Partner violence and associated factors among pregnant women in Nkangala district, Mpumalanga

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Objectives. To determine the prevalence of physical partner violence and associated factors among pregnant women in Nkangala district, Mpumalanga, South Africa.

Design. In a cross-sectional study, 1 502 pregnant women systematically selected at primary health care facilities were interviewed using a structured questionnaire.

Results. Almost 9% of the subjects reported experiencing physical partner violence in the past 6 months. About 19% of the women tested positive for HIV, 12.6% reported that their partners were HIV positive, and 17.3% reported having had a sexually transmitted infection (STI) other than HIV in the past 12 months. Multivariate analysis revealed that having 1 - 3 (odds ratio (OR) 2.24, 95% confidence interval (CI) 1.16 - 4.35) and 4 or more children (OR 8.00, 95% CI 2.92 - 21.96), concern that the partner drinks too much (OR 4.50, CI 2.49 - 8.00), having had an STI (other than HIV) in the past 12 months (OR 1.95, CI 1.07 - 3.58), and experiencing severe psychological distress (OR 2.02, CI 1.06 - 3.85) were significantly associated with physical partner violence in the past 6 months.

Conclusion. Physical partner violence among pregnant women in this predominantly rural setting is moderately common. Factors identified as associated with physical partner violence can be taken into consideration in partner violence interventions.

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Intimate partner violence (IPV), defined as actual or threatened physical, sexual, psychological and emotional abuse by current or former partners, is a global public health concern.[1] South Africa has one of the highest rates of violence against women in the world, with over 55 000 cases of rape reported to police in 2006.[2] Various studies have shown that IPV is the most common form of violence against women worldwide.[3-5] IPV against women is a significant public health problem with negative physical and mental health consequences. The adverse effects of IPV have been reported to include mental disorders such as suicidal ideation, suicide and post-traumatic stress disorders; gynaecological and obstetric disorders such as chronic pelvic pain and preterm deliveries; and infectious diseases such as HIV infection and other sexually transmitted infections (STIs).[6-9]

Pregnant women are not immune to IPV, and as many as 4 - 8% of all pregnant women are victims of IPV.[8] Devries *et al.*[10] found that the prevalence of IPV during pregnancy ranged from 2% in Australia to 13.5% among ever-pregnant women in Uganda. One in three (33.3%) South African women attending antenatal clinics were found to have experienced physical or sexual abuse from a partner in the previous year.[11] Phaswana-Mafuya *et al.*[12] also found that among pregnant women attending primary care services in Mpumalanga, 14% had experienced physical abuse by their partner in the past 12 months.

There is evidence supporting the relationship between IPV before and/or during pregnancy and poor maternal and infant outcomes. Abuse during pregnancy has been associated with poor maternal physical health outcomes such as increased STDs, preterm labour, vaginal bleeding and placental abruption, caesarean delivery, haemorrhage and infection.[8,13] Some adverse outcomes for the fetus and infant found to be associated with IPV were low-birth-weight infants and neonatal death.[14-16]

South African data have suggested a direct link between violence and HIV infection, where HIV-positive women are more likely than HIV-negative women to have experienced physical violence

perpetrated by their partner. According to Dunkle *et al.*,[11] South African women who experience violence have a 50% increased risk of being HIV positive. There is also now evidence that women who experience sexual assault in South Africa, like women in other parts of the world, are at higher risk for HIV infection. Some studies have shown that women with violent partners are significantly more likely than their counterparts to report that they knew their partners had had other sexual partners while in a relationship with them.[17] A study by Managa *et al.*[18] found high rates of IPV and HIV risk among primary care patients in South Africa. Predictors of sexual abuse were identified as having had more than one sexual partner in the past 12 months, having a primary partner with known HIV risk, frequent binge drinking on the part of the primary partner, and having had an STI.

Increased substance and drug use have been identified as risk factors for IPV during pregnancy, as intoxication may lead to irresponsible behaviour such as violence.[19,20] Some socio-demographic factors have also been found to be associated with partner abuse. Bohn *et al.*[20] found that not having high-school education, decreased income and ethnicity were significantly related to current abuse and abuse during pregnancy. Managa *et al.*[18] found having a low educational level to be one of the predictors of IPV.

We sought to determine the prevalence of physical violence by an intimate partner among pregnant women in Nkangala district, Mpumalanga province, South Africa, and its association with risky sexual behaviour, alcohol use and some reproductive health factors. Nkangala district was chosen because little is known about IPV in this predominantly rural district.

