Special Issue: Strengthening the Science and Practice of Implementation Support: Evaluating the Effectiveness of Training and Technical Assistance Centers

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Abraham Wandersman[1] and Lawrence M. Scheier[2,3]

Abstract

Hundreds of millions of dollars are spent each year by U.S. federal agencies for training and technical assistance (TTA) to be delivered by training and technical assistance centers (TTACs) to "delivery system organizations" (e.g., federally qualified health centers, state departments of health, substance abuse treatment centers, schools, and healthcare organizations). TTACs are often requested to help delivery system organizations implement evidence-based interventions. Yet, counterintuitively, TTACs are rarely required to use evidence-based approaches when supporting delivery systems (in the use of evidence-based programs). In fact, evaluations of TTAC activities tend to be minimal; evaluation of technical assistance (if conducted at all) often emphasizes outputs (number of encounters), satisfaction, and self-reports of knowledge gained—more substantive outcomes are not evaluated. The gap between (a) the volume of TTA services being funded and provided and (b) the evaluation of those services is immense and has the potential to be costly. The basic question to be answered is: how effective are TTA services? This article introduces the special issue on *Strengthening the Science and Practice of Implementation Support: Evaluating the Effectiveness of Training and Technical Assistance Centers.* The special issue promotes 1) knowledge of the state of the art of evaluation of TTACs and 2) advances in what to evaluate in TTA. A major goal of the issue is to improve the science and practice of implementation support, particularly in the areas of TTA.

Keywords

implementation, interactive systems framework, evidence-based system for innovation support, training and technical assistance, evaluation

> "If it is important to be evidence-based about our interventions, then it is important to be evidence-based about the support provided to practitioners via tools, training, and TA" (Katz & Wandersman, 2016, p. 417).

This special issue of the journal *Evaluation & the Health Professions* addresses several pressing concerns in the fields of implementation science, prevention science, and treatment science. These three areas are important for the health and well-being of the U.S. population and have been integral in the development of guidelines to improve the nation's well-being (National Prevention, Health Promotion, and Public Health Council, 2011; Office of Disease Prevention and Health Promotion, nd; see also link here, which is the National Governors Association Roadmap for Governors, *Implementing Best Practices Across the Continuum of Care to Prevent Overdose*, 2023). It has long been recognized that we can achieve better health outcomes if we can (1) better bridge research and practice (Atkins et al., 2016; Brounstein et al., 2006; Chinman et al., 2005; Saul et al., 2008)[1] and (2) provide needed support through training and technical assistance (TTA; Mitchell et al., 2002; Olson et al., 2020; Wandersman et al., 2012). Addressing both of these foci requires developing an evidence base of implementation support and using it.

In this introduction to the special issue on "Strengthening the Science and Practice of Implementation Support: Evaluating the Effectiveness of Training and Technical Assistance

[1]The Wandersman Center, USA
[2]LARS Research Institute, Inc., USA
[3]Prevention Strategies, USA

Corresponding Author:
Abraham Wandersman, The Wandersman Center, 1512 Laurel Street, Columbia, SC 29201, USA.
Email: WANDERAH@mailbox.sc.edu

Table 1. Acronyms Used Within this Article

Acronyms Used Within this Article	
Acronym	Meaning
CQI	Continuous quality improvement
EBPs	Evidence-based programs
EBSIS	Evidence-based system for innovation support
ISF	Interactive systems framework for dissemination and implementation
LCs	Learning communities
QA/QI	Quality assurance/quality improvement
RCTs	Randomized controlled trials
TA	Technical assistance
TTA	Training and technical assistance
TTACs	Training and technical assistance centers
TTCs	Technology transfer centers

Centers," we outline some major issues that contribute to the gap between research and practice and explain how they might be overcome with implementation support through a) motivation and capacity of practitioners and b) mechanisms of support like TTA (see Table 1 for full list of acronyms used in this article).

