Predictors of Sexual Victimization and Revictimization Among U.S. Navy Recruits: Comparison of Child Sexual Abuse Victims and Nonvictims

Mandy M. Rabenhorst, Ph.D.
Center for the Study of Family Violence and Sexual Assault
Northern Illinois University

Background
• Research fairly reliably demonstrates that women with a history of sexual abuse/assault (SA), whether in childhood or early adulthood, are at increased risk of future sexual victimization (Arata, 2002; Breitenbecher, 2001; Classen et al., 2005; Gold et al., 1999; Messman-Moore & Long, 2003; Poluha & Follitte, 1993; Rich et al., 2004; Roodman & Clum, 2001)
• Revictimization is better predicted by more recent than by more temporally distant SA experiences (Arata, 2002; Classen et al., 2005; Rich et al., 2004)

Wait, what? That’s not fair… Why are they at higher risk?
• Psychological adjustment problems (e.g., depression, PTSD symptoms, dissociation)
• Disturbed interpersonal relationships (e.g., insecure attachment, dependency)
• Negative attributional styles (e.g., self-blame, powerlessness)
• Maladaptive coping strategies
• Impaired risk perception
• Substance use or abuse
• Risky sexual behavior (e.g., sex with strangers, large number of sex partners)

Makes sense, so why do we need another study?
• Revictimization researchers frequently propose, but less often test, mediational models
  ▫ Instead, often we assume that any factor that predicts revictimization is a mediator of revictimization
• Retrospective/cross-sectional designs make it difficult to determine whether proposed mediators were present before ASA

More reasons for additional research
• Many studies examine only a small number of predictors
  ▫ Because many risk factors are correlated, failure to include a broad array is likely to result in a misspecified model
• Studies often fail to control for aspects of the childhood environment that are likely correlated with CSA (e.g., other violence)
  ▫ Can lead to exaggerated estimates of the impact of CSA on outcomes

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Prior research that has tested mediation

- Most frequently tested mediators include:
  - Psychological adjustment (e.g., trauma symptoms)
  - Risky sexual behavior
  - Alcohol use

- Although not uniform, there is both empirical and theoretical support for each of these as a mediator of revictimization (Gidycz et al., 1993; Gidycz et al., 1995; Messman-Moore et al., 2005; Messman-Moore et al., 2009; Orcutt et al., 2005; Sandberg et al., 1999; Testa et al., 2010)

Another potential mediator

- Hyperfemininity
  - Extreme adherence to stereotypic feminine gender roles, including overemphasis on the importance of romantic relationships and use of one’s sexuality to initiate and maintain relationships (Murnen & Byrne, 1991)

- Proposed to be a mediator of revictimization (Gold et al., 1999) but never tested empirically
  - Some evidence that it is associated with ASA and other risk factors for ASA (e.g., number of sex partners, alcohol, attracted to hypermasculine men)

Current study

- Used a sample of incoming U.S. Navy recruits to test the mediating role of
  - trauma symptoms
  - sexual behavior
  - alcohol use, and
  - hyperfemininity

  to explain the relationship between CSA and premilitary ASA and SA during a six-month period during the first year of active duty military service (T2 ASA)

Sample at baseline

- Age: 17 to 35 years ($M = 19.8$, $SD = 2.8$)
- Race/ethnicity:
  - 56% White, 23% African American, 11% Hispanic, 5% Asian, 3% Native American, 2% “other”
- Education:
  - 86% completed high school, 10% some college
- Marital status:
  - 90% single, 8% married or cohabiting, 2% divorced, separated, or widowed
Measures

- **ASA**: Sexual Experience Survey (Koss, 1993; Koss et al., 1987).
  - 10 behavioral items about unwanted sexual contact since age 14.
  - Categorized according to most severe (none, unwanted/coerced, attempted rape, rape) for premilitary and T2 ASA.
- **CSA**: Modified version of the Sexual Events Questionnaire (Finkelhor, 1979).
  - CSA = sexual contact < 14 yrs with a perpetrator at least 5 years older.

Measures

- **CPA**: Parent-Child version of the Conflict Tactics Scale (Straus, 1990).
- **Witness parent IPV**: Six items assessed the number of times the respondent had witnessed “things like hitting, kicking, throwing someone down, biting, or choking,” between her parents and their romantic partners.
- **Parental Support Scale**: Parent Support Scale (Fromuth, 1986).

Prevalence of SA

- 26% CSA.
- 55% premilitary ASA.
  - 20% unwanted/coerced sex.
  - 11% attempted rape.
  - 24% rape.
- 22% T2 ASA (during the first year of military service).
  - 10% unwanted/coerced sex.
  - 4% attempted rape.
  - 8% rape.

Odds of sexual revictimization

- Among CSA victims, compared to non-victims:
  - Odds of premilitary ASA were 2.5 times higher (95% CI: 1.8, 3.3).
  - Odds of T2 ASA were 1.7 times higher (95% CI: 1.2, 2.3).
- Among women with premilitary ASA, compared to not:
  - Odds of T2 ASA were 3.4 times (95% CI: 2.4, 4.8).

