School Mental Health (2022) 14:1–6
https://doi.org/10.1007/s12310-021-09468-0

ORIGINAL PAPER

Advancing the Science of Integrity Measurement in School Mental Health Research

Kevin S. Sutherland[1] · **Bryce D. McLeod**[2]

Accepted: 25 June 2021 / Published online: 14 July 2021

Abstract
The purpose of this special series is to highlight how the measurement of integrity, both treatment integrity and integrity for implementation strategies, can support intervention development, evaluation, and implementation research. The seven papers and one commentary in this special series illustrate how diverse measurement approaches are used for integrity across various types of intervention research. This introductory paper provides a general overview of the themes that cut across the papers in this special series. We define key terms and discuss how the measurement of treatment integrity (i.e., extent to which the core practices of a protocol are delivered) and integrity to implementation strategies (i.e., extent to which the core practices of an implementation strategy are delivered) changes as an intervention progresses along the treatment development pipeline spanning from basic research to implementation and dissemination research. Then we discuss the ways that the measurement of integrity can change across the different steps in the pipeline to meet the goals associated with different stops along the pipeline. We finish the paper with a description of the papers in the special series and concluding thoughts.

Keywords Treatment integrity · Integrity for implementation strategies · School mental health

Introduction

Key to interpreting findings from research focused on intervention development, evaluation, and implementation for youth mental health in schools is establishing that interventions and implementation strategies are adequately characterized, rigorously evaluated, and delivered as designed (Southam-Gerow & McLeod, 2013; Sutherland et al., 2013). The measurement of treatment integrity (also referred to as treatment fidelity) and integrity to implementation strategies (e.g., adherence to protocols for coaching; Slaughter et al., 2015) are thus necessary to help researchers understand if interventions and implementation strategies delivered in schools address the social, emotional, behavioral, and academic outcomes of students (Sanetti et al., 2021; Sutherland et al., 2021). Despite the importance of integrity measurement (i.e., measurement that includes assessment of treatment integrity and integrity to implementation strategies), it has been underreported in school-based research (Sanetti et al., 2011, 2012, 2020). While the last decade has seen an increase in the number of studies assessing treatment integrity (see Sanetti et al., 2020), most studies take a rather narrow approach to measuring treatment integrity and studies do not routinely measure integrity to implementation strategies. To achieve the goal of improving the quality of services delivered to student with social, emotional, and behavioral problems in schools, advances in how integrity is measured during intervention development, evaluation, and implementation are needed.

The seven papers and one commentary in this special issue in *School Mental Health* focus a variety of measuring treatment integrity or integrity to implementation strategies in school settings. This introductory paper will provide a general overview of the themes that cut across the papers and commentary. In particular, this paper will define key terms and discuss how the measurement of treatment integrity and integrity to implementation strategies changes as

✉ Kevin S. Sutherland
kssuther@vcu.edu

Bryce D. McLeod
bmcleod@vcu.edu

[1] Department of Counseling and Special Education, Virginia Commonwealth University, 1015 W. Main St., PO Box 842020, Richmond, VA 23284, USA

[2] Department of Psychology, Virginia Commonwealth University, 806 W. Franklin St., PO Box 842018, Richmond, VA 23284, USA

an intervention progresses along the treatment development pipeline spanning from basic research to implementation and dissemination research (Onken et al., 2014). A key goal of this paper, and the series, is to discuss how the measurement of integrity needs to change across the different steps in the pipeline to meet the goals associated with various stops along the pipeline. The paper concludes with a description of the seven papers.

