



Using Informal Training in Staff Networks to Support Implementation of Health Promotion Programs

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Implementation of Health Promotion Programs

- Gap: limited dissemination of successful programs [1-3]
- Program implementation is key [4]
- Focus: Organizational factors [5]





Afterschool Childcare

- Great potential for health promotion [1,2]
- Context-specific challenges
 - Implementation requires high skill levels [3,4]
 - Training requirements vs. limited resources [5,6]
 - High staff turnover rates [7]

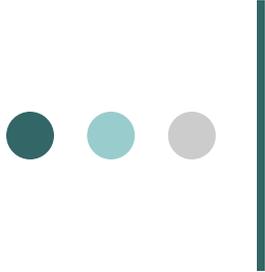




New Solutions for Training

- On-the-job feedback is crucial [1,2]
- Informal training
 - Can be cost-effective [3]
 - Utilizes staff social network [4,5]
- Question: can we use staff networks for informal skill transfer in community settings?





Theoretical Drivers

Informal, on-the-job training



Implementation Outcomes

- 1) Practitioner skills, knowledge, and behavior
- 2) Organizational structure to support practitioner behavior change
- 3) Relationships with important partners, such as consumers or systems partners

Intervention Outcomes

- 1) Target audience behavior
- 2) Target audience health outcomes



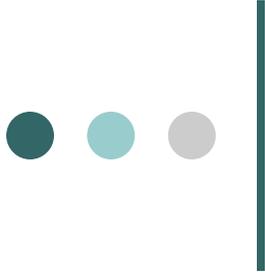


- YMCA of Greater Boston: Afterschool Programs
 - Urban sites
 - Underserved population

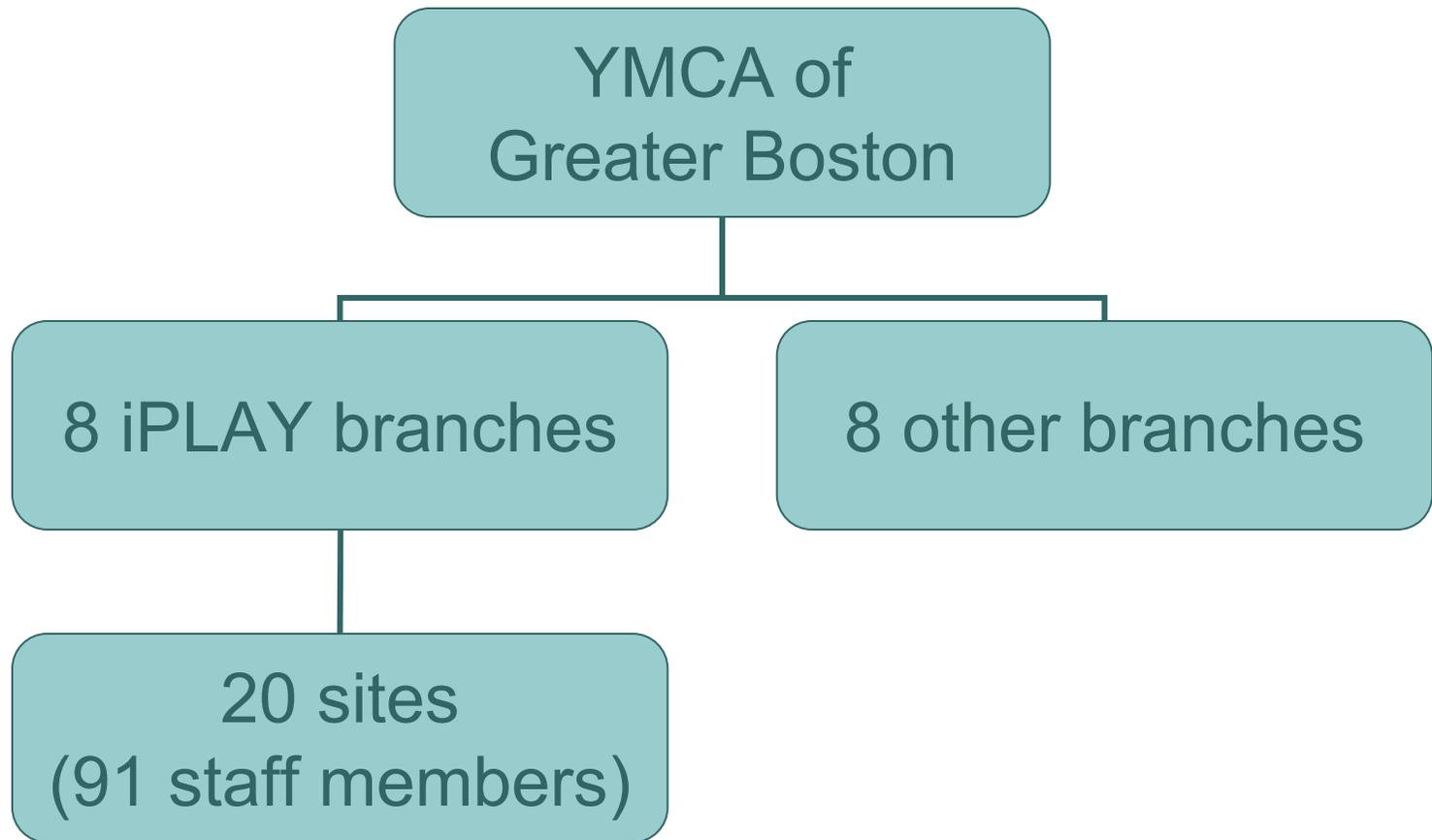
- Targets
 1. Physical activity
 2. Nutrition
 3. Screen time
 4. Staff connections