Complexities of Implementation Support

Often, those responsible for implementing programs (i.e., practitioners) require additional support to build capacity and increase their motivation. For those invested in capacity building, such support entails strengthening practitioners' skills and increasing their knowledge. From an organizational perspective, this can also include providing additional fiscal and human capital resources that can reinforce operational mandates (Brownson et al., 2018). Practitioners often encounter numerous challenges that arise because of the complexity of adopting and implementing interventions—particularly interventions that are new to them (Domlyn et al., 2021; Kenworthy et al., 2023; McBeath et al., 2019). Motivational barriers can include being underfunded or overburdened to conduct new activities, incongruities with respect to provider-client expectations, and lack of leadership or managerial support. The climate or culture of the organization may not be supportive, which can affect practitioners' attitudes toward their jobs and diminish their enthusiasm for implementing challenging interventions. Taken as a whole, capacity and motivational barriers hinder practitioners' ability to achieve program goals and take interventions to scale (Dymnicki et al., 2017; Elliott & Mihalic, 2004; Kegeles et al., 2005).

Awareness of the many barriers to program implementation stimulated the development of a literature that examines factors that inhibit implementation and scaling up (Aarons, et al., 2017; Fagan et al., 2019; Spoth & Greenberg, 2011). This literature contributes evidence regarding the need to promote quality implementation by providing practitioners with tools and TTA to improve fidelity and quality adaptation, foster buy-in, and achieve desired outcomes (Fagan et al., 2008; Mitchell et al., 2002; O'Donnell et al., 2000; Wandersman et al., 2012; Watson-Thompson et al., 2013). The literature documents that *training* and *technical assistance* are two related mechanisms required for successful implementation of model programs (Feinberg et al., 2004; Wandersman et al., 2012; Woods et al., 2014). Wandersman et al. (2012) define *training* as "a planned, instructional activity intended to facilitate the acquisition of knowledge, skills, and attitudes in order to enhance learner performance. Training is often performed in group settings" (p. 449). *Technical assistance* is defined by Wandersman et al. (2012) as "an individualized, hands-on approach to building an entity's capacity for quality implementation of innovations, usually following training" (p. 449). The emphasis on both components continues with others recognizing that TTA can create the means to achieve sustainable interventions that benefit organizations and communities for the long haul (Johnson et al., 2023; Katz & Wandersman, 2016; Ray et al., 2012; Spoth & Greenberg, 2011).

To address the need for implementation support, hundreds of millions of dollars are spent each year on TTA (in the U.S. alone) in an attempt to bolster health promotion, treatment, and prevention. The U.S. federal government funds numerous training and technical assistance centers (TTACs). Prominent examples of funders include the Centers for Disease Control and Prevention, the Substance Abuse and Mental Health Services Administration, the Health Resources and Services Administration, the Department of Education, and many other federal agencies that are involved in stewarding our nation's health and well-being. For example, the Substance Abuse and Mental Health Services Administration funds technology transfer

centers (TTCs; Agley et al., 2024; this issue; Olson et al., 2024, this issue) that provide TTA focusing on building workforce capacity in addictions, mental health, and substance use prevention. Fundamental components include training, coaching, modeling, problem solving, and information dissemination (Albers et al., 2020a; Dunst et al., 2019). Yet, there is relatively little published research that addresses the processes and outcomes of TTACs. If TTACs are focused on providing support to practitioners with the goal of enhancing capacity and ensuring quality implementation, how well do they achieve these goals? The construction and purpose of TTACs are well-intentioned, but their effectiveness and the factors that influence effectiveness are unproven. This becomes a critical issue because, as we learn from prevention science, the field needs to know: "What works, for whom, and under what conditions?" (e.g., Gottfredson et al., 2015).

Developing a Theory of Change in Support Interventions

If TTA is viewed as an "intervention," then a theoretical "*mechanism*" needs to be specified that explains how TTA leads to behavior change (e.g., practitioners changing their work behaviors; Albers et al., 2020b). Training and technical assistance, like any intervention, require a theory of change that specifies how TTA strategies affect knowledge, skills, efficacy, and motivation, which, in turn, improve delivery of evidence-based interventions (Chen, 1990). Metz et al. (2021) addresses one aspect of this issue by outlining core competencies required by implementation support practitioners such as coaches, knowledge brokers, facilitators, change agents, and technical assistance (TA) providers. The goal of this effort is to link these competencies with capacity building and eventually boost practitioners' ability to implement practices, policies, and programs. Leeman et al. (2017) canvassed 24 frameworks in a scoping review and proposed a unified theoretical framework for addressing the causal process that links TTA with practitioners' capacity and practice outcomes (e.g., adoption of evidence-based interventions and implementation).