Methods

Sample and procedure

A cross-sectional study was conducted among 1 502 pregnant women (age range 18 - 47 years, mean age 26.6 years, standard deviation (SD) 6.1; 98% were black Africans, mainly Zulu, Swazi and Ndebele, and the mean gestational age was 6.5 months (SD 1.6)). The inclusion criteria for participation in the study were that the participant should have attended at least one antenatal care clinic during the current pregnancy, and that she was 18 years of age or older; there was no gestational age limit. Antenatal women were recruited systematically (every consecutive patient visiting the clinic) from 48 primary care clinics and community health centres sampled as a convenience sample from the 74 clinics in all 6 sub-districts of the Nkangala district. The target was to interview at least 30 pregnant women per study clinic. Approval for the study was obtained from the Human Sciences Research Council ethics committee and health authorities at the provincial, district, sub-district and clinic levels.

Data were collected from April to June 2010 at primary healthcare facilities in Nkangala district. Women who were 18 years and older and had come for their second antenatal care visit were eligible to participate in the study. A team of trained research assistants visited the facilities daily to conduct the interviews until the sample was reached. The interview was conducted in Zulu and took 45 minutes to complete. Written informed consent was obtained from all the participants. The research assistants provided an explanation of the nature and purpose of the study, including assurance of privacy and confidentiality. The interviews were conducted in a private room.

Measures

A structured questionnaire containing sections on demographic details, HIV testing history, sexual risk and history of alcohol use and abuse was used to collect information from the subjects.

Socio-demographic information included age, race group, marital status, educational qualification, number of own (biological) children, and duration of the current pregnancy.

Antenatal care questions were asked to find out whether the woman had given birth previously, had planned the current pregnancy, and was unhappy about the current pregnancy.

HIV testing questions were asked with the intention to find out whether the woman had ever been tested for HIV and what her HIV status was.

Alcohol use questions included 'How often have you had a drink containing alcohol in the past 12 months?', 'Have you ever been concerned that your spouse/partner drinks too much alcohol?', and 'How many times in the past year has your spouse/partner been violent towards you while under the influence of alcohol?'

To determine abuse history, participants were asked 'Have you experienced physical abuse by your partner/husband in the past 6 months?' (physical abuse included being hit, slapped, kicked, bit, pushed, shoved or physically hurt in another way by the partner). Furthermore, the 7-item Revised Conflict Tactics Scale (CTS2) of Strauss *et al.*[21] and Kramer *et al.*[22] was used to determine the history and type of abuse by intimate partners within the preceding 6 months. In addition, participants completed the Kessler Psychological Distress Scale (K-10), which is a measure of global psychological distress based on perceived frequency of occurrence of significant psychiatric symptoms over the preceding 30 days.[23,24] The internal reliability coefficient for the K-10 in this study was alpha = 0.89.

Data analysis

Data analysis was conducted using the Statistical Package for Social Sciences (SPSS version 19.0 for Windows; SPSS Inc., Chicago, IL, USA). Firstly, descriptive data analysis was conducted to determine sample characteristics and describe the types of abuse. Then bivariate analysis was done to determine whether there were statistically significant ($p<0.05$) associations between each independent factor and physical partner violence in the past 6 months. Finally, unconditional multivariable logistic regression was used to model physical partner violence in the past 6 months on all independent factors that indicated significant associations in the bivariate analysis.

Results

Sample characteristics

Just over 40% of the women were aged 18 - 24 years (42.7%), 30.1% were married, and 55.6% had less than grade 12 education. Almost 9% (8.5%) reported experiencing physical abuse by their partner/husband in the past 6 months. Just over 19% of the women were HIV positive;

12.6% reported that their partners were HIV positive; and 17.3% had had STIs other than HIV in the past 12 months. Almost 7% reported using alcohol in the past year; 38.8% were concerned that their partners were drinking too much; and 24.4% reported that their partners were violent to them while under the influence of alcohol (Table 1).

Table 1. Sample characteristics and partner violence (*N*=1 502)

