Assessing Implementation Fidelity Use in Adults with Intellectual Disabilities and Their Residential Care Staff
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Purpose
The purpose of this project is to adapt Breitenstein’s Fidelity Checklist and begin to develop a coding manual for use in the evaluation of implementation fidelity of the Steps to Effective Problem-Solving (STEPS) program. This is an NIH funded clinical trial that tests the efficacy of a preventive training for individuals with intellectual disabilities living in group homes and the residential staff.2,3

Significance
One outcome of a clinical trial is moving interventions into wide-scale dissemination outside of the research setting, thus it is important to:
- Evaluate implementation fidelity in clinical trials
- Use implementation fidelity checks when interventions in wide dissemination
- Evaluation of implementation fidelity among people with intellectual disabilities has particular issues:
  - How to address social and communication skills necessary to develop group process in this population
  - Previous research used clinical treatment-based tools not health promotion/preventive intervention-based tool

Background
Previous research on fidelity:
- Addressed evaluating intervention fidelity in group-based interventions versus individual-based interventions
- Measured fidelity over time and in multi-site programs
- Adherence
- Observance to the intervention protocol
- Competence
- Skills in process and facilitation of intervention

Learning Objective
Identification of a tool available to enhance fidelity in health promotion and preventive interventions with adults with intellectual disabilities living in group homes and their residential staff.

Methods

Review & Tailor of New Fidelity Checklist

<table>
<thead>
<tr>
<th>STEPS</th>
<th>Coders</th>
<th>Food for Life (FFL)</th>
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<tr>
<td>Modules</td>
<td>Coders</td>
<td>Modules</td>
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<tr>
<td>House 1</td>
<td>1, 4</td>
<td>Coders 2 &amp; 3</td>
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<tr>
<td>House 2</td>
<td>2, 5</td>
<td>Coders 1 &amp; 3</td>
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<tr>
<td>House 3</td>
<td>3, 6</td>
<td>Coders 1 &amp; 2</td>
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1. Adherence: Related to group leaders according to the study’s protocol for each group session. Simple Y/N list of actions for coders to follow with space to comment.
   - Code: 0 = no, 1 = yes

2. Skill rarely or never demonstrated (skill demonstrated < 25% of the time)
   - The group leader fails to demonstrate the skills. These skills include engaging, facilitating, and reinforcing the concepts, and listening and respecting the residents and staff.

3. Skill sometimes/occasionally demonstrated (skill demonstrated 25-75% of the time)
   - The group leader occasionally demonstrates the skills. These skills include engaging, facilitating, and reinforcing the concepts, and listening and respecting the residents and staff.

4. Skill consistently demonstrated (skill demonstrated > 75% of the time)
   - The group leader consistently demonstrates the skills. These skills include engaging, facilitating, and reinforcing the concepts, and listening and respecting the residents and staff.

Coding with Fidelity Checklist

<table>
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<tr>
<th>House</th>
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<th>Module</th>
<th>Coder</th>
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<tbody>
<tr>
<td>1</td>
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<td>1 &amp; 2</td>
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Step 1: The three coders listened to audiotapes for the houses and modules above and collaborated to create the tailored fidelity checklist for coding.

Step 2: The three coders measured the adherence and competence of the group leader in Module 3 for both STEPS and Food for Life.

Results

Developed Fidelity Checklists
- Adherence Actions: attendance, rules, agenda for current session and subsequent, previous assignments, highlights from last session, timing of the session, and topics and games for each module
  - Sample of Adherence Action: “Assists participants to discuss how they might feel before reacting negatively to problems.”
- Competence Skills: engagement, facilitation, and reinforcement of the educational topics; listening and respecting the residents and staff
  - Sample of Competence Skill: “ Communicates to participants that they are experts about their own problems.”

Trial Coding with Fidelity Checklists
- STEPS Results: Inter-rater reliability was found to be 100%. Cohen’s kappa was calculated with K=1.0, p<0.001 (n=14).
- FFL Results: Inter-rater reliability was found to be 100%. Cohen’s kappa was calculated with K=1.0, p<0.001 (n=14).

Conclusion
This work increased our knowledge of evaluating implementation fidelity. Moreover, it enhanced our knowledge of research tool development to evaluate implementation fidelity.

The tools developed for this project were a result of collaboration from the authors, primary investigator, and project coordinator using audiotaped sessions and scripted manuals.

Implications: Further development of a coder manual needs to be completed with transcribed audiotaped sessions and specific examples of group leader’s adherence and competence.

References

Acknowledgements
We want to thank Dr. Sarah Ailey, the Principal Investigator, Dr. Teresa Moro the project coordinator, and Hugh Vandracek, MSc. in the College of Nursing at Rush University Medical Center.

Steps to Effective Problem-Solving (STEPS) is a clinical trial funded by the Eurico Kennedy Shriver Institute National Institute of Child Health and Development, National Institutes of Health 1R01HD086211-01A1