Aldridge et al. (2023) theorize about mechanisms of change that link core practice components associated with proximal practice outcomes (e.g., self-regulation, knowledge, skills, and abilities) among implementation support providers. In turn, these intermediate outcomes influence implementation capacity further downstream, which should lead to population-based outcomes (e.g., decreases in child welfare placements or domestic violence). Failure to address the precise ways in which implementation support and capacity building achieve their target outcomes creates a black box conundrum (e.g., Astbury & Leeuw, 2010). Put simply, we lack a clear understanding of the conditions of implementation and the mechanisms through which external implementation support targeting capacity building achieve the desired outcomes (see Hunter et al., 2009, for an example of how this issue can be addressed to develop a better theoretical understanding of TA).[2]

It should be necessary for TTACs to address these pressing concerns. Becoming more rigorous in linking theory to evaluation principles is one step in the right direction. The Society for Prevention Research's *Standards of Evidence* (Flay et al., 2005) can serve as a guide. The *Standards* were updated to address the specifics of implementation and dissemination that relate to the processes involved in "scaling up" interventions (Gottfredson et al., 2015). The standards represent knowledge regarding what constitutes an intervention, how to evaluate program efficacy, and the methodological and statistical tools required to reach both credible and confident conclusions regarding evidence-based interventions. The standards apply both to individual-level capacity building and organizational performance and are consistent with implementation and accountability models such as the Getting-To-Outcomes® intervention (Chinman et al., 2008; Wandersman et al., 2000).

Challenges to Identifying and Evaluating Effective TTA

Anytime TTA occurs, there are going to be multiple challenges that can affect outcomes, for example: how the training or technical assistance will impact practitioners and whether it can be made responsive to their levels of engagement; the practitioners' efforts to adapt the training to fit what they perceive as the needs, values, and expectations of the organization/community; and the ability of practitioners to sustain the impact and lessons of the training in the absence of the experts. The perspective of the trainer also needs to be considered as they may be inclined to institute "local reinventions" once they start conducting their work with practitioners. Although well intentioned, adaptations in TTA can lead to program drift (modifying, adding, or deleting training components) encountered with behavioral interventions. This can diminish the impact of training—if the adaptations are considerable and diminish core components (e.g., they can reduce effectiveness by diluting instructional content). As this brief discussion shows, there is much that can be learned from the trials and tribulations of prevention science, especially when the emphasis is on behavioral interventions. From a translational science perspective, obtaining more information that addresses the question of fidelity to core components of training can provide a more systematic and practical science of TTA.

There are additional challenges to TTA that can influence the research-practice gap. Identifying what fosters buy-in and readiness at one delivery system site, but causes hesitancy or reluctance at another, is a major challenge for TTACs. For instance, the type of training, how it is bundled and delivered, can interact with the levels of readiness and cohesiveness of community coalitions or the practitioners that are the focus of training (Chilenski et al., 2018; Jackson et al., 2018). Other

challenges include the variability of treatment integrity—the fact that so many different types and forms of TA occur, with varying dose frequency and delivery methods (Scott et al., 2022). Time is a major factor (and often a barrier) for TTA providers and for recipients, and there has been little research on the proper duration of implementing either training or technical assistance—this is important because there may be a dose–response relationship (Feinberg et al., 2008; Leeman et al., 2015). All of this can undermine what is termed "treatment construct validity" and is an essential component of determining whether an intervention is successful in the manner hypothesized (McCaul & Glasgow, 1985).

The critical issues that we have described are part of the everyday reality for TTA providers and recipients, and they are priority areas for the development of a robust science of implementation support. Yet, many of the issues have "flown under the radar," with limited focus on standardization across sites or TA modalities. Importantly, there is a need to find ways to incorporate these issues into evaluation plans of TTACs. In other words, the "typical approach" taken to evaluating TTA should not be so "typical." In seeking to resolve these pressing issues TTACs become hubs of activity that steward important resources that can benefit organizations and communities, but their reach, efficacy, approaches, and ability to achieve target outcomes and the determination of their cost-effectiveness are unclear.[3]

The Usefulness of Integrating Conceptual Frameworks

Because our knowledge regarding the effectiveness of TTA and TTACs is limited, a major purpose of this special issue is to call attention to what might be done to change this state of affairs. We propose that it is important to use a framework that can help build a theory of change and empirical evidence about what works and what does not work in implementation support. Numerous implementation science frameworks exist and can be helpful (see Nilsen, 2015; Strifler et al., 2018; Tabak et al., 2012 for examples of how multiple frameworks, theories, and models can be organized).

