

Social Indicators and Physical Abuse of Women by Intimate Partners: A Study of Women in Zambia

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Intimate partner physical abuse (IPPA) of women is a societal problem with sinister implications on health. IPPA has been integrally linked to social status though the direction of association remains elusive, not the least in sub-Saharan Africa. This article investigated the association between IPPA and social status of women in Zambia. Data comprising 3,969 currently partnered women were retrieved from the 2001 Zambian Demographic and Health Survey and analyzed using chi-square test and logistic regression. IPPA augmented with low education, income-generating activity, access to information, autonomy over household health issues, and having tolerant attitudes toward IPPA. Tolerant attitude toward IPPA and illiteracy were independent risk factors for IPPA. Educational interventions are recommended to prevent IPPA in Zambia.

Keywords: women; intimate partner; physical abuse; social status; DHS surveys; Zambia

Intimate partner violence (IPV) is a multifaceted societal problem, considering its implications on health (Bourke-Martignoni & Heise, 1994; Kramer, Lorenzo, & Mueller, 2004; World Health Organization [WHO], 2002), mortality and morbidity (Langford, 1999; Rude, 1999; Shadigan & Bauer, 2005; WHO, 2002), and economic and social development (Raphael, 2002; Tolman & Raphael, 2000; WHO, 2004). Though the exact magnitude of IPV is difficult to establish due to underreporting and differences in definition of the concept, relatively reliable national and community surveys estimate the life time prevalence in the developing countries between 11% and 52% and a yearly prevalence between 4% and 29% (Ellsberg, Pena, Herrera, Liljestrand, & Winkvist, 1999; Gage, 2005; Jewkes, Penn-Kekana, & Levin, 2002; Kishor & Johnson, 2004; Koenig, Ahmed, Hossain, & Khorshed, 2003; Mwenesi, Buluma, Kong'ani, & Nyarunda, 2003).

Research has come a long way in identifying factors associated with IPV. Broadly, IPV has been integrally linked to ideas of patriarchal norms, gender inequality, and male superiority over women (Bates, Schuler, Islam, & Islam, 2004; Heise, 1994; Jewkes, 2002), often manifesting in the use of violence to create and enforce gender hierarchy and punish transgressions (Wood & Jewkes, 2001). Moreover, social and demographic factors, for example, ethnicity and religion (Ellsberg et al., 1999; Jewkes, 2002); behavioral factors, for example, alcohol consumption; experience of abuse in childhood; and social isolation are factors associated with increased vulnerability of women to IPV (Jewkes, 2002; Jewkes et al., 2002).

The role of social status variables in the occurrence of IPV, however, remains elusive. While independent studies suggest that such indicators may be associated with IPV, there is a lack of consensus regarding the direction of association. Some findings have supported the notion that poor socioeconomic conditions, for example, less schooling, unemployment, social isolation, and low income (Malcoe, Duran, & Montgomery, 2004; Moraes & Reichenheim, 2002) may be associated with increased vulnerability. Other studies have instead indicated increased vulnerability among socially empowered women. Burazeri et al. (2005) indicated increased exposure among women with high education, employed in high status occupations, and particularly more educated than their spouses. Krishnan (2005) showed that women involved in income-generating activity and having control over money were particularly at risk. Bates et al. (2004) observed higher exposure among women with substantial income, making significant contribution to the household budget, and with high education. Hindin and Adair (2002), however, did not find support for socioeconomic factors as elicitors of violence in households. On the other hand, they found a correlation between women's autonomy over household decisions and increased vulnerability to IPV. Koenig, Lutalo, et al. (2003) attempted to explore in more detail the role of sociocultural norms in explaining these inconsistencies. After stratifying their analysis by two main geographical parts of the Bangladesh that differ culturally, the authors found that in the more conservative region, women's credit group membership was significantly related to greater risk of violence, while mobility and education were not. In the less conservative region, however, credit group membership was associated with a decreased risk of violence.

The literature review implies that there are no rigid rules about the impact of women's economic and social empowerment on IPV and seems to suggest that sociocultural factors may account for discrepancies in the results. We sought to study the association between intimate partner physical abuse (IPPA) of women and social status variables in Zambia. This study will fill in the void in the literature in this regard.