Characteristic	*n* (%)
Age (years)	
18 - 24	636 (42.7)
25 - 29	417 (27.8)
30 - 34	244 (16.4)
≥35	194 (13.0)
Married/cohabiting	444 (30.1)
Single/divorced/separated/widowed	1 031 (69.9)
Education	
< grade 12	832 (55.6)
≥ grade 12	665 (44.4)
Mean gestational age (mo.)	6.5
Gestational age (mo.)	
<3.5	64 (4.7)
3.5 - 6	576 (42.1)
7 - 9	727 (53.2)
Experience of physical violence in the past 6 months	123 (8.5)
HIV negative	1 161 (80.7)
HIV positive	278 (19.3)
No children	518 (35.4)
1 - 3 children	870 (59.5)
≥4 children	75 (5.1)
Pregnancy planned	670 (44.8)
Pregnancy not planned	824 (55.2)
Alcohol use in the past month	93 (6.5)
Concerned that partner drinks too much	344 (38.8)
Partner violence under the influence of alcohol	118 (24.4)
Condom use in the past 3 months	58.5 (114)
>1 sexual partners in the past 12 months	155 (10.9)
Had casual partner in past 3 months	107 (7.6)
Had STIs (other than HIV) in the past 12 months	254 (17.3)
Severe psychological distress	168 (12.3)

Experience of different forms of abuse in the past 6 months

Table 2 shows that almost 4% of the pregnant women had experienced minor physical abuse by their intimate partner within the past 6 months, 2.7% severe physical abuse, 1.3% sexual abuse and 7.1% emotional abuse.

Predictors of partner violence

Bivariate analysis showed that having less than grade 12 education, being HIV positive, use of alcohol in the past month, concern that the partner drinks too much, having had an STI (other than HIV) in the past 12 months, having had a casual partner or partners in the past 3 months, and having severe psychological distress were significantly associated with physical partner violence in the past 6 months. In addition, having 1 - 3 and 4 or more children were both significantly associated with partner violence in the past 6 months. Marital status, gestational age, planned or unplanned pregnancy, being unhappy or happy about pregnancy, condom use in the past 3 months, and partner's HIV status, were not significantly associated with physical partner violence in the past 6 months.

Multivariate analysis showed that having 1 - 3 (odds ratio (OR) 2.24, 95% confidence interval (CI) 1.16 - 4.35) and 4 or more children (OR 8.00, 95% CI 2.92 - 21.96), concern that partner drinks too much (OR 4.50, CI 2.49 - 8.00), having had an STI (other than HIV) in the past 12 months (OR 1.95, CI 1.07 - 3.58), and having experienced severe psychological distress (OR 2.02, CI 1.06 - 3.85) were significantly associated with physical partner violence in the past 6 months (Table 3).

Discussion

Almost 9% of the pregnant women in this study reported experiencing physical partner violence in the past 6 months. This figure is similar to the findings of a review by Sharps *et al.*[8] in which 4 - 8% of all pregnant women were reported to be victims of IPV, but appears lower than rates in other studies in South Africa, in which approximately 14%, 28% and 33%, respectively, of pregnant women reported IPV in the past 12 months.[12,13,25] Furthermore, in a population-based South African study, about 25% of the women reported experiencing physical abuse from a partner in their lifetime.[25] Abuse rates in South Africa may differ according to geographical area – women in urban areas (e.g. Soweto[17]), for example, could report abuse more than those in rural areas (e.g. Nkangala district in Mpumalanga province, which

Table 2. Experiences of different forms of IPV within the past 6 months (*N*=1 502)

Abuse item(s)	*n* (%)
Minor physical abuse (either or both of the examples below)	59 (3.9)
Partner twisted arm or hair, or threw something that could hurt	34 (2.3)
Partner pushed, grabbed or slapped you	45 (3.1)
Severe physical abuse (one, two or all of the examples below)	40 (2.7)
Partner kicked you or slammed you against a wall, punched or hit you with something that could hurt you	24 (1.7)
Partner beat you up, or burned or scalded you on purpose	29 (2.0)
Partner choked you, or used a knife or gun on you	7 (0.5)
Sexual abuse	
Partner used force, such as hitting you, holding you down or using a weapon, to make you have sex	19 (1.3)
Emotional abuse	
Partner put you down with words, emotionally hurt you or made you feel afraid	103 (7.1)

Table 3. Results of logistic regression models predicting physical partner violence

