Improving Outcome Study Design: Association of Psychosocial Factors with Recovery of Survivors of Torture

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National Symposium:
Connecting Leaders, Impacting Communities & Sustaining Programs:
Strengthening the National Torture Treatment Network
OVERVIEW

• Introductions & Stats 101
• Report research findings | What can be done with the data you collect
• Strategize ways to measure data & enhance evaluation of impact (research projects not required)
INTRODUCTORY QUESTIONS

• What are you charged to do?
• How do you do it?
• How do you know it’s working?
INTRODUCTORY QUESTIONS

• Roll call: who is in attendance?
• Anyone using the Client Progress Monitoring Tool (CPMT)?
• What is your comfort level with statistics?
STATS 101

• “P value” = how likely our observations are really true. The lower the p value, the more likely what we’re observing is not just by chance.

• “Odds Ratio” = measures the association between an exposure and an outcome
  • OR = 1 | Exposure does not change the chance of the outcome
  • OR > 1 | Exposure brings a higher chance of the outcome
  • OR < 1 | Exposure brings a lower chance of the outcome

• “Control” = Group not receiving a certain treatment being studied or a measure captured before a treatment is given.
DEFINITIONS

- Torture – OHCHR 1984 definition
- Refugee – UNHCR Convention definition
- Asylee – Individual seeking protection and whose claims for refugee status have not yet been determined
BACKGROUND

• Survivors of torture come from all walks of life. It’s difficult to measure how many people have survived torture, but the best indication we have is using studies with refugees.
  ➢ Jaranson: Between 5-35% of refugees have experienced torture

2014 Figures
• International (UNHCR): 11.7 million refugees, 1.1 million asylum seekers
• United States: 69,986 refugees and 29,184 asylees resettled

• Office of Refugee Resettlement, Report to the Congress FY 2012
BACKGROUND

• Estimated 11,000 survivors of torture live in San Diego

• Survivors of Torture, International (SOTI) provides holistic services focusing on medical, dental, psychiatric, psychological, and social service needs

• SOTI is a part of the National Consortium of Torture Treatment Programs (NCTTP)
STATEMENT OF THE PROBLEM

• Joyce et al: Triple trauma paradigm
• Kira et al: Negative effects go beyond individuals to families and communities
• Quiroga and Jaranson
  ➢ One of the most urgent needs for this population is housing or shelter
  ➢ Few outcome studies exist in the field of torture treatment, and all of them have limitations

LITERATURE: RECOVERY

• Quiroga and Jaranson: Depression and PTSD are the most common psychiatric diagnoses

• Kira et al: Dissociation and the great variability in the association between torture and PTSD

• McFarlane: Ecological factors that will likely influence improvement, such as physical insecurity, poverty, and lack of medical care are rarely included in research designs


PSYCHOSOCIAL FACTORS/ CASE MANAGEMENT

• Definition: Pertaining to the influence of social factors on an individual’s mind or behavior, and to the interrelation of behavioral and social factors.

• Examples:
  Social networks/support
  Work
  Financial security

STUDY OBJECTIVES

• Evaluate if and how much spending time with friends and family is associated with recovery among SOTI clients
• Evaluate if and how much the receipt of a housing or shelter referral is associated with recovery among SOTI clients
• Identify methods to improve monitoring and evaluation of torture treatment
HYPOTHESES

Hypothesis I

• There is a positive association between spending time with family and friends and an improvement in symptoms, among SOTI clients

• There is a positive association between receiving a shelter or housing referral and an improvement in symptoms, among SOTI clients

Hypothesis II

• There is a positive association between spending time with family and friends and the ability to deal with daily problems more effectively, among SOTI clients

• There is a positive association between receiving a shelter or housing referral and the ability to deal with daily problems more effectively, among SOTI clients
METHODS: RESEARCH DESIGN & DATA COLLECTION

• Historical prospective/retrospective cohort study
• Study sample – 58 registered SOTI clients with intake and follow up data from the Client Progress Monitoring Tool

• CPMT
  ➢ Non-validated questionnaire, not designed for academic research
  ➢ Follow up questions answered six months after intake
  ➢ Self report, administered by SOTI staff
  ➢ Data received were de-identified

• Follow up data collected until October 10, 2013
• SDSU IRB verified exempt in December 2013
METHODS: ANALYSIS

• Bivariate/Unadjusted
  - Fisher’s exact
  - Firth logistic regression
  - Variables were included in multivariate analysis if p < 0.3

• Multivariate
  - Firth logistic regression
  - Remained in model if:
    a. p < 0.2
    b. Variable of interest
    c. Changed parameter estimate by more than 15%
METHODS: MEASURES

Outcomes

• Symptoms | My symptoms are bothering me less since starting services here

• Deal | I deal more effectively with daily problems since starting services here

✓ Likert-scale
  ➢ Control: Strongly disagree, disagree, or neutral
  ➢ Improvement: Agree or strongly agree

Variables of Interest

• Housing/Shelter Referral | Yes or no; dichotomous

• Friends & Family | Spending time with both or only one; dichotomous
METHODS: MEASURES

