

ADVANCING TAILORED IMPLEMENTATION OF EVIDENCE-BASED PRACTICE
IN SCHOOL MENTAL HEALTH

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Dedication

This dissertation is dedicated to Evan, the absolute love of my life and partner forever; my little sweet Bianca Bo, the joy of my life every single day; and the newest member (and any future members) of our little tribe.

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Abstract

Approximately 1 in 5 youth aged 8–18 experiences a mental health problem (e.g., anxiety, depression, conduct, trauma) that requires mental health services; however, only about half receive evidence-based services, 70-80% of which are received in schools. There is an urgent need to address the implementation gap that limits youth access to quality mental health services and compromises longer term youth mental health outcomes. Improving mental health service implementation in schools requires the development and use of effective implementation strategies tailored to address context-specific barriers. Currently, implementation strategies are often selected based on a one-size-fits-all approach; however, to increase the likelihood that they will exert their desired effect, there is a need to use evidence-based knowledge and include participatory involvement of stakeholders to select and adapt strategies that are matched to site-specific barriers and deemed feasible for use in a given setting. The purpose of this *development study* was to engage school-based stakeholders in mixed method inquiry that facilitated the design of an implementation facilitation approach, the Facilitated Implementation Tailoring (FIT) technique. Our findings highlight the need to engage end-users at the outset of implementation strategy design. While all stakeholders welcomed the use of facilitation for school-based implementation efforts, several major and minor revisions to the FIT strategy were recommended following synthesis of stakeholder. Major revisions recommended included using a flexible yet structured “Pick-and-Choose” model that was comprehensive yet not over packaged to respond to stakeholders’ preferences and based needs. In addition, minor changes were suggested. Implications for theory and practice as well as limitations and future research are discussed.

Keywords: implementation science, school mental health, implementation strategies

Table of Contents

Dedication	i
Acknowledgements	ii
Abstract	v
List of Tables.....	ix
List of Figures	x
Chapter 1: Introduction	1
School Mental Health and Implementation Science.....	1
Tailoring Implementation Strategies and Facilitation	3
Facilitated Implementation Tailoring (FIT) Technique.....	6
Cognitive-Behavioral Intervention for Trauma in Schools (CBITS)	7
Purpose of the Study.....	9
Summary	11
Chapter 2: Literature Review	13
Children’s Mental Health Needs	13
Impact of Student Mental Health on Academic and Life Functioning	15
EBPs for Student Mental Health Needs in Schools.....	16
EBP Implementation in School Settings	17
Organizing the Delivery of Mental Health EBPs via Multi-Tiered System of Support	19
Science-to-Practice Gap in School Settings	20
Implementation Science	21
Implementation Science in Schools.....	37
Tailored Implementation via Implementation Facilitation	38
Development Studies.....	51
Gaps in the Current Research.....	53
Purpose of the Study.....	53
Chapter 3: Method.....	55
Setting and Participants	55
Measures.....	58
Procedures	61
Analyses	62
Chapter 4: Results	67
RQ1-1 Recommendations for any school-based facilitation strategy.....	67
RQ1-2 Specific changes to the features and core components of FIT.....	82
Chapter 5: Discussion.....	89
Theoretical Implications.....	91
Practice Implications	94
Limitations	96
Directions for Future Research.....	98

Conclusion.....	100
Table 1.....	95
Table 2.....	102
Table 3.....	103
Table 4.....	104
Table 5.....	105
Table 6.....	106
Table 7.....	107
Table 8.....	108
Figure 1	109
Figure 2	110
Figure 3	111
Figure 4	112
Figure 5	113
References	114
Appendix 1	139
Appendix 2.....	140
Appendix 3.....	143

List of Tables

Table 1. *Differentiation of Leadership Roles in Systems Change Efforts*

Table 2. *Models, Frameworks, and Taxonomies Associated with Key Constructs within the Simplified Model for Implementation Success*

Table 3. *FIT Strategy*

Table 4. *Demographic and Descriptive Information for Sample*

Table 5. *Measures and Data Collection Tools*

Table 6. *Acceptability, Appropriateness, and Feasibility Ratings*

Table 7. *One-Sample t-Test*

Table 8. *ANOVA Testing Within and Between Group Differences*

List of Figures

Figure 1. *Translational Research Process*

Figure 2. *FIT Components, Process Variables, and Target Outcomes*

Figure 3. *Causal Model for Applying Implementation Strategies*

Figure 4. *Box Plots Showing Dispersion and Skew of Acceptability Rating Distribution
for School Administrators*

Figure 5. *Box Plots Showing Dispersion and Skew of Feasibility Rating Distribution for
School Administrators*

Chapter 1: Introduction

According to the National Institute of Mental Health, approximately 1 in 5 youth aged 8–18 experiences a mental health problem (e.g., anxiety, depression, conduct, trauma) that requires mental health services (Any Disorder Among Children, n.d.); however, only about half receive treatment, and even fewer receive evidence-based practices (EBPs; Use of Mental Health Services and Treatment Among Children, n.d.). Schools are often the primary setting for receiving mental health services (Committee on School Health, 2004), with 70-80% of all youth mental health services delivered in schools (Chorpita & Daleiden, 2009; Duong et al., 2021; Weisz & Kazdin, 2010). Yet, EBPs are rarely adopted, delivered with fidelity, or sustained over time (Durlak & DuPre, 2008; Overstreet & Chafouleas, 2016; Weist & Evans, 2005). There is an urgent need to address the implementation gap that limits youth access to quality school-based mental health services and compromises youth mental health outcomes. The purpose of this dissertation study was to aid in addressing this gap by conducting a development study of an implementation facilitation strategy designed to promote evidence-based mental health service implementation in schools.

School Mental Health and Implementation Science

Over 18 million U.S. children experience mental health problems (Any Disorder Among Children, n.d.). Moreover, approximately half of all chronic mental health problems surface by the age of 14 and three-quarters by the age of 24 (Any Disorder Among Children, n.d.). Most children do not receive needed mental health services. Not only do untreated mental health problems have negative ramifications for individual health and functioning, but they also result in high societal cost (Use of Mental Health Services

and Treatment among Children, n.d.). The lack of access to high quality mental health services is even higher for youth from culturally and ethnically diverse backgrounds, compounding other disparities such as poverty and educational disproportionality that exist (Garland et al., 2005).

Schools provide 70 to 80 percent of the mental health services that children receive (Burns et al., 1995); for many children the school system provides the only venue to access mental health support. Indeed, schools overcome many access barriers evidenced in traditional care models. For example, in traditional community settings (e.g., mental health centers, hospitals, and outpatient clinics), limitations and barriers to accessing mental health care for youth include: (a) limited knowledge of mental health, (b) stigma of mental health, (c) financial barriers, (d) transportation problems, (e) limited availability of programs, (f) poor system capacity, and (g) insurance obstacles/excessive bureaucracy (Center for Health and Health Care in Schools [CHHCS], 2003; President's New Freedom Commission on Mental Health [PNFC], 2003; Radez et al., 2021; Weist, 1997; Weist et al., 2005). Thus, schools serve as an important setting for youth to access high-quality services and offer significant promise to promote children's mental health and reduce the likelihood of experiencing deleterious outcomes (e.g., developmental or complex trauma, substance misuse, school dropout, incarceration, negative physical health outcomes, and mortality; e.g., Bellis et al., 2013; Duong et al., 2021; McElroy & Hevey, 2014; Weisz et al., 2013). Moreover, increasing the delivery of high-quality mental health services (e.g., evidence-based practices and programs) in schools increases the likelihood that children develop new skills and experience supportive environments that foster resilience to proactively cope with adversity and achieve healthy life outcomes (Cooper et al., 2015).

While a myriad of EBPs have been established for use in school settings, very few are actually adopted, implemented with sufficient fidelity, and sustained over time, limiting the extent to which EBPs can yield desired outcomes (e.g., Wandersman & Florin, 2003). This gap between what we know works and what is actually adopted and used as part of routine practice constitutes the implementation gap that has plagued service systems and scientific communities for decades (Balas & Boren, 2000; Ringwalt et al., 2004). So longstanding is this implementation gap, in fact, that it has led to the emergence of the field of implementation science: the study of methods to promote the systematic uptake of research findings and other EBPs into routine practice to improve both service quality and client outcomes (Eccles & Mittman, 2006). The science of implementation produced a robust and generalizable knowledge base to facilitate the process of moving science into everyday practice (Powell et al., 2019). Indeed, the past two decades were marked by significant progress, as the field of implementation science engendered a better understanding of implementation barriers and facilitators (i.e., determinants) and, more importantly, an emerging evidence of the efficacy of implementation strategies to influence successful EBP implementation (Eccles & Mittman, 2006).

Tailoring Implementation Strategies and Facilitation

Implementation strategies refer to the methods and techniques used to improve specific implementation outcomes (Powell et al., 2015). Implementation strategies are akin to the interventions or practices developed via intervention science to improve student outcomes in that they are designed to ultimately influence or change people's social, environmental, and organizational conditions as well as their choices, attitudes, beliefs, and behaviors (Courage & Baxter, 2005; Norman & Draper, 1986). Whereas

interventions are student-facing, implementation strategies are adult-facing and designed to ultimately support and facilitate the adoption, delivery, and sustainment of EBPs.

Improving implementation of school-based EBPs requires the development and use of effective implementation strategies that are designed and tailored to address context-specific determinants present (i.e., hereafter referred to as “tailoring strategies”; Powell et al., 2019).

Currently, implementation strategies are often selected based on a one-size-fits-all approach (Mittman, 2012). However, to increase the likelihood that implementation strategies will exert an effect, there is a need to use evidence-based knowledge and include participatory involvement of stakeholders to select and adapt strategies that are matched to site-specific implementation barriers and deemed feasible for use in a given setting (Powell et al., 2019; Pellecchia et al., 2018). Tailoring strategies to prioritized context-specific barriers has considerable face validity and has shown promise relative to strategies that are not tailored to the local context (Mittman, 2012). However, only recently have implementation scientists increased their emphasis on tailoring implementation strategies to context-specific barriers (Powell et al., 2019).

Facilitation

Facilitation is a widely endorsed strategy to support EBP implementation (Baskerville, Liddy, & Hogg, 2012; Waltz et al., 2015) and could serve as an effective means of tailoring implementation strategies to address the complexities of “real-world” implementation (Harvey & Kitson, 2015). Facilitation is a process of interactive problem solving and support that occurs in a context of a recognized need for improvement and a supportive interpersonal relationship (Kirchner et al., n.d.). It is consistent with system

consultation from the school literature but tends to focus exclusively on the uptake and delivery of EBPs to promote access to higher quality care (Newell & Coffee, 2015). Moreover, system consultation in schools emphasizes a problem-solving model that involves the process of identifying a problem, analyzing why a problem exists, developing and implementing a plan, and evaluating whether that plan worked (Curtis & Stoller, 2002). In addition to consultation, other leadership roles and activities within systems change efforts are essential for change to occur (e.g., training, hierarchical leadership, and coaching); however, each of these roles and activities has distinct purposes and deliverables that should be considered and differentiated (Table 1). Facilitation can be conceptualized as an interpersonally guided process of supporting each of the problem-solving steps through strategic collaboration and knowledge exchange with stakeholders affiliated with a given setting, with an explicit focus on group process (Harvey & Kitson, 2015).

Positioned as the active ingredient in the integrated Promoting Action on Research Implementation in Health Services (i-PARIHS) framework (Ritchie et al., 2017), facilitation is undertaken by one or more facilitators, who help guide and navigate individuals within a given setting through the change processes involved and the challenges encountered during implementation (Bidassie et al., 2015). I-PARIHS locates the success of implementation in part on the ability of a facilitator to use facilitation skills and a relatively structured process to work with stakeholders in a given setting to tailor and deploy implementation strategies to promote implementation outcomes (Bakersville et al., 2012). A central role of facilitators is to use interpersonal skills and knowledge to guide and empower stakeholders to identify/address implementation barriers and develop

site-specific implementation plans (Kirchner et al., 2014).

