



ADVANCING HEALTH EDUCATION & RESEARCH

AVA Research Reviews provides AVA members with recent published, peer-reviewed articles in a broad array of violence and abuse topics. The goal is to highlight and disseminate violence and abuse research in a timely fashion, and to enhance healthcare providers' practice by fostering the educational mission of AVA

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# AVA Research Review

## ADVANCING HEALTH EDUCATION & RESEARCH

**Review Title:** Intimate Partner Violence During Pregnancy

**Reviewer:** Philip V. Scribano, DO, MSCE, Department of Pediatrics, Perelman School of Medicine, University of Pennsylvania

#### Articles:

1. Chu, SY, Goodwin MM, D'Angelo DV. Physical Violence Against U.S. Women Around the Time of Pregnancy, 2004-2007. *Am J Prev Med* 2010; 38 (3): 317-322.
2. Kan ML, Feinberg ME. Measurement and Correlates of Intimate Partner Violence Among Expectant First-Time Parents. *Violence and Victims* 2010; 25 (3): 319-331.

#### Article Summaries:

##### *Brief Overview*

Violence by an intimate partner is recognized as contributing to significant

negative health and social consequences for women in the U.S. and internationally.

When evaluating the prevalence of intimate partner violence (IPV) during pregnancy, rates ranging from 4-9 % have been reported. However, a number of methodological limitations hinder our ability to discern the actual prevalence of IPV during pregnancy or whether IPV increases, decreases or remains for pregnant as compared to non-pregnant women. These limitations include lack of standardization of IPV screening questions used in research studies and variation in the time period about which are asked to report IPV. In addition, there have also been discrepancies in how researchers define IPV.

##### *Aims/ hypotheses of the articles*

These articles address two important questions: 1. What is the prevalence of IPV during pregnancy compared to prior

to being pregnant?; and, 2. What are the outcomes of different IPV measurement in identifying mental health problems and couple relationship distress?

**Chu, SY, Goodwin MM, D'Angelo DV. Physical Violence Against U.S. Women Around the Time of Pregnancy, 2004-2007. Am J Prev Med 2010; 38 (3): 317-322.**

*Relevant findings*

In the Chu article, the investigators utilized the Pregnancy Risk Assessment Monitoring System (PRAMS) data from 2004-2007. This is an ongoing surveillance system which contains data on maternal behaviors associated with pregnancy and provides a link to birth certificate data on state-specific population cohorts from 37 states. Sampling methods provide a stratified systematic sample of new mothers who have delivered a live-born infant in the preceding 2-6 months from birth certificate records. The research working group established an a priori threshold of 70% response rate for all self-administered questionnaires used in PRAMS to minimize non-response bias. This threshold is further described in the paper and the authors provide information regarding 10 states which were

excluded due to this threshold.

There were 134,955 women who delivered a singleton, full-term infant during the study period. IPV prevalence (specifically physical violence only) was measured before pregnancy and during pregnancy with items that specify “During the 12 months before you got pregnant with your new baby...” and “During your most recent pregnancy....” to compare IPV experiences prior to and during pregnancy. Overall, rates of IPV during pregnancy were consistently lower than IPV during the 12 months prior to being pregnant. IPV prevalence before pregnancy from either a current or former partner was 5.3% compared to 3.6% during pregnancy with stratified analyses demonstrated IPV prevalence during pregnancy as high as 23% among those women who had been incarcerated or had a partner who was incarcerated. The authors also found that that IPV prevalence was consistently higher from a former partner compared to a current partner.

Analyses included multivariable logistic regression models to determine demographic, pregnancy-related and stress factors which predicted IPV risk. In those analyses, the strongest predictors of IPV during

pregnancy included the following: partner not wanting the pregnancy (current: AOR 3.5, 95% CI 3.1-3.9; former: AOR 3.2, 95% CI 2.9, 3.8); recent divorce/ separation (current: AOR 3.2, 95% CI 2.9, 3.6; former: 3.5, 95%CI 3.2, 3.9); and exposure to someone with substance use problem (current: AOR 3.1, 95% CI 2.8, 3.4; former: 3.0, 95% CI 2.7, 3.3). The authors also report that other, less important predictors included maternal characteristics such as age, education, race, marital status, and woman not wanting the pregnancy.

*Authors' conclusions*

The authors note that: 1. women may be at greater risk for IPV during and shortly before pregnancy perpetrated by a former husband or partner; and, 2. IPV risk during pregnancy is strongly associated with risk factors such as: having a partner who expressed he did not want the pregnancy, having had a recent divorce/ separation, and exposure to someone with a substance use problem.