- Data-driven decision-making and experimentation





Simplified Organizational Structure: Study Sites

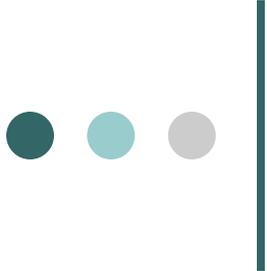




Methods

- 20 / 24 original sites
- All 91 staff members invited to participate
- Self-administered survey
- Respondents
 - General Staff
 - Coordinators
 - Supervisors





Network Definition

- Based on one function ^[1]: iPLAY program-related connections
- *Step 1*: Respondent nominated colleagues with whom s/he interacted regarding iPLAY
- *Step 2*: Respondent noted gains for six required skills



Measures: Descriptive

Network Density

- Percentage of potential ties realized [1]
- Range: 0 – 100% [2]
- Knowledge-sharing: ~15 – 20% [3]





Measures: Independent Variable

- *In/Out-Degree*
- *Out-Degree* ^[1,2] : functionally useful connections



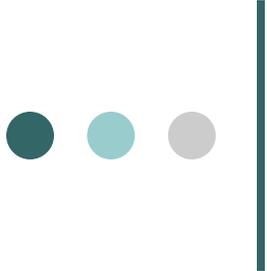


Measures: Dependent Variable

Skill Gains

- 1 point per skill gain report
- Range: 0 to 6
- Required skills
 - Connecting with children
 - Connecting with parents / guardians
 - Planning new programs
 - Implementing new programs
 - Evaluating new programs
 - Analyzing data





Analysis

- Sociometric Social Network Analysis
 - All 91 members of staff network and Program Director
 - UCINET-6 [1]
- Multiple linear regression: Out-Degree and Skill Gains
 - GEE to adjust for clustering of staff
 - Final model included staff position and tenure as covariates
 - SAS v 9.0 [2]