Despite the growing evidence supporting facilitation (Bakersville et al., 2012; Stetler et al., 2006), there remain significant gaps that warrant attention. First, the lack of replicable, pragmatic, and EBP agnostic (i.e., independent of a given EBP and generalizable across EBPs) facilitation methods for use with stakeholders has been cited as a reason for the mixed findings regarding the effectiveness of facilitation (Kirchner et al., 2014). There is limited empirical guidance regarding concrete, replicable methods facilitators can use to enable effective knowledge exchange with stakeholders to prioritize barriers to implementation and co-develop implementation plans that tailor strategies to the identified context-specific barriers (Harvey et al., 2002). Second, facilitation methods have largely been devoid of theory, which is concerning considering evidence indicating that theoretically informed approaches are more parsimonious and effective than atheoretical approaches (Lewis et al., 2018; Powell et al., 2019). Considering these limitations, there is a need for developmental research that aims at developing and demonstrating the promise of pragmatic, theory-informed facilitation methods. Such research will potentially lead to better scale-up of EBPs and generalization and use of effective facilitation across different facilitators, EBPs, and service settings (e.g., primary care, juvenile justice, child welfare, schools; Mittman, 2012; Oxman et al., 1995).

Facilitated Implementation Tailoring (FIT) Technique

As discussed above, there has been a call for research that develops pragmatic, theory-informed implementation strategies (Powell et al., 2019), refines and operationalizes facilitation processes to promote replicability (Doghtery et al., 2012), and

uses mixed methods to evaluate implementation strategies to generate new usable knowledge (Southam-Gerow & Dorsey, 2014). This dissertation study attempted to directly answer these calls by initiating a line of empirical inquiry to iteratively develop a theory-informed facilitation technique—Facilitated Implementation Tailoring (FIT)—through initial prototyping and user study to provide much needed guidance to facilitators on the methods and participatory process to use when collaborating with stakeholders to tailor strategies to overcome prioritized, context-specific barriers. In addition, this study explores candidate process variables that could serve as the mechanisms by which facilitation works. The FIT theory of change (Figure 1) builds off the i-PARIHS framework (Harvey & Kitson, 2015) and adapts the Program Planning Model (Delbecq & Van de Ven, 1971), which includes specific theory-informed components and process variables that can be targeted to influence implementation outcomes at different stages of the implementation process (e.g., adoption when initiating implementation, fidelity during active implementation, sustainability when external resources and supports are withdrawn; Proctor et al., 2011).

Cognitive-Behavioral Intervention for Trauma in Schools (CBITS)

Consistent with experiential learning theory and participatory involvement of stakeholders, this dissertation leveraged a real-world implementation effort focused on the delivery of Cognitive-Behavioral Intervention for Trauma in Schools (CBITS). Nearly two thirds of youth will experience a traumatic event by the time they reach adulthood (Copeland et al., 2007; McLaughlin et al., 2013). Many trauma-exposed youth experience an array of short- and long-term mental health problems. CBITS is a school-based EBP for trauma-exposed youth and has been shown to reduce symptoms of trauma,

anxiety, and depression (Allison & Ferreira, 2017; Jaycox et al., 2018; Morsette, 2009). CBITS was initially developed to decrease the negative effects of trauma exposure in an ethnically and linguistically diverse group of primarily low-income children while being delivered in the real-world setting of schools (Kataoka et al., 2006; Stein et al., 2002). In its initial effectiveness trial, Stein et al. (2003) found that youth randomly assigned to the early intervention group had significantly lower scores on symptoms of PTSD, depression, and psychosocial dysfunction. The effectiveness of CBITS has subsequently been evaluated in a number of randomized controlled studies focused on delivering early intervention to Mexican and Central American youth. These studies showed significant reduction in PTSD and depressive symptoms (Kataoka et al., 2003; Stein et al., 2003). Similar positive effects have been found in dissemination evaluations of CBITS in other communities, including urban African American (Stephan et al., 2007), Native American (Stolle et al., 2007), and rural communities (Van Den Brandt, 2007).

While clinicians hold positive perceptions of CBITS and its effectiveness has been replicated within a range of ethnically, linguistically, and culturally diverse communities, studies indicate significant barriers and lackluster implementation outcomes (Nadeem et al., 2018). For example, even with implementation strategies targeting provider adoption and implementation in place, individual strategies alone appear to be insufficient. In their hybrid type 2 pilot of a blended implementation strategy to support provider adoption and implementation of CBITS in public schools in the northwestern United States, Lyon et al. (2019) found that, while a provider-level strategy promoted clinicians' motivation to adopt and implement CBITS, providers failed to implement CBITS and provider-level motivation attenuated over time. Authors suggested

that aspects of the organizational context are also critical to implementation success. Thus, within CBITS implementation, and EBP implementation more broadly, there is a need for facilitation strategies that attend to contextual individual-level barriers that impact whether school-based mental health providers adopt and deliver CBITS.

Methods to address both individual and contextual barriers to CBITS implementation is particularly timely and important as CBITS is currently being scaled-up through federal funding institutions, such as the Center for Disease Control and Prevention (CDC), Substance Abuse and Mental Health Services Administration (SAMSHA), and the U.S. Department of Justice's Office of Juvenile Justice and Delinquency Prevention (OJJDP), in addition to other state and regional agencies focused on improving youth access to trauma-focused care (CBITS Program, n.d.). In order for these dissemination and implementation efforts to effect large-scale change in youth outcomes and reductions in mental health disparities, methods must be developed, tested, and utilized to understand how to best support the implementation of EBPs, such as CBITS. Given the evidence supporting CBITS as well as efforts supporting its large-scale dissemination, the regional CBITS implementation effort that serves as the context of this dissertation provides an opportune context for engaging stakeholders in a mixed-method study to iteratively develop and demonstrate the promise of FIT.

Purpose of the Study

In light of existing voids in implementation literature broadly and school-based literature specifically, this dissertation involved a developmental study to establish the viability of a theoretically informed facilitation strategy (i.e., FIT) that can be used to guide stakeholder collaboration and decision making to select and tailor implementation

strategies that address context-specific barriers impeding implementation of EBPs. This research was informed by best practice in user-centered and participatory design (UCPD) research (Lyon et al., 2016), which outlines an iterative development process by which innovations are designed via end user (e.g., stakeholder) input (Figure 1). Development studies are consistent with methods used in intervention science to develop feasible, appropriate, and effective programs and practices that offer promise to improve student outcomes. However, in the case of this dissertation, the aim was to develop a feasible, appropriate, and likely effective implementation strategy that could facilitate high-quality implementation of evidence-based mental health services in schools.

The current study was an *initial development study* involving interviews with end-users and recipients of FIT to gather input to refine FIT content and theory of change. The study involved individual interviews with school-based mental health stakeholders (i.e., district and school-based leaders, clinical supervisors/school-linked mental health coordinators, school-based clinicians) to gather feedback to refine FIT content and delivery to enhance its feasibility, appropriateness, and acceptability. A qualitative and mixed-method QUAN+QUAL approach was used for the purposes of expansion to collect detailed feedback from participants (Palinkas et al., 2011). The following research questions were addressed:

RQ1-1 What recommendations do school-based mental health stakeholders have for any facilitation strategy to be viewed as feasible, acceptable, appropriate, and effective?

RQ1-2 What specific changes to the features and core components of FIT mental health do stakeholders recommend that will improve FIT usability and likely

effectiveness?

Summary

This dissertation project was accomplished via a development study, which sought to initiate a line of research that addresses a significant gap regarding the need for theoretically informed, pragmatic, and effective facilitation strategies designed to tailor implementation strategies to context-specific barriers. The proposed research project used participatory mixed methods in the context of a real-world implementation effort to inform the development of a facilitation strategy that is viewed as feasible, acceptable, appropriate, and likely effective by stakeholders as well as scientifically rigorous to likely yield effects on implementation and youth mental health outcomes.

Alternative study designs were considered, especially whether the project should evaluate the impact of FIT on provider implementation behavior and youth mental health outcomes. This design was rejected because it is premature to evaluate FIT and its impact on implementation and youth outcomes, and such a design would exceed the scope and budget of a dissertation project. Moreover, there is substantial evidence supporting the efficacy of CBITS (Allison & Ferreira, 2017; Jaycox et al., 2018; Morsette et al., 2009) and the quality of its implementation to youth outcomes (Langley et al., 2010; Nadeem et al., 2018). Instead, an important starting point is to begin with a development study that focuses on developing and refining FIT to ensure it is an appropriate, acceptable, feasible, and likely effective strategy to improve stakeholder deployment of tailored implementation plans to promote both implementation and youth mental health outcomes. Additionally, FIT can inform future research that aims to evaluate its impact on process variables, proximal implementation outcomes, and more distal youth mental

health outcomes.

Chapter 2: Literature Review

Background literature provides the conceptual understanding and shines light on the rationale for this dissertation study. This chapter opens with a discussion of student mental health needs in schools followed by an overview of the need to deliver evidence-based practices as part of a continuum of supports to prevent and address mental health problems that interfere with academic and life success. Next, the longstanding science-to-practice gap is described, with an emphasis on the growing field of implementation science and its promise to improve student access to needed mental health supports. As part of this discussion, the core constructs of implementation science are discussed as well as the rationale for designing implementation strategies that facilitate the uptake and use of EBPs in school settings. Lastly, this chapter will address the voids in current implementation science findings that build the case for this dissertation study's focus on collecting school-based stakeholder input regarding the usability, feasibility, and appropriateness of facilitation strategies broadly, as well as gather specific feedback to inform the development and refinement of FIT content and delivery.

Children's Mental Health Needs

Approximately one in five youth have a mental health problem severe enough to warrant mental health treatment (Costello et al., 2003; Racine et al., 2021). These needs have likely increased because of the COVID-19 pandemic, which have put the demand for mental services for children at an all-time high (Aramson, 2022). For instance, in a 2020 survey of 1,000 parents around the country, 71% indicated that the pandemic had taken a toll on their children's mental health (Laurie Children's Hospital, 2021). Moreover, from March 2020 to October 2020, mental health-related emergency

department visits increased 24% for children ages 5 to 11 and 31% for those ages 12 to 17 compared with 2019 emergency department visits (Leeb et al., 2020).

Of all children in the United States, the COVID-19 pandemic has had a disproportionately negative impact on students and families from traditionally underserved and marginalized backgrounds. During the COVID-19 pandemic, increased loss of hundreds of millions of jobs, social inequalities, and school closures due to the pandemic exacerbated the precariousness of a broad range of already vulnerable populations and put millions of families, children, and adolescents at greater risk of experiencing mental health difficulties (e.g., anxiety, depression) as well as various forms of trauma (Cénat & Delaxis, 2020). For some children, staying at home during the pandemic created a greater risk of experiencing multiple traumas such as physical and emotional neglect, exposure to interparental violence, social isolation, and household stressors and difficulties (e.g., drug addiction or mental illness of a parent; Cénat et al., 2020).

Additionally, healthcare inequities disproportionately impacted the physical well-being of underserved racial and ethnic groups even more substantially than in previous years due to COVID-19 pandemic (Centers for Disease Control and Prevention, 2020). Because of this, approximately 91,000 American children of racial and ethnic minorities lost a primary caregiver who provided the child's home and basic needs (including love, security, and daily care; Pediatrics, 2021), leaving them disproportionately exposed to traumatic grief and at additional risk for ACEs. For BIPOC youth, the increased risk of mental health difficulties due to the global pandemic has also been compounded by the cascading collective trauma of race-based violence against unarmed Black people (e.g.,

Ahmaud Arbery and Breonna Taylor), including the videorecorded murder of George Floyd at the hands of Minneapolis police officers, leading to protests, social unrest, and destruction and violence in communities (MHTTC, 2021). Accelerated inequities in risk for mental unwellness, trauma exposure, and limited access to effective mental health care for students, particularly for children and youth from historically marginalized groups, portend the need to provide evidence-based mental health services in schools (e.g., special education; Goodman et al., 2012).

