Adaptations to Proposed Protocol among Getting People in Sync (GPS) Prediabetes Prevention Program Facilitators

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Overview

- The Diabetes Prevention Program (DPP)
- Gap in the field
- The Getting People in Sync (GPS) methodology
- Methods
- Results
- Discussion
- Conclusion
The Diabetes Prevention Program (DPP)

- Initiated in 1996
- 27 clinical center research study\(^1\)
  - 3,234 participants
  - Metformin and lifestyle intervention
- Lose 7% of initial weight reduced risk of diabetes by 58%\(^2\)
  - Lifestyle intervention
    - Low fat and low calorie diet
    - 30 minutes of physical activity 5 days a week
- Prediabetes
  - Higher than normal blood glucose levels but not high enough to be called diabetes.\(^3\)
  - 86 million or 27% in the U.S\(^4\)

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Gap in the Field:
Fidelity of Implementation

- Dissemination and Implementation Science
  - Evidence-based strategies used in clinical and public health practice\(^1\)
- Fidelity: Faithfulness to the procedures of intervention\(^1\)
  - Internal validity and expected outcomes\(^2\)
  - Underreporting of fidelity of implementation\(^3\)
- “Black box” evaluation\(^4\)
- Importance of translation research?
  - Generalizability and guidance for researchers to report findings for policy\(^5\)
- Lack of empirical findings limit “expert” consensus\(^2\)

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2. Diabetes Program Research, 2002
5. Santacroce, Maccarelli, and Grey, 2004
7. Frank, Coviak, Healy, Belza, and Casado, 2008
Conceptual Framework for Implementation Fidelity (Carroll et al., 2007)

Potential moderators:
1. Comprehensiveness of policy description
2. Strategies to facilitate implementation
3. Quality of delivery
4. Participant responsiveness

Intervention (GPS)

Adherence:
Details of content
Coverage
Frequency
Duration

Evaluation of implementation fidelity

Outcomes

Evaluation

Component analysis to identify "essential" components

Adaptations to Program Components

Strengthening Families Program for Parents and Youth 10-14

- Interviewed 42 facilitators
- Frequency of adaptations and reasons
  - 40% Delete
    - 75% Lack of time, forgetting material, disagreeing with content
  - 32% Add
    - 41% Clarify program material
  - 28% Change
    - 18% Group attributes
    - 18% Clarification

Hill, Mauclione, and Hood, 2007
Qualitative Evaluation of the Getting People in Sync (GPS) Prediabetes Prevention Program

- Faith placed intervention with 16 weekly group sessions led by lay health facilitators

Purpose
- Determine GPS program facilitator behavior and adaptations during program implementation.
- DPP → GPS → GPS Facilitator → GPS Participant

Research questions
- Did the facilitator adapt content in GPS Facilitator Guide during program implementation?

Specific Aim
- Examine adaptation made by the program facilitators to the GPS Facilitator Guide during program implementation through a qualitative analysis of the session audio recordings.

GPS Methodology

Table 1. Translation of the DPP to GPS

<table>
<thead>
<tr>
<th>Program Component</th>
<th>DPP</th>
<th>GPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Style</td>
<td>One on one coaching</td>
<td>Group</td>
</tr>
<tr>
<td>Participants</td>
<td>~40 participants per coach</td>
<td>~15 participants per group</td>
</tr>
<tr>
<td>Program facilitators</td>
<td>Lifestyle Coach Registered dietician Master's degree</td>
<td>Facilitator Volunteer-church health ministry</td>
</tr>
<tr>
<td>Training</td>
<td>2-day national training: 16 hours</td>
<td>4 two-hour sessions: 8 hours</td>
</tr>
<tr>
<td>Trainers</td>
<td>Lifestyle Resource Core</td>
<td>Drexel Community Research Coordinator</td>
</tr>
<tr>
<td>Co-facilitator</td>
<td>None</td>
<td>Drexel graduate research assistant</td>
</tr>
<tr>
<td>Data collector</td>
<td>Lifestyle Coach</td>
<td>Co-facilitator</td>
</tr>
<tr>
<td>Recordings</td>
<td>2 of the 16 sessions</td>
<td>16 sessions</td>
</tr>
</tbody>
</table>
GPS Methodology: Facilitator Training

Table 2. GPS Training Schedule

<table>
<thead>
<tr>
<th>A Week Before Session</th>
<th>Sessions Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1-3</td>
</tr>
<tr>
<td>5</td>
<td>5-8</td>
</tr>
<tr>
<td>9</td>
<td>9-12</td>
</tr>
<tr>
<td>13</td>
<td>13-16</td>
</tr>
</tbody>
</table>

○ 4 trainings sessions per cohort
  - Facilitated by Drexel Community Research Coordinator