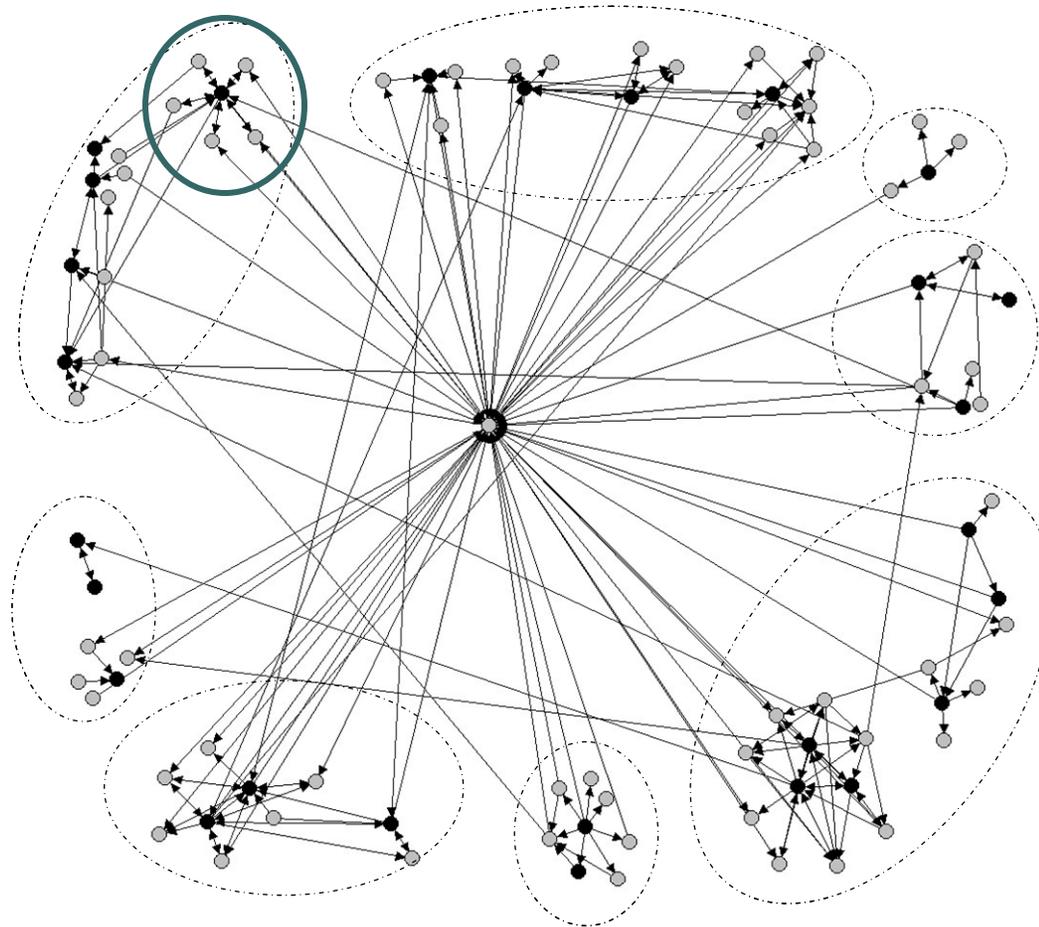


Results – Staff Characteristics

- 80 respondents (88% response rate)
 - 53 General Staff
 - 20 Coordinators
 - 7 Supervisors
- 71% younger than 25
- Education
 - 44% High School or Less
 - 48% Some College / Associate's Degree
- 56% had <2 years experience with the program

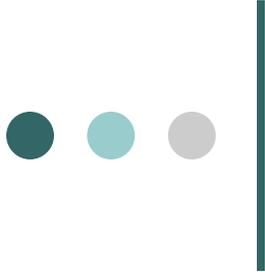


Network Diagram Describing Program-Related Connections (n=80)



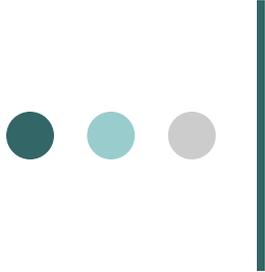
Network Density =
2.21%

Key: Black circles: Coordinators and Supervisors; Gray circles: General staff;
Individuals are clustered by site and large dotted ellipses show branch membership of sites.



Network Membership and Skill Gains

- In/Out-Degree
 - No isolates
 - Mean = 3.78 (SD = 2.72)
 - Most connections within-site (62%)
 - Coordinators and Supervisors > General Staff
 - Out-Degree
 - 10 staff members reported 0 connections
 - Mean = 2.42 (SD = 2.39)
 - Skill Gains
 - 77% of staff members reported at least one skill gain
 - Mean = 3.58 (SD = 2.39)
- 



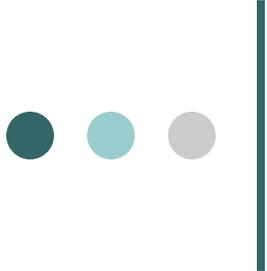
Determinants of Staff Skill Gains, Focusing on Network Connections Reported by Staff Members, Multiple Linear Regression (n=80)

Parameter	Estimate
Intercept	2.48***
Out-Degree	0.48***
Supervisor +	0.62
Coordinator +	-0.17
Tenure	-0.09
R-square	0.28