Impact of Student Mental Health on Academic and Life Functioning

Student mental health functioning contributes directly to their engagement in learning (Alzahrani et al., 2019; Bierman et al., 2008) as well as subsequent outcomes well into adulthood (Costello et al., 2003; Robson et al., 2020). Unaddressed mental health difficulties are associated with considerable problems in adolescence and adulthood, including impaired social functioning, unemployment, suicidality, substance misuse, criminality, lower educational and occupational attainment, and lower quality of life (Arango et al., 2018; Copeland et al., 2014; Erskine et al., 2016; Hopfer et al., 2013; Kessler et al., 2007; Owens, 2016). Even mild mental health problems (i.e., subclinical) negatively influence student academic achievement and functioning (Goodman et al., 2011) and serve as risk factors for short- and long-term negative outcomes such as interpersonal problems, lower academic performance, truancy, dropout, and adult unemployment (Beesdo & Knappe, 2012). Moreover, students with unaddressed mental health needs can disrupt other students' own learning, interfere with teachers' delivery of instruction, and/or inhibit their own success in school (Cook et al., 2013). For these

reasons, educators consistently rank student mental health among their top classroom concerns (Bushaw & Lopez, 2010).

Students who receive mental health services in school show significantly more positive outcomes (e.g., prosocial behavior, reduced conduct problems, better academic performance), compared to their counterparts who do not (Durlak et al., 2011; Taylor et al., 2017). Moreover, early and equitable access to mental health services can reduce developmental disparities for traditionally underserved and marginalized children and youth (Mental Health Commission of Canada, 2021). Considering that schools are the de facto source of mental health service access in the U.S. (Duong et al., 2021), and underserved students are six times more likely to complete mental health services in schools than in community settings (Jaycox et al., 2010), it is essential that school-based mental health supports are provided at scale to students with the greatest mental health needs to optimize their engagement in learning and life functioning.

EBPs for Student Mental Health Needs in Schools

In recognition of the importance of attending to and supporting student mental health and wellbeing, schools are under pressure to adopt and implement EBPs (Adelman & Taylor, 2006; Kutash et al., 2006; Wagner & Davis, 2006). EBPs are defined as, "the integration of best research evidence with clinical expertise and client values" (Institute of Medicine, 2001). Others have defined EBPs as "research-based prevention/intervention programs with a strong empirical basis that have demonstrated positive outcomes in multiple well-designed studies" (Stoiber & DeSmet, 2010, p. 213). Across a range of professions, there has been a significant push to transport scientific findings and EBPs into routine practice in the settings where children naturally exist and

already receive human services (e.g., education, healthcare; Hoagwood, Burns, & Kiser, 2001; Kazak, et al., 2010; Titler, 2008). Over the last two decades, researchers in psychology and education have identified a number of EBPs that, if adopted and implemented in everyday service settings such as schools, have the potential to prevent and ameliorate a range of academic and mental health problems that negatively impact short- and long-term outcomes (Cook et al., 2012).

EBP Implementation in School Settings

The potential promise and educational benefits of EBPs cannot be realized unless they are effectively adopted, implemented, and sustained over time in the settings where the majority of children routinely receive human services from a range of multi-disciplinary providers (e.g., schools, healthcare settings such as primary care). Therefore, it is imperative for EBPs to be delivered in a range of child-serving settings to increase opportunities and the likelihood of all children equitably accessing high-quality care that can prevent mental health difficulties from emerging, persisting, and/or crystalizing to promote overall wellbeing and healthy functioning (e.g., Affordable Care Act, 2011; Klein, 2015). As documented in various studies, schools continue to serve as one of the primary settings in which youth receive behavioral health supports, with 70% to 80% of SEB services being delivered in schools (Duong et al., 2020; Farmer et al., 2003; Teich et al., 2008). Schools provide an easier access point, reduce the stigma associated with receiving services, and have the availability of professionals who can deliver needed services. Indeed, children are more likely to access and complete services in school settings compared to community-based settings (e.g., clinics). One study found that underserved students are six times more likely to complete mental health services in

schools than community settings (Jaycox et al., 2010). Together, these make schools an ideal setting for the integration and delivery of mental health services with academic supports (Owens et al., 2014).

With this rationale in mind, researchers have developed and established numerous EBPs that cut across multiple tiers of prevention and intervention (universal, targeted, and intensive) for implementation in the school setting. For example, school-wide positive behavior intervention and supports (Sugai & Horner, 2002) and social-emotional learning curriculum (Zins, 2004) have been developed as universal EBPs that provide students with consistent access to quality experiences and supports that prevent risk factors from developing into mental health problems, promote generalization and reinforcement of skills acquired in targeted and indicated interventions, and enhance academic outcomes (Noltemeyer et al., 2019). Moreover, targeted small group interventions grounded in cognitive behavior therapy have been shown to decrease symptoms of mental health and subclinical social, emotional, and behavioral problems and promote better academic-related outcomes (Ehnholt et al., 2005; Neil & Christensen, 2009). Last, more intensive forms of school-based treatment, such as individualized, person-centered cognitive behavioral therapy for complex student needs (Ingram et al., 2005), have been shown to reduce the risk for negative outcomes and stabilize social, emotional, and academic functioning among high-risk students (Connors et al., 2021; Hannan et al., 2019; Kilbourne et al., 2018). Given a combination of the above, policies have called for schools to deliver a continuum of EBPs that target preventing and ameliorating mental health problems (e.g. ESSA, 2015; Klein, 2015; Thomas & Brady, 2005).

Organizing the Delivery of Mental Health EBPs via Multi-Tiered System of Support

Although schools represent an ideal setting for the delivery of EBPs for student mental health needs, schools often lack an adequate infrastructure for organizing these supports in a way that ensures students receive what they need (Adelman et al., 2005), and the quality of the practices that are implemented is limited (Evans & Weist, 2004). As mentioned above, the majority of the EBPs implemented in schools for student mental health varies by the intensity of students' specific problems and needs. Through a multi-tiered systems of support (MTSS) framework, researchers and practitioners generally stratify the EBPs delivered in schools into three tiers for more efficient and effective implementation, which is grounded in the public health model of prevention (Bruns et al., 2016).

Numerous researchers have embraced and advocated for the use of MTSS to efficiently and effectively organize and deliver a continuum of EBPs in schools (Cook et al., 2010). MTSS represents a service delivery framework, grounded prevention, data-driven decision making, and layered, individualized services, that aims to prevent, address, and minimize the burden of student acquisition and performance deficits while promoting social, emotional, and academic success among all individuals in a school (Strein et al., 2003). MTSS involves the delivery of multiple tiers of supports, including universal (i.e., Tier 1), selected (i.e., Tier 2), and indicated (i.e., Tier 3) supports. Although universal supports are essential to prevent the emergence of mental health problems that could lead to disability and promote social, emotional, and academic success (Rones & Hoagwood, 2000), selected and indicated supports are integral parts of the service delivery framework to meet the needs of students who have identified,

significant, and urgent needs or have not responded sufficiently to the universal supports and been identified as at-risk by the universal screening process. While the existence of EBPs integrated into an MTSS framework is essential infrastructure to produce meaningful changes in student outcomes, broadscale change in student outcomes will not occur without an explicit focus made on implementation to ensure that the programs and practices that are integrated within an MTSS are successfully adopted, used, and sustained (Cook et al., 2015; Proctor et al., 2011).

Science-to-Practice Gap in School Settings

Despite the widespread push for implementing EBPs within an MTSS framework, research indicates that an implementation gap persists, with several barriers impeding the successful uptake, delivery, and sustainment of EBPs in schools, leading to poor quality, inconsistent, and incomplete implementation (Durlak & DuPre, 2008; Evans & Weist, 2004). The actual adoption and routine implementation of EBPs in schools are highly variable, slow, and inconsistent, which undermines the beneficial impact of EBPs on student outcomes (Owens et al., 2014). Even if adopted, only 25 to 50 % of EBPs were carried out by school staff with a comparable fidelity to the original efficacy studies, which impaired their actual effects on real students or classrooms (Gottfredson & Gottfredson, 2002).

It stands to reason that no matter how efficacious or effective an EBP has been shown to be in well-controlled studies, they will not produce positive student outcomes unless adopted and sufficiently implemented in real-world settings (Fixsen et al., 2010). There is a consensus that a significant gap between research and practice exists that negatively impacts the effect of EBPs in real-world settings, such as schools (Fixsen et

al., 2005). In addition, decades of investments made in scientific research will be wasted if the EBPs developed are not eventually adopted and received by students (O'Connell et al., 2009). Therefore, there is a critical need to systematically investigate the phenomena of EBP implementation in school settings in an effort to identify solutions to address the science-to-practice gap.

Indeed, it is commonly acknowledged by both researchers and practitioners that the promise of EBPs cannot be realized unless they are successfully translated into everyday settings in which providers and service recipients exist (e.g., schools). It has been estimated that roughly two-thirds of well-intended implementation efforts fail to achieve desired change (Damschroeder et al., 2009), and nearly half have no effect on outcomes of interest (Powell, Proctor, & Glass, 2014). Transdisciplinary implementation research has shown that without deliberate efforts to bridge the science-to-practice gap through strategic implementation, there will be uneven uptake, use, and sustainment of EBPs (Fixsen, et al., 2005; Eccles & Mittman, 2006; McGlynn et al., 2003). This is also true in education where research suggests that an implementation gap exists leading to sub-optimal outcomes for students (Durlak & DuPre, 2008; Evans & Weist, 2004; Owens, et al., 2014). Thus, a focus on implementation is vital for society to benefit from the decades of research and millions of public funds that have been invested in developing and identifying school-based EBPs.

Implementation Science

The science-to-practice gap has been a persistent problem across service settings, professions, disciplines, and countries (Eccles & Mittman, 2006; Hussey et al., 2004; McGlynn et al., 2003; Seddon et al., 2001). Therefore, the multi-disciplinary field of

implementation science, which includes research and practice components, emerged to address this research-to-practice gaps by studying the factors, processes, and strategies across multiple socioecological levels (e.g., individual practitioners, school building, district, state) that influence the uptake, use, and sustainability of EBPs in community service settings, such as schools (Baumann & Cabassa, 2020). Implementation science is defined as the “scientific study of methods and strategies that facilitate the uptake of EBP and research into regular use by practitioners and policymakers” in order to improve the quality and outcomes of service delivery (Eccles & Mittman, 2006, p. 1). While dissemination is the active and strategic spread of information about innovations to specific target audiences, implementation represents the process of putting high-quality practices in place by strategically supporting the adoption, delivery, and sustainment of EBPs (Greenhalgh et al., 2008; Rabin & Brownson, 2012).

Current Status of the Field of Implementation Science

The field of implementation science is relatively young but rapidly growing with a wide coverage of different cross-disciplinary topics. The overarching goal of implementation science is to promote the systemic uptakes of research and EBPs into public practice and policy for better service and client level outcomes (Eccles & Mittman, 2006). In its early stages, implementation research accumulated a robust, generalizable knowledge base with high relevance to the training and practice of school psychology (Fixsen et al., 2005; Forman et al., 2013; Perry et al., 2019). For example, implementation researchers have developed over 60 different implementation frameworks that can be used to guide implementation-oriented decision-making (Tabak et al., 2012), uncovered up to 601 unique determinants that obstruct or enable

implementation success (Krauss et al., 2014), developed over 400 implementation instruments that could facilitate data-based decision making (Lewis et al., 2015), generated over 70 implementation strategies that represent the methods and techniques which can be used to influence implementation outcomes (Powell et al., 2015), and synthesized existing and novel theories of organizational and individual behavior change to better understand and explain the conditions for successful implementation (Nielsen, 2015). Despite the growth of implementation-specific knowledge, implementation science, like other fields, needs a comprehensive, robust and rigorous theoretical approach to guide implementation research that can be translated into everyday practice (May, 2013).

