



Sources of Information about Fidelity to Evidence-Based Practices in Early Childhood Special Education

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Abstract

Practitioner fidelity to evidence-based practices is closely linked with child and family outcomes. Effectively measuring fidelity can help programs identify areas to address the research-to-practice gap and increase program and practitioner alignment with the key characteristics of evidence-based practices. This *CASEmaker* bibliography provides sources of information about definitions of fidelity, the current state of the research-to-practice gap in early childhood special education, and existing measures of intervention fidelity.

Introduction

Eligible children and their families have the right to high-quality early childhood intervention and education services afforded by legislation (ESSA, 2015; IDEA, 2004; NCLB, 2002). National organizations provide guidance to the diverse professionals making up the fields of early intervention and early childhood special education (CEC, DEC, ECPC, ECTA, APTA, ASHA, AOTA). Research to support evidence-based practices is abundant; however, definitions of alignment to the practices and measures that address the key components of fidelity are less prolific. This *CASEmaker* bibliography includes selected references for understanding and evaluating intervention fidelity to evidenced-based practices. The included sources of information provide a foundation for understanding the definition of intervention fidelity, the current state of intervention fidelity in the field of early childhood special education, and strategies for measuring intervention fidelity to evidenced-based early childhood special education practices. Since practitioner fidelity to evidence-based practices is closely linked to child and family outcomes (Bruder et al., 2009; Kagan et al., 2008; Winton et al., 2008), understanding fidelity and appropriate measures of fidelity help programs monitor and ensure the provision of high-quality services.

Definition of Intervention Fidelity

Fidelity refers to a practitioner's level of adherence to a specific set of evidenced-based practices and is often referred to as adherence to practices, or integrity to intervention. Definitions and descriptions of fidelity are typically found in the mental health, public health, or

education fields (O'Donnell, 2008). Fidelity has been defined as "the degree to which...programs are implemented...as intended by the program developers" (Dane & Schneider, 1998). The inception of the field of implementation science, the study of factors that influence the full and effective use of innovations in practice (Fixen et al., 2009), distinguishes between implementation fidelity and intervention fidelity. **Implementation fidelity** refers to the process taken to support the adoption of a set of practices (Dunst et al., 2013) and is beyond the scope of this *CASEmaker*. **Intervention fidelity** refers to the degree to which evidenced-based intervention practices are used as intended by early childhood practitioners, or other intervention agents (e.g., parents), and lead to expected or intended benefits (Dunst et al., 2008). Practitioners with high degrees of alignment to evidence-based practices are likely to achieve the outcomes that have been associated with those practices. The references further define and describe fidelity.

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- Carroll, C., Patterson, M., Wood, S., Booth, A., Rick, J., & Balain, S. (2007). A conceptual framework for implementation fidelity. *Implementation Science, 2*(1), Article 40. <https://doi.org/10.1186/1748-5908-2-40>
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Rx Prescription for Practice Rx

Improve your knowledge and understanding of intervention fidelity and how this concept will help determine a practitioner's adoption of evidence-based practices in early intervention by reading the following:

Dunst, C. J., Trivette, C. M., McInerney, M., Holland-Coviello, R., Masiello, T., Helsel, F., & Robyak, A. (2008). Measuring training and practice fidelity in capacity building scaling-up initiatives. *CELLpapers, 3*(1), 1-11. http://www.earlyliteracylearning.org/cellpapers/cellpapers_v3_n1.pdf

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Current State of Intervention Fidelity in Early Childhood Education

The current climate of early intervention and early childhood special education is marked by accountability and performance (O'Donnell, 2008; Synder et al., 2011). Current legislation (see ESSA, 2015; IDEA, 2004; NCLB, 2002) has increased requirements for using evidence-based methodologies when providing intervention (Earles-Vollrath, 2012; Slavin, 2003). National organizations have increased the level of guidance and standards to help practitioners understand and operationalize recommended practices (see DEC Recommended Practices, 2014; Early Intervention/Early Childhood Special Education Standards, 2020; NAEYC Standards for Initial Early Childhood Professional Preparation Programs). Research shows, however, early childhood practices often lag behind research creating a sizable gap between research and practice. The time necessary for research findings to make their way into practice patterns in education and related fields is estimated at 17 to 20 years (Balas & Boren, 2000; Cook & Odom 2013; Fixsen et al., 2013; Metz & Bartley, 2012; Pellecchia et al., 2020). Insufficient personnel preparation, lack of access to recent research, insufficient professional development opportunities, and inconsistent monitoring have been identified as barriers to intervention fidelity (Kemp, 2020; Snyder et al., 2011; Stayton, 2015).

