Addressing Mental Health in HIV Prevention and Treatment Research

Kathleen J. Sikkema, Ph.D.
Professor of Psychology and Neuroscience, Global Health, and Psychiatry and Behavioral Sciences
Director, Social and Behavioral Sciences Core, CFAR
Director of Clinical Psychology
Director of Global Mental Health Initiative, DGHI
Director of Doctoral Studies, DGHI
Duke University
Mental Health Treatment to Reduce Transmission Risk Behavior

**Mental Health Intervention**

**Pharmacological Intervention**

**Improvements in Mediators:**
- MH symptoms
- Substance use
- Stress and coping

**Reduced sexual risk behavior**

**Improved adherence**

**Reduction in HIV transmission**

**Reduced viral load**

(Sikkema et al., AIBE 2010)
Recognition of LIFT as “Best Evidence”

BEST-EVIDENCE

Living in the Face of Trauma (LIFT)

Intervention Description

Target Population
HIV-positive adults with childhood sexual abuse (CSA) histories

Goals of Intervention

- Eliminate or reduce sexual transmission risk behavior
- Improve coping with the combined stressors of HIV infection and child sexual abuse
- Increase positive change in CSA-related trauma symptoms

LIVING IN THE FACE OF TRAUMA (LIFT): An Intervention for Coping With HIV and Trauma

Date of Review: December 2010

Living in the Face of Trauma (LIFT): An Intervention for Coping With HIV and Trauma is a group intervention that focuses on improving the coping abilities of individuals—women of any sexual orientation and men who have sex with men—who have HIV and a history of childhood sexual abuse. LIFT promotes better health protective decisionmaking with the goals of reducing the symptoms of traumatic stress and the risk of transmitting HIV, as well as the risk for substance abuse, a common experience among these populations.

LIFT therapists use a cognitive behavioral approach to help clients develop and maintain healthy relationships and protective health behaviors such as substance use reduction, protected sexual intercourse, increased patient-provider communication, and HIV treatment adherence. Since a key element of the intervention is to provide a supportive and safe treatment environment, LIFT groups are composed of same-gender clients, usually with a similar sexual orientation. Significant time in each session is devoted to sharing personal experiences of HIV infection and childhood trauma, allowing clients to offer each other support and feedback. LIFT therapists guide clients in identifying traumatic stress parallels (e.g., feeling powerless) between their HIV diagnosis and childhood sexual abuse. Past and present coping methods such as alcohol and drug use are discussed with the group, and healthy coping strategies are offered and then practiced during group role-plays and as homework. LIFT is manual driven and consists of 15 90-minute sessions delivered weekly by two cotherapists to groups of about 10 clients each.
LIFT: Impact on Sexual Behavior

Unprotected vaginal/anal sex with all partners

(Sikkema et al., JAIDS, 2008)
Syndemics: Psychosocial Factors

Trauma & Violence
- Childhood abuse
- Adult violence
- Food insufficiency

Substance use
- Drug use
- Alcohol problems

HIV
- Sexual risk behaviors
- HIV/STI diagnosis

Mental Health
- PTSD
- Depression

Adapted from Gonzalez-Guarda 2011
Understanding Alcohol-related HIV Risks among South African Women

Sikkema, Duke University
Kalichman, University of Connecticut
Skinner, Stellenbosch University

(NIAAA 01 AA018074 2008-2014)
Histories of abuse

Mental health distress

HIV risk behaviors

HIV transmission

Trauma

Gender-based Violence

Mental Health

- Depression
- PTSD

Sexual Behaviors

Drug and Alcohol Use

HIV
Longitudinal, Multi Method Study

- Cross-sectional surveys in the bars: N=560
- Observations of bars: N=159
- Cohort of women: N=4,931 (unique cases)
- In-depth interview: N=48 weeks