Defining Key Terms

Treatment integrity, also referred to as treatment fidelity, is defined as the extent to which a practice (e.g., praise) or intervention (i.e., a collection of practices) is delivered as designed (McLeod et al., 2009; Sutherland et al., 2013). Though several definitions of treatment integrity exist (see e.g., Sanetti & Kratochwill, 2009; Southam-Gerow & McLeod, 2013; Sutherland et al., 2013), researchers have typically conceptualized treatment integrity as multidimensional (Sanetti et al., 2021; Sutherland et al., 2013). For the purpose of our discussion below, we focus on several important components relevant to intervention development and evaluation research that include (see McLeod et al., 2013): adherence, or the extent to which a practice or intervention was delivered as designed; competence, or the quality with which a practice or intervention was delivered as designed; differentiation, or the extent to which practices not prescribed by a treatment protocol are delivered; student responsiveness, or how responsive a student(s) is to an interventionalist's (e.g., teacher or mental health clinician) attempt to deliver a practice or intervention; and dosage, or the amount of a practice or intervention delivered over a period of time (see Sutherland et al., this issue for a conceptual model of treatment integrity). While each of these components assess important aspects of practice or intervention delivery, assessing these components in a variety of combinations and levels of intensity at multiple stages of the pipeline can support efforts to develop, evaluate, and implement evidence-based interventions in schools.

Integrity to implementation strategies describes the extent to which the strategies designed to support the implementation of evidence-based interventions are delivered as designed. Implementation strategies are defined as specific methods or techniques that are used to support and facilitate the adoption, use, and sustainment of evidence-based programs (Cook et al., 2019; Proctor et al., 2013). Researchers have cataloged implementation strategies for school-based interventions (see Cook et al., 2019), such as high quality and ongoing training, coaching and consultation, and train-the-trainer strategies, to name but a few. As an intervention travels down the pipeline the use of implementation strategies to target contextual and individual (e.g., teacher) level mechanisms is likely to increase. And, as we note below, how integrity to the implementation strategies are assessed needs to evolve as the research questions shift from does the intervention work to can we effectively implement and sustain the intervention in school settings (i.e., a focus on implementation outcomes). Though the field has yet to agree on the components of integrity to implementation strategies (Slaughter et al., 2015), it is suggested that researchers consider assessing adherence (i.e., extent to which the implementation strategy was delivered), dosage (i.e., how much of the strategy was delivered), and responsiveness (i.e., extent to which individual engaged in the strategy).

What is the Intervention Development Pipeline?

School-based mental health intervention development research (also called translational research) focuses on taking findings from basic research and using them to develop effective interventions that can improve the quality and impact of mental health services in schools. As it applies to schools, the translational pipeline (see Bradshaw et al., 2012), typically moves from basic research (e.g., behavioral principles) to intervention development (e.g., integrating teacher praise and corrective feedback into a teacher-delivered intervention), with researchers attempting to design effective interventions that target important outcomes (e.g., increased student engagement in learning) and are feasible to deliver. After interventions are developed and manualized, efficacy (e.g., does the intervention result in positive outcomes) studies examine how the intervention performs in highly controlled studies that emphasize internal validity; when interventions are deemed efficacious in these studies, effectiveness (e.g., does the intervention work in school settings where most students receive mental health services) studies determine if an intervention outperforms standard care within a specific setting. Interventions that are deemed effective may then be candidates for implementation research that focuses on the types of supports needed to effectively implement and sustain an intervention in school settings.

Integrity Measurement Along the Pipeline

Although the number of intervention studies that assess treatment integrity has increased over the past decade (see Cox et al., 2019; Sanetti et al., 2020), we argue that more attention is needed to how treatment integrity measurement can change as an intervention progresses along the pipeline. Most studies see treatment integrity measurement as a means to assess how much and how well an intervention is

delivered, which misses unique opportunities to use treatment integrity measurement to support the modification, implementation, uptake, and sustainment of evidence-based interventions. Relative to the measurement of treatment integrity, little attention is paid to the measurement of integrity to implementation strategies. To illustrate these points, in this section, we note how the measurement of both treatment integrity and integrity to implementation strategies can change along the pipeline. As an intervention progresses along the pipeline it is important to consider how the measurement of treatment integrity and the integrity of implementation strategies need to evolve. Table 1 highlights important components of integrity to assess as well as characteristics of integrity measures at various stages of the pipeline.

