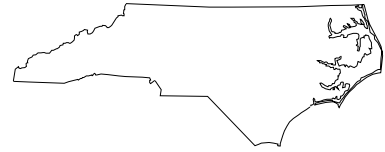

Statistical Brief



State Center for Health Statistics

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Physical Violence Against Pregnant Women in North Carolina: 1997-2000

by Matt Avery

Introduction

Physical violence against women has been recognized as an important health problem. The national *Healthy People 2010*¹ includes an objective on reducing the rate of physical abuse by current or former intimate partners.

Prevalence estimates of physical violence during the 12 months before pregnancy range from 4 percent to 26 percent, while estimates of violence during pregnancy generally range from 4 percent to 8 percent.²

Physical violence against pregnant women has immediate and lasting effects. Immediate effects on the pregnancy include blunt trauma to the abdomen, hemorrhaging, uterine rupture, miscarriage/stillbirth, and preterm labor.³ Other effects, such as stress, substance abuse, and delayed or no prenatal care are more indirect. Stress may lead to behaviors that are harmful to the health of the woman and her baby. For example, women who experience physical violence may use smoking and/or substance abuse as a negative coping mechanism. There is also evidence that abused women do not get adequate prenatal care, often delaying care until the third trimester. Late or no entry into prenatal care may prevent the opportunity for early risk assessment and health promotion activities.^{4,5}

The objective of this report is to describe the problem of physical violence among pregnant women in North Carolina.

Methods

We use 1997-2000 data from the Pregnancy Risk Assessment Monitoring System (PRAMS). PRAMS is a population-based survey of North Carolina women who delivered a live-born infant within the previous 3-6 months. Approximately 1,800 women complete the survey via mail and/or telephone each year. In 1997, the first year of PRAMS data collection in North Carolina, approximately 850 surveys were completed for July through December live births. The survey assessed physical violence by asking women if they had been pushed, hit, slapped, kicked, choked, or physically hurt in some other way during each of three periods: 12 months before becoming pregnant, during pregnancy, and after delivery. Women in each period were also asked about their social relationship with the perpetrator of the violence (e.g., husband/partner, other).

The percentages shown are weighted percentages, designed to reflect prevalence in the entire population of North Carolina women having a live birth. The confidence intervals show the range within which we expect the “true” percentage to fall 95 percent of the time. As a rough guide, if the confidence intervals of two percentages do not overlap, the difference is statistically significant.

There was a change in the wording of the question in 2000. Prior to 2000 the mother was asked if she experienced physical “abuse” such as being pushed, hit, slapped, etc. In 2000 and later years the term “abuse” was not used and the mother was just asked if she was pushed, hit, slapped, etc. All other things being equal, we would expect the wording change to result in somewhat of an increase in reporting of physical violence, since the label “abuse” was not invoked. This may help to explain the slight upward trend in reported violence in 2000.



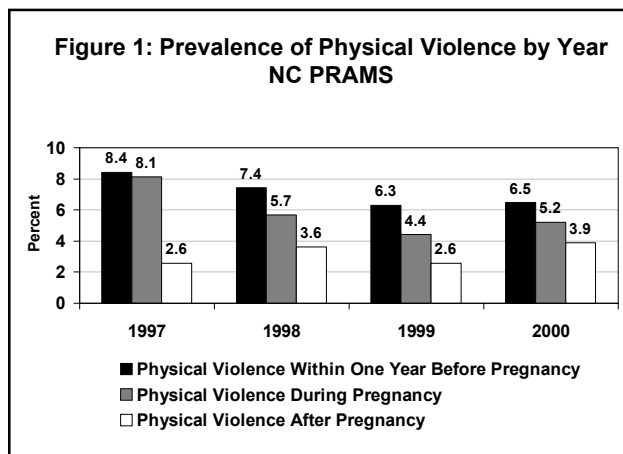
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Results

Data from PRAMS show that the prevalence of physical violence (before, during, or after pregnancy by anyone) was 9.4 percent in the combined years 1997-2000 (Table 1). Among the women who reported violence, 70 percent said that the perpetrator was a current spouse or partner and 39 percent said it was someone else (which includes an ex-husband or ex-partner). A small percentage answered both.

The prevalence of physical violence after delivery was relatively low compared to the prevalence of violence 12 months before pregnancy and violence during pregnancy. The prevalence of violence 12 months before pregnancy for the combined years 1997-2000 was 6.9 percent, during pregnancy 5.5 percent, and after pregnancy 3.3 percent. The prevalence of physical violence before and during pregnancy decreased during 1997-2000 (Figure 1). The rate of physical violence during the period 12 months before pregnancy decreased from 8.4 percent to 6.5 percent, and this trend was significant at the 0.10 probability level. The rate of physical violence during pregnancy went down significantly ($p < 0.05$), from 8.1 percent to 5.2 percent. The rate of physical violence after pregnancy remained stable during 1997-2000. The differences observed in these prevalence estimates may be due in part to the length of the risk periods. Mothers were asked if they experienced physical violence 12 months before pregnancy, during the nine months of pregnancy, and 3-6 months after giving birth; therefore there is a greater chance of experiencing violence during a longer time period.