ZAMBIA: HEALTH STATISTICS AND INTIMATE PARTNER VIOLENCE

Zambia has a population of about 10.3 million and a GDP per capita of US\$359 as of 2002. Infant mortality as of 2004 is 95 per 1,000 live births and maternal mortality at 729 per 100,000 live births (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2004). According to the Zambia National Health accounts of 2002, the total expenditure on health is 5% of GDP and the total health expenditure per capita is estimated at US\$17.38. Fifteen percent of the health expenditure is used in prevention compared with 80% on curative medicine (Phiri & Tien, 2004).

In Zambia, there is a culture of silence about IPV, especially because of fear or shame (Kishor & Johnson, 2004). Still, 35% to 40% (Heise, 1994; Lawoko, 2006) of women report IPV. Cultural notions where women are seen as men's property could account for the high prevalence (Mayeya et al., 2004). The women themselves appear to justify such attitudes, considering recent findings (Lawoko, 2006) showing that up to 80% of women in reproductive age in Zambia would justify IPPA for such reasons as her burning the food, visiting friends or family without his permission, or neglecting her children.

Given this background, it is important to understand the factors possibly associated with abuse of women in Zambia. These may be important in designing interventions to reduce abuse specific to the Zambian context. In this article, particular attention is drawn to social status indicators.

More concretely, the association between specific social indicators (e.g., education level and occupational status, access to information, autonomy, and attitudes) and IPV against women in Zambia was scrutinized.

METHODS

The Zambian Demographic and Health Survey

The 2001–2002 Zambian Demographic and Health Survey (ZDHS) is a comprehensive nationally representative survey implemented by the Central Statistics Office in partnership with the Central Board of Health. Technical assistance is provided by the MEASURE DHS project, implemented by Macro International, Incorporated. Like most other DHS surveys, the ZDHS is mainly funded by the USAID. Additional funding has been obtained from the Japanese government, United Nations Population Fund (UNFPA), and the Danish International Development Agency (DANIDA). At a broad level, the ZDHS provides data on fertility, marriage, domestic violence, social/empowerment indicators, awareness/utility of family planning methods, nutritional status of women and children, awareness regarding sexually transmitted illnesses including HIV, maternal and child health, and mortality.

Ethical Issues

The survey procedure (e.g., organization and sampling methods) and instruments used have received ethical approval from the Institutional Review Board of Opinion Research Corporation (ORC) and Macro International, Incorporated. Opinion Research Corporation is a demographic, health, and market research and consulting company based in New Jersey, USA.

The domestic violence module used in the ZDHS adheres to the standards for ethical and safety recommendations for research on domestic violence set by the WHO. The recommendations aim at ensuring women's safety while maximizing disclosure of actual violence, promoted among other things by offering adequate training and support to field workers together with informed consent and guarantee of privacy to respondents (WHO, 2001).

Sample Design

The list of Standard Enumeration Areas prepared for the year 2000 population census in Zambia constituted the frame for the ZDHS sample selection. Based on this list, a stratified two-stage sampling design was utilized. In the first stage, 320 clusters (100 in urban areas and 220 in rural areas) were selected from the frame. The second stage involved systematic sampling of households, selected with a probability proportional to the number of households in each of the 320 clusters. Thus, the ZDHS 2001–2002 comprises a nationally representative probability sample of 8,050 households. A more in-depth description of the sampling procedure is described in the ZDHS final report (Dzekedzeke & Mulenga, 2002).

Participants

All women 15–49 years of age residents/visitors at the sampled household at the time of the survey were eligible for participation, that is, a total of 7,944 women. Of those eligible, 7,658 were interviewed, constituting a response rate of 96.4%. The domestic violence

module, however, was only administered to one woman in the household, randomly chosen, in compliance with the World Health Organization's ethical and safety recommendations for research on domestic violence (WHO, 2001). A total of 5,466 women were selected for the domestic violence module, of which 5,029 were interviewed, constituting 92% of those eligible for the domestic violence module. For the purpose of this study, only women currently married/having a partner ($n = 3,969$) were included to study concurrently the association between social status indicators and IPV.

Questionnaire

A comprehensive questionnaire covering demographic and health issues was administered to the eligible women. The questionnaire covered women and husband's background, empowerment and social status, reproductive history, utility of family planning methods, fertility preferences, antenatal and delivery care, child care and nutrition, child mortality, adult mortality, awareness of and precaution against sexually transmitted diseases, marriage and sexual behavior, and domestic violence. For the current article, the questions on domestic violence and social indicators were of primary interest.