Few studies in education assess intervention fidelity (Barton & Fettig, 2013; Ledford & Wolery, 2013; O'Donnell, 2008). Most studies merely document the quantity of interventions without systematically noting the quality (Caron et al., 2017; Hamre et al., 2010). The lack of focus on fidelity impairs the accurate interpretation of outcomes, making it unclear if lackluster outcomes are due to ineffective intervention practices, or inconsistent use of the practices. The selected references below further describe the gap between research and practice.

- Bruder, M. B., Catalino, T., Chiarello, L. A., Mitchell, M. C., Deppe, J., Gundler, D., Kemp, P., LeMoine, S., Long, T., Muhlenhaupt, M., Prelock, P., Schefkind, S., Stayton, V., & Ziegler, D. (2019). Finding

- a common lens: Competencies across professional disciplines providing early childhood intervention. *Infants & Young Children*, 32(4), 280-293. <https://doi.org/10.1097/YC.0000000000000153>
- Cook, B. G., & Odom, S. L. (2013). Evidence-based practices and implementation science in special education. *Exceptional Children*, 79(2), 135-144. <https://doi.org/10.1177/001440291307900201>
- Snyder, P., Hemmeter, M. L., & McLaughlin, T. (2011). Professional development in early childhood intervention: Where we stand on the silver anniversary of PL 99-457. *Journal of Early Intervention*, 33(4), 357-370. <https://doi.org/10.1177/1053815111428336>
- Vanderlinde, R., & van Braak, J. (2010). The gap between educational research and practice: Views of teachers, school leaders, intermediaries and researchers. *British Educational Research Journal*, 36(2), 299-316. <https://doi.org/10.1080/01411920902919257>
- ### Strategies for Measuring Intervention Fidelity
- Fidelity assessment plays several important roles in program implementation including helping to explain the absence or weak effects of an intervention (Bond & Drake, 2020; Mowbray et al., 2003) and identifying the most important elements or combination of elements associated with positive outcomes (Dunst et al., 2013). The most common type of fidelity measure is the checklist due to the ease of use and its ability to support planning, monitoring, and evaluation (Gawande, 2009). Existing fidelity checklists address a variety of topics within early intervention and early childhood special education, including use of cross-disciplinary practices, approaches to teaming, development of Individualized Education Programs and Individualized Family Service Plans, resource-based family support practices, and transitions. Current fidelity literature notes four primary components related to measuring intervention fidelity: (1) degree to which the intervention is being delivered as designed, (2) degree to which dosage, frequency and intensity of the intervention, matches the research recommendations, (3) the quality of program delivery (e.g., practitioner skill level, preparedness, conscientiousness), and (4) participant engagement in the intervention (Cross & West, 2011; Dane & Schneider, 1998). Fidelity measures, therefore, should address one or more of these four areas. Existing fidelity checklists in early intervention and early childhood special education focus on identifying the practitioner's behaviors that align with the evidence-based characteristics of target practices or design of the intervention (see Dunst et al., 2018; Sexton et al., 2023), and do not address other components of intervention fidelity (recommended dosage, quality of program delivery, or participant engagement in the intervention). The following references provide examples of existing intervention fidelity measures.
- Early Childhood Technical Assistance Center. (2019). *Performance checklist*. <https://ectacenter.org/de-crp/type-checklists.asp>
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Conclusion

Sources of information are included in this CASEmaker to provide readers with useful resources when considering matters of intervention fidelity. Understanding the many ways practitioner implementation fidelity impacts child and family outcomes impresses upon us the importance of attending to the available evidence on how to monitor and support fidelity. Governing legislation asserts children and their families the right to receive high-quality early childhood education services aligned with national standards, research, and professional wisdom. A growing body of research provides ample guidance to the practices that lead to optimal outcomes for these children and their families. Fidelity measures can help bridge the gap between research and practice.

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