In the early stage of development, most implementation research lacked valid theoretical bases which impeded capacity to understand, explain and predict implementation phenomena and constrained findings of factors, mechanisms, and strategies producing successful implementation (Eccles et al., 2005; Eccles & Mittman, 2006; Michie et al., 2005). Implementation research has advanced beyond its early stages to create conceptual clarity between core implementation concepts (i.e., implementation determinants, strategies, mechanisms, and outcomes) that are used by researchers, while also providing usable knowledge for stakeholders engaged in supporting real world EBP implementation efforts. Specifically, implementation researchers articulate how core constructs of implementation are distinct yet related by clear causal relationships. The increased clarity paves the way for deeper conceptualization and understanding of “when, where, why, and how” to support successful implementation in the service of promoting positive youth outcomes in schools (Powell et al., 2019). These key implementation

constructs include: (1) implementation determinants; (2) implementation strategies; (3) mechanisms of action; and (4) implementation outcomes. Lyon and Bruns (2019) outline a causal model for conceptualizing the inter-connection between these constructs to guide both implementation research and practice. Below, each of the key implementation constructs are reviewed, as well as the connection between them, drawing on specific examples applicable to school-based mental health that may inform implementation research and practice. Table 2 is also available at the end of this dissertation, which outlines widely used models, frameworks, and taxonomies associated with each implementation construct.

This simplified model for implementation success featured in Figure 3 outlines the key constructs that are essential to inform both implementation research and practice focused on school-based mental health. Overall, this model suggests that through strategic and thoughtful linking of implementation strategies to determinants and their associated mechanisms of action, there is an increased probability of achieving important implementation outcomes. In turn, it is through improved implementation outcomes that youth mental health outcomes are likely to improve.

Implementation Determinants. The successful implementation of mental health services in schools is impacted by key implementation determinants occurring or not occurring in a given system (Lyon & Bruns, 2019). Implementation determinants, also commonly referred to as “barriers” or “facilitators,” are factors that facilitate or inhibit successful implementation and can obstruct or enable the effects of implementation strategies on outcomes. Consistent with many fields of scientific inquiry, implementation researchers made a concerted effort to identify factors that explain why implementation

gaps exist by uncovering over 600 unique determinants (Flottorp et al., 2013). These 600 implementation determinants are described across over 100 implementation frameworks (e.g., Tabak et al., 2012), such as the Consolidated Framework for Implementation Research (CFIR; Damschroeder, 2009).

Across frameworks, there is relative consensus about the levels of influence at which implementation determinants operate (Lyon & Bruns, 2019). These levels are consistent with the socioecological model and frequently include: (1) the outer setting, which reflects the larger political, social, and economic context in which implementation occurs, including the school district and beyond (2) the inner setting, which constitutes the immediate organizational context in which implementation occurs, (3) characteristics of the individuals who are expected to implement the EBP, and (4) features of the EBP itself, including intervention complexity or intervention-setting fit. Implementation processes often play out across each of these levels of socioecological influence, and evidence suggests that implementation strategies that address more than one of these levels are more effective than those targeting a single level (Beidas & Kendall, 2010). Within the school-based mental health context specifically, implementation is influenced by determinants at each of the aforementioned levels, and without deliberate attention to each of these levels of influence, successful implementation is unlikely to occur. While conceptual frameworks provide knowledge of the range of determinants that could inform many aspects of implementation research and practice, lists of determinants alone are insufficient to guide efforts focused on identifying the specific barriers and facilitators present within a given school system that are likely to make or break implementation success.

Notwithstanding the important contributions of work cataloging barriers and facilitators, the sheer number of determinants espoused to impact implementation creates an information management problem for practitioners who attempt to keep stock of all this information and use it in actual implementation practice (Grimshaw et al., 2012). There is a need for guidance about *how* school systems, mental health agencies, and intermediary organizations should go about: (1) identifying the most influential and salient determinants in a given context; and (2) accurately and efficiently tailoring or linking particular implementation strategies to the salient determinants identified in a given context (Chambers et al., 2017; Powell et al., 2017). Without a dedicated process regarding *how* to identify the most influential and salient determinants within a given setting, and accurately tailor implementation strategies to determinants, adoption and delivery of EBPs will remain a hit or miss affair with limited impact on implementation (e.g., adoption, fidelity, reach) and student outcomes being unpredictable and inadequate. Thus, both implementation scientists and practitioners need to develop and test *methods* to: (1) distill and prioritize the “vital” implementation determinants most likely to impact implementation success or failure; and (2) accurately and efficiently link strategies to determinants that are defined with sufficient specificity that they can inform practice.

Implementation Outcomes. One of the great achievements in the field of implementation science has been the identification and concrete operationalization of implementation outcomes (Albers et al., 2020; Lewis et al., 2015). Implementation outcomes are defined as “the effects of deliberate and purposive actions to implement new practices, programs, or interventions” (Proctor et al., 2011, p. 65). Implementation outcomes have important functions that are distinct from service system outcomes (e.g.,

effectiveness, timeliness, equity) and client-level outcomes (satisfaction, functioning, symptomatology), as they are: (1) indicators of the implementation success; (2) proximal indicators of implementation processes; (3) key intermediate outcomes (Rosen & Proctor, 1981) in relation to the service or client-level outcomes of which service providers hope to ultimately achieve. Without data on implementation outcomes, stakeholders may be unable to distinguish whether implementation failure was due to an implementation or intervention problem. Since EBPs will not be effective if they are not implemented as intended, implementation outcomes serve as necessary preconditions for desired changes in the quality and type of services being delivered in schools that youth ultimately receive and benefit from. Implementation scientists have deepened work on implementation outcomes in several ways to address gaps in the research. In their seminal paper, Proctor et al. (2011) developed a taxonomy of these implementation outcomes, offered conceptual definitions, and addressed their measurement challenges. Others, like Mettert and colleagues (2020), have begun identifying, evaluating, and creating pragmatic and rigorous approaches to measure implementation outcomes, an area in desperate need of continued research.

Overall, implementation scientists have generally come to consensus on eight main implementation outcomes of interest that constitute the desired endpoints of implementation efforts. These include acceptability, feasibility, appropriateness, adoption, penetration/reach, fidelity, cost, and sustainability (Proctor et al., 2011). While each is distinct, implementation outcomes are interrelated in dynamic and complex ways (Hovmand & Gillespie, 2010; Reppenning, 2002) and are likely to change throughout any particular implementation process. For example, certain implementation outcomes can be

most salient at different points in time or to different stakeholders. Thus, a range of stakeholders and priorities should be represented throughout the implementation process to ensure salient outcomes are captured given the overarching goals of any specific research or practice project. Moreover, implementation outcomes are considered either latent/perceptual or manifest/observable variables, meaning some may be more appropriately assessed or inferred in terms of attitudes, opinions, and intentions, or reported in terms of observable behaviors (Proctor et al., 2011). Below, each outcome is discussed below with applicable school-based mental health examples.

Acceptability, Appropriateness, and Feasibility. Acceptability is the perception among implementation stakeholders that a given treatment, service, practice, or innovation is agreeable, palatable, or satisfactory. Appropriateness is the perceived fit, relevance, or compatibility of the EBP for a given practice setting (e.g., school), provider, population, or particular issue/problem. Feasibility is defined as the extent to which a new EBP can be successfully used or carried out within a given setting (Karsh, 2004). While acceptability, feasibility, and appropriateness appear similar, they remain conceptually distinct. For example, a program may be appropriate for a service setting—in that it is compatible with the setting’s mission or service mandate but may not be feasible due to resource or training requirements. An EBP, such as the Good Behavior Game (Kellam et al., 2011), might be considered a good fit (i.e., appropriate) for positively and proactively addressing and preventing student behavior difficulties but its features (for example, rigid protocol and particular language used) may render it unacceptable to teachers and increased demands on teachers may yield it unrealistic to implement (unfeasible).

As shown in the example, acceptability, appropriateness, and feasibility are perceptions among stakeholders. Because they are perceptual by nature, ratings of each may be different when taken at the outset of an effort when stakeholders are unfamiliar with the actions required of them, and again in later stages of implementation as stakeholders become more familiar with the EBP chosen for implementation. Most frequently, acceptability, appropriateness, and feasibility are assessed during the preparation stage when an implementation strategy is being developed or an EBP is being selected for implementation. For example, it may be wise to assess school-based mental health clinician's perception of appropriateness and feasibility for Trauma-Focused Cognitive Behavioral Therapy (Cohen et al., 2012) prior to signing a contract for training, as low appropriateness or feasibility signal some "pushback" to the implementation effort, as can be seen when providers feel a new program is a "stretch" from the mission of the setting or is inconsistent with their current skill set, role, or job expectations, which may cause problems for adoption and implementation in future stages (Proctor et al., 2011). On the other hand, if TF-CBT is determined to be an essential intervention to make accessible within the setting, there is significant work to be done to improve clinician's perceptions that it is indeed an acceptable, appropriate, and feasible intervention for them to implement as part of their routine practice.

Adoption. Acceptability, appropriateness, and feasibility are all predictors of *adoption* (also referred to as "uptake"), which is the intention, initial decision, or action to try or employ an EBP. Adoption could be assessed from the level of the provider or the organization as well as either as a perceptual or behavioral outcome depending upon when and how it is assessed (e.g., during the preparation stage where intent to adopt may

be measured perceptually, or in later implementation when the action of initial adoption can be observed). Adoption is helpful to assess in the early stages of implementation (e.g., shortly after training) to understand which implementers may need additional follow-up support. Insufficient adoption puts a ceiling on the number of clinicians who persist towards high fidelity. For example, a school that recently provided training in a Tier 1 prevention program, such as Second Step (Frey et al., 2000), may want to engage in brief classroom observations to assess whether teachers across the system have adopted the intervention to engage in follow-up data collection about barriers to adoption that can inform the delivery of tailored coaching supports. In this example, they may find that only 10 out of 20 teachers who received training actually initiated adoption of Second Step. This would suggest a need to provide some teachers with additional follow up support depending on whether they began implementing Second Step or not.

Fidelity. Fidelity is the most common implementation outcome to be assessed and is defined as “the degree to which a program or practice was implemented as it was intended in the original protocol by the program developers” (Dunesbury et al., 2003). Fidelity is often assessed during the active implementation phase, when implementers have begun implementing the EBP with some regularity. While the literature identifies five fidelity dimensions overall (i.e., adherence, quality, adaptation/differentiation, dose, and participant responsiveness/involvement), fidelity is typically measured across one or more of the following subconstructs: (1) adherence to the program protocol, (2) dose or amount of program delivered, and (3) quality of program delivery. To date observational measures of adherence specifically are considered the “gold-standard” in integrity measurement (Sanetti & Kratochwill, 2009; Sutherland et al., 2013); however, this

approach to integrity assessment is not well-suited for implementation research or practice (Sanetti et al., 2020).