The prevalence of physical violence varied by maternal characteristics (Table 1). Mothers under the age of 20 years reported physical violence more often than those 20 years of age and older. There was a significant decrease after age 24. The prevalence was



Maternal Characteristic	Number Reporting Violence	Percent	95% Confidence Interval
Overall	596	9.4	(8.4, 11.4)
Age			
<20	153	18.7	(15.1, 22.3)
20-24	182	14.2	(11.6, 16.8)
25-34	178	5.0	(3.9, 6.1)
35+	34	4.8	(2.7, 6.9)
Race/Ethnicity			
Non-Hispanic White	287	7.3	(6.2, 8.4)
Non-Hispanic Black	251	14.6	(12.2, 17.0)
Hispanic	34	9.1	(5.3, 12.9)
Other	24	11.5	(5.6, 17.4)
Education			
< High School	235	16.8	(14.1, 19.5)
High School	240	12.4	(10.4, 14.4)
More than High School	121	3.4	(2.5, 4.3)
Marital Status			
Married	233	5.3	(4.4, 6.2)
Not Married	363	17.7	(15.4, 20.0)
Income			
<= \$15,999	344	19.6	(17.1, 22.1)
\$16-24,999	94	8.1	(5.8, 10.4)
\$25-39,999	59	5.8	(3.8, 7.8)
\$40,000 +	32	1.8	(1.1, 2.5)
WIC During Pregnancy			
No	164	4.0	(3.1, 4.9)
Yes	426	15.5	(13.7, 17.3)
Medicaid			
No	91	2.8	(2.1, 3.5)
Yes	504	16.4	(14.6, 18.2)
Intendedness of Pregnancy			
Intended	163	4.5	(3.5, 5.5)
Unintended	391	14.9	(13.1, 16.7)
Pre-Pregnancy Weight			
Not Overweight	378	8.8	(7.6, 10.0)
Overweight	217	10.4	(8.7, 12.1)

7.3 percent among non-Hispanic White women, 14.6 percent for non-Hispanic Black women, and 9.1 percent among Hispanic women. Additionally, mothers who were less educated, not married, had a total family income less than \$16,000, were overweight before pregnancy, were on WIC during pregnancy, received Medicaid benefits, or had an unintended pregnancy reported a greater prevalence of physical violence.

Selected maternal behaviors and conditions were compared between mothers who reported physical violence before, during, or after pregnancy and those mothers who reported no physical violence (Table 2). Mothers who reported physical violence were more than four times as likely to experience stressful events and more than three times as likely to report being depressed after giving birth, compared to mothers who did not report physical violence. They were also twice as likely to smoke (smoking defined as continuous smoking before, during, and after pregnancy). Additionally, 36 percent of mothers who reported physical violence did not start prenatal care during the first trimester compared to 20 percent of those mothers who did not report physical violence. Those who reported physical violence also had a significantly greater prevalence of delivering a low birthweight (<2500 grams) baby. Low birthweight babies may face serious health problems, and low birthweight is a factor in roughly 65 percent of infant deaths.^{6, 7} The prevalence of a preterm delivery was similar between mothers experiencing physical violence and those not experiencing physical violence.

To summarize, the reported prevalence of physical violence before or during pregnancy declined somewhat from 1997 to 1999, leveling off in 2000. The characteristics of mothers in North Carolina who reported higher rates of physical violence either 12 months before, during, or immediately after pregnancy include:

- 20 years of age and younger
- 12 years or less of education
- Not married
- Total family income less than \$16,000
- Receipt of Medicaid benefits
- WIC benefits during pregnancy
- Unintended pregnancy
- Overweight

Additionally, mothers who experience physical violence are more likely to:

- Smoke
- Report postpartum depression
- Experience more stressful events during the 12 months before birth
- *Not* receive prenatal care during the first trimester
- Deliver low-birthweight babies

Physical violence during an earlier time period is strongly associated with subsequent violence. Eighty percent of mothers who reported physical violence during pregnancy also reported physical violence before pregnancy. Similarly, 70 percent of mothers reporting physical violence after pregnancy also reported physical violence before pregnancy.

Conclusion

Physical violence against women is a serious public health concern that impacts both the mother and infant. Data from PRAMS show that nearly ten percent of North Carolina women experience physical violence either within one year before their pregnancy, during pregnancy, or 3-6 months after giving birth. These findings suggest target groups where progress can be made to reduce violence among North Carolina women before, during, and after pregnancy.

A limitation of the information presented here is that it is based on self-reporting of physical violence by women through a mail or telephone interview and we cannot verify the accuracy of the information. Women who experience less severe forms of violence may not answer the PRAMS questions affirmatively. Therefore, there may be underreporting of physical violence in this survey.

Table 2: Comparison of Mothers Who Did and Did Not Report Physical Violence On Selected Risk Factors and Pregnancy Outcomes: North Carolina PRAMS, 1997-2000		
Physical Violence	Percent	95% Confidence Interval
Did Not Start Prenatal Care First Trimester		
No Violence	20.3	(18.8, 21.8)
Violence	36.3	(30.8, 41.8)
High Stress During the 12 Months Before Birth		
No Violence	16.0	(14.7, 17.3)
Violence	66.5	(61.2, 71.8)
Continuous Smoking (Before, During, and After Pregnancy)		
No Violence	11.6	(10.5, 12.7)
Violence	26.7	(21.7, 31.7)
Preterm Delivery		
No Violence	9.6	(8.9, 10.3)
Violence	10.1	(7.8, 12.4)
Postpartum Depression		
No Violence	6.2	(5.4, 7.0)
Violence	22.3	(17.7, 26.9)
Low Infant Birthweight (<2500 grams)		
No Violence	7.6	(7.4, 7.8)
Violence	10.1	(8.7, 11.5)

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