In line with the premises and evidence presented, we need an implementation science framework that features implementation support and TTACs. Wandersman et al. (2008) provide an interactive systems framework for dissemination and implementation (ISF) that integrates a research-to-practice model with a community-centered/practice-centered model (Wandersman, 2003). The ISF stresses the bidirectional relationships between research and practice, and the framework is designed around three interacting systems: (1) a delivery system that provides treatment, prevention, and education services (e.g., mental health centers, community coalitions, and health care systems); (2) a support system (e.g., TTACs) that provides support via tools and TTA to the delivery system; and (3) a synthesis and translation system (e.g., organizations that distill information and make it user friendly to end-users, which can be a role that TTACs play). In the ISF, it can be readily seen that TTACs play a pivotal role in helping to bridge research and practice. Figure 1 presents an updated version of the ISF (Domlyn et al., 2021) and provides an overview of the interactions between the systems, with a special emphasis on the support system (i.e., highlighting the role of TTACs).

A major feature of implementation science is its concern with the barriers and facilitators of implementation. A popular approach to addressing barriers and facilitators is to examine the motivation and capacities of delivery systems to

Figure 1. Interactive Systems Framework featuring TTACs as the Support System

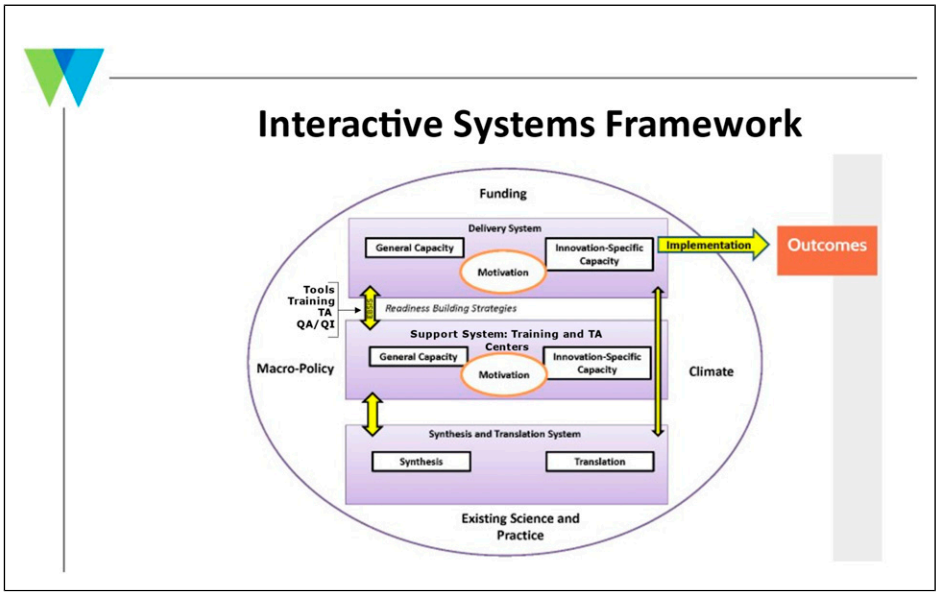
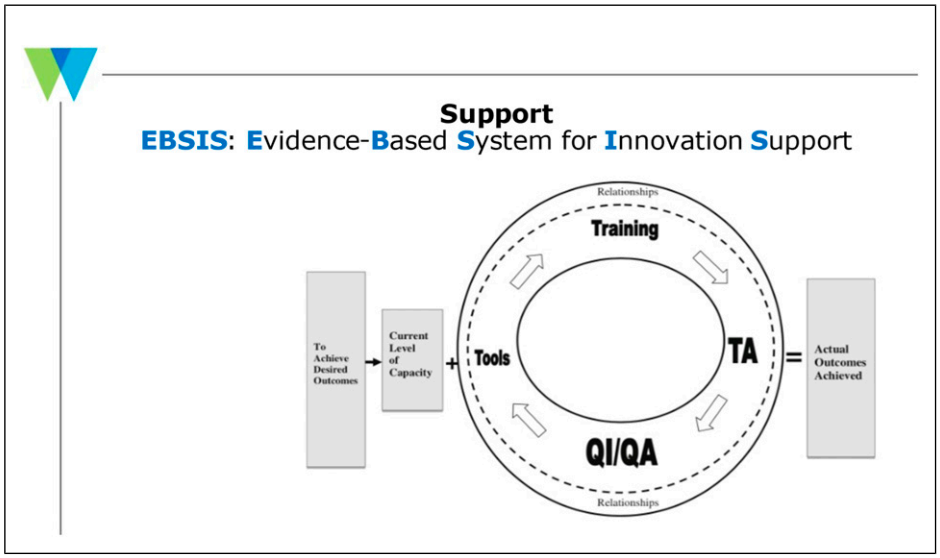