Key: * p<0.05, ** p<0.01, *** p<0.001

+ Referent group: General Staff





Discussion

- Starting point for use of informal skill-sharing to complement formal training in low-resource, high-turnover settings
- Promising in context of goal
- Consistent with literature linking network size to knowledge transfer [1-4]
- Threshold likely, but low density allows for improvement



Increasing Staff Connectedness

- Decrease structural and cultural barriers [1-3]
- Target new hires and isolates [2]
- Leverage organizational structure





Limitations and Strengths

- Limitations
 - Perceived, not actual, skill gains
 - Lack of psychometric data
 - Cross-sectional data
 - No comparison group
 - Limited external validity
- Strengths
 - Sociometric network analysis
 - Attempted staff census, high response rate
 - Impetus to study staff networks in health promotion





Next Steps

- Research
 - Longitudinal, multi-site data
 - Multiple outcomes
 - Relevance for other high turnover, low-resource environments
- Practice
 - Removing cultural and structural barriers to knowledge transfer
 - Social network analysis for monitoring and evaluation



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Field Day 2008



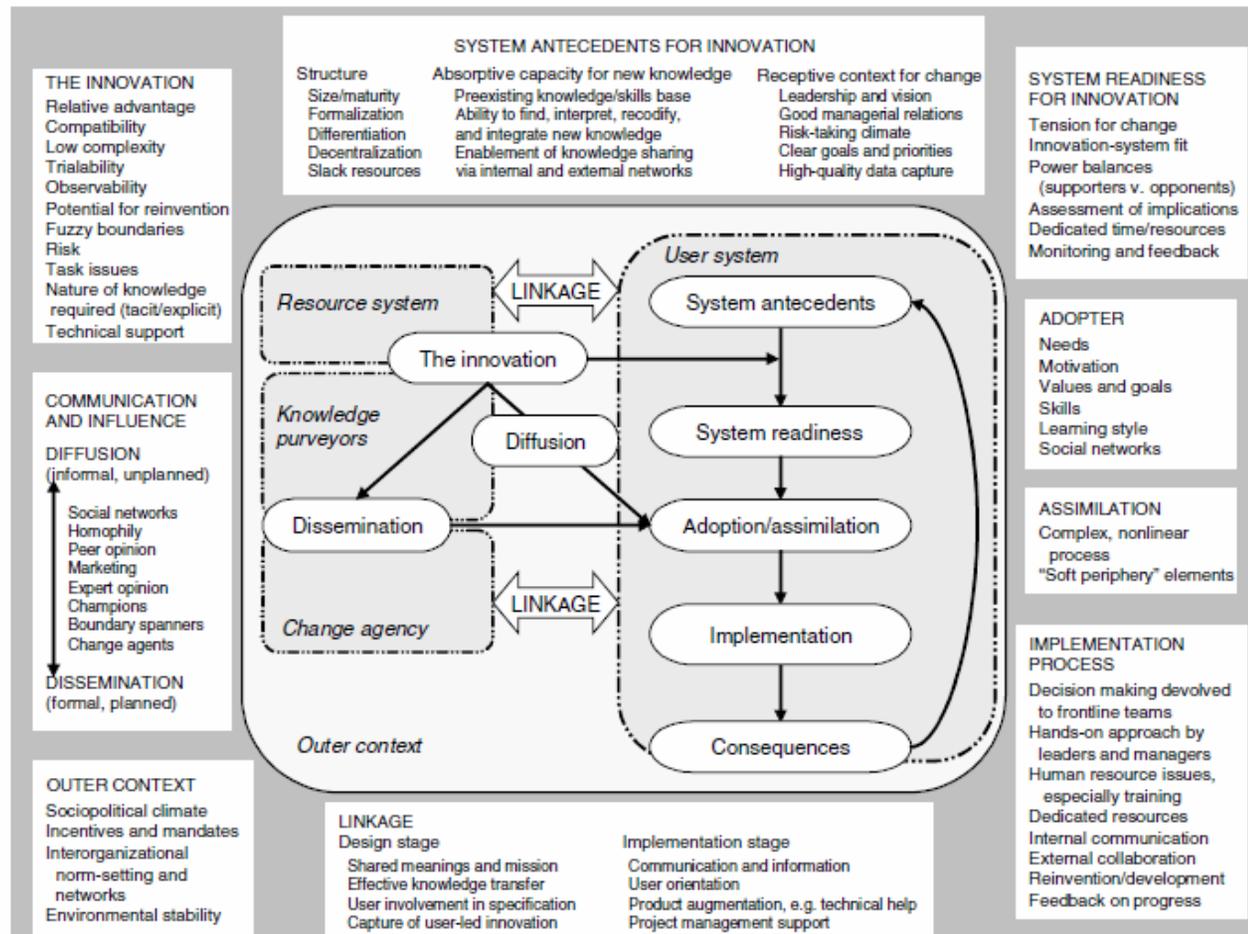
Organic Food / Yogurt Day 2008



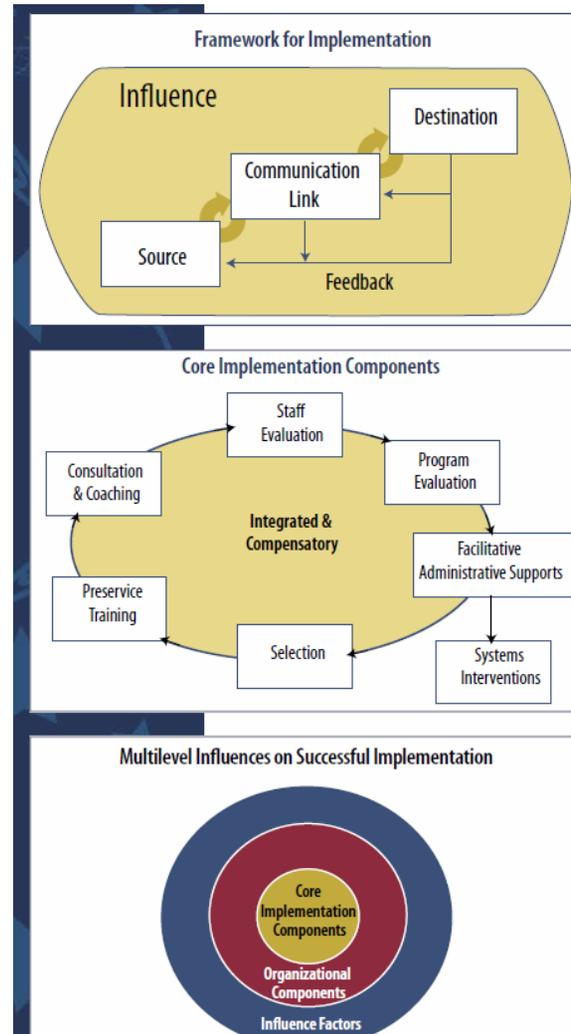


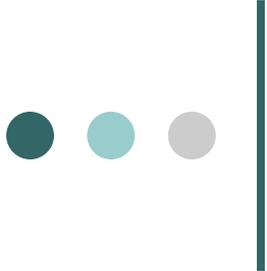
Extra Slides

Greenhalgh Framework



Fixsen Framework





Mechanisms by Which Connections Support Informal Training