Control Variables

• Legal | Asylum seeker or permanent status; dichotomous

• Age | Age at torture treatment onset; categorical
  - 5-13 years
  - 14-24 years
  - 25+ years

• Gender | Male or female; dichotomous

• Arrival Time | Time between arrival to U.S. and start of services at SOTI; categorical
  - 0-6 months
  - 7-24 months
  - 25+ months
## DESCRIPTIVE RESULTS

Frequencies of selected variables from CPMT. SOTI, San Diego, 2013.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No improvement</td>
<td>16</td>
<td>27.6</td>
</tr>
<tr>
<td>Improvement</td>
<td>42</td>
<td>72.4</td>
</tr>
<tr>
<td>Deal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No improvement</td>
<td>17</td>
<td>29.3</td>
</tr>
<tr>
<td>Improvement</td>
<td>41</td>
<td>70.7</td>
</tr>
<tr>
<td>Friends/Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>24</td>
<td>66.7</td>
</tr>
<tr>
<td>Both</td>
<td>12</td>
<td>33.3</td>
</tr>
<tr>
<td>Housing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>37</td>
<td>71.2</td>
</tr>
<tr>
<td>Yes</td>
<td>15</td>
<td>28.9</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>23</td>
<td>42.6</td>
</tr>
<tr>
<td>Female</td>
<td>31</td>
<td>57.4</td>
</tr>
<tr>
<td>Legal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asylum Seeker</td>
<td>30</td>
<td>55.6</td>
</tr>
<tr>
<td>More permanent status</td>
<td>24</td>
<td>44.4</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-13</td>
<td>10</td>
<td>18.5</td>
</tr>
<tr>
<td>14-24</td>
<td>13</td>
<td>24.1</td>
</tr>
<tr>
<td>25-64</td>
<td>31</td>
<td>57.4</td>
</tr>
<tr>
<td>Arrival (months)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-6</td>
<td>21</td>
<td>38.9</td>
</tr>
<tr>
<td>7-2</td>
<td>15</td>
<td>27.8</td>
</tr>
<tr>
<td>25+</td>
<td>18</td>
<td>33.3</td>
</tr>
</tbody>
</table>

Note: All variables had missing data.
## ADJUSTED RESULTS

Final logistic model - symptoms bothering a client less since starting services, SOTI, San Diego, 2013.

<table>
<thead>
<tr>
<th>Variable</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends/Family</td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>1</td>
</tr>
<tr>
<td>Both</td>
<td>0.6 (0.2, 5.4)</td>
</tr>
<tr>
<td>Housing</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>1</td>
</tr>
<tr>
<td>Yes</td>
<td>0.5 (0.1, 3.4)</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
</tr>
<tr>
<td>5-13</td>
<td>1</td>
</tr>
<tr>
<td>14-24</td>
<td>0.7 (0.03, 15.6)</td>
</tr>
<tr>
<td>25-64</td>
<td>0.7 (0.1, 7.7)</td>
</tr>
<tr>
<td>Arrival (months)</td>
<td></td>
</tr>
<tr>
<td>0-6</td>
<td>1</td>
</tr>
<tr>
<td>7-24</td>
<td>11.6 (0.6, 232.3)</td>
</tr>
<tr>
<td>25+</td>
<td>2.6 (0.3, 19.7)</td>
</tr>
</tbody>
</table>

Key: ~p<0.2 *p<0.05 ** p<0.01 ***p<0.005

Final logistic model - clients dealing with daily problems more effectively, SOTI, San Diego, 2013.

<table>
<thead>
<tr>
<th>Variable</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends/Family</td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>1</td>
</tr>
<tr>
<td>Both</td>
<td>0.6 (0.1, 3.9)</td>
</tr>
<tr>
<td>Housing</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>1</td>
</tr>
<tr>
<td>Yes</td>
<td>0.5 (0.1, 3.4)</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
</tr>
<tr>
<td>5-13</td>
<td>1</td>
</tr>
<tr>
<td>14-24</td>
<td>0.7 (0.03, 15.6)</td>
</tr>
<tr>
<td>25-64</td>
<td>0.7 (0.1, 7.7)</td>
</tr>
<tr>
<td>Arrival (months)</td>
<td></td>
</tr>
<tr>
<td>0-6</td>
<td>1</td>
</tr>
<tr>
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<td>25+</td>
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</tbody>
</table>

Key: ~p<0.2 *p<0.05 ** p<0.01 ***p<0.005
KEY FINDINGS

• Findings do not support the hypotheses
  - Family/friends – contradicts literature related to data measurement?
  - Housing/shelter referral – receipt of referral could indicate more of a need

• Attenuated recovery in arrival time
  - Those who arrived 7-24 months before starting services were 10.4 times more likely to deal with daily problems more effectively than those who arrived 0-6 months before.
  - Those who arrived 25+ months before starting services were 4.3 times more likely to deal with daily problems more effectively than those who arrived 0-6 months before.
DISCUSSION

Strengths

• Availability of data/outcome variables
• Created by experts
• Short, easy to understand questionnaire