Figure 2. Logic model for Evidence-Based System for Innovation Support (EBSIS)



implement interventions. The ISF describes motivation and capacities in the delivery system in terms of the organizational readiness R = MC^2 approach (Scaccia et al., 2015). General capacities are the capacities needed for day-to-day functioning; innovation-specific capacities are capacities needed to implement a particular intervention; motivation assesses the willingness to implement an innovation.

Special issue contributors were encouraged to consider the ISF as a skeletal structure that should be filled in with theory and practice so that connections can be made among their findings and more clearly reveal advances in theory and research that address key issues in implementation support. Specifically, the contributors were asked to provide recommendations and takeaways that could improve the effectiveness of TTACs. In an effort to expand the scope of this work, as editors of the special issue, we also pointed to current and future potential refinements to the ISF. Wandersman et al. (2012) enhanced the ISF by integrating an evidence-based system for innovation support (EBSIS) as the channel by which a support system can work with a delivery system—via tools, training, TA, and quality assurance/quality improvement (QA/QI). The EBSIS identifies an entity's current capacity and their needs and resources in light of their desired outcomes. According to the EBSIS logic model (Figure 2), the four support approaches work iteratively to help an organization (e.g., community coalition) achieve its desired outcomes.[4]

Contributors were asked to address how to move the agenda forward and directly address how to strengthen the science and practice of TTA. Systematic reviews by Dunst et al. (2019), Katz & Wandersman (2016), and Scott et al. (2022) pointed to the need for TTA theory and research to improve capacity and boost the effectiveness of innovations and programs. Scott et al. (2022), for instance, assessed two decades of the scientific literature on TA and reported the meager state of the science. Their work reveals many implications for improving both the science and practice of TTA, particularly in the context of offering evaluation schemes appropriate for TTA. If the goal is to help improve the world of intervention supports, then funders, as well as researchers/evaluators, support personnel (such as TTA providers), and other key stakeholders, must help grow and use the evidence of effective support.

Funders of TTACs and "the Chicken and the Egg" Challenge

Our brief overview underscores that there is a "chicken and egg" problem in the science of implementation support with several major elements. This problem can be illustrated with a focus on TTA:

- Generally, funders have not pushed for evidence-based, evidence-informed, or even systematic, conceptual approaches to TTA in their requests for proposals. There are many questions to be clearly asked and answered. For example, what are the goals of TTA (e.g., capacity, skills, knowledge, motivation, and outcomes) and how can we best achieve the goals (e.g., how to engage TTA recipients and build trust)?
- Even if funders wanted to have these issues clearly addressed, not much science could be provided to bolster these efforts (e.g., scoping review by Scott et al., 2022).
- One funder of TTACs stated they needed to see results that demonstrate that systematic approaches to TTA

produce desired outcomes in order to invest in systematic approaches to outcomes.

In summary, the status quo is highly inadequate: 1) funders have not requested systematic, evidence-based approaches; 2) funders have not funded much in the way of systematic evaluation and research; and 3) not much systematic research on implementation support is available for TTACs to use as they carry out their work.

An important premise of the special issue is: If it is important to be evidence-based in our interventions, then it should also be important to be evidence-based in how we provide support via tools, TTA, and QA/QI. Our introduction highlights important issues that can contribute to the science and practice of implementation support. The special issue contains articles that point to more evidence-informed and conceptual directions for the research and practice of implementation support. By the end of the special issue, our goal is to collect and synthesize findings from disparate TTA evaluation efforts and create a more coherent state of the science and practice of TTA support. Then it will be crucial that funders, TTACs, implementation support practitioners, delivery systems, and researchers/evaluators pay more attention to these issues—if we are going to make progress and achieve desired outcomes to health and well-being at the local community level and for the nation as a whole.