During intervention development as researchers and other stakeholders design (or co-design) interventions to support children and youth in schools, treatment integrity measures are used to determine how much and how well interventions are delivered. Within the intervention development stage, it is particularly important to measure adherence, competence, and student responsiveness. Specifically, assessing these treatment integrity components allow researchers and stakeholders to determine how much and how well the practices from the intervention are delivered, along with how responsive students are to intervention. At this stage, it is critical that researchers operationally define the core practices contained within the intervention that are posited to engage the target mechanisms that promote change in the social, emotional, and behavioral competencies of students. Specification of the core practices facilitates the development of treatment integrity measures that can provide detailed and specific information about intervention delivery during development and piloting. This type of detailed data collected at this stage can inform modifications to an intervention (e.g., dropping a practice that is too difficult to implement; or, if the practice is critical, developing implementation strategies to support better adherence and competence; see Sutherland et al., 2019). Though more intensive from a training and resource perspective, observational treatment integrity measures are often utilized at this stage as they provide reliable data regarding the delivery of core practices (McLeod et al., 2009). It is typical at this early stage in the pipeline that more time and resources are dedicated to assessing treatment integrity. However, it is worthwhile to develop self-report measures of integrity to the implementation strategies used to support the delivery of the intervention that can capture adherence and dosage (e.g., training and coaching). At this stage, the intervention developers are often directly involved in the training and coaching, so integrity to these implementation strategies is typically high. However, mapping out the core components of the training and coaching approaches at this stage can facilitate the development of more detailed integrity measures that can be used at later stages when other individuals are involved in the training and coaching activities.

During efficacy studies, researchers can focus treatment integrity measurement on adherence, competence, student responsiveness, and differentiation. Again, observational measures should be used at this stage to ensure accuracy, and researchers can consider publishing papers reporting on the score reliability and validity of the treatment integrity measures. At this stage, assessing adherence and competence allows researchers to perform manipulation checks, ensuring that any observed improvements are due to the intervention. Assessing these components can also help researchers understand how an intervention does, or does not work, via integrity-outcomes analyses (see e.g., Sutherland et al., 2018), whereas assessing student responsiveness opens the door for researchers to determine how responsive students are to the intervention. By introducing the measurement of differentiation at this stage researchers can determine whether practices not found in the intervention protocol were delivered by teachers, which may account for unanticipated treatment outcomes (McLeod et al., 2013). Measures of integrity to training and coaching supports can be used at this stage as a manipulation check. Though these measures are likely to be more detailed than in early stages,

Table 1 Treatment integrity and implementation integrity measurement

Research stage	Treatment integrity		Integrity for implementation strategies	
	Components	Measurement	Components	Measurement
Development	Adherence competence student responsiveness	Observational measures	Adherence dosage	Self-report measures
Efficacy	Adherence competence Student responsiveness differentiation	Observational measures	Adherence dosage	Self-report measures
Effectiveness	Adherence competence student responsiveness differentiation dosage	Self-report measures	Adherence dosage responsiveness	Observational and self-report measures
Implementation and dissemination	Adherence competence dosage	Self-report measures	Adherence dosage responsiveness	Observational and self-report measures

it is appropriate to utilize self-report measures to collect data on adherence and dosage at this stage.

As an intervention accrues evidence of efficacy and moves down the pipeline researchers need to pay less attention to internal validity and more to the external validity of the intervention (i.e., intervention evaluated in representative conditions). As the emphasis shifts from internal to external validity, treatment integrity and integrity to implementation strategies are conceptualized as implementation outcomes (Proctor et al., 2011), allowing researchers to determine how factors in specific contexts influence integrity. Figure 1 illustrates the pipeline along with the colored arrows representing the importance of internal and external validity at different phases.