Selected Limitations

• Sample size & power
• Selection bias - no true control group, or random assignment
• Mental health and natural history of disease
• Interview bias
• Recall bias
SOTI IMPLICATIONS

• Research staff and resources
  - Graduate students/interns
  - Faculty liaison

• Closely monitor survivors who arrived over two years prior to starting services; explore in future research
Modify research development, measures, or design
1. Start SMART – set specific, measureable, attainable, realistic, timely goals/objectives prior to development of questionnaire
2. Measure intensity and frequency of key variables, i.e. importance of relationships and/or time spent
3. Enhance research design – capture control measures

**Figure 4. One Group Pretest-Posttest Design**

<table>
<thead>
<tr>
<th>Pretest</th>
<th>Treatment</th>
<th>Posttest 1</th>
<th>Posttest 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>O1</td>
<td>X</td>
<td>O2</td>
<td>O3</td>
</tr>
</tbody>
</table>

**Figure 5. Quasi-experimental Wait-List Design**

<table>
<thead>
<tr>
<th>Random Selection</th>
<th>Pretest</th>
<th>Treatment 1</th>
<th>Posttest 1</th>
<th>Treatment 1 (Delay)</th>
<th>Posttest 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate</td>
<td>O1</td>
<td>X</td>
<td>O2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wait-list</td>
<td>O1</td>
<td></td>
<td>O2</td>
<td>X</td>
<td>O3</td>
</tr>
</tbody>
</table>
IMPLICATIONS | MEASURES AND DESIGN

4. Establish comparison groups among partners
   A. CBT only
   B. CBT and Psychosocial program
   C. Psychosocial program only
IMPLICATIONS | CAPTURING QUANTIFIABLE DATA

Use Established Tools:
• Current Adaptive Functioning Index (CAFI)
• Global Assessment of Functioning (GAF)
• Distress thermometer
• What scales/tools do you use?
IMPLICATIONS | CAPTURING QUANTIFIABLE DATA

1. My symptoms are bothering me **less** since starting services here.
2. I deal **more** effectively with daily problems since starting services here.

1 - Strongly agree
2 - Agree
3 - Neutral
4 - Disagree
5 - Strongly disagree

ALTERNATIVES

1. My symptoms are bothering me this week.
2. This week it has been difficult to deal with my daily problems.

1 - Strongly agree
2 - Agree
3 - Neutral
4 - Disagree
5 - Strongly disagree
IMPLICATIONS | CAPTURING QUANTIFIABLE DATA

1. Are you currently involved in community or social activities (mark all that apply)?

1 - Any
2 - Spend time with family
3 - Spend time with friends
4 - Activities led or organized by health professionals/doctor/social service

ALTERNATIVES
1. How much time do you spend socializing per week?

1 - 1 day/week
2 - 2-3 days/week
3 - Every day

2. Are you happy with your social network?

1 - Strongly agree
2 - Agree
3 - Neutral
4 - Disagree
5 - Strongly disagree
1. Current housing status

1 - Stable (living in own room, apartment, house for six months or more)
2 - Unstable (moves frequently, more than twice per year – or lives in common area, like a living room)
3 - Homeless
4 - Detention
5 - Other

2. Current employment status

1 - No work authorization
2 - Unemployed, work authorized, and not seeking employment
3 - Unemployed, work authorized, and seeking employment
4 - Employed (FT/PT) with work authorization
5 - Unable to work due to current physical or mental disability of condition
6 - Student
7 - Primary caregiver not employed outside the house
8 - Other
Examples from Washington State Refugee Health Promotion Project

<table>
<thead>
<tr>
<th>How well do you speak English?</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do not speak English at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can say a few words in English</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can ask for basic things in English</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can carry on a simple conversation in English</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I speak English Fluently</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How safe do you feel in your neighborhood?</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do not feel safe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A little unsafe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sometimes I feel safe and sometimes I feel unsafe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I usually feel safe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel safe all the time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Are you behind in rent (missed or late on a payment)?</th>
<th>☐ Yes</th>
<th>☐ No</th>
<th>☐ I don’t know</th>
</tr>
</thead>
</table>
WHY QUANTIFY?

1. Improve program evaluation
   • Identify strengths
   • Reduce gaps in services

2. If data is contributed to research, analysis will be enhanced
   • Categorical
   • Continuous
   • Standardized metrics
ACKNOWLEDGEMENTS

• Survivors of Torture, International
  ➢ Kathi Anderson, Executive Director
  ➢ Leilani Amiling, Data & Office Manager

• Drs. Lindsay, Novotny, Lemus, and Engstrom | San Diego State University Faculty

• Refugee Health Program | WA State Department of Health

• Beth Farmer, LICSW | Lutheran Community Services Northwest

• Office of Refugee & Immigrant Assistance | WA State Department of Social and Health Services
DISCUSSION/ACTIVITY

• Break into regional groups

• Prioritize two psychosocial factors you want included in a research design, based on your population(s)

• Develop at least two sample data points
  - Measure frequency or intensity
  - Not burdensome to collect – quick, easy to understand/translate, etc.

• Report out
  - Which psychosocial factors and why?
  - What data points & how would you measure?
FINAL THOUGHTS/Q&A