Resilience measures predict 12-month continuous safe sex behaviors among highly vulnerable MSM following intervention

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There are no conflicts to report.
A 5-year randomized clinical trial comparing the efficacy of a 4-session small group empowerment intervention to an enhanced single session risk reduction and resilience counseling condition.
Background

Recent work has suggested that the syndemic model of health disparities among MSM be expanded to include research into resilience processes

... by which many MSM exposed to syndemic risk are able to use strengths and resources to overcome risk.
What are syndemic health disparities?

“Two or more afflictions, interacting synergistically, contributing to an excess burden of disease in a population” (CDC 2011)

- Mental distress
- Victimization
- HIV
- Substance dependence
What is empowerment?

“A process through which individuals come to perceive a connection between their goals and the means to achieve them, and between their efforts and the desired results.” (Mechanic 1991).

- goal setting
- social engagement
- positive coping skills
- self-efficacy
What is resilience?

Empowerment, despite multiple personal and social losses

(Fergus & Zimmerman 2005)
CONCEPTUAL MODEL OF MSM HEALTH RISKS AND THEORIZED PSYCHOLOGICAL EMPowerMENT INTERVENTION EFFECTS

Migration considerations:
- Perceived Costs
  - Lost social capital
  - Lost social norms
  - Lost relationships
- Perceived Benefits
  - Freedom
  - Mental health
  - Attraction / desire
  - Safety
  - Friendships

Urban Gay Subcultures:
- Escapist / fantastic / spectacular
- Homophobic
- Competitive
- Temporary
- Normative drug use and hypersexuality
- Limited social networks and opportunities

Cultural alienation:
- Self-protective "attitude"
- Sense of sexual violation
- Depression/anxiety
- Reinforced homophobia
- STI / HIV infections
- Substance use
- Sensation seeking

Mediators:
- Increased social networks
- Increased perceived control
- Active vs. escape coping
- Increased social diagnostic skills
- Reduced anxiety and depression

Behavioral Health Outcomes:
- Reduced sensation seeking
- Reduced sexual risks
- Reduced substance use

Early life experiences in a homophobic environment:
- Family rejection
- Not fitting in with peers
- Secrecy
- Verbal and physical abuse
- Shame

P I N T E R V E N T I O N
Purpose of the Presentation

Among a sample of 515 substance using at-risk men, we examined the relationship between transition to 100% condom use following participation in the behavioral interventions (N=88) and improved scores on measures of resilience at 12 month follow-up.
Eligibility Requirements

- Ages 18-55
- 3 + times drug / drunk in the last 30 days:
- Sex risk in the last 90 days:
  - 3+ times anal sex with a non-primary partner, including 1+ times UAI
# Demographics (N=515)

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (median; range: 18 - 55)</strong></td>
<td>39 years</td>
</tr>
<tr>
<td><strong>Education (median)</strong></td>
<td>14 years</td>
</tr>
<tr>
<td><strong>Income (median)</strong></td>
<td>$15,000</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>250 48.5</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>133 25.8</td>
</tr>
<tr>
<td>African American</td>
<td>108 21.0</td>
</tr>
<tr>
<td>Other</td>
<td>24 4.7</td>
</tr>
<tr>
<td><strong>HIV- Positive</strong></td>
<td>239 46.4</td>
</tr>
</tbody>
</table>
Baseline Substance Use, N=515
Lifetime and Past 90 Days
Sexual behaviors (Past 90 days)

Means

# male anal sex partners 13
# anal sex times 33
# times no condom 23

Syndemic factors

<table>
<thead>
<tr>
<th>Condition</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe mental distress</td>
<td>298</td>
<td>57.9</td>
</tr>
<tr>
<td>DSM-IV dependence</td>
<td>320</td>
<td>62.1</td>
</tr>
<tr>
<td>Childhood victimization</td>
<td>282</td>
<td>54.8</td>
</tr>
</tbody>
</table>
Resilience measures

Personal mastery (Pearlin et al. 1981)
  Scale 0 - 28

Positive coping skills (Brief Cope; Carver 1997)
  Scale 0 - 20

Coping self efficacy (Chesney et al. 1981)
  Scale 0 - 130

Pro-social activities (past 90 day event count)
  Scale 0 - 100
There were no differences at baseline between “safer men” (12 months continuous 100% condom use post intervention) and other men as to:

Syndemic risk factors
Sexual risk behaviors
Resilience measures
## Bivariate Logistic Regression Models to Predict 100% Condom Use

<table>
<thead>
<tr>
<th></th>
<th>$P$</th>
<th>OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.502</td>
<td>1.01</td>
<td>0.98, 1.03</td>
</tr>
<tr>
<td>HIV-positive</td>
<td>.524</td>
<td>0.86</td>
<td>0.54, 1.37</td>
</tr>
<tr>
<td>Race/ethnicity (ref. Hispanic)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>.011</td>
<td>2.20</td>
<td>1.20, 4.03</td>
</tr>
<tr>
<td>White</td>
<td>.042</td>
<td>0.53</td>
<td>0.29, 0.98</td>
</tr>
</tbody>
</table>
Logistic Regression Models to Predict 100% Condom Use (controlling for age, race/ethnicity, and HIV status)

<table>
<thead>
<tr>
<th>Resilience Measures at 12 months</th>
<th>P</th>
<th>OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Mastery Scale (mean 22.9)</td>
<td>.049</td>
<td>1.07</td>
<td>1.00, 1.15</td>
</tr>
<tr>
<td>Positive Coping Scale (mean 13.8)</td>
<td>.026</td>
<td>1.08</td>
<td>1.01, 1.15</td>
</tr>
<tr>
<td>Coping Self Efficacy Scale (mean 93.5)</td>
<td>.015</td>
<td>1.01</td>
<td>1.00, 1.03</td>
</tr>
<tr>
<td>Pro-social Activities Scale (mean 16.8)</td>
<td>.046</td>
<td>1.01</td>
<td>1.00, 1.03</td>
</tr>
</tbody>
</table>
Discussion

Men who transitioned to and maintained 100% condom use for 12 months post-intervention reported higher scores than other men on measures of resilience at follow-up.

Measures of resilience appear to cohere well with self-reported risk behavior change.
Discussion

Black men had higher odds, and white men lower odds, of 100% condom use at follow up, than Hispanic men, though there were no ethnic differences in sex risk at baseline.

Black men reported especially strong appreciation for the social support they received in the study.

Conclusion

Interventions that focus on increasing assets and resources to deal with syndemic risk - resilience - appear to be highly effective in reducing risk among even very vulnerable men.
Still Needed

- What do the most effective resilience-based interventions look like?
- What are the best measures of resilience?
- How long does it take to be able to measure new resilience processes, and how are they sustained?
Thank you

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