*Potential limitations of the article/ findings*

While the PRAMS data set has been developed with a sampling plan to minimize selection bias, there may be differences among the 37 of 50 states participating in PRAMS as well as the 10 states which

did not meet the 70% response rate to be included in this study. Additionally, in any research in which data is derived from self-reported measures, and in particular, in research evaluating violence and abuse, bias may be present through non-response as subjects may withhold information on these topics due to social desirability factors and the stigmatizing concerns that women may have regarding this problem. Finally, the authors acknowledge that it is unknown whether the partner was the father of the infant and whether the IPV disclosed was perpetrated by the same male who became separated from the woman during the survey period.

**Reviewer's Comment:**

This study provides a thoughtful approach to address the ongoing concerns in the literature with regard to IPV prevalence prior to as compared to during pregnancy. As such, it supports the contention that pregnancy may actually be a protective time period within a woman's relationship experiences with regard to IPV. It is not surprising that the authors identified the strongest predictive factors of IPV exposure as a partner's attitude/ desire for the pregnancy, the termination of a relationship in either divorce

or separation, and substance use problems.

**Kan ML, Feinberg ME. Measurement and Correlates of Intimate Partner Violence Among Expectant First-Time Parents. Violence and Victims 2010; 25 (3): 319-331.**

*Relevant findings*

In the Kan article, the investigators sought to understand the how couples interpret their relationship experiences in the context of defining IPV. In specific, the authors were attempting to evaluate potential gender differences in their report of IPV using the Revised Conflict Tactics Scale (CTS-2) and the outcomes (relationship distress and depressive symptoms) from their IPV experience. A total of 169 heterosexual couples were recruited during childbirth education programs when they were expecting their first child, and were living together, regardless of marital status. Of note, the subjects were invited to participate in a randomized study testing an intervention program for first-time parents designed to enhance the co-parental relationship with the anticipated outcomes of improved parent mental health, parent-child relationship and infant outcomes. IPV was measured using the physical assault subscale of the CTS-2.

Couple relationship distress was measured using items from several measures reported in the literature. Mental health problems were measured using a subset of the Center for Epidemiological Studies Depression Scale (CES-D) to evaluate depressive symptoms.

The study sample was predominantly married (82%) and Caucasian (91%) with a median annual family income of \$65,000. The authors report that the study sample is "comparable to other community samples studied in IPV research". The authors evaluated their hypothesis regarding low level of partner agreement about violence by examining inter-partner agreement on the presence of violent behaviors in only those couples in which at least one member reported violence. Mean % agreement across eight items for women's behaviors was 14.4% (SD 18.7) and men's behaviors was 26.3% (SD 24.5). Violence prevalence was reported with a total of 29.8% of women and 17.3% of men perpetrating any violence in the past year and this difference was statistically significant. Similar gender trends were noted when the investigators stratified the severity of violence. Couples in which both partners perpetrated any violence comprised 49% of the sub-sample of couples in whom

violence occurred.

In multivariate analyses, women's violence was significantly associated with both partners' reports of couple relationship distress and depressive symptoms. Men's violence was significantly associated to women's depressive symptoms and both partners' reports of couple relationship distress. Severity of violence was similarly associated to the outcomes with a greater magnitude of effect.

#### *Authors' conclusions*

The authors found that, in general, partners did not agree about the presence of violence in their relationship. Additionally, they note that a predominantly middle-class expectant-parent dyad with stable relationships, reported IPV rates similar to other populations described in the literature. The authors discuss their results regarding disparities in IPV prevalence when comparing married to unmarried partners and IPV exposure prior to and during pregnancy as findings consistent with other work. The authors further discuss the mutual violence experience noted in this sample.

#### *Potential limitations of the article/ findings*

The most important caveat the authors acknowledge regarding the gender differences in reporting the perpetration of IPV and their measurement of IPV is that either couples in whom a unidirectional perpetration i.e. male perpetration against female did not consent to the study and self-selected out, or that both partners in this particular dyad minimized or denied violence exposure. This is an important limitation to any study in which comparisons are made between two partners' involvement in violence perpetration and the risk of bias in the study sample. The demographics of this study sample limit the generalizability to other more diverse populations.

#### **Reviewer's Comment:**

This study demonstrates an interesting dilemma when attempting to measure IPV exposure between two partners. It provides us with an important caution when interpreting the results beyond the intended purpose: to explore the methodologic challenges in IPV research when evaluating couple-level correlates of IPV. While the methodologic issues are not unique to women's exposure to IPV during pregnancy, this work does offer insights into the implications of studying

IPV during this important parenthood transition.

#### **Reviewer's Summary:**

These articles provide us with some important lessons regarding the measurement of IPV during pregnancy. First, investigators need to grapple with the limitations of many of the standardized IPV measures in the field when attempting to identify IPV exposure during the pregnancy period, as most measures begin with "in the past 12 months" and limits the ability to discriminate violence preceding vs. during the pregnancy period. Second, the issue of bias has come up in both articles, whether utilizing a large multi-state database (PRAMS) or a small single-site cohort of couples in a child birth education program. One must recognize the types of bias that may threaten the validity of the study and discern its significance with regard to the final results of the study.