McLeod and colleagues (2021) outline several features of existing observational measures that limit the feasibility of use in schools. First, it is costly and time intensive to gather integrity data with observer-rated measures, particularly when efforts are part of locally-managed implementation projects (Schoenwald et al., 2011). For example, an elementary school with 18 teachers that requires two 60-minute integrity observations per year would result in 36 hours of observation. Second, assessments of adherence should be ongoing to continuously improve and inform decision-making in real time. In their current form, observational measures are not suited for this purpose (Hogue et al., 2017). The cost and time required to use observational measures limits the frequency with which they can be used. As a result, they capture a smaller sample of implementer behavior (i.e., fewer occasions) and may miss important information (e.g., changes related to coaching; Hogue et al., 2013) that can spur targeted action via tailored implementation. For these reasons, pragmatic integrity measures that are practical, brief, easy to use, acceptable, and technically adequate are necessary to improve data utilization in school implementation efforts (Hogue et al., 2013; Stanick et al., 2019).

In addition to capacity factors that limit routine fidelity assessment in schools, a lack of measures for additional facets of fidelity prevents schools from accurately tailoring implementation strategies to individual-level determinants of implementation. Currently, most measures of treatment integrity lack companion tools that assess important factors significantly influencing the adherence-outcome relationship. For example, when looking at the root causes of intervention failure in a longitudinal study,

Weck and Colleagues (2014) found that the collaborative and affective bond between an implementer and intervention recipient (i.e., therapeutic alliance; Luborsky, 1984) acts as a prerequisite for adherent and competent implementation. Additionally, client responsiveness, engagement, and motivation have been hypothesized as important mediators of intervention success even when interventions are delivered with high adherence. As such, adherence alone may not constitute the sole, or even most influential, “delivery factor” that effects intervention success, and additional measures are needed to support accurate and efficient delivery of implementation supports.

Penetration/Reach. Penetration, or reach, is an observable construct thought of as the integration of a practice within a service setting defined by: 1) the number of eligible service recipients who actually receive the service, or 2) the number of trained implementers who actually adopt and utilize a particular practice or program (Glasgow et al., 1999; Proctor et al., 2011). Several methods for calculating reach exist and can occur later in the active implementation and sustainment phases. For example, service reach to eligible service recipients can be calculated by dividing the number of eligible people who use a service by the total number of people eligible for the service. Implementation reach can be calculated by dividing the number of practitioners who deliver a given intervention divided by the total number of practitioners trained in or expected to deliver the service. Reach is an important and helpful implementation outcome to monitor, as it can highlight differences or similarities that better equip stakeholders to tailor strategies that improve dissemination and implementation outcomes, such as client awareness and engagement or intervention adoption and implementation.

Sustainability. Sustainability is the extent to which a newly implemented

intervention is maintained or institutionalized within a service setting's ongoing stable operations (Proctor et al., 2011). Although arguably the end goal for implementation, sustainability remains one of the least understood and most vexing issues for implementation research. Sustainability in particular has been difficult to understand due to unique methodological challenges and lack of consensus in the field regarding operationalization, conceptualization, and measurement approaches (e.g., different metrics and observation periods). While sustainability can be assessed retrospectively via self-report or prospectively through observation, sustainability is rarely studied as part of implementation efforts, especially in the area of school-based mental health.

To date, sustainability as a concept is more frequently discussed in conceptual papers, and empirical articles measuring sustainability of EBPs are lacking (Proctor et al., 2011). This could occur because grant funding stops before sustainability data can be collected or because systems get stuck in “the flavor of the month” problem, characterized by rapid adoption and abandonment of programs or practices. Sustainability also depends upon other implementation outcomes that temporally precede it, such as adoption and fidelity, and often adoption and fidelity is too low to enable sustainability. Thus, implementation efforts should be planned with sustainability in mind at the outset, with an understanding that insufficient adoption and fidelity and overall implementation infrastructure will lead to sustainability issues.

Ultimately, lack of sustainability means a failure to produce a return on investment. The most advanced understanding of sustainability comes from the work by McIntosh and colleagues (2015) on factors that influence the continuance of Positive Behavior Interventions and Supports once school systems have reached full fidelity. One

of the main takeaways from this research is the critical role of teams in buildings that involve formal and informal leaders who work together to use a range of implementation strategies to maintain EBP implementation through ongoing efforts to gather data and provide feedback, address turnover, and provide ongoing learning opportunities. While this research elucidates important findings, there is a need for future research to conceptualize how best to measure sustainability and identify the essential implementation strategies that target vital determinants of successful sustainability.

Implementation Strategies. Just as there is an ever-growing intervention science that has generated EBPs across different tiers of prevention and intervention, the science of implementation has identified a number of implementation strategies that target improving the uptake and delivery of EBPs across a range of service settings, including schools (Cook et al., 2018). While mental health services represent interventions that students receive, implementation strategies are interventions designed to support adult behavior change and organizational improvement, and ultimately bring about changes in implementation-relevant outcomes. One of the most straightforward definitions of implementation strategies is that they are approaches, methods, or techniques deployed to increase the adoption, delivery, sustainment, and scale-up of an innovation (e.g., EBP; Proctor et al., 2013; Powell et al., 2019). When viewed in this way, the strategic planning and use of implementation strategies are essential to implementation success.

Implementation strategies vary widely and may be designed to impact multiple levels of a school system, including the individuals expected to implement the EBP (e.g., via training and coaching), aspects of the inner school setting (e.g., via selecting or preparing school leaders to strategically support implementation climate), aspects of the outer

setting (e.g., via policy changes), or specific characteristics of the intervention (e.g., via increasing usability by systematically adapting the intervention for the setting or population). Implementation strategies can be single-component, “discrete” strategies (e.g., disseminating educational materials, reminders, and audit and feedback); however, most are multifaceted and multilevel, involving the combination or bundling of discrete strategies to address different aspects of the organizational context and people within it.

Because implementation strategies constitute the “how to” component of changing practice, they have unparalleled importance in implementation and scale-up efforts. Just like EBPs are to be delivered with fidelity to exert an effect, so too are implementation strategies. The use of implementation strategies tested in research settings are optimized when they are operationally defined, theoretically informed, and include operational manuals or steps to guide their use. With this in mind, Proctor and colleagues (2013) recommended carefully identifying and describing specific features of implementation strategies including the: (1) actor(s) who will use the strategies, (2) the specific action(s) that will be undertaken, (3) the targets of the actions (i.e., those who are the focus of the strategy), (4) the temporality of the strategy including the timing and sequencing, (5) the proper dose of it to have an effect, (6) detailing of the specific implementation outcomes likely to change, and (7) the theoretical, empirical, or pragmatic justification for the strategy. These criteria can be utilized to better track implementation strategies to better understand when, where, and how they exert an effect on implementation outcomes. These criteria can be particularly useful for tracking and evaluating implementation strategies when used in conjunction with existing compilations, such as those developed through the Expert Recommendations for

Implementing Change (ERIC) project and, for schools specifically, the School Implementation Strategies, Translating ERIC Resources (SISTER) project.

The ERIC project initially produced a seminal resource that established a taxonomy of and common nomenclature for implementation strategies (Waltz et al., 2014). The ERIC project yielded 73 unique strategies (Powell et al., 2015), which through a concept mapping process resulted in nine conceptual categories of strategy types: (1) Engage Consumers, (2) Use Evaluative and Iterative Strategies, (3) Change Infrastructure, (4) Adapt and Tailor to Context, (5) Develop Stakeholder Interrelationships, (6) Utilize Financial Strategies, (7) Support Clinicians, (8) Provide Interactive Assistance, and (9) Train and Educate Stakeholders. Cook and colleagues (2019) adapted the ERIC strategy compilation for use in schools via an iterative process of review and revision by a panel of experts in implementation and school-based mental health. The SISTER project (Cook et al., 2019) reviewed the 73 ERIC strategies, made surface-level changes (i.e., changes to wording or terminology) to 52 strategies, made deeper modifications (i.e., adaptations that changed the core meaning) to five strategies, deleted five strategies due primarily to contextual inappropriateness, and added seven new strategies. Deep modifications and deletions were most common in the Financial Strategies category, which has previously been identified as incongruent with standard organizational practices in educational settings (Lyon et al., 2018). No other categories required as much strategy adaptation, suggesting greater applicability in the education context. The resulting 75 SISTER strategies were adapted to increase their relevance to implementation research and practice in schools.

While the resulting SISTER taxonomy is helpful alone, the selection and tailoring

of these strategies can be further supported by the prioritization of strategies to highlight those that are likely feasible and viewed as important to delivering EBP in schools. As an extension of the SISTER project, Lyon and colleagues (2019) examined school-based practitioners' perceptions of implementation strategy feasibility and importance. Their work revealed that, out of the 75 strategies, there was a subset perceived as feasible to deploy and likely to have an impact on implementation success. For example, the following 12 strategies in particular were found to be feasible and important: (1) conduct ongoing training, (2) dynamic, engaging training, (3) provide ongoing consultation/coaching, (4) monitor the progress of the implementation effort, (5) improve implementers' buy-in, (6) build partnerships (i.e., coalitions) to support implementation, (7) involve students, family members, and other staff, (8) model and simulate change, (9) develop and organize a quality monitoring system, (10) facilitation/problem-solving to overcome specific barriers, (11) fidelity audit and provide feedback, and (12) create a professional learning collaborative. While existing compilations of implementation strategies are needed to understand the wide range of techniques and methods that can be used to drive successful implementation, as well as the narrower list of those that may be both feasible and effective, lists of strategies do not outline *how* to select and design effective implementation strategies that are tailored to a given school system's needs at a given point in time.

Implementation Science in Schools

While research implementation science literature has traditionally been dominated by the fields of health care, child welfare, and psychology (Eccles & Mittman, 2006; Graham, et al., 2006; Proctor, et al., 2009), there is a growing literature base for

education-focused implementation research. Notwithstanding discipline-specific implementation knowledge, findings from implementation science in a range of fields can inform both educational research and practice, as many of the findings are generalizable and applicable to other service sectors such as schools (Cook & Odom, 2013). For example, research in child welfare has identified specific leadership qualities that serve as key factors of the adoption and delivery of EBPs, as well as developed and evaluated specific implementation strategies to promote site-based leaders' ability to facilitate EBP implementation among providers (Aarons & Sommerfeld, 2012). These findings are generalizable to the school context in which leadership across multiple levels is likely to influence the probability that EBPs are successfully selected, installed, and sustained over time. Moreover, research from the Veterans Health Administration has produced a robust literature base on the complex and multi-faceted interplay of factors that emerge throughout the implementation process that must be addressed through dynamic strategies, such as implementation facilitation (Stetler et al., 2006). These findings are also generalizable in school settings where an interplay of multi-level factors likely impact implementation over time and require different approaches to implementation strategy use and deployment. While a range of strategies exist in other services settings to target factors influencing implementation success, there is a need to adapt specific findings from other fields to ensure they are relevant, appropriate, and comprehensible for EBP implementation efforts in the schools.

Tailored Implementation via Implementation Facilitation

In order to make quality mental health services consistently accessible in schools, there is a need to focus on implementation research and practice that aims to reduce the

research-to-practice gap and ultimately provide students with mental health services that improve child functioning. As discussed above, implementation success often rests on the implementation strategies that are utilized to address determinants and target mechanisms of action that influence implementation outcomes of interest. By increasing our ability to efficiently and effectively select implementation strategies that target the most vital and salient needs in schools, the likelihood of promoting specific implementation outcomes goes up. Thus, there is a need for school-based mental health researchers to contribute to the field of implementation by addressing existing gaps in research and practice, including the development and testing of: methods to identify and prioritize implementation determinants; systematic approaches to tailor or link strategies to determinants and specify their hypothesized mechanisms of action; and measures of implementation outcomes. Through continued commitment to implementation research and practice, school-based mental health services are more likely to have a significant impact on public health outcomes for youth.

“Tailored implementation,” or the tailoring of implementation strategies to the specific individual and contextual needs of a particular setting (Lewis et al., 2018), is touted as essential to implementation success, as research has shown that one-size-fits-all approaches are largely ineffective to produce change (Powell et al., 2017).