As interventions move to the effectiveness stage, the feasibility of treatment integrity measurement becomes more important. At this stage measuring adherence, competence, differentiation, and student responsiveness are important for the same reasons as highlighted above, namely interpretation of study findings. In addition, the component of dosage becomes important since interventions are less likely to be fully delivered in effectiveness research (Weisz et al., 2013), so determining how much of the intervention (e.g., number of lessons; coaching meetings) was delivered is critical. Observational measurement of treatment integrity, while ideal, may not be feasible or preferable for effectiveness research that emphasizes evaluating the intervention under circumstances that represent typical care in school settings. At this stage, researchers need to start transitioning to methods that are feasible to use by stakeholders in school settings as such pragmatic treatment integrity measures are needed to support implementation and sustainment of evidence-based interventions. Thus, it is important to start using pragmatic treatment integrity measures (i.e., brief, easy to use, with psychometric support for their use by stakeholders in school settings; Stanick et al., 2019) that focus on the core practices of the intervention that teachers and other purveyors can easily use in effectiveness research in order to set the stage for subsequent implementation and sustainment work. Measurement of integrity of implementation strategies often becomes more intensive and detailed during the effectiveness stage. This is because treatment integrity may be more variable in an effectiveness trial (McLeod et al., 2018), so understanding how integrity to the training and coaching procedures related to treatment integrity can inform the development of future implementation strategies. Assessing adherence, responsiveness, and dosage at this point is important to provide detailed information about the training and coaching procedures. Researchers may also consider using a multi-informant approach by collecting observer- and self-report data in order to provide a detailed description about the integrity of implementation strategies in order to inform future research.

Finally, at the implementation and dissemination stage it is important that pragmatic integrity measures exist to assess the various integrity components. Measurement of integrity, both treatment integrity and integrity of implementation strategies, need to have certain features. First, the measures must be pragmatic – i.e., brief, easy to use, with psychometric support for their use by stakeholders in school settings. Second, integrity measures should be capable of supporting quality improvement – e.g., identify teachers who need more coaching support due to low adherence to a protocol.

As can be seen through this description, the assessment of integrity can play an important role in the development, evaluation, modification, and implementation of interventions. Early in the process integrity measures can provide information needed to interpret study findings whereas at later stages integrity data can be used to inform efforts to implement and sustain effective interventions in school settings. We thus suggest that researchers leverage the possibilities of integrity measurement early in their intervention development work with a long-term goal of developing pragmatic, feasible integrity measures with strong score reliability and validity that can be used to support the implementation and sustainment of effective interventions for students in schools. Below we highlight the papers in this special issue on integrity, which we are delighted to co-edit, that advance the science of measurement of treatment integrity.

Special Issue

First, Sutherland and colleagues (2021) describe how they developed measures to assess multiple components of treatment integrity across several intervention development projects and efficacy trials. The importance of training and supervision of coders early in the pipeline is highlighted, and these authors provide recommendations for other researchers to support their own work in school-based treatment

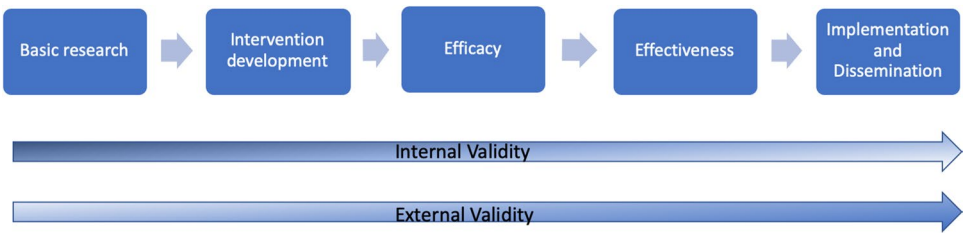

Fig. 1 Treatment development pipeline

integrity measurement as research progresses from intervention development to evaluation. In addition, the importance of developing psychometrically sound integrity tools early in the pipeline is emphasized. Relatedly, Duppong Hurley and colleagues (2021) describe how they assessed various components of treatment integrity within a parent-to-parent phone support intervention. This paper fits nicely into the pipeline of intervention development, as these researchers describe how they have developed treatment integrity measures that assess multiple components within a unique intervention early in the translational process to support the evaluation and implementation of their intervention.

