An Investigation of Posttraumatic Stress Disorder and Physical Health Status in Sexual Assault Survivors

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Background

Trauma Exposure, PTSD and Physical Health

Across a variety of populations, both trauma exposure and PTSD have been linked to adverse health outcomes including:

- Self-reported physical symptoms
- Poorer perceptions of health
- Greater utilization of health services
- Diagnosed medical problems (Medical diagnoses)
- Chronic health conditions
- Limitations in physical functioning

(Friedman & Schnurr, 1995; Schnurr & Green, 2004 Schnurr & Jankowski, 1999)

Trauma: Sexual Assault

- As with other traumas, sexual assault has been linked to:
  - General health symptoms
  - Poorer perceptions of health status
  - Greater utilization of health services
  - Higher rates of chronic disease
  - Limitations in physical functioning

(e.g., Golding, 1994; Kimerling & Calhoun, 1994)

- Sexual assault is also associated with reproductive and sexual health problems (Chapman, 1989; Golding, 1994)

Purpose of the Study

1. Investigate the role of PTSD as a mediator in the relationship between sexual assault and physical health outcomes

2. Examine the role of PTSD symptom clusters in determining health outcomes among sexual assault survivors

PTSD as a Mediator between Trauma and Health

Research has shown that PTSD, at least partially, mediates the relationship between trauma exposure and physical health

- This suggests that an individual's psychological response to a traumatic stressor is an essential component that triggers changes in physical health status

- This adverse impact on physical health appears to be most adequately explained by PTSD, as compared to other psychological disorders

- This mediation model had previously not been tested with the trauma of sexual assault

Hypotheses & Research Question

Hypotheses

1. When compared to women with no history of sexual assault, sexual assault victims will report:
   a. More general health symptoms
   b. More sexual and reproductive health concerns
   c. Poorer global health perceptions
   d. Higher levels of health care utilization

2. Posttraumatic stress disorder (PTSD) will mediate the relationship between sexual assault victimization and physical health problems.

Research Question

3. Are PTSD symptom clusters differentially associated with physical health outcomes?
Participants (N = 155)

- Undergraduate student sample
- Median Age: 19 years (range 17-39)
- Racial Affiliation: 74% Caucasian, 12% Asian
- Citizenship: 90% Canadian
- Marital Status: 93% single, never married, 6.5% common-law
- Median income (family of origin): $70,000-79,999 per yr

Health Measures

- General Health Symptoms
  - Health Symptom Checklist (HSC; Runtz, 2002)
  - 54-item measure of general health symptoms
- Reproductive/Sexual Health
  - Reproductive Health Questionnaire (RHQ)
  - 40-item measure of female reproductive and sexual concerns
- Health Perceptions
  - Cantril Self-Anchoring Ladder (Cantril, 1965)
  - Current, past, future and best health are ranked from 1-10
- Health Care Utilization
  - Self-reported visits to medical services
    - e.g., physician, E.R.

Victimization Measures

- Sexual Assault
  - Sexual Experiences Survey (SES; Koss & Oros, 1982)
- Childhood Victimization Experiences
  - Childhood Sexual Experiences (CSE; Runtz, 2002)
  - Physical Abuse Questionnaire (PAQ; Demaré, 1995)
  - Psychological Maltreatment subscale of the Childhood Maltreatment Interview Schedule Short Form (CMIS-SF; Briere, 1992)

Prevalence Rates

- 54.8% lifetime exposure to any traumatic event
- 11.6% lifetime PTSD
- 53.5% sexual assault
  - (includes unwanted sexual contact, coerced sex, attempted rape, and rape)
- 29% reported rape or attempted rape

Results

- After controlling for child victimization variables, sexual assault was related to physical health problems, in that, increasing severity of assault was associated with:
  - More general health symptoms
  - More reproductive/sexual health symptoms
  - Poorer health perceptions
  - Greater use of medical services
- The path model fit the data well:
  - χ²(5) = 6.88, ns, CFI = .99, RMSEA = .045

Direct Model

[Diagram of path model with variables and estimated coefficients]
Results

Path analysis revealed that PTSD symptom severity partially mediated the relationship between sexual assault and physical health problems.

The mediated model fit the data well:
- $\chi^2(9) = 14.69$, ns, CFI = .96, RMSEA = .064
- Comparison of the mediated model to the full model (all paths free-to-vary), did indicate a significant improvement
- $\chi^2_{\text{DIFF}}(1) = 3.85, p = .05$
- Inclusion of the indirect pathway in the model (PTSD SS as mediator) led to a significant decrease in the strength of the direct pathway (46%), indicating partial mediation.

Alternate Model - Depression

An alternate model testing depression symptoms as the mediator did not fit the data well:
- $\chi^2(9) = 21.76$, $p = .01$, CFI = .92, RMSEA = .096

Regression Analyses

<table>
<thead>
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<th>Variable</th>
<th>$\beta$</th>
<th>SE</th>
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<td>Health perceptions</td>
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<td>Reexperiencing</td>
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<td>.31</td>
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<td>Health care utilization</td>
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<tr>
<td>Reexperiencing</td>
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<td>.19</td>
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<tr>
<td>Hyperarousal</td>
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<td>.22</td>
<td>-.73</td>
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Note. Both overall models were significant at $p < .05$.

Mediated model

Results

Multivariate multiple regression analyses indicated PTSD symptom clusters were not individually related to general or reproductive/sexual health symptoms.
- However, when taken together, PTSD symptoms were associated with symptom outcomes:
  - General health symptoms: $F(3, 76) = 3.70$, $p < .05$
  - Reproductive/sexual symptoms $F(3, 76) = 4.39$, $p < .01$
- Avoidance symptoms uniquely predicted health perceptions
- Reexperiencing symptoms uniquely predicted health care utilization

Conclusions

This study is consistent with previous research in finding that sexual assault is associated with adverse physical health outcomes.
- PTSD symptom severity partially mediates this relationship between sexual assault and physical health outcomes
- Depression does not mediate the sexual assault – physical health relationship
- PTSD symptom clusters appear to operate together in their association with symptom outcomes (general health and reproductive/sexual symptoms)
- Avoidance symptoms are related to health perceptions, while reexperiencing symptoms are related to health care utilization, in this sample
Implications

- Women should be screened for trauma history when presenting with physical health problems, particularly reproductive/sexual health problems.
- Treatment of PTSD symptoms may help to alleviate physical health problems.
- Integration of care for physical and psychological symptoms may be appropriate for these individuals.
- Further research should be conducted on the relative contribution of PTSD symptom clusters to adverse physical health outcomes.

Limitations

- Generalizability is limited.
- All female sample, limited diversity within sample.
- Study design is cross-sectional.
- Causal inferences cannot be made.
- Self-report measures used.
- Influenced by accuracy of memory, social desirability.
- PTSD symptom severity used as mediator.
- Inferences regarding diagnostic status cannot be made.

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Selected References