Implementation facilitation offers tremendous promise as an implementation strategy to improve the translation of EBPs into routine practice in schools to improve student outcomes, as it is grounded in tailoring implementation specifically to context specific needs by collaborating and building the capacity of site-based teams to address critical barriers to implementation.

Implementation facilitation is a process of interactive problem solving and support that occurs in the context of: (1) a recognized need for improvement and (2) a supportive interpersonal relationship (Kirchner et al., n.d.). Facilitation is frequently used in implementation initiatives to support stakeholders in addressing context-specific barriers to implementation in a given setting and deploying implementation strategies to address context-specific needs (Baskerville et al., 2012; Waltz et al., 2015). It is often undertaken by one or more facilitators, who build supportive relationships with individuals or teams and use specific processes or methods that promote empowerment and action to address the challenges encountered within a given setting during implementation (Bidassie et al., 2015; Damush, 2015). Thus, within a facilitation framework, implementation success is indirectly due to the presence of a facilitator who effectively applies facilitation skills and interactive processes to work with stakeholders to identify barriers and then design implementation strategies that promote implementation outcomes (Baskerville et al., 2012). Overall, facilitators must leverage their interpersonal skills and implementation science knowledge to provide guidance and empower stakeholders to identify/address implementation barriers and develop site-specific implementation plans that teams can deploy and evaluate in their settings (Kirtchner et al., 2014).

Although there is growing support for the use of facilitation as an interactive process that improves implementation (Baskerville et al., 2012; Stetler et al., 2006), there remain significant gaps in its use across settings that warrant further attention. First, mixed findings regarding the effectiveness of facilitation have been attributed to the lack of replicable, pragmatic, and EBP agnostic (i.e., independent of a given EBP and

generalizable across EBPs) facilitation methods for use with stakeholders (Harvey & Kitson, 2015). Although facilitation has grown in popularity and is an appealing approach to implementation practice, limited guidance exists regarding concrete, replicable methods or techniques facilitators can use to enable effective tailored implementation over time (Harvey et al., 2002). Second, implementation strategies as a whole and facilitation methods specifically have largely been devoid of theory. This is concerning since evidence suggests that theoretically informed approaches are more parsimonious and effective than atheoretical approaches (Lewis et al., 2018; Powell et al., 2019). In light of these gaps, there has been a call for research that develops pragmatic, theory-informed methods or techniques to be used within implementation facilitation and refines and operationalizes facilitation processes to promote replicability (Lewis et al., 2018; Overstreet & Chafouleas, 2016; Powell et al., 2019).

The Facilitated Implementation Tailoring Technique (FIT)

Directly addressing this call, the Facilitated Implementation Tailoring (FIT) technique potentially provides: (a) much needed guidance to facilitators regarding the methods and participatory processes to use when collaborating with stakeholders to prioritize context-specific barriers to implementation and tailor strategies to these critical, context-specific needs, and (b) elucidates potential theoretically-informed process variables that serve as hypothesized mechanisms by which facilitation may work. FIT is the combination of theoretically informed methods (e.g., structured activities, consensus building, team decision making) and participatory processes designed to provide facilitators with guidance on how to efficiently collaborate with stakeholders to identify and prioritize barriers and co-generate implementation plans that tailor strategies to

prioritized, context-specific barriers. The FIT theory of change (Figure 1) builds off the i-PARIHS framework and adapts the Program Planning Model (Delbecq & Van de Ven, 1971), which includes specific theory-informed components and process variables that can be targeted to influence implementation outcomes at different stages of the implementation process (e.g., adoption when initiating implementation, fidelity during active implementation, sustainability when external resources and supports are withdrawn; Proctor et al., 2011).

FIT has three core components that enable solution-oriented, rational decision-making and construct a prosocial interpersonal context for effective knowledge exchange between a facilitator and stakeholder group. Ultimately, FIT provides a process through which facilitators engage and empower teams in: (1) identifying and prioritizing context-specific barriers; (2) selecting strategies that address the prioritized context-specific barriers; and (3) co-developing an implementation plan to integrate and deploy feasible yet effective implementation strategies that addresses context-specific needs of a given school setting (Table 3). Based on the *Program Planning Model* (PPM; Delbecq & Van de Ven, 1971) of managing innovation implementation and planning processes, developed by Van de Ven (1980), FIT aims to increase implementation by employing the *Nominal Group Technique* (NGT; Van de Ven & Delbecq, 1974) which is a widely-used, theoretically-informed procedure with evidence supporting its use across a range of sectors to successfully engage stakeholders in prioritization and planning processes to produce improved outcomes. NGT is a widely used, theoretically informed procedure with evidence supporting its use across a range of sectors to successfully engage stakeholders in prioritization and planning processes to produce improved outcomes

(Harvey et al., 2012; Potter et al., 2004).

The PPM, and by extension the NGT, is grounded in three theories that increase the likelihood of facilitation, guiding a team of stakeholders working together to develop and deploy tailored implementation strategies that promote both implementation and youth outcomes. These theories include: (1) *decision theory* that emphasizes processes necessary to ensure solution-oriented decision making that guards against individual gain and ineffective decisions (Slovic et al., 1977), (2) *experiential learning theory* that posits adaptation and change occur through the exchange of expertise and experience between facilitators (e.g., implementation researchers, intermediaries) and stakeholders (e.g., program administrators, clinicians, consumers; Kolb et al., 2001), and (3) *social psychological theory* that emphasizes establishing an interpersonal context in which productive collaboration can occur (Cartwright, & Zander, 1968; Heider, 2013; Thibaut, 2017). By guarding against faulty decision-making, counterproductive interpersonal dynamics, and lack of knowledge, it is hypothesized facilitation strategies grounded in these theories will: (1) be viewed as a feasible, acceptable, and effective way of developing implementation strategies that are tailored to context-specific barriers in a given setting and (2) impact precise process variables that serve as potential causal mechanisms linked to the increased likelihood that stakeholders will deploy the implementation strategies they develop to improve EBP implementation.

FIT Component-Mechanism Linkages. Figure 2 displays core FIT components, as well as specific process variables that may serve as the causal mechanisms through which tailored implementation results in improved implementation and youth mental health outcomes. This is consistent with contemporary implementation research, which calls for the development and testing of theoretically informed implementation strategies available that target precise mechanisms of change (Lewis et al., 2018). Each process variable that could act as a potential causal mechanism informs a specific component of the FIT strategy. Below is a discussion of the three FIT components that strategically address each of the process variables hypothesized to lead to tailored implementation.

Solution-oriented, consensus-driven process. FIT leverages decision theory to conceptualize how people make decisions and what processes are necessary to facilitate optimal, reasoned decision-making (Harvey & Kitson, 2015). The nominal group technique (NGT) is grounded in decision theory and provides an evidence-informed approach to group work that manages interpersonal dynamics and structures cognitive reasoning in groups. NGT guides solution-oriented, consensus-driven decision making, by providing a facilitator with methods to exchange knowledge and expertise to frame an issue, generate rich feedback from participants, balance participation of group members, and ultimately obtain a prioritized set of decisions based on voting (Delbecq, 1983; Gallagher et al., 1993; Langford et al., 2002; Van de Ven & Delbecq, 1972). NGT enhances the value of information by generating solutions/ideas in response to a well-framed tension or question (e.g., What is the main individual-level barrier among clinicians that is likely to interfere with their delivery of the ‘EBP’ with fidelity?) and supporting participant consensus through a process of prioritizing recommendations or

solutions through systematic group discussion and voting (Langford et al., 2002). It allows disparate ideas on matters of shared interest to be expressed and collated, with a view to identifying areas of consensus and establishing priorities for change (Harvey & Holmes, 2012; Vella et al., 2000). NGT methods are hypothesized to act on *consensus* (i.e., mutual agreement, satisfaction, and commitment; DeStephen, 1983), which in turn is hypothesized to drive team member motivation to deploy and utilize the implementation plan developed through FIT.

Knowledge exchange. By way of the PPM, the FIT is steeped in experiential learning theory (ELT; Kolb et al., 2001), which articulates that learning and knowledge exchange occurs by doing. From this view, tailored implementation is dependent on a facilitation experience that involves a facilitator collaborating with site-based stakeholders to co-construct a tailored implementation plan. Facilitators enter the experience with knowledge of theory (e.g., health action process model and organizational change theory and evidence-informed resources), which they exchange with stakeholders for purposes of learning. Site-based stakeholders, on the other hand, enter the experience with knowledge of challenges and the implementation context, which they exchange with the facilitator for purposes of learning. Combined, the facilitation experience provides opportunities for learning and knowledge exchange that increases the likelihood of designing and tailoring implementation strategies that are: 1) appropriate given an organization's culture, constraints, and preferences; and 2) evidence and theory to support accurate strategy selection for prioritized concerns. Skillfully structured knowledge exchange through use of the FIT NGT is hypothesized to act on a team's *collective efficacy*, which reflects team members' belief in their ability to design

and deploy a tailored implementation plan that addresses context-specific barriers (Lawler, 2001).

Prosocial interactions. FIT leverages social psychological theory to conceptualize the prosocial interactions between group members that are necessary to promote effective knowledge exchange and decision-making (Cartwright & Zander, 1968; Heider, 2013; Thibaut, 2017). Exchange of knowledge and shared decision-making can rarely occur apart from interpersonal interactions (Paulus, 2000). To exchange information, learn from others' explicit and tacit knowledge, and engage in reasoned, solution-oriented decision-making, facilitators must create a hospitable space, norms, and interdependency among group members to create a sense of mutual ownership over the process (Bakersville et al., 2012). Moreover, without structure, teams tend to perform poorly and make ill-informed decisions under unstructured situations (LaFasto & Larson, 2001), with some members socially loafing (Singh et al., 2018), making decisions based on social desirability (Singh et al., 2018), and/or dominating the group process or distracting others from goals (Landeta, 2006; Rowe & Wright, 2011).

Facilitators who establish prosocial norms, create a sense of interdependency, and use a structured group process are likely to promote prosocial interactions that yield better group functioning and more creative insights (Bastian et al., 2018). Prosocial group interaction can lead to a type of "synergy" that fosters investment and encourages teams to strive toward continual improvement (Campbell & Mark, 2006; De Dreu et al., 2000). FIT emphasizes prosocial norms, interdependency, and structured interactions to create a collaborative, engaging atmosphere in which knowledge is exchanged and systematic reasoning can occur to reach consensus. This component is hypothesized to act on group

collaboration, which is characterized by two or more people coming together in a common experience and working prosocially with one another to achieve a common goal (e.g., tailored implementation; Schei et al., 2011).

Although FIT fills a gap in the literature and could theoretically support stakeholders in effectively solving problems related to implementation in real-world change efforts, there is a need to engage stakeholders in a participatory process of developing and designing FIT prior to its testing and use to ensure that it not only can effect change by leveraging theoretically principles, but also can be used as part of real-world implementation efforts (Sanders et al., 2002). To date, many education innovations have been developed without participation and involvement of end-users with specific design principles in mind, resulting in reliance on researcher biases' as well as their own ideas, skills sets, and experiences, which may be starkly disparate from those for whom they are designing (e.g., Lyon et al., 2015). Thus, while structured and theoretically informed facilitation strategies, such as FIT, may serve a critical "function" in applied implementation work, it is critical for these methods to be developed and designed in such a "form" that they are equally feasible, satisfying, and appropriate for continued use in practice (Lyon et al., 2016). Lacking a focus on "form" (e.g., usability, feasibility, acceptability) and over-emphasizing "function" (e.g., effectiveness), strategies and methods developed via implementation science run the risk of replicating the longstanding science-to-practice that implementation science was developed to resolve (Karsh, 2004; Littlejohns et al., 2003; Lyon et al., 2015). Developmental studies that use user-centered, participatory approaches are well-suited to inform the development of usable and effective facilitation strategies.