Factors	Unadjusted OR (95% CI)	*p*-value	Adjusted OR (95% CI)*	*p*-value
Demographic				
Married/cohabiting v. single/divorced/separated/widowed	0.94 (0.62 - 9.41)	0.749	-	-
Education ≥ grade 12 v. < grade 12	0.67 (0.46 - 0.99)	0.043	1.26 (0.70 - 2.24)	0.440
Reproductive				
Gestational age ≥5 months or more v. <5 months	1.85 (0.88 - 3.88)	0.103	-	-
Pregnancy planned v. not planned	1.25 (0.85 - 1.83)	0.250	-	-
Unhappy about pregnancy v. happy about pregnancy	1.43 (0.96 - 2.11)	0.075	-	-
No children	1.00		1.00	
1 - 3 children	1.62 (1.03 - 2.54)	0.035	2.24 (1.16 - 4.35)	0.017
≥4 children	4.48 (2.29 - 8.76)	0.000	8.00 (2.92 - 21.96)	0.000
Sexual behaviour and partner characteristics				
Condom use in the past 3 months (with primary partner)	2.14 (0.74 - 6.20)	0.162	-	-
More than one partner in the past 12 months	1.79 (1.08 - 2.97)	0.023	1.49 (0.72 - 3.06)	0.281
Had casual partner in past 3 months	2.56 (1.22 - 3.82)	0.008	0.97 (0.40 - 2.36)	0.941
Had STIs (other than HIV) in the past 12 months	2.91 (1.94 - 4.35)	0.000	1.95 (1.07 - 3.58)	0.030
Partner HIV positive	1.50 (0.70 - 3.22)	0.295	-	-
Concerned that partner drinks too much	4.21 (2.66 - 6.66)	0.000	4.50 (2.49 - 8.00)	0.000
Alcohol use in past month	4.07 (2.41 - 6.87)	0.000	2.02 (0.95 - 4.29)	0.068
HIV positive v. HIV negative	1.56 (1.01 - 2.40)	0.046	1.24 (0.66 - 2.30)	0.504
Mental health				
Severe psychological distress	2.57 (1.60 - 4.14)	0.000	2.02 (1.06 - 3.85)	0.032

*Hosmer-Lemeshow χ^2=6.08, p=0 .638; Nagelkerke R^2=0.21.

is predominantly rural). Shamu *et al.*[26] found that violence against pregnant women is associated with significant negative maternal and child health outcomes that are directly linked to Millennium Development Goals (MDGs) number 4 and 5, which are to reduce child mortality and improve maternal health, as well as MDG 3, to promote gender equality and empowerment of women. Programmes addressing IPV should be targeted at women living in rural areas. Implementation of interventions that can empower and protect women in both rural and urban settings is essential.

Some studies have indicated that women with less education are generally more likely to experience violence than those with higher levels of education.[18,27,28] In this study pregnant women who had less than grade 12 education were more likely to experience IPV than those who had grade 12 education or more. Higher education empowers women by giving them greater self-confidence, wider social networks, and greater ability to use information and resources and attain economic independence.[29]

Several studies have found associations between domestic violence and poor mental health among pregnant women.[30-31] Stranix-Chibanda *et al.*[32] found domestic violence to be one of the causes of stress reported by women. Makin[33] also found associations between depression and a history of domestic violence in a study in South Africa. In this study severe psychological distress was associated with experience of IPV among pregnant women.

The association between alcohol consumption and IPV is well established in the literature.[15,34] The results of this study also revealed that pregnant women who had experienced physical partner violence in the past 6 months were more likely than those who did not experience partner violence to have used alcohol in the past month and to be concerned that their partner drinks too much.

In our study pregnant women who were HIV positive and reported a history of an STI were more likely than other women to have experienced IPV. This finding is similar to those of other South African studies. For example, in Soweto women with violent or controlling partners were more likely to be HIV positive, and abusive men were more likely to be HIV positive and impose risky sexual practices on their partners.[35] In an HIV-negative cohort of young women in the Eastern Cape, relationship power inequity and IPV significantly increased the risk of incident HIV infection.[36] Various studies have shown that abusive partners generally engage in more high-risk sexual behaviour such as simultaneous partners and transactional sex.[37]

Our most interesting finding was that having 1 - 3 and 4 or more children were both significantly associated with physical partner violence. Pregnant women with 4 or more children were eight times more likely than those having no children to have experienced physical partner violence, while pregnant women with 1 - 3 children were twice as likely to have done so. Having more children was associated with more experience of physical partner violence, whereas having no children was associated with less experience of physical partner violence. This is not surprising, since more children in the family means increased parental responsibilities, which can sometimes lead to unhappiness for both parents. In a study that

analysed data from 86 countries,[38] having 1, 2 or 3 or 4 or more children was associated with significantly lower reported happiness compared with people who were childless.

Study limitations

This was a cross-sectional study and the focus was on a specific sample, so generalisations cannot be made on the basis of these results. Additionally, the measures used were all self-reported, so a degree of biased reporting is possible.

Conclusion

Domestic violence reported in this study was moderately common. However, the figures warrant a need for appropriate interventions to prevent and reduce IPV among pregnant women. Screening for IPV among pregnant women visiting antenatal health care facilities in South Africa may enable implementation of appropriate interventions among abused pregnant women.

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