Measures

Dependent Variable. Intimate partner physical abuse (IPPA) was assessed using a modified version of the Conflict Tactic Scale (CTS; Straus & Gelles, 1990), which assesses whether participants have, since the age of 15 years, experienced physical abuse perpetrated by the current husband/partner. In the logistic regressions analyses, exposure to IPPA during the latest year was used as the dependent variable.

Independent Variables. Social indicators were measured using the following four indicators:

1. Sociodemographic variables: These included age, which was categorized in 5-year bands since studies have suggested that women in certain age groups may be particularly vulnerable to abuse (e.g., Lawoko, 2006); education (i.e., highest educational achievement with the following options: no education, primary, secondary, and postsecondary); literacy level (i.e., defined as being able to read a full sentence, part of a sentence, or not being able to read at all). We dichotomized this variable so that those who could read fully formed one group and those who could not read/could read only partly formed the second group; occupational category (the two largest groups, i.e., unemployed and agriculture workers were left intact while the professionals, civil servants, and other kinds of office workers were grouped together under "others" owing to the small numbers in these categories).
2. Access to information: Women were asked whether they had access to information via television and radio and whether they read newspapers/magazines.
3. Autonomy: Women were asked to indicate who in the household had the final say on decisions about how to spend money, healthcare, and visiting relatives/friends. The response options were partner alone, other person in household, woman and partner, woman and other person, woman alone. These options were dichotomized into full or partial say (later three options) and no say (former two options).
4. Attitudes toward IPPA that was measured by inquiring of the women if partner physical abuse was justified for one or several of the following reasons: if she burns the food; if she argues with him; if she goes out without telling him; if she neglects the children; and if she denied him sexual relationship.

Statistical Analyses

In the univariate analyses of IPPA and its association with social indicators, chi-square tests were used. However, potential confounding of social and demographic variables may bias the results if only univariate methods are used. For example, variables such as age and education could be both related to IPPA and autonomy in the household, that is, educated and older women may be more likely to participate in household decisions than less educated and younger peers. Low education and young age, however, are also associated with increased vulnerability to physical abuse. Thus, to assess the independent contribution of the different explanatory variables (free of confounding) on the dependent variable (i.e., IPPA), logistic regression was run. The magnitude and direction of association were expressed in the odds ratios. For all statistical analyses, a significance level of $p < .05$ was used.

RESULTS

As shown in Table 1, there was a significant association between age and physical abuse in the past year, $\chi^2(6) = 26, p < .001$. IPPA was least prevalent amongst women in the youngest and the oldest age groups. Urban dwellers, $\chi^2(1) = 14, p < .001$, and women with low education, $\chi^2(3) = 8.4, p < .05$, were more likely to report IPPA. Women working in the agricultural sector and those not working were less likely to report IPPA than peers in other sectors, $\chi^2(2) = 6, p < .05$. Furthermore, women without a say on health issues were more likely to report IPPA than those with such autonomy, $\chi^2(1) = 4.2, p < .05$. Finally, women with tolerant attitudes toward IPPA were more likely to report exposure, $\chi^2(1) = 21.7, p < .001$.

As indicated by the adjusted odds ratios in Table 2, illiterate women stood at a higher likelihood of IPPA when contrasted with their literate peers after adjusting for the other social indicators using a logistic regression. In addition, women with a nontolerant attitude toward IPPA were at a lower risk of IPPA when contrasted with their peers with tolerant attitudes toward IPPA.

DISCUSSION

The results of the current work suggest a relationship between IPPA and indicators of empowerment and social status, sometimes in a complex manner. With regard to sociodemographics, IPPA was least prevalent among women with a postsecondary education when contrasted with those having no education, primary education, and secondary education. In addition, women engaged in agriculture activity or not working were less exposed to IPPA when contrasted with peers engaged in other higher income-generating activity (e.g., professionals). The later finding seems consistent with the results of Krishnan (2005) and Burazeri et al. (2005) where it is suggested that women engaged in income-generating work may be more prone to abuse. Similarly Bates et al. (2004) showed that women engaged in a substantial income activity as compared to those who only contribute marginally to household budget were at increased IPPA vulnerability. A plausible explanation could be that women's economic empowerment may result in their acting more assertively, prompting acts of violence from their partners (Schuler, Hashemi, & Badal, 1998). These findings, however, are inconsistent with research implicating women's socioeconomic empowerment as protective against IPPA (Gage, 2005; Malcoe et al., 2004; Moraes & Reichenheim,