Quantitative

Qualitative
Repeated Cross-Sectional Surveys

- Both men and women
- Conducted in each of the 12 venues, 4 times per year
- Brief (15 minute) structured survey
- Aim for 75% coverage by convenience sample
- Average response rate: 93%
  - Range by venue: 84.8-97.9%

N=4,931 (unique cases)
• **Women** recruited from each of the 12 venues (n=560)
• Response rate – 93.9%
• Retention rate at 12 months – 95.2%

**Measures:**

- Sexual behavior
- HIV attitudes & stigma
- HIV testing
- Traumatic experiences
- Intimate partner violence
- Depression and PTSD
- Alcohol use / abuse
- Alcohol expectancies
- Drug use
Mental Health and HIV Sexual Risk Behavior Among Patrons of Alcohol Serving Venues in Cape Town, South Africa

### Mental Health

<table>
<thead>
<tr>
<th>Screened positive for depression (PHQ-2)</th>
<th>Men (n=382)</th>
<th>Women (n=340)</th>
<th>X² Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>50.5%</td>
<td>68.0%</td>
<td>29.70*</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Screened positive for PTSD (Kimerling 7-item scale)</th>
<th>Men (n=382)</th>
<th>Women (n=340)</th>
<th>X² Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.9%</td>
<td>44.5%</td>
<td>24.66*</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05

(Sikkema, Watt et al, JAIDS 2011)
Predictors of number of unprotected intercourse occasions among women (n=321)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>RR (95% CI)</th>
<th>Wald Chi-Sq</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td>0.92 (0.70, 1.20)</td>
<td>0.38</td>
<td>0.536</td>
</tr>
<tr>
<td>Age</td>
<td>0.99 (0.98, 1.00)</td>
<td>0.74</td>
<td>0.389</td>
</tr>
<tr>
<td>Alcohol frequency</td>
<td>1.18 (1.04, 1.33)</td>
<td>6.41</td>
<td>0.011</td>
</tr>
<tr>
<td>Alcohol quantity</td>
<td>1.26 (1.14, 1.39)</td>
<td>19.96</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Any drug use</td>
<td>1.33 (0.93, 1.91)</td>
<td>2.45</td>
<td>0.118</td>
</tr>
<tr>
<td>Screen for depression</td>
<td>1.53 (1.13, 2.09)</td>
<td>7.29</td>
<td>0.007</td>
</tr>
<tr>
<td>PTSD score</td>
<td>1.07 (1.01, 1.14)</td>
<td>5.65</td>
<td>0.018</td>
</tr>
</tbody>
</table>

GLM, negative binomial regression

Model fit: Likelihood chi-sq = 77.69, df=7, p<.001

(Sikkema, Watt et al, JAIDS 2011)
PTSD Symptoms Mediate the Relationship Between Traumatic Experiences and Drinking Behavior Among Women Attending Alcohol-Serving Venues in a South African Township

Traumatic experiences – lifetime (n=560)

- Any adult emotional IPV: 51.8%
- Any adult physical IPV: 49.6%
- Any adult sexual IPV: 26.3%
- Any child physical/emotional abuse: 35.0%
- Any child sexual abuse: 25.9%
- Any other violent experiences: 71.1%
- Any other unexpected traumas: 65.7%

ANY TRAUMATIC EVENT: 90.7%

Measures: Conflict Tactic Scale, Childhood Trauma Questionnaire, WHO CIDI – PTSD Section

(Watt et al., J Stud Alcohol Drugs, 2012)
PTSD as a mediator of the relationship between trauma exposure and drinking (n=560)

Mediator: PTSD SYMPTOMS

DV: DRINKING BEHAVIOR (AUDIT score)

IV: TRAUMATIC EXPOSURE (# of categories)

Proportion mediated: $ab/c = 0.46$

Standardized regression coefficients are shown.