FIT Development based on User-Centered and Participatory Design

Many of the challenges that exist for translating implementation research findings into actual everyday implementation practice in schools may be prevented by addressing fundamental design problems of implementation strategies early in the development process through a set of principles and methods drawn from user-centered and participatory design approaches (UCPD; Lyon & Koerner, 2016; Sanders, 2002). UCPD is an approach to innovation (i.e., products, assessments, interventions, and implementation strategies designed to ultimately influence or change people's social, environmental, and organizational conditions as well as their choices, attitudes, beliefs, and behaviors) development and design that is grounded in collecting and utilizing information about and from the people who will ultimately use or receive an innovation (Courage & Baxter, 2005; Norman & Draper, 1986). Although UCPD borrows concepts from participatory research, it uniquely bundles them into a set of principles and procedures that are intended to make innovations more accessible and appealing and improve innovation effectiveness over time (Lyon & Kroener, 2016). The principles and methods employed via UCPD ultimately allow researchers, or designers, to enhance user experience and increase the potential for innovations to live and sustain in the real world.

To ensure that innovations are accessible and appealing and improve their effectiveness over time, UCPD research focuses extensively on usability—the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency, and satisfaction in a specified context of use (International Standards Organization, 1998). Principles for ensuring usability, outlined by Lyon and colleagues (2016), suggests that well-designed interventions should: (a) provide end-

users, service recipients, and other users opportunities to rapidly build understanding of or competence in their use (*learnability*); (b) minimize the time, effort, and cost of using the intervention to resolve identified problems (*efficiency*); (c) remember and successfully apply important elements of the intervention without many added supports (*memorability*); (d) prevent or allow rapid recovery from errors or misapplications (*error avoidance/reduction*); (e) be viewed as acceptable and valuable compared with other interventions available within the larger marketplace (*satisfaction / acceptability / reputation*); (f) maintain simplicity (*low cognitive load*); and (g) be designed—first and foremost—to fit their context of use (*exploit natural constraints*).

To meet the principles of UCPD related to ensuring usability, UCPD places a strong emphasis on explicitly *identifying primary and secondary users* (Cooper et al., 2007; Grudin & Pruitt, 2002). Primary users are the target group for a product, whose needs are prioritized in the design or redesign process. An example of a primary user in an educational setting may include a teacher (primary user) who would ultimately deliver an evidence-based social-emotional learning curriculum (innovation) on a daily basis. Secondary users are those who are likely to be generally satisfied with the design elements identified based on the primary users, but who may have additional needs that can be accommodated without compromising an intervention's ability to meet the primary users' needs. An example of a secondary user in an education setting may include a leader (secondary user) who needs the curriculum (intervention) to be delivered within a 30-minute block of time. While there are a range of systematic methods for identifying essential primary and secondary users to include in UCPD research, one parsimonious model for user identification is the lead user approach, wherein the experiences of

particularly advanced users are collected to uncover system problems and solutions (which lead users often identify on their own; von Hippel, 1989). This method has been found to improve the efficiency of the product design process (Olson & Bakke, 2001).

The conceptualization of users and user needs should not only involve explicit articulation of user types but should also incorporate primary and secondary user perspectives across innovation development phases. Engaging end users early in the innovation development process allows for insight into the lived experience of primary and secondary users and strengthens interventions by promoting usability and ultimately increasing utility and fit while reducing burden and load for practical application (Etchell & Yelding, 2001; Lyon & Kroener, 2016; Wilkerson & De Angeli, 2014). Lacking participatory approaches in the development stage, researchers generally rely on their own ideas, skills sets, and experience, which may be disparate from those for whom they are designing (Hoddinott, 2015). To guard against social psychological phenomenon (e.g., positivist bias, groupthink, and citation bias) to which scientists often fall prey when developing and designing innovations, development studies can be performed to check researcher bias at the early stages of development and ultimately co-develop better interventions with those who may use and receive them (Hoddinott, 2015).

Early in the intervention design process, development studies are a critical starting point for the iterative development and eventual rigorous testing of innovations (e.g., implementation strategies; see Figure 2 in Chapter 1 for translational research process; Lyon et al., 2016). Indeed, there has been an increase in the execution and publication of developmental studies over the past ten years that provide insights into the factors that impact the feasibility, usability, and ultimately likely effectiveness of interventions (Craig

et al., 2008). This has been attributed to the rise in acknowledgement that the development of interventions has been largely a “black box” affair (Hoddinott, 2015). Lacking proper reporting of development studies, the development of innovations from inception to testing will remain a “black box” with little knowledge sharing from the experiences of other professionals and designers.

Development Studies

Development studies are a critical aspect of intervention science, within the translational spectrum of science. Development studies focus on the iterative development and refinement of innovations that can be more rigorously tested in pilot effectiveness and efficacy research (Krener, 2006). From a funding perspective, R34 and R21 projects from the National Institute of Mental Health and Development and Innovation projects from the Institute of Education Sciences represent specific funding mechanisms devoted to developmental and refinement studies. Development studies are used early in the intervention science continuum to develop interventions that have a higher likelihood of being adopted and utilized following testing, and reduce “research waste” resulting from developing interventions that never impact service or client-level outcomes (Lyon et al., 2015)

Development studies employ participatory methods associated with UCPD to understand the ways in which researchers, or innovation designers, need to strategically revise or refine key components of an innovation before investing in resources to fully develop and test the innovation. Development studies typically start with an innovation that has a theory of change, such as FIT, and engage stakeholders in decision-making processes using participatory methods, typically focused on the “what, why, how and

when” decisions involved in specifying an innovation as well as information regarding innovation processes and resources, to enhance the usability and likely impact (Hoddinott, 2015). Specific participatory methods used in development studies include individual interviews with primary and secondary users, focus groups, structured activities (e.g., card sorting or structured brainstorming and prioritization), and more recently generative methods (e.g., structured creation activities; Daymon & Holloway, 2002).

Individual interviews are a valuable data collection method to use in early development stages as this method enables opportunities for semi-structured discussion and feedback between researchers and end-users to develop early prototypes for demonstration in future iterations of design processes (Bowen et al., 2009). While a variety of structured activities can be utilized within the interview format to glean information from end-users to better understand their needs and lived experience (e.g., cognitive walkthroughs, card sorting tasks, generative processes; e.g., Choy-Brown et al., 2016; Lyon et al., 2015; Sanders et al., 2002), semi-structured qualitative or mixed method approaches hold great potential for the study of intervention design because of their ability to enable researchers to be closely involved with research participants (Daymon & Holloway, 2002). This helps researchers to better understand social processes, the motivations of participants, and the contexts in which they are situated and understand the subjective viewpoints of a range of key stakeholders to develop effective, collaborative dialogue for intervention development and prototyping and ultimately increase intervention usability and likely effectiveness (Lyon et al., 2016).

Gaps in the Current Research

Overall, there is a need for practical guidance about *how* school systems should go about supporting implementation. Without practical strategies that help school systems identify the most influential and salient determinants within a given setting, and accurately tailor implementation strategies to determinants, EBP implementation will remain a one-size-fits-all, ‘hit or miss affair,’ with limited impact on implementation outcomes (e.g., adoption, fidelity, reach) and student functioning. Thus, there is a need to use evidence-based knowledge and include participatory involvement of stakeholders to select and adapt strategies that are matched to site-specific implementation barriers and deemed feasible for use (Pellecchia et al., 2018; Powell et al., 2019).

Facilitation is a widely endorsed strategy to support EBP implementation (Baskerville, Liddy, & Hogg, 2012; Waltz et al., 2015) and could serve as an effective means of tailoring implementation strategies to address the complexities of “real-world” implementation (Harvey & Kitson, 2015); however, significant gaps remain, such as the lack of replicable, theoretically-informed, pragmatic, and EBP agnostic (i.e., independent of a given EBP and generalizable across EBPs) facilitation methods for use with stakeholders (Kirchner et al., 2014). When considering these limitations, there is a need for developmental research that aims to develop and demonstrate the promise of pragmatic, theory-informed facilitation methods. Such research will potentially lead to better scale-up of EBPs as well as generalization and use of effective facilitation across different facilitators, EBPs and school systems (Mittman, 2012; Oxman et al., 1995).

Purpose of the Study

Facilitation strategies that use methods of supporting stakeholders to develop site-

specific implementation plans should be designed to live in the real world so they can be used to support everyday implementation efforts in schools (Kirchner et al., 2014; Stetler et al., 2006). For this to occur, researchers, or designers, of facilitation methods must engage with end users at the outset of the development process to receive input to co-develop interventions that can live and sustain in the real world (e.g., Lyon et al., 2016; Sanders et al., 2002). Such research can also contribute generalizable knowledge that helps inform future research. The purpose of this development study was to conduct interviews with school-based mental health stakeholders to collect input regarding the acceptability, feasibility, and appropriateness of facilitation strategies broadly, as well as gather specific feedback to inform the development and refinement of FIT content and delivery. The specific research questions guiding this study are as follows:

RQ1-1 What recommendations do school-based mental health stakeholders have for any facilitation strategy to be viewed as feasible, acceptable, appropriate, and effective?

RQ1-2 What specific changes to the features and core components of FIT do mental health stakeholders recommend that will improve FIT usability and likely effectiveness?

Chapter 3: Method

Setting and Participants

This study recruited internal facilitators (e.g., implementation champions, change agents, leaders) and school-based mental health professionals (i.e., school-based mental health provider) from school systems in Minnesota that were connected to real-world, statewide implementation effort focused on increasing the uptake and routine use of trauma-focused evidence-based school mental health interventions (i.e., CBITS, Trauma-Focused Cognitive Behavioral Therapy [TF-CBT]; Cohen & Mannarino, 2015; Southam-Gerow et al., 2020; Stein et al., 2003) in schools. This study was part of a larger collaborative implementation effort between the Minnesota Department of Human Services (MDHS) and the Minnesota Department of Education (MDE) that most recently has focused on appointing school-linked mental health coordinators (i.e., clinical and administrative supervisors) from community-based clinics to oversee school-based clinicians contracted to work in schools throughout the state of Minnesota. MDHS and MDE focused their initial efforts on training school-based mental health providers in a range of EBPs and aimed to further support the uptake and delivery across school districts by providing follow-up implementation supports to school-linked providers and their SMH coordinators to provide student access to high quality mental health care that addresses community identified needs.

Regarding recruitment, individuals were purposefully sampled based to maximize “information power” (i.e., the actual sample holds adequate understanding and relevant information to develop new knowledge, referring specifically to the aim of the study at hand; Malterud et al., 2016) regarding implementation facilitation, implementation

barriers, and implementation behavior change (e.g., Palinkas et al., 2015). This approach was used to ultimately meet “conceptual depth criteria” (Nelson, 2017) and “theoretical sufficiency” (i.e., reach sufficient depth of understanding that can ensure data includes both subtlety and richness of meaning for analysis (Dey, 1999; Hamilton, 2019).

Specifically, to purposefully sample schools, the lead researcher and fellowship sponsor (Cook) worked in connection with MDHS to identify individuals with varying levels of success and experience implementing mental health EBPs in schools across the state of Minnesota. Based on best practice recommendations for effective non-probabilistic and purposive sampling methods for qualitative analysis of individual interviews, 12 end users were recruited with no more than two facilitators and one school-based stakeholder from any one school to gather input from participants operating in different settings. In previous research on purposive sampling in qualitative work, the meta-themes are typically captured within the first six interviews, and the full range of thematic discovery (i.e., saturation) typically occurs within 12 interviews (Guest et al., 2006). Smaller sample sizes are appropriate for deductive coding designs (Hamilton, 2013); however, we planned a contingency to recruit more if we had not reached saturation by 12 interviews; however, based on the data, saturation was met at approximately eight interviews with limited additional themes identified after the first eight interviews were completed.