- Increasing network size \neq informal training
- Characteristics of connections and skills are influential
 - Staff motivation to seek skills
 - Ability to identify and access peer experts [1]
 - Interaction methods [2]
 - Impact of connection strength (complex skills) [3]



Network Data Form

<p>1) We will start off very broadly and talk about how Carol White staff help each other with program work. So, thinking of people who you interacted with about the program since you started with, who all falls into this group? This can be for sharing information, skills, or talking through challenges and successes. List 1 includes the names of staff involved with the program to help you remember.</p>				<p>2) About how often did you interact with this person about Carol White work during the last month? 1-2 times per day, 1-2 times per week, or 1-2 times per month.</p>		<p>3) So far, we have been talking about general sharing of information and skills. Now, I would like to switch gears and have you to think about the specific SKILLS YOU GAINED from these staff members while collaborating regarding the Carol White Program. They may have taught you about data analysis, helped you with an experimental cycle, etc.</p>			
Branch	Site	Staff Member	Frequency	Data Analysis	Program Planning	Program Implementation	Program Evaluation	Connecting with Kids	Connecting with Parents
<i>Example: Central</i>	<i>On-Site</i>	<i>Jed Clampett</i>	<i>1-2 times per week</i>	<i>X</i>		<i>X</i>		<i>X</i>	<i>X</i>

