

COMMENTARY ON SIMPSON

Advancing sustainability research: challenging existing paradigms

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Simpson's description of a multistaged model of implementation (1) effectively depicts the complexity of successfully integrating evidence-based health interventions within clinical and community settings. The model's consideration of the full range of facilitators and barriers to training, adoption, implementation, and sustainability distances from the long-standing assumption that publication is the key driver for research to achieve public health impact. Given the potential platforms through which effective oral health interventions could be broadly implemented (e.g., Practice-Based Research Networks), Simpson's model seems relevant upon which to craft targeted implementation strategies. Of particular benefit is the inclusion within the model of sustainability. We know that effective interventions that sit forever on the shelf benefit no one, but even when interventions are implemented, public health benefit is minimal without sustained use.

This speaks to the importance of increasing emphasis on sustainability within dissemination and implementation science. The current National Institutes of Health (NIH) program announcements (2) have called for "effective and efficient methods, structures, and strategies to disseminate and implement [interventions]." Dissemination and implementation researchers have succeeded in fostering the development and testing of a range of strategies to embed screening, diagnostic, preventive, treatment, and services interventions within service systems, emphasizing individual and systemic behavior change. We have fewer studies, however, that concentrate on optimizing sustainability of

interventions. This represents a key next step for dissemination and implementation science.

There are several realities that make sustainability research difficult. One is the inherent challenge of an adequate time frame to determine whether sustainability has occurred. If one expects the adoption and implementation phases within a trial to take much of the 5 years of the typical NIH study, sustainability can only be gauged after months, not the years that would likely be more telling. Second, we have limited consensus as to what defines sustainability. To what degree does level of fidelity dictate sustainability? Is there a threshold for consistency in delivering a practice? Is it simply delivering something that resembles what was initially implemented? More work is needed to increase the knowledge base.

Finally, we may be limited by a simplistic approach to sustainability. A common view of sustainability of evidence-based practices suggests that sustainability stands in opposition to change, that continuing to deliver a practice with a high level of fidelity to the original model is paramount; at the same time, we recognize the limitations of our evidence base, that patients, providers, and systems may differ in significant ways from those who generated the data within our efficacy and effectiveness trials. In addition, research has shown in multiple contexts that dynamism is a principle of a practice setting, and that practices can more helpfully be thought of as "complex, adaptive systems" (3). This lens could govern future research on sustainability. In essence, it suggests that quality improvement for implementation of evidence-based practices need not be restricted to the goal of faithfully continuing the practices as they have been designed, but that the practices themselves can be improved over time. Simpson's model can be even more potent when turning an eye toward quality improvement of the intervention, not just improving the quality of implementation. In further addressing the dynamism inherent within real-world practice, Simpson's model could represent a new step forward for the field.

Conflict of interest

The author declares no conflict of interest.

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