○ Content
  - Success, challenges, tips, and suggestions
  - Group dynamics
  - Activity demonstrations
  - Homework

GPS Methodology: Facilitator Guide

Section I. Weekly Progress & Review
  A. Review Previous Week
  B. Participant Q&A
  C. Focus of the Week

Sections II and III. New Core Material

Section IV. Review & Self-Monitoring
  A. Review Current Week
  B. Tracking and Homework
  C. Next Week
  D. Thank the group for coming and remind them to keep up the good work at home!
Qualitative Data Collection

20 Session audio recordings
- 7 facilitators
  - Spring 2013 cohort 3 groups
  - Fall 2013 cohort 4 groups
- 3 sessions
  - Week 2: Being a Fat and Calorie Detective
    - Week 3: Ways to Eat Less Fat and Fewer Calories
  - Week 8: Take Charge of What’s Around You
    - Week 7: Tip the Calorie Balance
    - Week 9: Problem Solving
  - Week 15: You Can Manage Stress

Methods

- Data Management
  - Session audio transcribed verbatim into MS Office Word
  - Imported transcripts and GPS Facilitator Guide into qualitative data software QSR NVivo 10
- Utilized strategies from Grounded Theory\(^1\)
  - Data emerged from the transcripts: Patterns or distinct differences
  - Initial annotation of data
  - Cyclic review of transcripts until saturation
    - Compared session audio transcripts to the GPS Facilitator Guide

\(^1\)Charmaz, 1990
Methods

- **Descriptive coding**: Describe the speaker
  - Session audio
    - Pseudo name
    - Group size

- **Topic Coding**: Sort by topic
- **Memo writing**

- **Analytic coding**: What did I find interesting?!
- Why was this interesting to me?!
- Memo writing
- In vivo Codes
  - Surprising or recurring
- Matrix
  - Codes created and interpretations

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Diagram of Methods: Topic Coding

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1. Richards, 2009
Results

Figure 1. Proportion of GPS Facilitator Guide Implemented by Facilitator by Week

Figure 2. Proportion of GPS Facilitator Guide Adapted (Deletions and Changes) by Facilitator by Week

*Missing session, an alternate week selected and noted with ().
Results

Figure 3. Proportion of Additions to GPS Sessions by Facilitator by Week

Table 3. Adaptations - Deletions to Facilitator Guide

<table>
<thead>
<tr>
<th>Theme</th>
<th>Content</th>
</tr>
</thead>
</table>
| Deletion of definitions| Week 8 “Scientists who study learning call these things in your surroundings ‘cues’.  
                          -Cues can be positive or negative.  
                          -Cues can become a problem when they have a negative effect on your behavior, and lead you to overeat or be inactive.  
                          -Food cues: things that affect eating  
                          -Activity cues: things that affect activity.” |
| Deletion of practicing knowledge | Week 15 “Let’s Practice: Ask participants to create an action plan for either preventing or coping with stress that this program causes.” |
| Deletion of review of new material | “Review of Week 15: You Can Manage Stress  
                          -Stress effects how you think, how you feel, and what you do  
                          -Coping with Stress is essential  
                          -Use tips from today to prevent and manage stress” |
Discussion

- **Findings**
  - Most common adaptations: Deletions
  - Material most often deleted: Defining content, reviewing new material, and practicing new skills.
  - Individual facilitator behaviors

- **Limitations**
  - Analyzed only 3 sessions per Facilitator
    - Richness, complexity, and detail of the data
  - Inter-rater reliability
    - Experiences specific to the program and facilitators
    - Log trail

- **Strengths**
  - Proportions from coding GPS Facilitator Guide
    - Patterns within and across the Facilitators and sessions.

  2. Richards, 2009

Conclusion

- **Importance of assessing dissemination and implementation of evidence-based programs**
  - Process of achieving program outcomes
  - When and why adaptations are made
    - Inform training, implementation, and support
  - Researchers inform policy around diabetes prevention

- **Future research questions**
  - Additions
  - Co-facilitators' role
  - Consider adaptations and GPS participant outcomes
  - Assess GPS Program Facilitators' experiences

  1. Stame, 2004
  3. Ackermann, 2012
Ahéhee°!

- Advisor and PI: Nicole A. Vaughn, PhD
- GPS Program Facilitators
- GPS Program Participants
- GPS Research Team
  - Crystal Wyatt, Community Research Coordinator
  - Purni Abeysekara, MPH
  - Alexis Amankwanor, MPH
  - Kimberly Arnold, MPH
  - Elizabeth Dalianis, MS, MPH
  - Laura Hunter, MPH
  - Juhi Mawla, MPH
  - Idris Robinson, MPH
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Questions?
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