Resilience & Behavioral Disengagement: Correlates of a Negative Sense of Control for an HIV sample

Danielle Vincent, Eliot Lopez, MS, James Miller, MS, Chwee-Lye Chng, PhD & Mark Vosvick, PhD
Background

- Limited research has been conducted on sense of control within people living with HIV (PLH)

- However, many researchers have found a correlation between negative sense of control and deleterious psychosocial and health outcomes in elderly individuals (Langer & Rodin, 1976) and those with coronary heart disease (Glass, 1977; Shapiro, Friedman and Piaget, 1991)

- PLH may experience a loss of control leading to a negative sense of control (Siegel & Schrimshaw, 2000)

- Positive sense of control has been associated with positive psychological and physical outcomes (Shapiro, 1994)

- Having a positive sense of control can help you reduce stress and improve psychological wellbeing (Shapiro, 1994)
Background

- Negative sense of control -> stress

- **Stress undermines the immune system**
  - Cortisol, the “stress hormone”, is increased
  - Production of “good” prostaglandins (which support immune function) slows
  - Immune system cells disappear from the blood
  - Lower levels of cortisol will allow immune system cells to circulate in excess (Sapolsky, 2004)
Background

- Negative sense of control is associated with feelings of a loss of control, lack of control, and too much control from others. Individuals with a negative sense of control may feel helpless and may demonstrate passive (Seligman, 1975) coping strategies (Shapiro 1994).

- Behavioral disengagement (i.e. avoidance) is characteristic of a negative sense of control (Moskowitz et al., 2009).

- Resilience can be obtained through a positive sense of control over stressful life events (Emlet, Tozay & Raveis, 2010; Connor & Davidson, 2003; Bonanno, 2004).
Theoretical Model
Based on the Transactional Model of Stress & Coping
(Lazarus & Folkman, 1984)

Stressor

Primary Appraisal
Challenging/Positive/Irrelevant
Stressful

Secondary Appraisal
Behavioral Disengagement
Adaptive Coping

Reappraisal

Outcome
Higher chance for resilience
Lower chance for resilience
Higher chance for resilience

Diagnosis

Center for Psychosocial Health Research
UNIVERSITY OF NORTH TEXAS
Hypotheses

1. Resilience is negatively correlated with negative sense of control
2. Behavioral disengagement is positively correlated with negative sense of control
3. Resilience and behavioral disengagement account for a significant proportion of variance in negative sense of control
Participants

- Recruitment: Dallas/Forth Worth metroplex AIDS service organizations and local health centers
- Eligibility: 18+, HIV+, fluent in English
- Incentive: $10 for Phase 1 and $25 for Phase 2
Methodology

- Study received IRB approval
- Cross-sectional correlational design
- Computerized survey on QDS
- Assistance provided by study staff
Procedures

- A gender stratified convenience sample was recruited via word-of-mouth and flyers
- Written informed consent obtained from all participants
- Self-report computerized survey
- Researchers were present to assist any participants who had difficulty understanding the questionnaire
## Demographics

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>%</th>
<th>M (SD)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>32</td>
<td>50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>43</td>
<td>67.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>European American</td>
<td>17</td>
<td>26.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latino</td>
<td>2</td>
<td>3.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>3.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gay</td>
<td>24</td>
<td>37.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bisexual</td>
<td>9</td>
<td>14.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>31</td>
<td>48.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
<td>46.8 (8.87)</td>
<td>23-66</td>
</tr>
<tr>
<td>Education (years)</td>
<td></td>
<td></td>
<td>11.9 (2.59)</td>
<td>3-18</td>
</tr>
</tbody>
</table>

N = 64
Measures

Connor-Davidson Resilience Scale (Connor & Davidson, 2003)
\[ \alpha = .89 \]

- 25 items
- 5-point likert-type scale
- 0 (Not at all true)
- 4 (True nearly all the time)
  - Ex: “I tend to bound back after illness or hardship”
  - Ex: “Coping with stress strengthens me”
- Convergent and divergent validity assessed with similar resilience measuring scales
- High scores represent greater resilience
Measures
Brief Cope (Carver, 1997) Behavioral Disengagement Subscale
α= .65

- 2 items
- 4-point likert-type scale
- 1 (I haven’t been doing this at all)
- 4 (I’ve been doing this a lot)
  - Ex: “I’ve been gibing up trying to deal with it”
  - Ex: “I’ve been giving up the attempt to cope”
- Discriminant validity assessed
- High scores represent increased frequency of the particular coping mechanism
Measures

Shapiro Control Inventory (Shapiro, 1994) Negative Sense of Control subscale

$\alpha = .89$

- 5 items
- 6-point Likert-type scale
- 1 (never)
- 6 (very often)
  - Ex: “I feel that I am losing control in areas where I once had control”
  - Ex: “I am too passive and helpless”

Discriminant, divergent and incremental validity assessed

High scores indicate more negative sense of control
Data Analysis

- Univariate analysis
- Bivariate analysis
- Multivariate analysis
Data Analysis
Univariate