TABLE 1. Exposure to IPPA by Social Indicators: Total Number (N), Number Exposed (n), Proportions Exposed (%)

Variable	Total (N)	Exposed		P Value
		(n)	(%)	
Age				0.0001
15–19 years	323	102	31.6	
20–24 years	855	346	40.5	
25–29 years	831	390	46.9	
30–34 years	568	241	42.4	
35–39 years	406	167	41.1	
40–44 years	294	131	44.6	
45–49 years	210	79	37.6	
Residential area				0.0001
Urban	968	453	46.8	
Rural	2519	1,003	39.8	
Education				0.037
No education	553	208	37.6	
Primary	2217	964	43.5	
Secondary	647	259	40.0	
Postsecondary	70	25	35.7	
Occupational category				0.047
Not working	1,232	500	40.6	
Agriculture	1,537	627	40.8	
Other	716	328	45.8	
Read newspaper				0.179
Not at all	2,943	1,216	41.3	
Yes	538	239	44.4	
Listen to radio				0.994
Not at all	1,681	702	41.8	
Yes	1,805	754	41.8	
Watch TV				0.010
Not at all	2,778	1,130	40.7	
Yes	708	326	46.0	
Literacy level				0.235
Cannot read fully	1,947	830	42.6	
Can read fully	1,509	613	40.6	

(Continued)

TABLE 1. (Continued)

Variable	Total (N)	Exposed		P Value
		(n)	(%)	
Say on health				0.040
Not at all	2,041	881	43.2	
Full or partial say	1,439	571	39.7	
Say on purchase				0.170
Not at all	2,263	964	42.6	
Full or partial say	1,219	490	40.2	
Say on visiting				0.178
Not at all	1,994	851	42.7	
Full or partial say	1,485	600	40.4	
Attitude toward IPPA				0.0001
Nontolerant: no for none of the given reasons	386	119	30.8	
Tolerant: yes for one or more reasons	3,079	1,332	43.3	

2002). With regard to education, however, our findings suggest an association between low education and an increased risk of IPPA, corroborating the works of the later authors, but contradicting observations by Burarezi et al. (2005), where education was associated with an increased vulnerability to abuse.

The discrepancies in the literature could be explained using the integrated ecological framework of violence (Heiss, 1998). According to this framework, variables at the individual, community, and societal levels may act in interaction to increase/reduce vulnerability to IPV in general. Thus, what may seem to be a risk factor at the individual level in one society or community may prove a protective factor in another. The discrepancies in findings discussed above could thus be a reflection of such circumstances. Thus, more complex modeling that takes into account variables at the community and societal levels (e.g., multilevel models) is warranted in future research to better understand the interrelationships between IPPA and risk factors with as well as across societies.

It is noteworthy, however, that both education and occupational status were not independently associated with IPV when other social variables were adjusted for in the logistic regression indicating possible confounding with one or several of these variables. Deeper scrutiny of possible confounding variables is therefore warranted in future research.

Women with access to information via TV were more often exposed to IPV when contrasted with peers without such access. This finding may be indicative that attempts to access information among women in Zambia may provoke abuse from their intimate partner as this may be seen to empower and educate them. On the other hand, women with some say on health issues reported less exposure to IPV when contrasted with peers

TABLE 2. Social Indicators as Predictors of IPPA: Adjusted Odds-Ratios (OR) and Their Confidence Intervals (CI for OR)

Variable	Adjusted ^a OR (CI for OR)
Education ^c	
No education	1.26 (0.69–2.31)
Primary	1.55 (0.88–2.70)
Secondary	1.27 (0.74–2.20)
Postsecondary ^d	1.00
Occupational category ^c	
Not working	0.84 (0.69–1.04)
Agriculture	0.84 (0.67–1.04)
Other ^c	1.00
Read newspaper ^c	
Not at all	0.79 (0.63–1.01)
Yes ^d	1.00
Listen to radio ^c	
Not at all	1.12 (0.96–1.31)
Yes ^d	1.00
Watch TV ^c	
Not at all	0.88 (0.70–1.10)
Yes ^d	1.00
Literacy level ^c	
Cannot read fully	1.22 (1.02–1.47)
Can read fully ^d	1.00
Say on health ^c	
Not at all	1.14 (0.98–1.33)
Full or partial say ^d	1.00
Say on purchase ^c	
Not at all	1.06 (0.90–1.25)
Full or partial say ^d	1.00
Say on visiting ^c	
Not at all	1.03 (0.88–1.21)
Full or partial say ^d	1.00
Attitude towards IPPA ^c	
Nontolerant	0.59 (0.47–0.75)
Tolerant ^d	1.00

^a Adjusted for age, residential area and all other social and empowerment indicators.