Mediation of sexual revictimization

- Fit of the hypothesized path model was reasonably good.
  - \(\chi^2 (6, N = 1,056) = 17.26, p = .008\).
  - Comparative fit index (CFI) = .992.
  - Tucker-Lewis Index (TLI) = .925.
  - Root mean square error of approximation (RMSEA) = .042.
- Tests of the significance of individual paths and modification indices were examined for potential changes to the model.
Predicting premilitary ASA

- Direct predictors include:
  - CSA
  - Trauma symptoms
  - Number of sex partners
  - Alcohol problems
  - Witnessing parental IPV
- Indirect predictors include:
  - CPA (via increased trauma symptoms)
  - Parent support (via reduced trauma symptoms and alcohol problems)
- Overall, predictors accounted for 28% of the variance in premilitary ASA

Predicting T2 ASA

- Most predictors were mediated through premilitary ASA
  - Trauma symptoms and number of sex partners evidenced both direct and indirect effects (via premilitary ASA)
  - Hyperfemininity direct predictor of T2 ASA
- Overall, predictors accounted for 9% of the variance in T2 ASA

Multi-group path analysis

- Used to test whether the predictors and mediators are the same for CSA victims and non-victims in predicting premilitary and T2 ASA (i.e., testing whether the model fits the data equally well for both groups)
- Started by testing the fit of the unconstrained model (no cross-group equality constraints)
  - Reasonably good fit: $\chi^2 (12) = 23.84, p = .02; CFI = .990; TLI = .921; RMSEA = .031$
Multi-group path analysis

• Next, constrained the path coefficients to be equivalent between CSA victims and non-victims
  ▫ Model had good fit and the fit was not significantly worse than the fit of the unconstrained model
  ▫ $\chi^2$ difference (21) = 21.83, $p = .41$
  ▫ Critical ratio comparisons test whether specific paths differ for the two groups (like simple effects)
  ▫ Path from trauma symptoms to premilitary ASA differed such that trauma symptoms were a stronger predictor among non-victims

Multigroup path analysis

• Subsequent models constrained the intercepts and means (basically the unadjusted means of the exogenous and adjusted means of the endogenous variables)
  ▫ Exhibited significant lack of fit and fit significantly worse than the unconstrained model
  ▫ $\chi^2$ difference (9) = 131.25, $p < .001$
  ▫ What does that mean?
    ▫ Mean scores on the exogenous and endogenous variables were not equal for CSA victims and non-victims

CSA victims vs. non-victims

<table>
<thead>
<tr>
<th>Predictor</th>
<th>CSA</th>
<th>No CSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child physical abuse</td>
<td>7.10 (14.39)</td>
<td>3.35 (9.76)</td>
</tr>
<tr>
<td>Witness parent IPV</td>
<td>0.53 (0.59)</td>
<td>0.33 (0.47)</td>
</tr>
<tr>
<td>Parent support</td>
<td>37.25 (8.26)</td>
<td>41.90 (8.67)</td>
</tr>
<tr>
<td>Hyperfemininity</td>
<td>6.66 (5.98)</td>
<td>6.80 (5.68)</td>
</tr>
<tr>
<td>Number of sex partners</td>
<td>9.40 (10.28)</td>
<td>5.37 (7.92)</td>
</tr>
<tr>
<td>Trauma symptoms</td>
<td>0.15 (0.76)</td>
<td>0.19 (0.75)</td>
</tr>
<tr>
<td>Alcohol problems</td>
<td>3.02 (4.72)</td>
<td>2.13 (3.56)</td>
</tr>
<tr>
<td>Premilitary ASA</td>
<td>1.56 (1.24)</td>
<td>0.99 (1.18)</td>
</tr>
</tbody>
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- CSA victims scored significantly higher on all predictors except hyperfemininity

Take home message

• Consistent with previous research, we found robust evidence of sexual revictimization effect

But why do these things increase risk?

• Although the results provide support for trauma symptoms, risky sexual behavior, and alcohol problems as mediators, this study does not provide information as to why these factors increase risk of sexual revictimization
  ▫ Future research could employ innovative social cognitive research methods to test hypotheses regarding impaired risk detection, etc.
• Not all potential mediators were studied (e.g., coping mechanisms, attachment style)
• Move beyond intrapersonal factors

Another brick in the wall

• Findings add to a growing body of literature prospectively examining mediators of sexual revictimization
  ▫ U.S. Navy sample confirms what has been found in college student samples
• Final model indicates that the relationship between CSA and premilitary and T2 ASA was mediated by trauma symptoms, number of sex partners, and alcohol problems
  ▫ Partial mediation for premilitary ASA
  ▫ Full mediation for T2 ASA (via premilitary ASA)
Unique risk factors for CSA victims?

- CSA victims do not appear to have unique risk factors that place them at risk for sexual victimization in adulthood compared to non-victims
  - Instead ... they appear to have significantly more of the same risk factors
- Implication?
  - Intervening to reduce trauma symptoms, alcohol problems, number of sex partners (preemptive) could reduce risk for all women, not just CSA victims

Contact: mrabenho@niu.edu