As a discipline of inquiry and influence, implementation science emerged in response to a need. In the early 1970s, Archie Cochrane (1972) voiced the concern that health care workers in England were not basing their practice on scientific evidence. His voice was influential in the start of the evidence-based medicine movement, which gained further traction through the work of Sackett and colleagues in Canada (Sackett et al., 1996). The parallel effort in education emerged from the concern about the gap between research and practice and the need for “evidence-based education” (Davies, 1999). In the field of special education, this message extends well back into the 1980s and 1990s, with *Exceptional Children* publishing a set of articles led by Doug Carnine’s (1997) paper, calling for research that is trustworthy, accessible, and usable.

Although Carnine and other leaders at the time questioned the relevance of the educational research being conducted, a National Academy of Sciences panel questioned the methodological and scientific quality of educational research (Shavelson & Towne, 2002). This concern led to the Education Science Reform Act of 2002, which had for its goal the improvement of the methodological quality of educational research. The Institute of Education Sciences was created to achieve that goal. The assumption was that as teachers and other service providers learned more about practices, strategies, and curriculum demonstrated as effective, they would use these in their instruction. However, this assumption was faulty. Although identification of evidence-based practices (EBPs) is the initial and necessary first step, implementation of such practices in classrooms and schools does not naturally follow from just the presence of knowledge about the practices (Odom, 2009). The failure of the “single-day workshop” approach (i.e., the primary approach in schools to share knowledge about EBPs) to close the research-to-practice gap reflects the need for strategies that specifically lead to implementation of EBPs.

Responding to this need in health and human services and education, implementation science emerged as a clear movement in the first decade of the 2000s. In their inaugural issue of the journal *Implementation Science*, Eccles and Mittman (2006) defined implementation science at “the scientific study of methods to promote the systematic uptake of research findings and other EBPs into routine practice, and, hence, to improve the quality and effectiveness of health services” (p. 1). Around the same time, the landmark monograph by Fixsen et al. (2005) caught the attention of many researchers conducting randomized clinical trials in school settings who were seeing challenges to implementation. In the subsequent years, researchers have proposed many models of implementation (Bauer et al., 2015). Common themes across those models are a focus on organizational systems perspectives, the phase- or stage-like process that implementation follows, and consideration of the different factors within and outside an organization that operate at the different phases of the process (Odom, Hall, & Suhrheinrich, 2019).

In a previous issue of *Exceptional Children*, Cook and Odom (2013) brought attention to the importance of implementation science for the field of special education. Articles in that issue addressed the definition of implementation science, dissemination and diffusion, scaling up effective interventions, the tension between fidelity and adaptation, and also a model the special education programs in states could use for promoting EBPs. However, only one article in the issue provided any empirical findings related to their application of implementation. In this current special section of *Exceptional Children*, we
return to the topic of implementation science and special education. The goal of this special section is to demonstrate the use of implementation science in special education research. It is important to make a distinction between implementation science research and the relationship of implementation to program outcomes (Dunst et al., 2013). The articles in this section address the former, that is, the empirical examinations of variables or features of the implementation process in special education research. Certainly, the next steps in implementation science research will be to examine associations between implementation and outcomes.

In the first article, Sugai and Horner present the implementation model they followed in supporting schoolwide use of positive behavior support and intervention (PBIS), arguably the most extensively implemented of any special education intervention on a national scale. They describe the phases of implementation, active “drivers” employed in the model, adoption by schools, and fidelity of PBIS use. In the second article, Steinbrenner, Odom, Hall, and Hume employ an “index” approach to assessing implementation of a comprehensive treatment program (CTM) for adolescents with autism in 60 nationally distributed high school programs. Unlike interventions having a single focus (e.g., reading, social skills training), CTMs for individuals with autism have multiple and varied components, and assessment of implementation requires a process for systematically merging data across components, which the authors describe in their article. In the third article, Suhrheinrich, Reith, Dickson, and Stahmer examine implementation of classroom-based pivotal response training (CPRT) for preschool children with autism. Following the EPIS (exploration, preparation, implementation, sustainment) model developed by Aarons et al. (2011), the authors found associations between factors operating at the classroom and organizational levels and teachers’ fidelity and sustainment of the use of CPRT after the initial training year. Together, these studies provide a glimpse into how implementation science questions are beginning to be addressed in special education research and hopefully provide a motivation for special education researchers to direct their efforts toward identifying strategies that will aid in the implementation of EBPs in schools.

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References


