Effects of Domestic Violence during Pregnancy on Later Physical Health

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Prevalence of Domestic Violence

• Domestic Violence (DV) is common
  – About 12% in the last year (Straus & Gelles, 1986)
  – About 20-38% in lifetime (Tjaden & Thoennes, 2000)
  – 25.8% in lifetime in Michigan (Breiding, Black & Ryan, 2008)

• Few have investigated prevalence rates for the various forms of DV (Smith et. al., 2002)
  – TOTAL = 18.4% (Female registered voters in NC)
    • Physical = 8.6%
    • Sexual = 13.5%
    • Psychological = 6.0%
Prevalence of Domestic Violence during Pregnancy

• Approximately 1 in 12 pregnant women experience DV (Gazmararian et al., 2000)
  – Higher rates during this time may be due to increased stress, younger age or increased jealousy by partner

• 1 of 6 abused women reports that her partner first abused her during pregnancy (vulnerable period)
Effects of Domestic Violence on Physical Health

- DV correlated with: disability preventing work, chronic pain, frequent headaches, arthritis, stammering, sexually transmitted infections, stomach ulcers, spastic colon, and frequent indigestion, diarrhea or constipation

- Health outcomes are worse for more recent and longer duration DV (Bonomi, 2006)
The Present Study

- Very few investigations of the effects of DV on physical health looked at differences between the various forms of DV.

- Little is known about the duration of physical symptoms due to DV since there are few longitudinal investigations in this area.

- There have been no known investigations of the longer term health effects of DV on pregnant women.

- This study examined the effects of DV in pregnant women on their physical health in the following year. The effects of depression on this relationship was also investigated.
Participants

- 89 pregnant women (in last trimester) from community in southeastern Michigan
- Average age = 26.5 (Range = 18-42, SD = 5.8)
- Racial/Ethnic self-identification:
  - 49% African American
  - 36% Caucasian
  - 10% Biracial
  - 6% other ethnic groups
- Marital Status:
  - 62% single (never married)
  - 28% married
  - 6% separated
  - 4% divorced
- 44% first time mothers
Participants cont.

• Highest level of education obtained:
  – 22% high school diploma/GED or less
  – 40% some college or trade school
  – 38% college degree

• Median monthly income = $1,600 (range = $0 - $10,416)

• Involvement in Social Services:
  – 71% Women, Infants, and Children (WIC)
  – 53% food stamps
  – 72% public health insurance
  – 27% public supplemental income
Procedures

• Participants were recruited via fliers, mostly from:
  – community-based health clinics (23%)
  – Women, Infants, and Children (WIC) program (18%)
  – Regional-level university and community colleges (16%)
  – “Community Baby Shower” (11%)
  – Word of mouth (11%)

• Interviewed in last trimester of pregnancy at home (78%) or at research office (22%)
  – 2 ½ to 3 hours
  – Compensated with a $25 gift card
  – Demographic, DV, and Depression measured during this time

• Interviewed approximately 1 year after giving birth
  – 2 ½ to 3 hours
  – Compensated with $50 cash
  – Physical Health information measured at this time
Measures

• The Conflict Tactics Scale – 2
  
  (CTS–2; Straus, Hamby & Warren, 2003)
  – 33-item measure of partner psychological, physical, and sexual violence, and injury
  – Measured DV “during the current pregnancy”
  – Higher scores indicate more violence
  – Total Score Alphas = .89 - .93 in this study
Measures cont.

• Mother Physical Health Screen
  (developed for this study)
  – 20-item measure of participant’s physical health
during the last year (approximately 1 year after
giving birth)
  – Total Score Alpha = .79 in this study
Measures cont.

• Edinburgh Postpartum Depression Scale
  (Cox, Holden & Sagovsky, 1987; Wisner, Perry & Piontek, 2002)

• 10-item measure of depression in mothers for the past 7 days (measured during pregnancy)
  – Items are rated on a 4-point scale (0 to 3)
  – Higher scores indicate higher depression
  • (about 1/2 of items are reverse coded)
  – Assessed approximately 1 year after giving birth
  – Total Score Alpha = .81 in this study
Results: Rates of Domestic Violence

<table>
<thead>
<tr>
<th>Types of Domestic Violence Reported</th>
<th>Physical</th>
<th>Injury</th>
<th>Sexual</th>
<th>Psychological</th>
</tr>
</thead>
<tbody>
<tr>
<td>15%</td>
<td>9%</td>
<td>11%</td>
<td>79%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rates of Domestic Violence</th>
<th>None</th>
<th>One</th>
<th>Two</th>
<th>Three</th>
<th>Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>58%</td>
<td>14%</td>
<td>4%</td>
<td>4%</td>
<td></td>
</tr>
</tbody>
</table>
Results: Rates of Physical Health Problems

- Headaches – 79%
- Colds – 74%
- Poor Appetite – 47%
- Acid Stomach/ Indigestion – 44%
- Faintness/ Dizzy – 43%
- Feeling weak all over – 40%
- Heart Pounding – 36%
- Other Significant Health Problems – 31%
- Hospitalization – 25%
- Hands Trembling – 25%
- Infections – 18%
Results: Health Outcomes for various forms of DV

• **Physical**: Faintness/ Dizzy, Hand Tremble, Heart Pounding, Poor Appetite, Weak all over, Other significant health problems

• **Injury**: Faintness/ Dizzy, Hand Tremble, Heart Pounding, Poor Appetite, Colds, Other significant health problems

• **Sexual**: Headache, Acid stomach/ Indigestion, Infection, Hospitalization

• **Psychological**: Faintness/ Dizzy, Headache, Hand Tremble, Poor Appetite, Flu, Other significant health problems, Hospitalization
Results: Impact of DV on Physical Health

<table>
<thead>
<tr>
<th>Physical Health</th>
<th>Type of Domestic Violence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Physical</td>
</tr>
<tr>
<td>Physical Injury</td>
<td>.24*</td>
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</table>

* = p < .05
** = p < .01
Results: Regression of Psychological DV on Physical Health Controlling for Physical DV

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized Coefficients</th>
<th>Standard Error</th>
<th>Standardized Coefficients</th>
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</thead>
<tbody>
<tr>
<td><strong>Step One</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical DV</td>
<td>.558</td>
<td>.245</td>
<td>.239*</td>
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<tr>
<td><strong>Step Two</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Physical DV</td>
<td>.070</td>
<td>.360</td>
<td>.030</td>
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<tr>
<td>Psychological DV</td>
<td>.181</td>
<td>.099</td>
<td>.281⁺</td>
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</table>

*= p < .05
⁺ = p < .10
Results: Impact of Depression on the Relationship between DV & Physical Health

In Mediated Model—$\beta = .123, p = n.s.$
Conclusions

• Severity of psychological abuse was associated with physical health even after severity of physical abuse was accounted for.

• Maternal depression fully mediated the relationship between prenatal domestic violence and postnatal physical health.

• It is important to screen pregnant woman for depression and psychological as well as other forms of DV as they significantly affect physical health.
Acknowledgements

• We are enormously grateful to the families participating in this study who allowed us to visit their homes and learn about their circumstances.

• We are also very grateful to the project investigator as well as graduate and undergraduate research assistants who helped collect these data.

• We thank our funding sources for this study
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