An Anthology of Articles in the Special Issue

In the first of two issues of this journal devoted to the topic of TTA, the six articles include a broad overview of how TTACs operate and their goals, research, and evaluation strategies. All six articles present findings stemming from evaluations of TTAC operations, although they differ greatly in the type, scope, and quality of data collected. Mixed-method evaluations were the dominant strategy applied in all cases, blending qualitative inquiry with quantitative methods. Qualitative methods gained a richer understanding of the perceived barriers and facilitators that affect the operations of TTACs in administering TA, while quantitative methods asked participants fixed-response questions about perceived utility of training, confidence in applying it, satisfaction, and intentions to implement the training (or share with colleagues).

In the first article of this special issue, Agley et al. (2024) demonstrate the use of continuous quality improvement (CQI) as a cornerstone evaluation tool within a large TTC network funded by the Substance Abuse and Mental Health Services Administration. The Substance Abuse and Mental Health Services Administration funds numerous centers in the U.S. that tackle the nation's problems with respect to addiction, mental health treatment, and substance use prevention. The Substance Abuse and Mental Health Services Administration seeks to improve organizational capacity and make available the latest evidence-based programs to the healthcare workforce. Agley et al. (2024) were funded to conduct an external evaluation of the Substance Abuse and Mental Health Services Administration's TTCs, as seen through the eyes of the various TTCs spread throughout the U.S. They were asked to evaluate whether the centers achieve their goals and make a difference in organizational capacity through the various training methods the centers apply. This was done using EBSIS as a model, which provides a logical means to examine the success of innovation transfer. The authors detail how they used a multi-faceted, mixed-method study combining qualitative interviews (key informants), requiring inductive coding of open-ended responses, and survey data collected at multiple time points to evaluate CQI activities in the TTCs. The information they collected included Government Performance and Results Act metrics and data assessing TTA activities from an organizational-level, time-allocation study. The obtained data provides rich insight into how the TTCs operationalize and use CQI and future potential improvements, One of the most pressing questions facing TTCs entails the decision-making that goes into selecting and disseminating evidence-based programs (EBPs). When a delivery system organization faces choosing a program, it is not enough to state that a program "works." Other factors may come into selecting a program including the program's cost, feasibility of implementation, and readiness of the staff. In the next article, Reho et al. (2024) conducted a mixed-method study involving qualitative interviews and a cross-sectional survey of the 39 regional TTCs funded by the Substance Abuse and Mental Health Services Administration throughout the U.S. The focus was primarily on how the TTCs select EBPs ("practices") and what technology transfer mechanisms they use to disseminate EBPs to the communities they serve (i.e., the delivery system). As an added benefit, the authors framed their questions by activities both pre- and post-COVID to establish whether the pandemic altered strategies for selection and dissemination.

In the next article of the special issue, Olson et al. (2024) used a mixed-method strategy to examine workforce development for mental health centers tied to the mental health technology transfer network funded by the Substance Abuse and Mental Health Services Administration. The authors provide three case examples that evaluate the viability of online learning communities (LCs) to foster capacity building in behavioral health organizations. Learning communities are constructive educational groups that engage in collaboration, reflection, and mutual learning with the goal of increasing general and innovation-specific implementation capacity. Learning communities can target capacity building at both the individual and organizational level, use a number of teaching modalities (e.g., in-person and virtual learning sessions), target a variety of outcomes (e.g., cultural competency, leadership training, and networking), and can easily be modified to encompass unique goals, audiences, and service delivery priorities. They are essentially designed to bridge the ISF support and delivery systems in an effort to support workforce development and foster positive implementation outcomes by supporting other similar organizations in their

lessons-learned. What makes this particular study compelling is the extent of high-quality measures used to assess the LCs' effects (impact on practice), the wide-angle lens they use to focus on the efficacy of LCs, and the ability of their findings to foster actionable steps to cost-effectively improve TTA.

The opioid epidemic has presented unique challenges to the treatment community. This is especially true for rural communities that do not have access to the same resources as their urban counterparts. Drive-time to attend sessions at clinics, limited broadband for telehealth, and other factors create inequities in treatment compared to more urban areas. Unfortunately, these challenges create burdens for both those seeking and those delivering care. In their article, Weybright et al. (2024) consider the special case of rural treatment providers as they examine the effectiveness of TTA when delivered through the agriculturally based cooperative extension system. The significance of their research is attributable to the fact that they drill down deeply into the TTA infrastructure and examine how it influences adoption of EBPs among practitioners delivering services in rural areas. Their work is framed by prominent social psychological theories of behavior change including the theory of reasoned action and the transtheoretical model, both of which can be used to account for support system-delivery system linkages expressed in the ISF. A key takeaway is that one of the core competencies of the extension system revolves around the observation that TTA can be used to establish community social capital. This has value to rural communities that can benefit from access to resources and services. In the long run, community connections and authentic engagement by practitioners can be translated into much needed prevention and recovery supports, which has been configured in social determinant models as a contributing factor to health and well-being (e.g., Kawachi et al., 1997).

