Battered Women and Children: Research, Resilience and Models of Response

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Two things---

1. Observations and research on resilience with abused women and their children
2. New findings on the health effects of intimate partner violence (IPV)

Of necessity my remarks will be brief!
But first--

A story
Support of others

• “...they always encouraged me & said that I could do whatever I wanted to do & that I would be somebody. So this was always being affirmed all of the time by so many people that it was something I accepted and I expected. It got to the point where I expected it & there was no less.”

• “...but my mother thought we were perfect & we believed her... she thought we were great so I think I thought I was great.”
RESILIENCE

• Exposure to adversity or trauma does not necessarily lead to impairment and the development of psychopathology!
• Process of adapting well in the face of adversity or trauma (Yehuda, Flory, Southwick, & Charney, 2006)
  - **Resistance**—factors that contribute to relative imperviousness to deleterious effects of stress
  - **Recovery**—an individual’s ability to mend or restore psychological/physical damage as a result of stress
CONCEPTUALIZATION OF RESILIENCE

Psychological characteristics

Biological characteristics

RESILIENCE
COLEVA
Known and Suspected Consequences Of Lifetime Experiences of Violence and Abuse
or attempted suicide. An association between recent ill health and lifetime experience of violence suggests that physical and mental effects may last long after the violence has ended.
# Chronic Pain in Abused Women

<table>
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<th>Chronic pain common complaint</th>
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<td>• 48% to 84% of abused women</td>
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<th>Most common sites</th>
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<td>• Headaches (84%), musculoskeletal soreness (81%), back pain (80%)</td>
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<td>• Frequent c/o abdominal, GU, &amp; GI pain</td>
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<th>Limitations of research</th>
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<td>• Specialty clinic or shelter-based samples</td>
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<td>• Single-item measures</td>
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“Throughout our lives most of us have had pain from time to time. Have you had pain that didn’t go away and lasted 3 months or more?”

65 (77%) = yes
**Mild Chronic Pain**

**Moderate-Severe Chronic Pain**

* p<.05
Chronic Pain Characteristics

- Average of 5 painful sites
  - Range = 1-21
- >50% participants describes pain as
  - “Miserable”
  - “Exhausting”
  - “Unbearable”
But why?
Chronic stress and aging

  - Women with chronic stress
  - Hypothesized that stress impacts health by modulating the rate of cellular aging

Telomeres

- DNA-protein complexes that cap chromosomal ends promoting chromosomal stability
- Their length shortens with each cell division & correlates inversely with age
  - Biomarker for biological “age”
- Can be modified by genetic & epigenetic factors
  - Physiological stressors –

A critical minimum telomere length triggers cell senescence. Accumulation of senescent cells attenuates the integrity and normal function of tissues, leading to age-related diseases including chronic inflammation.
To examine the relationship between mean telomeric DNA length in women who have experienced IPV as one type of chronic stress.

- Hypothesis: IPV exposure will be associated with shorter telomere length.
Total Sample \((N = 112)\)

- **Age** = 32.1 ± 9.3
  - Range = 18-54
- **Ethnicity**
  - 38% White
  - 22% Black
  - 15% Asian
  - 9% Latino
  - 12% Multiracial
  - 4% Not given
- **38% Had children**
- **34% Previously smoked cigarettes**
- **Health rating** = 8.4 ± 1.2
- **BMI** = 27.7 ± 7.3
  - Range 17-52.4
- **Education**
  - 6% < HS grad
  - 14% HS or GED
  - 59% Some college
  - 20% Post grad study
- **61% Employed**
- **Current monthly income**
  - \(M = \$2,151, \text{Md}n = \$1,325\)
- **BDI-II**
  - 57% Nondepressed (0-13)
  - 27% Mildly to Moderately depressed (14-28)
  - 15% Severely depressed (29-63)
- **Lifetime traumas** = 9.6 ± 5.8
  - Range = 0-23
Humphreys, et al., 2010

* $t = 2.4, p = .02$
## Multiple Regression Analysis

### Summary Table for Two Variables Predicting Telomere Length

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<tr>
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<th>Unstandardized Coefficient</th>
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<th>Confidence Interval for B</th>
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<tbody>
<tr>
<td></td>
<td>B</td>
<td>Standard Error</td>
<td>t</td>
<td>p</td>
<td>Lower Bound</td>
<td>Upper Bound</td>
<td>Part r²</td>
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<td><strong>Model</strong></td>
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<tr>
<td>Have children</td>
<td>.15</td>
<td>.05</td>
<td>2.82</td>
<td>.006</td>
<td>.045</td>
<td>.257</td>
<td>.067</td>
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<tr>
<td>Length of time abused in years</td>
<td>-.01</td>
<td>.05</td>
<td>-2.11</td>
<td>.038</td>
<td>-.024</td>
<td>-.001</td>
<td>.037</td>
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$R^2 = .17 \ (N = 102, \ p < .001)$
Central role of the brain in allostatics and the behavioral and physiological response to stressors

It’s in their heads, but it’s also in their cells!

Environment stressors (work, home, neighborhood)

Major life events

Perceived stress (threat, helplessness, vigilance)

Trauma, abuse

Behavioral responses (fight or flight; personal behavior — diet, smoking, drinking, exercise)

Individual differences (genes, development, experience)

Physiologic responses

Allostasis

Adaptation

Allostatic load

McEwen, B. S. Physiol. Rev. 87: 873-904 2007;
doi:10.1152/physrev.00041.2006
Additional considerations

STUDY LIMITATIONS

- Small sample size
- Convenience sample
- Cross-sectional design
- Limited to measure of telomere length alone

STUDY STRENGTHS

- Initial study of IPV and telomere length
- Community-based sample
- Comparison groups
  - Formerly abused women
  - Never abused women
Conclusions

- Telomere length was significantly shorter in formerly abused women vs. never abused women (5-10 years!)
Conclusions - continued

• Interventions that reduce oxidative stress & enhance resilience may be helpful to abused women
  ▪ Healthy behaviors
    ▪ Good nutrition
    ▪ Sleep
    ▪ Exercise
      ▪ “Power of Exercise” (Puterman, et al., 2010)
  ▪ Reduced perceptions of stress
    ▪ Social support
    ▪ Enhanced coping—stress management
    ▪ Meditative practices
      ▪ Yoga
      ▪ Mindfulness stress reduction
Conclusions- continued

- Interventions that end the violence and/or reduce women’s exposure, may prove beneficial in reducing health consequences including depression.
  - Best predictor of chronic pain & telomere shortening—length of time in abusive relationship
  - If IPV assessment is as intervention, then assessment may contribute to decreased exposure
  - Certainly it does no harm
Thank you
Selected References


