Physical Abuse of Women Before, During, and After Pregnancy

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Any women, including pregnant women and those soon to become pregnant, have been physically abused by intimate partners or others.1,3-12 Studies of abuse during the year preceding pregnancy report prevalence estimates ranging from 4% to 26%,5,8-11 while investigations of abuse during pregnancy have generally found prevalences of 4% to 8%.9 Differences in these prevalence figures are probably due to variations in violence across populations, as well as use of differing study methods.

Although research on abuse before and during pregnancy is increasing, a dearth of information exists concerning abuse that occurs after infant delivery, a stressful time for many families.13,14 Only 3 clinically based investigations were identified that followed up patients after delivery to examine various types of postpartum abuse. Two of these studies found postpartum abuse prevalences of 19% to 24%, while the third study (which focused on women who were abused during pregnancy) found a postpartum abuse prevalence of 90%.10,15,16

The American Academy of Pediatrics17 has recently joined other organizations, including the American Medical Association18 and the American College of Obstetricians and Gynecologists,19 in endorsing screening for violence among female patients. Thus, clinicians who care for new mothers and infants need additional empirical information concerning postpartum abuse to provide a foundation on which to develop and implement appropriate abuse screening, referral, and intervention procedures. This article examines (1) the prevalence and patterns of physical abuse before, during, and after pregnancy; (2) injuries and medical interventions resulting from postpartum abuse; and (3) patterns of abuse over time in relation to women's sociodemographic characteristics and use of well-baby care.

Context Clinicians who care for new mothers and infants need information concerning postpartum physical abuse of women as a foundation on which to develop appropriate clinical screening and intervention procedures. However, no previous population-based studies have been conducted of postpartum physical abuse.

Objectives To examine patterns of physical abuse before, during, and after pregnancy in a representative statewide sample of North Carolina women.


Main Outcome Measures Prevalence of physical abuse during the 12 months before pregnancy, during pregnancy, and after infant delivery; injuries and medical interventions resulting from postpartum abuse; and patterns of abuse over time in relation to sociodemographic characteristics and use of well-baby care.

Results The prevalence of abuse before pregnancy was 6.9% (95% confidence interval [CI], 5.6%-8.2%) compared with 6.1% (95% CI, 4.8%-7.4%) during pregnancy and 3.2% (95% CI, 2.3%-4.1%) during a mean postpartum period of 3.6 months. Abuse during a previous period was strongly predictive of later abuse. Most women who were abused after pregnancy (77%) were injured, but only 23% received medical treatment for their injuries. Virtually all abused and nonabused women used well-baby care; private physicians were the most common source of care. The mean number of well-baby care visits did not differ significantly by maternal patterns of abuse.

Conclusion Since well-baby care use is similar for abused and nonabused mothers, pediatric practices may be important settings for screening women for violence.

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Abuse prevalences before, during, and after pregnancy were computed. Odds ratios (ORs) and 95% confidence intervals (CIs) quantified associations between abuse that occurred during a previous period and that which occurred at a subsequent time. Descriptive and bivariate analyses examined relationships between patterns of abuse and women’s sociodemographic characteristics, as well as use of well-baby care. SUDAAN software\(^2\) was used to take the survey sampling methods into account.

### RESULTS

The statewide abuse prevalence during the 12 months before pregnancy was 6.9% (95% CI, 5.6%-8.2%); 68% of perpetrators were current or former husbands/partners, 14% were family members, 8% were multiple persons, 5% were friends, and 5% were someone else. Similarly, abuse prevalence during pregnancy was 6.1% (95% CI, 4.8%-7.4%); 67% of perpetrators were current or former husbands/partners, 14% were family members, 4% were multiple persons, 3% were friends, and 12% were someone else. Postpartum abuse prevalence was 3.2% (95% CI, 2.3%-4.1%); 76% of perpetrators were current or former husbands/partners, 10% were multiple persons, 9% were family members, 5% were friends, and less than 1% were someone else. Seventy-seven percent of women who were abused after delivery were injured, experiencing pain the day after the abuse (73%), sprains/bruises/small cuts (57%), head/internal/permanent injuries (9%), weapon wounds (8%), and broken bones/severe cuts/burns (6%). Although three quarters of these women had multiple types of injuries, only 23% received medical care for them.