In two related papers, McLeod and colleagues describe efforts to develop pragmatic teacher report measures of treatment integrity as well as provide a conceptual model of learning school systems that could potentially leverage feasible and reliable measures of treatment integrity to support implementation research. In the first paper, McLeod et al. (2021b) describe the development of a teacher report measure based upon a gold standard observational tool and highlight the challenges inherent in assessing treatment integrity using teacher report. While the findings from this study raise more questions than they answer, the promise of developing teacher report measures for advancing implementation at later stages of the pipeline remains an important goal for the field and may contribute to the learning school systems approach outlined in McLeod et al. (2021a). These researchers provide a model for combining treatment integrity data and youth outcome data that can ultimately support the implementation and sustainment of evidence-based interventions in schools.

Examining factors associated with treatment integrity is an important area for future research to enrich understanding of both barriers and supports to the implementation and sustainment of evidence-based interventions in schools. Zhang et al. (2021) explored the relation between the time allocated to implementers for planning, reflection, and collaboration and treatment integrity within elementary schools delivering school-wide positive behavior interventions and supports, finding that time allocation is an important determinant for evidence-based intervention implementation. In another paper, Holmes et al. (2021) examined teacher engagement during professional development training of the Incredible Years program, highlighting the role that engagement plays on both sustained implementation of the program as well as student outcomes. Husabo et al. (2021) examined adherence and competence of delivery of a school-based cognitive-behavioral therapy (CBT) intervention delivered in groups to students at risk for anxiety disorders. Although these researchers did not find associations between treatment integrity and clinical outcomes, they noted that it appears that novice CBT providers may be better able to deliver a simplified version of the intervention. Finally, Aaron Hogue (2021) provides thoughts on the papers in the special series and suggests important directions for integrity research in school-based mental health.

Concluding Thoughts

Studies such as those in this special issue help us better understand factors associated with treatment integrity measurement in school-based studies. Our hope is that the papers in this special issue may assist researchers in refining and improving their approach to the measurement of treatment integrity, with the ultimate goal of improving the uptake and sustainment of evidence-based interventions in schools. That said, researchers rely on funding to conduct studies such as those in this special series, and while the National Institute of Health does have a Dissemination and Implementation competition the Institute of Education Sciences (IES), which funds the majority of school-based research in the USA, does not currently support implementation research. While IES has traditionally followed the intervention development pipeline in their research competitions (e.g., intervention development to efficacy and replication to effectiveness), funding to support implementation research has not been a priority and is sorely needed. Given the amount of time, it takes for innovations to move through the pipeline (Balas & Boren, 2000), studying implementation outcomes (such as treatment integrity and integrity to implementation strategies) is a critical step for the field to take to realize the goal of improving mental health service uptake and sustainment in school settings.

Acknowledgements Preparation of this article was supported in part by a grant from the Institute of Education Science (R305A140487; McLeod & Sutherland). The opinions expressed by the authors are not necessarily reflective of the position of or endorsed by the U. S. Department of Education.

Funding This research was supported by grants from the U. S. Department of Education's Institute for Education Sciences (R305A140487). The opinions expressed by the authors are not necessarily reflective of the position of or endorsed by the U. S. Department of Education.

Declarations

Conflicts of interest The authors declare that they have no conflict of interest.

Ethical Approval Not Applicable.

Informed Consent Not Applicable.

References

Balas, E. A., & Boren, S. A. (2000). Managing clinical knowledge for health care improvement. *Yearbook of Medical Informatics, 9*(1), 65–70.