*** $p<.001$

(Watt et al., J Stud Alcohol Drugs, 2012)
### Bivariate associations among syndemic factors (n=560)

<table>
<thead>
<tr>
<th>Syndemic Factor</th>
<th>Associations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food insufficiency</td>
<td>Associations with 7 other factors, except drug use</td>
</tr>
<tr>
<td>Depression</td>
<td>Associations with 7 other factors, except for HIV/STI dx</td>
</tr>
<tr>
<td>PTSD</td>
<td>Associations with 7 other factors, except for HIV/STI dx</td>
</tr>
<tr>
<td>Childhood abuse</td>
<td>Associations with 7 other factors, except for HIV/STI dx</td>
</tr>
<tr>
<td>Adult violence</td>
<td>Associations with all 8 other factors</td>
</tr>
<tr>
<td>Drug use</td>
<td>Associations with 6 other factors, except food insufficiency and HIV/STI dx</td>
</tr>
<tr>
<td>Alcohol problems</td>
<td>Associations with 7 other factors, except for HIV/STI dx</td>
</tr>
<tr>
<td>Sexual risk behavior</td>
<td>Associations with 7 other factors, except for HIV/STI dx</td>
</tr>
<tr>
<td>HIV/STI diagnosis</td>
<td>Associations with food insufficiency, childhood abuse, adult violence and sexual risk behavior</td>
</tr>
</tbody>
</table>
Additive impact on sexual risk behavior

Test for linearity: $F(1, 368)=21.08$, $p<.001$

(Pitpitan et al., ABM, 2012)
Longitudinal cohort study of depression, post-traumatic stress, and alcohol use in South African women who attend alcohol serving venues (n=560)

Within person interaction between depression and PTSD

(Abler et al., BMC Psychiatry, 2014)
Traumatic stress and the mediating role of alcohol use on HIV-related sexual risk behavior: Results from a longitudinal cohort of South African women who attend alcohol-serving venues

Overall Mediation Model

Path $a = 0.27^{***}$

Path $c' = 0.20^{**}$

Path $c = 0.28^{***}$

Mediated effect of traumatic stress on unprotected sex = 0.08; 95% CI 0.038-0.118

**p<.01; ***p<.001

(Abler et al., JAIDS, under review)
Mental Health Treatment to Reduce Transmission Risk Behavior

- Mental Health Intervention
- Pharmacological Intervention

*Improvements in Mediators:*
- MH symptoms
- Substance use
- Stress and coping

*Reduced sexual risk behavior*

*Improved adherence*

*Reduction in HIV transmission*

*Reduced viral load*

(Sikkema et al., AIBE 2010)
Improving the Health of South African Women with Traumatic Stress in HIV Care (ImpACT)
(Sikkema and Joska, PIs; R34 MH 102001)

- Co-occurring epidemics of sexual trauma and HIV among South African women
- Experiencing sexual trauma leads to greater risk of HIV infection and poorer health outcomes once infected with HIV
- Addressing traumatic stress resulting from sexual trauma and HIV may improve engagement in care
Study design of the pilot test

Enroll at ART clinic

Screen

Baseline Assessment

Experimental Condition: ImpACT plus Standard of Care

Control Condition: Standard of Care

ART Initiation

Months

0 1  2  3  4  5  6  7

3 SOC SESSIONS

4 ImpACT SESSIONS

2 ImpACT SESSIONS

3 Mo F/U

6 Mo F/U

3 Mo F/U

6 Mo F/U

Med Record Review

Med Record Review
Key intervention outcomes

- Engagement in care
  - Retention in care
  - Adherence
- Traumatic stress
- Avoidant coping
- Risk behaviors
  - Sexual behaviors
  - Substance use
Implications for HIV risk, care engagement, and prevention trials

HIV risk reduction needs to address the context of women’s lives

- Traumatic Experiences
- Drinking & Addiction
- Gender inequality
- Relationship violence / control
- Poverty
- Mental health distress

Photo source: http://www.hireanillustrator.com/i/33489/new-illustrations-for-ziz-thisus/