Abuse during a previous period was a strong risk factor for subsequent abuse (Figure). A strong, significant association was found between abuse before and during pregnancy (OR, 67.6; 95% CI, 27.3-167.2). There also was a strong, significant association between abuse during pregnancy and postpartum abuse among women who were abused before pregnancy (OR, 38.0; 95% CI, 5.8-247.3). Among women who were not abused before pregnancy, the positive association between abuse during pregnancy and postpartum abuse also was strong; however, this association did not reach statistical significance (OR, 4.4; 95% CI, 0.9-22.0). Less than 1% of all women experienced abuse for the first time after infant delivery (ie, they were abused after delivery but not before or during pregnancy). Furthermore, only 29% of women who were abused after delivery had not been abused during the year before pregnancy, so absence of abuse before pregnancy was strongly protective against postpartum abuse (OR, 0.02; 95% CI, 0.01-0.06). Similarly, only 18% of women who were abused after delivery had not been abused before or during pregnancy, so absence of any previous abuse was strongly protective against postpartum abuse (OR, 0.01; 95% CI, 0.001-0.05).

Respondents’ sociodemographic characteristics did not vary significantly among the 8 patterns of abuse (Table 1). However, comparison of women with a history of abuse during any period with never-abused women found that abused women were significantly more likely to be unmarried (χ\(^2\) = 43.5; \(P = .01\)), poor (χ\(^2\) = 21.7; \(P = .02\)), and younger (χ\(^2\) = 21.6; \(P = .02\)), with less than a high school education (χ\(^2\) = 20.2; \(P = .02\)).
Virtually all respondents took their infants to health care practitioners for well-baby care (TABLE 2). Both abused and nonabused women used a variety of well-baby care sources, with private physicians being the predominant care source in 7 of the 8 abuse pattern groups. There was no statistically significant association between abuse patterns and primary source of well-baby care, nor did the mean number of well-baby care visits differ significantly between infants of never-abused women and any of the other 7 pattern groups of abused women.

**COMMENT**

This is the first statewide study, to our knowledge, to examine women’s postpartum physical abuse experiences in addition to abuse before and during pregnancy. Abuse prevalence was relatively low (3.2%) during the mean 3.6-month postpartum period studied compared with prevalence of abuse during the 12 months before pregnancy (6.9%) and the approximate 9 months of pregnancy (6.1%). It is noteworthy that the highest prevalence estimate resulted from examination of the longest period, whereas the lowest prevalence estimate resulted from examination of the shortest period. It is important to note that even this relatively low prevalence translates into the abuse of more than 3000 new mothers annually in North Carolina. Previous abuse was a strong risk factor for subsequent abuse (including postpartum), a finding consistent with other research documenting the often long-term nature of violence. Although women abused after pregnancy often were injured (with few receiving medical care for their injuries), these women managed to bring their infants to well-baby care visits as frequently as nonabused women, and this care was provided most often by private physicians.

These findings should be interpreted in light of the study’s methodological constraints. For example, 25% of women invited to participate in NC PRAMS did not complete the survey, with nonrespondents more likely than respondents to be young, unmarried, black, and of low education levels. Furthermore, survey responses concerning sensitive topics such as abuse are prone to response bias, which may lead to underestimation of the true extent of abuse. Moreover, women’s ability to recall abusive events may vary as a function of the period asked about, with less recall of events that occurred in the more distant past. In addition, the survey did not ask about the composition of women’s households or whether they changed intimate partners during the 3 periods examined; thus, we are unsure of whether the initiation or discontinuation of violence as time progressed was associated with these types of alterations. Similarly, information was not available concerning types of abuse other than physical abuse (eg, psychological). Finally, since NC PRAMS includes only women whose pregnancies resulted in live births, these findings may not be generalizable to women with other types of pregnancy outcomes.

Despite these study limitations, these findings should alert health care practitioners that women who are physically abused before and/or during pregnancy often continue to experience abuse after infant delivery, placing the health of both mother and child in jeopardy. Further...
thermore, these abused mothers do take their infants to well-baby care visits. Thus, repeated clinical screening of women for violence within various health care settings, including pediatric practices, appears warranted. Given the current relatively low rate of violence screening by pediatric practitioners, enhanced education and training of pediatricians concerning the often long-term nature of violence as well as appropriate abuse screening protocols and referral/intervention procedures are needed. These are important steps toward ensuring that women who experience physical abuse are provided with optimal care for this important health concern.

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