

Think Tank Summary: Conceptualizing Fidelity in Implementation Research

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Key issue/challenge

Increased methodological development is needed on how we conceptualize fidelity, while also capturing barriers and their solutions in implementation research. Real world settings require adapted models that fit different contexts and cultures compared to contexts of the evidence-based interventions on which they are based. Formative research informs the adapted models, yet unanticipated barriers are often identified once implementation is underway. These barriers and their solutions offer valuable data from which others will benefit. However, how do we tell the difference between identifying barriers as data versus poor fidelity to the implementation plan?

Barriers

There was consensus that fidelity is quite different in implementation research versus efficacy studies. One participant observed that adaptation is going to happen in two-thirds of the cases during dissemination, whereas in efficacy studies you have much more control over how the intervention is being delivered. This control is further hampered when there are multiple settings, each with different local cultures and different barriers within. Turnover at research sites is often a problem, particularly if the project “champion” leaves. One researcher described working with migrant seasonal farm workers, who are subject to growing seasons and weather, such that the implementation must be adapted to a shifting environment. While the literature recommends that fidelity should be linked to the theoretical model or core components, researchers often don’t make it clear what these core components are or how they relate to success. Another commenter observed that since fidelity has its roots in clinical trials research, this may not be the right word in implementation research, as it doesn’t capture the very real and messy things that happen along the way. The flip side of this is that we don’t always know why research fails when it is implemented on a population level and we want to know why.

Strategies to overcome barriers

Many participants reported using various frameworks to identify expected barriers and facilitators so that these can be systematically checked off when they occur or not. One such framework is the Consolidated Framework for Implementation Research [CFIR]. Another is Fixen’s model, which cues researchers and providers to a “road map” with helpful things to think about. Fixen’s work also says it takes two-to-three years to implement multi-level, community-based interventions; and having this timeline is important for participating institutions to understand. Researchers reported using a variety of means to collect fidelity data, including use of a “professional patient” who goes to multiple sites, records time spent, tests done, and uses check-lists to document what happened in session with the doctor. Qualitative interviews are often used and these can be evaluated systematically with check-lists to identify objectives covered or to score indicators of implementation. Another method reported was to use “force-field analysis” to understand whether a particular variable is effective in different sites. A key repeated theme was to report which core components were delivered, which barriers and facilitators occurred and importantly, to relate these to outcomes. Then you could say the barrier mattered or that variability in implementation mattered, because it would allow us to know if that variability has an effect on summative measures.

Questions for future research

There were some comments that participants specifically wanted communicated back to funders, such as the need for “practice-informed research”, which is different from efficacy research, such that existing standards don’t apply. The application of terminology, such as fidelity, may also not fully fit this newer type of research. The reporting of lessons learned and actual experiences in implementation and dissemination is also a new topic for reporting in professional journals. It represents a shift in what is ok to publish within the research community. But many participants

indicated they were having some success in newer journals and specialty topic journals. Some key recommendations were noted above, but these will be itemized here also as recommendations for further research:

- Researchers need to clearly identify the core components in their intervention studies, also tying these to outcomes, in order to facilitate adaptations during dissemination in different settings.
- Implementation and dissemination research should not only document whether core components were delivered, but tie these to outcomes, to understand whether these were important to success in different settings. Variability in implementation will thus be understood as it relates to variability in effects on summative measures.
- Barriers and facilitators should also be related to summative measures, to help us understand their effect on success, as defined in models used or in health outcomes.