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Original Research

Maternal outcomes of intimate partner violence during pregnancy: study in Iran

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ABSTRACT

Objectives: To investigate the prevalence of intimate partner violence (IPV) against pregnant women and its relationship with adverse maternal outcomes, including preterm labour, abortion, caesarean section, antenatal hospitalization and vaginal bleeding, in the West Azerbaijan, Iran.

Study design: Cross-sectional design.

Methods: In total, 1300 pregnant women, aged 18–39 years, who were referred to hospitals in the Iranian cities of Miandoab and Mahabad in the province of West Azerbaijan in 2009–2010 were recruited for this study by a convenience sampling method. Participants were asked to share their experiences of IPV during pregnancy and adverse maternal outcomes.

Results: Of these pregnant women, 945 (72.8%) reported that they had experienced IPV during their last pregnancy. A significant association was found between IPV and preterm labour [adjusted odds ratio (adjOR) 1.54, 95% confidence interval (CI) 1.16–2.03], caesarean section (adjOR 11.84, 95% CI 6.37–22.02), antenatal hospitalization (adjOR 6.34, 95% CI 3.82–10.52) and vaginal bleeding (adjOR 1.51, 95% CI 0.9–2.3).

Discussion: This study demonstrated a high prevalence of IPV during pregnancy, and found that IPV was associated with adverse maternal outcomes including preterm labour, caesarean section, antenatal hospitalization and vaginal bleeding. This adds to the existing literature and can be used to inform healthcare practices in developing countries. Medical, health and surgical services for pregnant women should consider screening for IPV, and providers should be aware that IPV victims are at increased risk for adverse outcomes. Services should also develop links with the Battered Women's Movement; such programmes now exist in many countries.

Introduction

Reproductive health programmes, particularly prenatal care and delivery services, provide a unique opportunity to identify women affected by intimate partner violence (IPV), and to safeguard the health of both mothers and infants.[1] IPV (also known as domestic abuse, domestic violence[1] or family violence) is defined as physical, sexual and psychological

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harm by a current or former partner or spouse.[2] The literature suggests that IPV affects between 3% and 11% of pregnant women in high-income countries, and between 3% and 66% of women in low–middle-income countries.[3,4]

Researchers disagree about whether the prevalence of IPV is associated with pregnancy. A small number of comprehensive reviews have found that pregnant women are no more likely than non-pregnant women to experience IPV, or may even be at decreased risk.[5] In contrast, other studies have found that violence may actually escalate with pregnancy; even Jana et al. in their study found that almost one-third of the women who were abused in their current pregnancy reported that IPV against them increased in pregnancy.[6] The actual prevalence of IPV during pregnancy may be even higher due to the reluctance of women to disclose IPV, especially during pregnancy.[7] In addition, many studies have suggested that the increased risk of IPV during pregnancy is associated with: smoking cigarettes,[8] low socio-economic status, young age, marital status, low level of education and household situation.[9] In particular, many reports have identified an association between young, low-educated and unemployed husbands and IPV during pregnancy.[8]

There have been differing reports in the literature regarding the prevalence of adverse consequences of IPV during pregnancy.[10] IPV during pregnancy can have serious health consequences for women and their infants.[11] Documented effects include: vaginal and cervical infection,[12] kidney infections,[13] miscarriages and abortion,[14] bleeding during pregnancy,[15] preterm labour,[10] severe vomiting,[16] caesarean section,[17] unhealthy diet, severe postpartum depression, breastfeeding difficulties, lower self-esteem, poor weight gain, anaemia[6] and even maternal death.[4] Regardless of whether or not these poor health consequences are secondary to the physical and/or sexual assault or related psychological distress, IPV is a significant risk factor for poor maternal outcomes.[1]

Accordingly, IPV during pregnancy is a significant public health concern, and it is very important to identify women at risk of, or experiencing, IPV in order to inform prevention and early intervention activities. Unfortunately, a limited number of studies on IPV against pregnant women have been undertaken in the Middle East or Iran, and, to the authors' knowledge, no studies have been undertaken in West Azerbaijan. Therefore, the aim of this study was to determine the prevalence of physical, emotional and sexual violence experienced during pregnancy among women referred to hospitals in Mahabad and Miandoab for abortion or delivery, and to investigate the relationship between IPV and poor maternal outcomes leading to antenatal hospitalization.

Methods

Participants and data collection

Using a cross-sectional study design, pregnant women were recruited voluntarily over a 12-month period from 2009 to 2010 at hospitals in the Iranian cities of Miandoab and Mahabad in the province of West Azerbaijan. Considering a 60% rate of IPV against pregnant women in Iran,[18] the equation, $n = Z(1-\alpha/2)pq$, was used to calculate the necessary sample size, estimating almost equal population sizes for each city. Six hundred and fifty women were selected from each city to achieve the desired sample size. The inclusion criteria were as follows: pregnant woman referred to hospital for abortion or delivery, regardless of gestational age; Iranian nationality; age 18–35 years; parity $\leq$4; single cephalic foetus; lack of known physical or psychological diseases requiring therapy; married to a living spouse at the time of sampling; not presenting with malpresentation of the foetus; and no addiction to alcohol or drugs of abuse.

Questionnaire

All questionnaires were completed in a private room under safe, comfortable conditions and then placed in a locked box. Confidentiality was guaranteed. The data collection tool included: (1) a data sheet to record demographic data, including woman's and husband's ages, educational levels and occupations, number of children, sufficiency of family income to live comfortably (in own opinion) and cigarette smoking by the woman during this pregnancy; and (2) a questionnaire to assess IPV and pregnancy outcome (maternal). The IPV recording sheet consisted of 74 questions, with 60 questions aimed at screening for IPV (15 questions pertaining to physical abuse, 40 questions pertaining to mental/emotional abuse and five questions pertaining to sexual abuse) and four questions aimed at maternal outcomes (reason for referral to hospital, history of hospitalization during pregnancy and reason). The reliability of the questionnaire was determined using content reliability (Cronbach's alpha was 0.90 for different domains of the questionnaire), and the validity was assessed using test–re-test. In order to collect data, the researchers in the postnatal ward provided privacy for the preliminary interview with the mothers. During the preliminary interview, the researchers introduced themselves, obtained permission and informed the woman about the study objectives. If the woman fulfilled the inclusion criteria and gave her written informed consent, she was selected as a study participant. Self-reported precise obstetric and IPV history were obtained for the time frame of their most recent pregnancy; the IPV and pregnancy outcome questionnaires were completed by researchers during an interview in a completely private setting.

Physical and psychological questions were based on the Abuse Assessment Screen Scale,[19] and sexual abuse by a partner was defined according to Finkelhor and Yllo.[20] The final questionnaire was developed by the authors using relevant textbooks[21,22] and dissertations,[13,23] and then homogenized with the sociocultural situation of the study population.

Definitions

A woman with at least one positive response to any of the questions regarding physical, emotional or sexual violence was classified as a 'woman experiencing violence', and all data about a woman's demographic factors and pregnancy outcomes were analysed only in this group and the comparison group. Low education was defined as less than high school. Smoking status during pregnancy was self-reported (yes/no). Current employment status was classified as unemployed/employed or housewife. Adverse maternal outcomes included: preterm labour, abortion, caesarean section, antenatal

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