Bradshaw, C. P., Pas, E. T., Bloom, J., et al. (2012). A state-wide partnership to promote safe and supportive schools: The PBIS Maryland initiative. *Administration and Policy in Mental Health and Mental Health Services Research, 39*(4), 225–237. https://doi.org/10.1007/s10488-011-0384-6

Cook, C. R., Lyon, A. R., Locke, J., Waltz, T., & Powell, B. J. (2019). Adapting a compilation of implementation strategies to advance school-based implementation research and practice. *Prevention Science, 20*, 914–935. https://doi.org/10.1007/s11121-019-01017-1

Cox, J. R., Martinez, R. G., & Southam-Gerow, M. A. (2019). Treatment integrity in psychotherapy research and implications for the delivery of quality mental health services. *Journal of Consulting and Clinical Psychology, 87*(3), 221–233.

Duppong Hurley, K., Farley, J., & Huscroft D'Angelo, J. (2021). Assessing treatment integrity of parent-to-parent phone support for families of students with emotional and behavioral disturbance. *School Mental Health*. https://doi.org/10.1007/s12310-021-09448-4

Hogue, A. (2021). Commentary on the specialseries. *School Mental Health*, this issue.

Holmes, S. R., Reinke, W. M., Herman, K. C., et al. (2021). An examination of teacher engagement in intervention training and sustained intervention implementation. *School Mental Health*. https://doi.org/10.1007/s12310-021-09457-3

Husabo, E., Haugland, B. S. M., McLeod, B. D., et al. (2021). Treatment fidelity in brief versus standard-length school-based interventions for youth with anxiety. *School Mental Health*. https://doi.org/10.1007/s12310-021-09458-2

McLeod, B. D., Cook, C., Sutherland, K. S., Lyon, A., Dopp, A., Broda, M., & Beidas, R. (2021a). A theory-informed approach to locally-managed learning school systems integrating treatment integrity and youth mental health outcome data to promote youth mental health. *School Mental Health*. https://doi.org/10.1007/s12310-021-09413-1

McLeod, B. D., Cox, J. R., Jensen-Doss, A., Herschell, A., Ehrenreich-May, J., & Wood, J. J. (2018). Proposing a mechanistic model of clinician training and consultation. *Clinical Psychology: Science and Practice*, *25*(3). https://doi.org/10.1111/cpsp.12260

McLeod, B. D., Southam-Gerow, M. A., Tully, C. B., Rodriguez, A., & Smith, M. M. (2013). Making a case for treatment integrity as a psychosocial treatment quality indicator for youth mental health care. *Clinical Psychology: Science and Practice, 20*(1), 14–32. https://doi.org/10.1111/cpsp.12020

McLeod, B. D., Southam-Gerow, M. A., & Weisz, J. R. (2009). Conceptual and methodological issues in treatment integrity measurement. *School Psychology Review, 38*(4), 541.

McLeod, B. D., Sutherland, K. S., Broda, M., Granger, K. L., Cecilione, J., Cook, C. R., Conroy, M. A., Snyder, P. A., & Southam-Gerow, M. A. (2021b). Examining the correspondence between teacher- and observer-report treatment integrity measures. *School Mental Health*. https://doi.org/10.1007/s12310-021-09437-7

Onken, L. S., Carroll, K. M., Shoham, V., Cuthbert, B. N., & Riddle, M. (2014). Reenvisioning clinical science: Unifying the discipline to improve the public health. *Clinical Psychological Science, 2*(1), 22–34. https://doi.org/10.1177/2167702613497932

Proctor, E. K., Powell, B. J., & McMillen, J. (2013). Implementation strategies: Recommendations for specifying and reporting. *Implementation Science, 8*, 1–11.

Proctor, E., Silmere, H., Raghavan, R., Hovmand, P., Aarons, G., Bunger, A., Griffey, R., & Hensley, M. (2011). Outcomes for implementation science: Conceptual distinctions, measurement challenges, and research agenda. *Administration and Policy in Mental Health and Mental Health Services Research, 38*(2), 65–76.

