*, **61** (2), 343–364.
- Garcia-Moreno, C., Jansen, H., Ellsberg, M., Heise, L. & Watts, C. (2005) *WHO Multi-country Study on Women's Health and Domestic Violence against Women: Initial Results Prevalence, Health Outcomes and Women's Responses*. WHO, Geneva.
- Garcia-Moreno, C. (2002) Dilemmas and opportunity for an appropriate health service response to violence against women. *Lancet*, **359** (9316), 1509–1514.
- Glander, S., Moore, M., Michielutte, R. & Parsons, L. (1998) The prevalence of domestic violence among women seeking abortion. *Obstetrics and Gynecology*, **91** (6), 1002–1006.
- Golding, J. (1999) Intimate partner violence as a risk factor for mental disorders: a meta-analysis. *Journal of Family Violence*, **14** (2), 99–132.
- Heise, L. & Garcia-Moreno, C. (2002) Violence by intimate partners. In *World Report on Violence and Health* (Krug, E., et al., eds). WHO, Geneva, pp. 87–121.
- Jejeebhoy, S. (1998) Association between wife-beating and infant death: Impression from a survey in rural India. *Studies in Family Planning*, **29** (3), 300–308.
- Jewkes, R., Levin, J. & Penn-Kekana, L. (2002) Risk factors for domestic violence: findings from a South African cross-sectional study. *Social Science and Medicine*, **55** (9), 1603–1617.
- Kishor, S. & Johnson, K. (2004) *Profiling Domestic Violence: A Multi-country Study*. ORC Macro, Calverton, MD.
- Koenig, M., et al. (2003) Domestic violence in rural Uganda: evidence from a community-based study. *Bulletin of the World Health Organisation*, **81** (1), 53–60.
- Koss, M. (1990) The women's mental health research agenda: violence against women. *American Psychologist*, **45** (3), 374–380.
- Mayeya, J., et al. (2004) Zambia mental health country profile. *International Review Psychiatry*, **16** (1–2), 63–72.
- Mulder, E., et al. (2002) Prenatal maternal stress: effects on pregnancy and the unborn child. *Early Human Development*, **70** (1–2), 3–14.
- Mwenesi, B., Buluma, R., Kong'ani, R. & Nyarunda, V. (2003) Gender violence. In *Kenya Demographic and Health Survey, Final Report*. Available at: <http://www.measuredhs.com/pubs/pdf/FR151/15Chapter/pdf> (accessed 25 May 2007).
- Otieno, F. & Opiyo, S. (2003) Introduction: survey organisation and sample design. In *Kenya Demographic and Health Survey, Final Report*. Available at: <http://www.measuredhs.com/pubs/pdf/FR151/01Chapter01.pdf> (accessed 28 March 2007).
- Pallitto, C. & O'Campo, P. (2004) The relationship between intimate partner violence and unintended pregnancy: analysis of a national sample from Colombia. *International Family Planning Perspective*, **30** (4), 165–173.
- Petersen, R., Gazmararian, J. & Clark, K. (2001) Partner violence. Implications for health and community settings. *Women's Health Issues*, **11** (2), 116–125.
- Plichta, S.B. (2004) Intimate partner violence and physical health consequences: policy and practice implications. *Journal of Interpersonal Violence*, **19** (11), 1296–1323.
- Roberts, T., Auinger, P. & Klein, J. (2005) Intimate partner abuse and the reproductive health of sexually active female adolescents. *Journal of Adolescent Health*, **36** (5), 380–385.
- Rose, L., Campbell, J. & Kub, J. (2000) The role of social support and family relationships in women's responses to battering. *Health Care of Women International*, **21** (1), 27–39.

- Rutstein, S. & Rojas, G. (2003) *Guide to DHS Statistics*. ORC Macro, Calverton, MD.
- Silverman, J., Raj, A., Mucci, L. & Hathaway, J. (2001) Dating violence against adolescent girls and associated substance use, unhealthy weight control, sexual risk behaviour, pregnancy, and suicidality. *Journal of the American Medical Association*, **286** (22), 572–579.
- Strauss, M. (1990) Measuring intra-family conflict and violence: the conflict tactics (CT) scales. In *Physical Violence in American Families: Risk Factors and Adaptations to Violence in 8145 Families* (Strauss, M.A. & Gelles, R.J. eds). Transaction Publishers, New Brunswick, pp. 29–47.
- Tjaden, P. & Thoennes, N. (2000) Extent, nature, and consequences of intimate partner violence: findings from the National Violence Against Women Survey. Department of Justice (US), Washington, DC.
- Tolman, R. & Rosen, D. (2001) Domestic violence in the lives of women receiving welfare. *Violence Against Women*, **7**, 141–158.
- World Health Organisation (WHO) (2001) *Putting Women First: Ethical and Safety Recommendations for Research on Domestic Violence against Women*. WHO, Geneva.