Persistent Adverse Mental and Physical Health Outcomes are Common Among Women After Sexual Assault

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Introduction/Background

• Emergency departments worldwide provide care to individuals who present for evaluation in the immediate aftermath of sexual assault.
• To date, no prospective longitudinal studies of such women have been performed.
• Adverse mental and physical health outcomes after emergency care remain poorly understood.

Physical and Mental Health Outcomes after Sexual Assault

• Chronic health problems are common after sexual assault.

- PTSD
- Anxiety
- Headache
- Personality Disorders
- Depression
- Sexual dysfunction
- Chronic Pain
- Smoking
- Migraines
- Low Self-Esteem
- Chronic Pelvic Pain
- Alcohol abuse
- STIs
- Back Pain
- Drug abuse
- GI symptoms
- Risky sex
- Menstrual symptoms
- Drug abuse
- Gyn Symptoms
- Genital trauma/injury
- Withdrawal
- Isolation
- Psychological disorders
Study Aims

- Data for this analysis were drawn from The Women’s Health Study, the first large-scale prospective longitudinal study of women sexual assault survivors receiving emergency care after sexual assault.

- In this prospective, observational study, we evaluated the incidence of somatic and mental health symptoms after sexual assault.

The Better Tomorrow Network

Methodology: Evaluation Time Points

- ED
- Wk 1
- Wk 6
- 6 Mnth
- 1 Year
Methodology: Evaluation Time Points

- Medical record from SANE exam
- Assessment of overall pain
- Assessment of pain by body region

ED

Wk 1

Wk 6

Assessments at one week and 6 weeks include:
- Pain (0-10 numeric scale)
- Somatic symptoms (1-10 NRS)
- Depression (PROMIS 8b)
- Anxiety (PROMIS 8b)
- Posttraumatic stress (PCLS-S DSM-IV PTSD)

Results: (N = 334)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, mean (SD)</td>
<td>28 (10)</td>
</tr>
<tr>
<td>Ethnicity, n (%)</td>
<td></td>
</tr>
<tr>
<td>African-American</td>
<td>56 (17)</td>
</tr>
<tr>
<td>European-American</td>
<td>209 (63)</td>
</tr>
<tr>
<td>Multiethnic/other</td>
<td>69 (20)</td>
</tr>
<tr>
<td>Hispanic or Latino, n(%)</td>
<td>83 (25)</td>
</tr>
<tr>
<td>Highest level of education completed</td>
<td></td>
</tr>
<tr>
<td>High school or less</td>
<td>111 (33)</td>
</tr>
<tr>
<td>Some college or other training</td>
<td>160 (48)</td>
</tr>
<tr>
<td>College grad or post-grad</td>
<td>63 (19)</td>
</tr>
</tbody>
</table>

Selected Assault Characteristics*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threat of injury to patient or patient’s loved ones n(%)</td>
<td>41 (24)</td>
</tr>
<tr>
<td>Weapon n(%)</td>
<td>25 (15)</td>
</tr>
<tr>
<td>Strangulation n(%)</td>
<td>54 (30)</td>
</tr>
<tr>
<td>Physical Assault n(%)</td>
<td>69 (39)</td>
</tr>
<tr>
<td>Multiple Assaults n(%)</td>
<td>20 (10)</td>
</tr>
<tr>
<td>Drug facilitated assault n(%)</td>
<td>77 (36)</td>
</tr>
<tr>
<td>Assault Relationship n(%)</td>
<td></td>
</tr>
<tr>
<td>Known n(%)</td>
<td>139 (60)</td>
</tr>
<tr>
<td>Unknown n(%)</td>
<td>61 (27)</td>
</tr>
<tr>
<td>Relative n(%)</td>
<td>2 (1)</td>
</tr>
<tr>
<td>Penetration of n(%)</td>
<td></td>
</tr>
<tr>
<td>Vagina n(%)</td>
<td>146 (60)</td>
</tr>
<tr>
<td>Anus n(%)</td>
<td>33 (14)</td>
</tr>
<tr>
<td>Mouth n(%)</td>
<td>49 (21)</td>
</tr>
<tr>
<td>Multiple forms of Assault n(%)</td>
<td>89 (39)</td>
</tr>
</tbody>
</table>

*From subsample of n = 230
Adverse mental and physical health outcomes 1 week after sexual assault*

- Moderate or severe pain
- Moderate or severe depressive symptoms
- Significant posttraumatic stress

110/122 (90%) reported ≥3 worsening “post-concussive” symptoms at 1 week in subsample analyses, more than % of these individuals did not experience head injury or strangulation during assault

- Headache
- Dizziness
- Nausea
- Noise sensitivity
- Light sensitivity
- Difficulty
- Taking longer to think
- Blurred vision
- Double vision
- Restlessness
- Fatigue
- Insomnia

*Moderate or severe pain defined by pain score ≥4 (0-10 numeric rating scale); Moderate or severe depressive symptoms Promis8b score ≥23; Significant Posttraumatic stress defined by PCL5 (cutoff score for PTSD diagnosis)

Adverse physical and mental health outcomes 6 weeks after sexual assault

- Headache
- Dizziness
- Nausea
- Noise sensitivity
- Light sensitivity
- Difficulty
- Taking longer to think
- Blurred vision
- Double vision
- Restlessness
- Fatigue
- Insomnia

77/102 (76%) reported ≥3 worsening “post-concussive” symptoms at 6 weeks in subsample analyses, ~ % of these individuals did not experience head injury or strangulation during assault

Moderate or severe pain defined by pain score ≥4 (0-10 numeric rating scale); Moderate or severe depressive symptoms Promis8b score ≥23; Significant Posttraumatic stress defined by PCL5 (cutoff score for PTSD diagnosis)
Conclusions

• Adverse mental and physical health outcomes are common and morbid among sexual assault survivors.

• Moderate/Severe Depression, PTS, persistent pain, and somatic symptoms typically termed “post-concussive” are commonly seen.

Limitations

• Only US sample
• Only individuals presenting to large sexual assault centers
• Non-English speaking participants excluded
• Insufficient sample for later follow-up timepoints

Future Directions

• Assess adverse outcomes at later timepoints
• Develop prediction tools that frontline providers can use to identify individuals at high risk for one or more adverse outcomes
• Test early interventions to improve outcomes in those at high risk
  • Psychological interventions
  • Pharmacologic interventions

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