Sanetti, L. M., Charbonneau, S., Knight, A., Cochrane, W. S., Kulcyk, M. C. M., & Kraus, K. E. (2020). Treatment fidelity reporting in intervention outcome studies in the school psychology literature from 2009 to 2016. *Psychology in the Schools, 57*(6), 901–922.

Sanetti, L. M. H., Cook, B. G., & Cook, L. (2021). Treatment fidelity: What it is and why it matters. *Learning Disabilities Research & Practice*. https://doi.org/10.1111/ldrp.122238

Sanetti, L. M. H., Dobey, L. M., & Gritter, K. L. (2012). Treatment integrity of interventions with children in the Journal of Positive Behavior Interventions from 1999–2009. *Journal of Positive Behavior Interventions, 14*, 29–46. https://doi.org/10.1177/1098300711405853

Sanetti, L. M. H., Gritter, K. L., & Dobey, L. M. (2011). Treatment fidelity of interventions with children in the school psychology literature from 1995–2008. *School Psychology Review, 40*, 72–84.

Sanetti, L. M., & Kratochwill, T. R. (2009). Treatment integrity assessment in the schools: An evaluation of the treatment integrity planning protocol. *School Psychology Quarterly, 24*(1), 24–35. https://doi.org/10.1037/a0015431

Slaughter, S. E., Hill, J. N., & Snelgrove-Clarke, E. (2015). What is the extent and quality of documentation and reporting of fidelity to implementation strategies: A scoping review. *Implementation Science, 10*, 129.

Southam-Gerow, M. A., & McLeod, B. D. (2013). Advances in applying treatment integrity research for dissemination and implementation science: Introduction to special issue. *Clinical Psychology: Science and Practice*. https://doi.org/10.1111/cpsp.12019

Stanick, C. F., Halko, H. M., Nolen, E. A., Powell, B. J., Dorsey, C. N., Mettert, K. D., Weiner, B. J., Barwick, M., Wolfenden, L., Damschroder, L. J., & Lewis, C. C. (2019). Pragmatic measures for implementation research: development of the psychometric and pragmatic evidence rating scale. *Translational Behavioral Medicine. Advance Online Publication*. https://doi.org/10.1093/tbm/ibz164

Sutherland, K. S., Conroy, M., McLeod, B. D., Algina, J., & Wu, E. (2018). Teacher competence of delivery of BEST in CLASS as a mediator of treatment effects. *School Mental Health, 10*(3), 214–225.

Sutherland, K. S., McLeod, B. D., Conroy, M. A., & Cox, J. R. (2013). Measuring implementation of evidence-based programs targeting young children at risk for emotional/behavioral disorders: Conceptual issues and recommendations. *Journal of Early Intervention, 35*(2), 129–149. https://doi.org/10.1177/1053815113515025

Sutherland, K. S., McLeod, B. D., Conroy, M. A., & McCormick, N. (2021). Developing treatment integrity measures for teacher-delivered interventions: Progress, recommendations and future directions. *School Mental Health*. https://doi.org/10.1007/s12310-021-09423-z

Sutherland, K. S., McLeod, B. D., Granger, K., Nemer, S. L., Kunemund, R. L., Conroy, M. A., Johnson, A., & Miles, C. (2019). Adapting an evidence-based early childhood tier 2 program for early elementary school. *The Elementary School Journal*, *119*(4), 542–561. https://doi.org/10.1086/703103

Weisz, J. R., Kuppens, S., Eckshtain, D., Ugueto, A. M., Hawley, K. M., & Jensen-Doss, A. (2013). Performance of evidence-based youth psychotherapies compared with usual clinical care: A multilevel meta-analysis. *JAMA Psychiatry, 70*(7), 750–761.

Zhang, Y., Cook, C. R., & Lyon, A. R. (2021). A simple matter of time? School-level analysis of the relationship between time allocation, treatment integrity, and student outcome. *School Mental Health*. https://doi.org/10.1007/s12310-021-09412-2