^b Continuous variable.

^c Category variable.

^d Comparison group.

^e Other occupational category consists mainly of professionals, civil servants and other kinds of office workers.

without such autonomy. In this case, women's involvement in domestic affairs may be seen to conform to the partner's expectations in societies where women's predominant engagement in domestic activities is a social norm. These results contradict the findings of Hindin and Adair (2002), who found women's autonomy over household decisions to be associated with an increased vulnerability to IPV. Again, the social ecological framework of violence may provide a useful explanation, that is, differences in societal attitudes toward women's empowerment could explain the discrepancy in the literature.

However, both access to TV and autonomy on health decision were not independently associated with IPV when other social variables were adjusted for in the logistic regression, warranting further scrutiny of possible confounding.

Justification of IPV among women was independently associated with increased vulnerability to IPV. This finding is in line with the works of Faramarzi, Esmailzadeh, and Mosavi (2005), who found tolerant attitudes toward violence to have a stronger predictive power of IPV, above the significance of other social indicators like employment, education, and poverty. Thus, a positive change of women's attitudes toward IPV seems an appropriate intervention.

In summary, the findings of the current and previous studies in the field suggest that the association between IPV and empowerment/social status is a complex one and may vary depending on the societal norms and gender roles that may be unique for each society. With regard to Zambia, our work suggests differences between IPV-exposed and -nonexposed women regarding social indicators. Low education, involvement in income-generating activity, having autonomy in domestic decisions, access to information, and justification of IPV were associated with an increased vulnerability to IPV. Of these indicators, however, only illiteracy and tolerant attitudes toward IPV were independently associated with a higher likelihood of IPV exposure, suggesting possible confounding.

These findings have some important implications for intervention to address IPV in Zambia. Interventions based on attitudinal changes denouncing IPV in all its forms are warranted. This could be accomplished by a rigorous awareness campaign about IPV and its devastating consequences on health and development. In addition, social empowerment of women by increasing literacy and educational levels may prove fundamental in prevention.

The strength of this study lies in its careful methodology. Data collection was carried out in strict adherence to the standards for ethical and safety recommendations for research on domestic violence set by the WHO (2001). In addition, the sampling methodology assured that data would be representative of women of reproductive age in Zambia. However, some of the weaknesses of the study deserve acknowledgement. The study design is cross-sectional, making it difficult to draw causal conclusions. For example, while it is possible that women with tolerant attitudes to IPV are likely to be more abused, the reciprocal cannot be ruled out, that is, exposure to IPV could as well have played a vital role in forming such attitudes. Second, the operational definition of IPV in this study included only physical abuse and did not cover psychological and/or sexual abuse. Yet, these forms of violence are rather prevalent in developing countries (e.g., Mwenesi et al., 2003) and may also be associated with the social status of women. In addition, some social indicators would have benefited from further scrutiny. For instance, access to information in itself does not tell us anything about the content and quality of that information. Whether or not women's issues are addressed in mass media is unknown. Likewise, the grade of autonomy of women used in this study covered only autonomy in the domestic arena. Issues such as women's autonomy over family income/economy were not addressed. Finally, as Lawoko (2006) pointed out, the measure of the attitude toward IPV in the demographic and health surveys is limited in scope to capture women's normative roles in the domestic arena. Other issues such as motivation of partner abuse because of nondomestic factors like woman's

financial superiority/inferiority, employment position, education, husband's drunkenness, and so on were not included in the measure of attitudes toward IPV. Yet, the significance of such variables in explaining IPV has been demonstrated (Hoffman, Demo, & Edwards, 1994; Krishnan, 2005; Malcoe et al., 2004).

CONCLUSION

In conclusion, our work suggests differences between IPV-exposed and -nonexposed women regarding social indicators. Low education, involvement in income-generating activity, having autonomy in domestic decisions, access to information, and justification of IPV were associated with an increased vulnerability to IPV. Intervention based on attitudinal changes together with empowerment drives such as increasing literacy and educational levels are recommended in the prevention of IPV in Zambia. Research with a more powerful design and instrumentation is needed to address limitations of the study.

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