<table>
<thead>
<tr>
<th></th>
<th>Mean (SD)</th>
<th>Possible Range</th>
<th>Actual Range</th>
<th>Calculated $\alpha$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral Disengagement</td>
<td>3.5 (1.8)</td>
<td>2 - 8</td>
<td>2 - 8</td>
<td>.73</td>
</tr>
<tr>
<td>Resilience</td>
<td>66.0 (22.7)</td>
<td>0 - 100</td>
<td>0 - 100</td>
<td>.97</td>
</tr>
<tr>
<td>Negative Sense of Control</td>
<td>14.5 (5.1)</td>
<td>5 - 30</td>
<td>5 - 28</td>
<td>.70</td>
</tr>
</tbody>
</table>
Data Analysis
Bivariate

*\( p < .05; **p < .01 \)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Ethnicity</td>
<td>-.26**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Sexual Orient.</td>
<td>.67**</td>
<td>-.17</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Age</td>
<td>-.09</td>
<td>.02</td>
<td>-.02</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Education</td>
<td>-.29**</td>
<td>.07</td>
<td>-.35**</td>
<td>.18*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Resilience</td>
<td>-.05</td>
<td>-.18</td>
<td>.03</td>
<td>.14</td>
<td>.06</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>7. Behav. Dis.</td>
<td>.14</td>
<td>.09</td>
<td>.01</td>
<td>-.13</td>
<td>-.13</td>
<td>-.35**</td>
<td>1</td>
</tr>
<tr>
<td>8. Neg. S.O.C.</td>
<td>.19</td>
<td>.02</td>
<td>.16</td>
<td>-.18</td>
<td>-.23</td>
<td>-.49**</td>
<td>.39**</td>
</tr>
</tbody>
</table>

\( p < .05; **p < .01 \)
# Results

Multivariate Dependendent Variable: Negative Sense of Control

## Block 1

<table>
<thead>
<tr>
<th>IV</th>
<th>β</th>
<th>t</th>
<th>p</th>
<th>Tolerance</th>
<th>Vif</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.18</td>
<td>-1.40</td>
<td>.17</td>
<td>.96</td>
<td>1.04</td>
</tr>
</tbody>
</table>

\[F(1, 62) = 1.96, \text{ Adjusted } R^2 = .02, \ p < .05\]

## Block 2

<table>
<thead>
<tr>
<th>IV</th>
<th>β</th>
<th>t</th>
<th>p</th>
<th>Tolerance</th>
<th>Vif</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resilience</td>
<td>-.39</td>
<td>-3.35</td>
<td>.001</td>
<td>.86</td>
<td>1.16</td>
</tr>
<tr>
<td>Behavioral Disengagement</td>
<td>.24</td>
<td>2.07</td>
<td>.043</td>
<td>.87</td>
<td>1.15</td>
</tr>
</tbody>
</table>

\[F(3, 60) = 8.39, \text{ Adjusted } R^2 = .26\]

\[R^2 \text{ change} = .27, \ p < .001\]
Discussion

Hypothesis 1: As predicted, resilience is negatively correlated with negative sense of control. This is defended by the finding that negative sense of control is associated with depression and anxiety (Siegel & Schrimshaw, 2000), both of which are commonly found when levels of resiliency are low.

Hypothesis 2: As predicted, behavioral disengagement is positively correlated with negative sense of control. This is supported by Lazarus and Folkman’s finding that efforts to exude control are concurrent with coping (Lazarus & Folkman, 1984, p. 179) (i.e., negative coping is synonymous with negative sense of control).

Hypothesis 3: As predicted, resilience and behavioral disengagement comprise a significant proportion of variance in negative sense of control.
Discussion

- Our findings suggest that PLH who report low resilience and maladaptive coping strategies (such as behavioral disengagement) may experience a negative sense of control, which is characterized by relinquishment in active coping strategies (Langer & Rodin, 1976) as well as feelings of helplessness and passivity.

- Researchers have associated maladaptive coping strategies and psychological distress in PLH with reduced functioning of CD4+ T-helper lymphocytes and natural killer (NK) cells, both of which are integral to defending the body from opportunistic infections and cancers (Antoni, 2003; Kiecolt-Glaser, McGuire, Robles, & Glaser, 2002).

- Lazarus and Folkman (1984) posit that choice of coping responses (problem-focused vs. emotion-focused) is typically influenced by the degree to which the individual appraises that event as controllable. When individuals attempt to use problem-focused coping to deal with situations beyond their control, feelings of frustration and helplessness can arise.
Treatment Implications

- Public health interventions promoting positive sense of control and resilience
  - Stress management
  - Reduce behavioral disengagement
  - Provide advantageous coping mechanisms
    - Acceptance

- Coping Effectiveness Training (CET) is a theory-based intervention that promotes appropriate coping responses to different situations.

- CET is based on the idea that the use of problem-focused coping in response to circumstances that are beyond an individual’s control can result in increased symptoms of frustration, helplessness, and anxiety (Riolli & Savicki, 2010; Chesney, et al., 2003)
Future Research

- The impact of resiliency promoting interventions on negative sense of control
- The correlation between other maladaptive coping mechanisms and negative sense of control
- The impact of CET interventions on negative sense of control
- Public health researchers should further explore interventions enhancing coping abilities and promoting a positive sense of control
Limitations

- Negligible research over the combined constructs in the model could be found
- Dated and limited research
- Self report bias
- Limited generalizability due to geographic location of sample
- Correlation does not equal causation
Acknowledgements

- Center for Psychosocial Health Research
- HIV community
- Dallas Resource Center
Q & A

When was the last time you washed your hair?

Why do you ask?
References


