Treatment Integrity: A Fundamental Component of PBS

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Goals for Today

• Describe the link between treatment integrity and PBS.
• Describe what we know about treatment integrity.
• Describe methods for increasing integrity.

Treatment Integrity and PBS

• PBS is a data based decision-making approach.
• The impact of PBS depends on the effectiveness of specific interventions.
• The effectiveness of interventions is a function of the integrity with which they are implemented.
Treatment Integrity and PBS

- The quality of decisions regarding an intervention is directly linked with the integrity of implementation.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrity</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Continue Intervention</td>
<td>Change Intervention</td>
<td></td>
</tr>
</tbody>
</table>

- Unknown reason
  - Other life changes?
  - Unknown intervention?
  - Intervention is effective?

- Unknown reason
  - Intervention problem?
  - Implementation problem?

Ethical Responsibility and Treatment Integrity

- Most education programs are funded with public dollars (taxes).
- Those responsible for implementation are custodians of the public monies.
- This is a type of fiduciary responsibility.
  - We have a responsibility to assure that public is receiving the greatest return on their investment.
  - Research-based interventions implemented with integrity are our best chance of meeting our ethical responsibility.
Dimensions of Treatment Integrity

• Exposure (Dosage): the extent to which participants are exposed to the intervention as prescribed.
• Adherence: the extent to which the components of an intervention are delivered as prescribed.
• Quality of delivery: qualitative measure of how well the intervention is implemented.

Dimensions of Treatment Integrity

• Participant responsiveness: the extent to which a student engages with an intervention.
• Program differentiation: the extent to which a program interacts with other programs.

Dimensions of Treatment Integrity

• Adherence has received most of the research attention.
  ➢ Dosage and quality of delivery relatively little attention.
  ➢ Participant responsiveness and program differentiation very little attention.
What We Know About Treatment Integrity

- It is estimated that drug prevention programs are implemented with integrity only 19% of the time. (Hallfors & Godette, 2002)
  - Programs have extensive research base as being effective.
  - This may be a generous estimate.
- No reason to assume that PBS is immune to poor implementation.

What We Know About Treatment Integrity

- Most of what we know has been developed at the level of individual student support plans.
- SET is a measure of treatment integrity at the school level.
  - Does not address what is happening at the level of the individual classrooms or individual students.
  - As precision of an intervention increases, the complexity of an intervention increases and integrity decreases.

Relationship between precision and complexity of support plan

- Be as precise as necessary but no more.
What Do We Know About Treatment Integrity and Student Behavior?

• Different levels of integrity result in different levels of student behavior.
  (Wilder, Atwell, & Wine, 2006)

• High integrity followed by declines in integrity has limited impact on student behavior.
  (Northup, Fisher, Kahng, Harrel, & Kurtz, 1997)

• Low levels of integrity followed by increases in integrity does not produce the same level of student response as when integrity high from the beginning.
  (Groskreutz, Higbee, Groskreutz, 2008)

What Do We Know About Treatment Integrity and Student Behavior?

• Implications
  ➢ Make sure that integrity is high at the beginning of intervention.
    ✓ It is better to start with high levels of integrity and let it decline than to start with low integrity and try to increase it.
    ✓ Maximizes impact of intervention.

What Do We Know About Integrity of Interventions at the Universal Level?

• Kovaleski, Gickling, Morrow, & Swank (1999)
  ➢ Evaluated high vs low implementation of Instructional Support Teams (IST).
    ✓ School-wide organizational change.
    ✓ Students benefited from IST processes only when implemented with high fidelity.
    ✓ Implementing with low fidelity resulted in no better outcomes for students than control group not exposed to IST processes.
    ✓ Having structures in place was not sufficient to assure high fidelity.
    ✓ Fidelity assessed one time per year.
What Do We Know About Integrity of Interventions at the Universal Level?

• Horner (2005)
  ➢ Effect of high fidelity vs low fidelity on office discipline referrals.
    ✓ Schools that implemented with high fidelity had 25% fewer office referrals for major rule violations than schools that did not meet fidelity criterion.
    ✓ Fidelity measures taken 2 times per year.

What We Do Not Know About Treatment Integrity

• How much integrity is enough?
  ➢ Data suggests that more is better.
    ✓ Is there a point where something less than 100% is just as effective?
• Does everyone have to be at high level of integrity or is it sufficient for the group average to be high?
  ➢ What is the effect of differences between implementers?

What We Do Not Know About Treatment Integrity

• How often do we have to assess integrity to assure that it will maintain at high levels?
  ➢ Does it vary with the complexity of the intervention?
How Do We Increase Treatment Integrity?

- Integrity does not happen by accident.
- The challenge is to find an efficient, low effort method that can be implemented at appropriate scale for assuring high integrity.
- The most common approach to increasing treatment integrity is staff training.
  - Not all staff training is created equally.

