Measuring collaboration between child- and adult-serving programs

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The Transitions RTC aims to improve the supports for youth and young adults, ages 14-30, with serious mental health conditions who are trying to successfully complete their schooling and training and move into rewarding work lives. We are located at the University Massachusetts Medical School, Worcester, MA, Department Psychiatry, Systems & Psychosocial Advances Research Center. Visit us at:

http://labs.umassmed.edu/transitionsRTC/index.htm

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Collaboration

- **Collaboration** involves information exchange, activity modification, resource sharing, and building capacity the partner/s for reciprocal benefit and to achieve shared goals (Himmelman, 2001).

- Consistent relationship between collaboration & increased service utilization (e.g. Rosenheck et al., 1998; Rothbard et al., 2004).
Barriers to Cross-age Collaboration

- Different funding streams
- Different “cultures”/approaches
- Different agents accountability
- Different training/background
- Different target populations
Ultimate Goals

1. Identify features programs that could be leveraged to increase cross-age collaboration
2. Predict programs that will lead or struggle with cross-age collaboration efforts
Immediate Goal

- Identify strong measures cross-age collaboration
- Examine correlates the strong measure
Social Network Analysis

One of the most common approaches to measuring interorganizational collaboration (e.g. Morrissey et al., 1994; Pablo et al., 2013; Milward et al., 2010)

Serve children

Serve adults

From Davis et al., 2012
Potential Correlates

Individuals across different Functional Units (e.g. engine assembly, trunk assembly) need:

1) Overlapping responsibility
2) Reward/accountability based on collective performance
3) Mechanisms that make it easy to understand what each other is doing
4) Clear procedures that foster coordination

(Majchrzak & Wang, 1996)
Program Characteristics Associated with Collaboration

- Program “Demographics”
- Program leadership belief/perceptions
  - coordination is important
  - Key stakeholders support coordination
  - Funders support coordination
  - Accountability for coordination

(Fletcher et al., 2009)
METHODS
Data Collection Methods

- 3 Networks: 2 HTI sites and one previous PYT site
- “Key Informant” identified for each program in the network
- Data collection spring and summer 2011 (2nd year HTI grants); Summer 2014 PYT site (9 yrs post grant)
- Phone and web interview (initial consent rate about 80%)
Data collected at program level

- Program collaboration practices
  - Index Interdisciplinary Collaboration
  - Questionnaire on within- and cross-program collaboration
- Leadership beliefs/perceptions
- Involvement in HTI project
- Program “demographics”
  - Size/Age program
  - Types services provided
  - Ages served and age continuity
Social Network Analysis Questions

1. How often do staff in your program meet with staff in this other program for client planning purposes?
2. How often do staff/administrators in your program and these programs meet together to discuss issues of mutual interest?
3. How often does your program refer clients to this other program?
Social Network Analysis Questions

4. How does your program receive client referrals FROM this other program?

5. How does your program share resources with each of these other programs (e.g., administrative support, shared staff)?

Not at all  Rarely  Don’t Know  =  No Connection
Occasionally  Fairly  Very = Connection

CODING
Definition Cross-age

- Each program categorized
  - Youth
  - TAY (transition-age youth/young adults)
  - Adults
- “Cross-age” connection = connection with a program that serves a different age category
  - e.g. a Youth program referring clients to an Adult program
Results: Whole Network
Social Network Analysis

- Method for assessing the presence and strength of relationships between organizations in a network
- Yields various statistics for characterizing relationships
Site A

Full Network

Cross-Age Collaborations

Total links: 113

Total links: 64
Site B

Full Network

Cross-Age Collaborations

Total links: 183

Total links: 105

Youth 48%

TAY 24%

Adults 29%
Site C

Full Network

Cross-Age Collaborations

Youth 39%
TAY 25%
Adults 36%

Total links: 254
Total links: 119
RESULTS: PROGRAM LEVEL DATA
Dependent Variable #1: EI-Index

\[
\text{EI-Index} = \frac{\text{# reported external connections} - \text{# reported internal connections}}{\text{# external connections} + \text{# internal connections}}
\]

Range -1 to .82. Mean (SD) = .05 (.41)

A higher score (closer to +1) indicates more cross-age collaboration

*Incoming and Outgoing*
Dependent Variable #2: Cross-Age Collaboration

Cross-Age Collaboration =

\# reported connections with programs serving other age groups / \# possible cross-age connections

*Incoming and Outgoing*

Range .00 to .91. Mean (SD) = .44 (.22)
Higher scores indicate more cross-age collaboration

Cross-Age – EI Index; Spearman’s Rho = .61, p < .001
RESULTS: PREDICTORS OF CROSS-AGE COORDINATION
Program - Age Group

Cross-Age  EI Index***

- Youth
- TAY
- Adult

*** p<.001
Program - Services

*Yes vs. No  p<.05
## Collaboration & Perspectives

<table>
<thead>
<tr>
<th>Collaboration Measures</th>
<th>Cross-Age</th>
<th>EI-Index</th>
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</thead>
<tbody>
<tr>
<td><strong>Index Interdisciplinary Collaboration</strong></td>
<td>p = .05 (positively correlated)</td>
<td>NS</td>
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<tr>
<td>Examples: “I communicate in writing with colleagues from other disciplines” (5 point scale) (<a href="#">Bronstein, 2003</a>)</td>
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<td></td>
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<tr>
<td><strong>Within Program Collaboration</strong></td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Example: Jobs in my program have overlapping responsibilities (range 10-60)</td>
<td></td>
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<tr>
<td><strong>Cross Program Collaboration</strong></td>
<td>NS</td>
<td>NS</td>
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<tr>
<td>Examples: We have a good idea how other programs we interact with work (range 10-60)</td>
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<tr>
<td><strong>Perspectives on System/Leadership</strong></td>
<td>NS</td>
<td>NS</td>
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<tr>
<td>System leadership has set up accountability mechanisms that require coordination</td>
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Independent Variable: Measure

Same Age coordination

\[
\text{Same-Age coordination} = \frac{\# \text{ reported connections with programs serving the same age group}}{\# \text{ possible same-age connections}}
\]

Range = .17 to .90. Mean (SD)= .62 (.20)

Cross-Age – Same-Age; Pearson’s = .33, p<.01
EI-Index – Same-Age; NS
Network Connectivity

Network Connectivity = 

# reported connections regardless age served / # possible connections

Range = .11 to .95. Mean (SD) = .54 (.19)

Cross-Age – Network Connectivity; Pearson’s = .91, p<.001
El-Index – Network Connectivity; Pearson’s = .40, p=.001
Conclusions/Summary

- We’ve created two interesting variables!
- Measuring cross-age collaboration through a proportion actual/possible connections is new
  - Appears validated by general coordination measure
Conclusions/Summary

- **Strong Cross-Age Collaborators:**
  - Collaborate well in general
  - Perceive that funders and key stakeholders value and reward coordination
  - Educational services ↑
  - Substance Abuse & Case Mgmt ↓
  - Ages served not significant

- System leadership can leverage their “support” to increase cross-age collaboration (malleable variable)
Next steps

- Explore differences between our two dependent variables
- Tease out Cross-Age and EI-Index scores for individual questions