The clarion call of the guest editors suggested a need for greater precision in the model specification linking TA with outcomes. Toward this end, Gayles et al. (2024) rigorously code and classify implementation support activities that are part of a state-wide prevention support system. Once the activities were coded, the authors examined whether intervention and provider characteristics influence type and amount of TA delivered during unique EBPs conducted in community settings. This is no small task as EBPs (the authors use the term evidence-based interventions) vary in numerous ways including factors such as design, quality, complexity, and the resources made available from the program developer. These and related intervention design characteristics can weigh on the success of a program by contributing to drift or type III error (i.e., failure to implement correctly; also, see Basch et al., 1985; Dobson & Cook, 1980).

In keeping with the themes of this special issue, it is only fitting that Ward et al. (2024) provide an insightful analysis of a study linking TA practices (core competencies) and targeted capacity-building outcomes that was conducted in a K-12 educational setting. Their analysis dives into the evaluation of TA process and outcomes data that was conducted by the State Implementation and Scaling-up of Evidence-Based Practices Center, a national technical assistance center funded by the Office of Special Education Programs within the Department of Education. In an effort to move the field forward, they provide key insights from longitudinal analyses that offer a clearer picture of how TA practices foster capacity-building outcomes. Foremost among these insights is that more intensive, longer duration TA promoting the uptake of EBPs requires attention to individual core competencies (i.e., skills, knowledge, attitudes, and efficacy) coupled with the development of implementation infrastructure. In the context of educating disabled students, this entails linking champions at all levels of the educational system (i.e., state, regional, district, local partner agencies, and schools), all of whom are stakeholders in the effort to improve education for disabled students. Ward et al. (2024) also point to a TA process evaluation where reach, dosage, quality/relevance, and utility were examined as factors that can influence the relationship between TA practices and capacity-building outcomes.

Each of the contributors to this special issue has addressed one or more ways through which the field can move forward and become more theoretical, practical, and powerful—as we collectively build a science of implementation support.

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ORCID iD

Lawrence M. Scheier https://orcid.org/0000-0003-2254-0123

Notes

1. This gap has been a major concern of many investigators involved in prevention, implementation, and translation sciences. Lessons learned in this special issue can apply to bridging research and practice in numerous fields including medicine and management (e.g., Goodman, 2000).
2. Lewis et al. (2020) provide a collection/synthesis of studies that examine mechanisms in implementation, and Lewis et al. (2018) provide an overview of strategies (e.g., path modeling) that can be used to better understand causal processes involved in how implementation strategies achieve the desired proximal and distal outcomes.
3. Although using randomized controlled trials (RCTs) is considered a "gold standard" in most behavioral and medical sciences (e.g., Carey & Stiles, 2016), it may not be feasible in many implementation settings. Part of the problem is that the unique nature of TTA—with its many layers of implementation complexity—creates the potential

for uncontrolled bias to occur. This can include personality, motivational, and stylistic factors of the trainer, practitioner, setting, or their respective combinations. There is also high demand for TTA, which even with randomization can create conditions leading to contamination or rivalry. Ethical considerations may also factor into the equation, as many marginalized or underserved groups do not want to be assigned to a treatment that may not be beneficial, particularly when the need for TTA to more effectively serve their constituents is high and pressing (e.g., Bromley et al., 2015). The challenges to conducting large-scale RCTs in implementation support studies has created a vacuum, and there is a shortage of rigorously controlled experimental studies examining the efficacy and effectiveness of TTA in real-world settings (for exceptions, see Scott et al., 2022; Williams et al., 2017).

4. Rhoades et al. (2012) highlight ISF as a conceptual model that requires greater elaboration of reciprocal interactions between the prevention synthesis and translation, support, and delivery systems. Their example involves a state-level prevention support system intended to create a new public health approach to prevent delinquency and youth violence. The focus of their approach was on maintaining fidelity and sustainability using research-informed TA that links state-agency funders responsible for policy decisions with practitioners (e.g., communities implementing programs).

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