### Effects of Training

<table>
<thead>
<tr>
<th>TRAINING COMPONENTS</th>
<th>OUTCOMES</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>(% of Participants who demonstrate knowledge, demonstrate new skills in a training setting, and use new skills in the classroom)</td>
</tr>
<tr>
<td></td>
<td>Knowledge</td>
</tr>
<tr>
<td>Theory and Discussion</td>
<td>10%</td>
</tr>
<tr>
<td>Demonstration in Training</td>
<td>30%</td>
</tr>
<tr>
<td>Practice &amp; Feedback in Training</td>
<td>60%</td>
</tr>
<tr>
<td>Coaching in Classroom</td>
<td>95%</td>
</tr>
</tbody>
</table>

Joyce and Showers, 2002

How Do We Increase Treatment Integrity?

- The most common method for assuring high integrity is feedback (Noell, Witt, et al., 2000; Mortenson & Witt, 1998).
  - Daily feedback improves integrity.
    - Daily better than weekly feedback.
    - Likely too resource intensive for large scale implementation.

Daily better than weekly feedback.
How Do We Increase Treatment Integrity?

• Video Modeling
  ➢ Teach functional assessment skills (Moore & Fischer, 2007).
  ➢ Teach problem solving sequence (Collins, Higbee, & Salzberg, 2008).
    ▶ Video model was brief (3 minutes).
    ▶ Video model + role play resulted in significant increases over role play alone.
    ▶ Effects maintained at least 3 weeks.
    ▶ Promising method for increasing treatment integrity.

How Do We Increase Treatment Integrity?

• Job aides (Detrich, 2000)
  ➢ Support plan pamphlets were developed for multi-component support plan.
    ➢ Plans were color coded for specific contextual conditions.
      ➢ Playground, dining room, classroom, etc.
    ➢ Easily folded and carried by staff.
  ➢ Plans were posted in the areas for which they were relevant.
  ➢ Resulted in increases of all elements of support plan.

How Do We Increase Treatment Integrity?

• Quizzes (Detrich et al., 2001)
  ➢ Staff quizzed weekly on elements of multi-component individualized behavior support plans.
    ➢ Given feedback on quiz but no feedback on actual implementation of support plan.
    ➢ 4 versions of the quiz. One question per element of the plan (student preferences, antecedent interventions, teaching replacement behavior, responding to misbehavior).
What Have We Learned?

• The reviewed methods are promising.
  ➢ Have not been implemented at large scale.
• Most of the research on treatment integrity addresses multi-component behavior support plans.
  ➢ Very little research on integrity with academic interventions.

Intervention Acceptability and Treatment Integrity

• Common assumption:
  ➢ The more acceptable an intervention is the more likely it will be implemented with high integrity.
  ➢ There are very little data to support this assertion.
• In the absence of data, it is wise to select interventions that have high acceptability.
Increasing Acceptability

• Acceptability linked to contextual fit.
  ➢ Select interventions that are:
    • Consistent with the existing culture.
    • If inconsistent with what teachers “know” about teaching then integrity is lower.
    • Requires relatively little effort.
    • Requires few additional resources.
    • Additional resources lower integrity.
    • Address problems that those responsible for implementing are concerned about.
      • If not important to implementer then integrity will be low.

Increasing Acceptability

• PBS measures acceptability by requiring 80% of school agrees to make student behavior a priority for 3 or more years before beginning intervention.
  ➢ How will PBS be affected now that some states are mandating implementation?
    • Will mandate decrease acceptability and by extension result in lower integrity?

Unresolved Issues

• Adoption or adaptation?
  ➢ Must we implement exactly as prescribed or can we adjust to fit local circumstances?
• Research suggests that programs are almost always adapted.
• Presumably adapted to improve outcomes.
  ➢ Some adaptation for other reasons:
    • Better fit teaching style.
    • Do not like some elements of program.
Unresolved Issues

• What does this mean for treatment integrity?
  ➢ Are adaptations systematic?
    ✓ If so, then we can assess integrity.
  ➢ What parts of program can we adapt without doing harm to effectiveness?
    ✓ Core elements?
  ➢ If adapted is program still research-based?
  ➢ If teacher’s allowed to adapt then program more acceptable.
    ✓ Teacher’s made better adaptation of reading programs if they were well grounded in principles. (Klingner, Vaughn, Hughes, & Arguelles, 1999).

Treatment Integrity and PBS

• Regardless of the level of the intervention, it is necessary to know that it was implemented with integrity.
  ➢ High integrity is necessary in a data based decision making approach.
• Integrity should be assessed at the same level that the intervention is being evaluated.

Treatment Integrity and PBS

• A program or intervention is a set of protocols that guides behavior of the adult.
  ➢ If protocols are not followed then by definition the program has not been implemented or sustained.
• PBS is an excellent model for making decisions about when, where, and how to intervene.
  ➢ Intervention without process for assuring integrity is likely to result in wasted effort.
Where are We?

- Implementation is where good interventions go to die unless there is active plan to assess and influence integrity.
- Research-based approaches to influencing treatment integrity are emerging.
- We have ethical obligation to allocate resources to influencing treatment integrity.

Thank you

- Copies may be downloaded at:

www.winginstitute.org