Table 4 displays participant demographics for the complete sample of 12 end users. Providers and clinical supervisors worked in four clinics in southern, northern, and central Minnesota. School-based professionals (i.e., providers, school and district administrators) included in the study worked in rural, suburban, and urban schools in eight different districts. In addition to demographics described in Table 4, participants

were asked about role-specific experiences, which are described herein. All district and school administrators indicated that they had served on any teams working on school-based mental health services or MTSS for behavior during the study year or previous year. These teams included: district SEL teams, site-based quality improvement teams, mental health collaboratives, student support teams, school-based mental health teams, and problem-solving teams. Clinical supervisors were asked about their supervision with school-linked mental health providers. Clinical supervisors indicated that they supervise three to nine clinicians ($M = 6.25$; $SD = 2.77$) for one to two hours per supervisee weekly. Supervisors indicated that they spend approximately zero to 30 minutes of weekly supervision ($M = 13.33$ minutes; $SD = 12.47$ minutes) discussing the use or delivery of EBPs.

Providers were asked about their work with students and the EBPs they provide in schools. All providers indicated that they provided mental health services to students during the study year. Two providers indicated using only telehealth to see students, while two indicated that they saw students via telehealth and in person. Providers reported seeing an average of 22 students during the previous academic year ($SD = 7.5$; min. = 15, max. = 35). During the current or previous school year, providers indicated using the following EBPs with students and their families: TF-CBT, Cognitive Behavioral Therapy, MAP, Dialectical Behavior Therapy, Motivational Interviewing, Parent-Child Interaction Therapy, Eye Movement Desensitization and Reprocessing. It is noteworthy that while providers were trained in CBITS through the statewide implementation effort, none were implementing CBITS currently. Since providers were actively implementing a range of EBPs and some that were trauma-focused (e.g., TF-

CBT), questions and activities in the qualitative interviews were framed to discuss CBITS specifically, where appropriate, and EBPs broadly.

Measures

Data collection tools (quantitative measure and semi-structured interview guide) assessed the following: participant demographics, FIT acceptability, appropriateness, feasibility, and likely effectiveness, and stakeholder recommendations. Quantitative measures included the Feasibility of Intervention Measure (FIM), Acceptability of Intervention Measure (AIM), Intervention Appropriateness Measure (IAM; Weiner et al., 2017) and a brief follow-up survey administered for the purpose of triangulating findings from the qualitative interviews with participants. Detailed descriptions of measures are described in subsequent sections, outlined briefly in Table 5, and copies of measures and the semi-structured focus group guide are included in Appendix 1-3.

FIT Feasibility, Acceptability, and Appropriateness

Weiner et al. (2017) constructed and validated a suite of valid, reliable, and pragmatic measures of three key implementation outcomes: acceptability (i.e., the perception among implementation stakeholders that a given intervention, service, practice, or innovation is agreeable, palatable, or satisfactory), appropriateness (i.e., the perceived fit, relevance, or compatibility of the innovation or evidence-based practice for a given practice setting, provider, or consumer; and/or perceived fit of the innovation to address a particular issue or problem), and feasibility (i.e., the extent to which a new treatment, or an innovation, can be successfully used or carried out within a given agency or setting). The AIM, IAM, and FIM are four-item measures endorsed on a 5-point ordinal scale that ranged from *completely disagree* to *completely agree*. Items on each

measure are agnostic to the target innovation and include stems such as: “I like this [innovation].” (acceptability), “This [innovation] seems suitable.” (appropriateness), and “This [innovation] seems doable.” (feasibility). Each measure is highly reliable and valid for the measurement of innovation acceptability, feasibility, and appropriateness.

Findings from Weiner et al.’s (2017) measurement construction and validation study demonstrated good reliability and validity evidence. For example, substantive and discriminant content validity assessment indicated that items generated reflected the conceptual content of the three implementation outcomes. Results of structural validity showed high-scale reliability, specifically Cronbach alphas of .85 for acceptability, .91 for appropriateness, and .89 for feasibility. Analysis of variance provided evidence of known-groups validity, with medium- to large-size main effects of each manipulation on the relevant scale score. The Cronbach alphas for the scales from the test-retest reliability survey were .83 for acceptability, .87 for appropriateness, and .88 for feasibility. All three correlations exceeded .70; hence, the three measures demonstrated acceptable test-retest reliability. Regarding sensitivity to change, regression analysis indicated that vignette assignment order explained 41, 42, and 46% of the variance in change in the acceptability, appropriateness, and feasibility measures, respectively. The regression coefficients for the assignment order low-high and high-low were statistically significant and signed in the expected direction for each implementation outcome. Results indicated that each measure was sensitive to change in both directions, from low to high and high to low.

Semi-structured Interview Guide

Open-ended questions were used to gather data to address RQ1-1 (i.e.,

recommendations for any facilitation strategy to be viewed as acceptable, appropriate, feasible, and likely effective) and RQ1-2 (i.e., specific changes to FIT components that will increase usability and likely effectiveness). See Appendix 2 for semi-structured interview guides. Participants were asked about the use of FIT with CBITS and EBPs broadly, since none of the clinicians recruited were actively implementing CBITS in schools. To address RQ1-1, open-ended questions covered topics such as: strengths and weaknesses of facilitation strategies in general, natural constraints impacting facilitation activities, additional factors to be considered regarding main components of FIT. To address RQ1-2, qualitative questions built on quantitative ratings of acceptability, feasibility, and appropriateness. Specifically, the guide included questions such as: “Why did you give FIT ‘X’ rating on [feasibility, acceptability, appropriateness] and not a higher one? What changes would need to be made for you to give it a higher rating?” Additionally, open ended questions were used to understand modifications to specific FIT components to increase its appropriateness, acceptability, and feasibility for use in typical team meeting processes, how to best format resources and information from FIT, other strategies that could be integrated and utilized for each component of FIT. The interview guide was used as a conversation model to maximize the potential of encountering unexpected data (Kvale, 2009).

Follow-up survey

Participants were provided the opportunity to complete an optional, post-interview follow-up survey. The purpose of the follow-up survey was to triangulate findings from the qualitative interviews, specifically regarding the ideal model of facilitation to be developed given participants’ perceptions and lived experiences in

school settings. The follow-up survey was comprised of both closed and open-ended questions, such as: “Which model of support described above would: (1) fit reasonably into your workload as a school-based clinicians; and (2) result in improved circumstances that would increase the likelihood that you would feel more motivated, confident, and supported to select and implement EBPs?” and “Why would the model you selected work best for you and your school and/or clinic?”

Procedures

Prior to the development study, IRB approval was obtained from the University of Minnesota Human Subjects Department. Twelve individual interviews were conducted with end users. Participants each received \$150 remuneration for their time. Interviews were conducted via secure video conferencing (i.e., HIPAA-compliant Zoom) and lasted approximately 60 minutes. These parameters allowed for sufficient time and responsiveness to stakeholder responsibilities and bandwidth to engage in research activities that went beyond their job roles. Participants completed consent as well as the demographic survey prior to their participation in interviews. Interviews were scheduled at a time most convenient to participants, outside of working hours.

The interviews were organized according to the following structure: (1) framed the emerging use of facilitation as an implementation strategy; (2) participants respond to open-ended question to gather data to address RQ1-1 (i.e., recommendations for any facilitation strategy to be viewed as acceptable, appropriate, feasible, and effective); (3) presented FIT steps and components (e.g., the lead researcher first presented the rationale, purpose, and each step associated with FIT); (4) participants completed feasibility, appropriateness and acceptability ratings; (5) quantitative ratings were tallied

in real-time to spur qualitative discussion (e.g., “Why did you give it X rating?” “What changes are needed to give it a higher rating?”), which yielded qualitative feedback pertaining to RQ1-2; (6) participants completed the brief post-interview follow-up survey, if desired.

Analyses

Individual interviews were audio and video recorded, transcribed, and then coded using directed content analysis (Hsieh & Shannon, 2005) and qualitative coding software (NVivo; Bazeley & Jackson, 2013), which allowed research team members to highlight text segments and assign codes. To ensure that context was included in coded text and reduce interpretation biases, the unit of text segmentation was defined as at least a full paragraph of participant response following a question, prompt, or probe (Geisler & Swarts, 2019). This segmentation rule allowed for double coding when necessary or a coder to switch codes between paragraphs if the topic changed within a participant’s response. Segmentation reliability was included in kappa coefficient calculation for coding reliability. The process for developing codes and thematic analysis is described for each research question below. Codes and developed themes can be viewed in Appendix 4.

RQ1-1 Recommendations to enhance the feasibility, acceptability, appropriateness, and effectiveness of school-based facilitation strategies

RQ1-1 was addressed using a purely qualitative design using a deductive coding approach by starting with our FIT theory of change and Lyon et al.’s (2016) usability framework and utilizing participant responses to build on and refine the framework and theory. For RQ1-1, qualitative data were analyzed using directed content analysis

(Hickey & Kipping, 1996; Hsieh & Shannon, 2005; Mayring, 2000). We used the proposed FIT theoretical framework to explore potential process variables and outcomes for any facilitation strategies to be viewed as acceptable, appropriate, feasible, and effective. We also applied the principles for ensuring usability, outlined by Lyon and colleagues (2016), to explore natural constraints of school and district settings that could inform FIT design and refinement. The existing principles and proposed theory were used to identify key concepts or variables as initial coding categories (Potter & Levine-Donnerstein, 1999). As analysis proceeded, additional codes were developed for data that were not captured by the selected frameworks and theories, and the initial coding scheme was iteratively revised and refined until a stable set of codes was reached.

More specifically, the lead researcher reviewed participant responses to each question from a subset of transcripts, identified potential codes as described above for topics addressing RQ1-1, and then produced an initial codebook. The resulting codebook was reviewed and refined by the research team (i.e., descriptions of codes were co-developed and revised collectively). One additional coder was trained in the resulting codebook. Training included: 1) assigned readings, presentation and discussion of qualitative coding and analysis texts; 2) a presentation of the study background, rationale and research aims; 3) review and discussion of the codebook and code definitions; 4) co-coding two transcripts with the lead researcher; and 5) assessing reliability (see below) using a subset of four additional transcripts. After training the additional coder up to reliability, the codebook was trialed independently by the lead researcher and the additional coder across additional transcripts and subsequently revised. This process continued over several iterations until a stable set of codes was reached. Coding used a

consensus process in which each transcript was re-coded independently by both raters who then met to arrive at consensus judgments through open dialogue (DeSantis & Ugarriza, 2000; Hill et al., 2005). Inter-rater reliability (IRR) was calculated using established Kappa statistic cutoffs (moderate: .40; substantial: .60; outstanding: .80; Landis & Koch, 1977) to ensure consistency between coders and minimize confirmation bias (McDonald et al., 2019). A Kappa below .80 required discussion about codes and disagreements, modifications to the coding scheme as needed, and re-coding and another process of consensus and IRR calculation. Overall, over 50% of transcripts were double coded and checked for reliability at or above $k = .80$. After coding was complete, a final review of basic, organizing, and global themes was completed. Per Attride-Sterling's (2001) guidelines for organizing and developing themes, overarching (organizing and global) themes were refined to identify patterns in the data and understand how themes may interrelate and explain stakeholder perceptions and needs.

RQ1-2 Specific changes to the features and core components of FIT that will improve FIT usability and likely effectiveness

RQ1-2 was addressed using a mixed method design, based in Palinkas et al.'s (2011, 2015, 2019) typology of mixed methods designs in implementation and mental health services research. Quantitative and qualitative data were collected simultaneously with equal weight given to both methods (e.g., QUAL + QUAN). The mixed method design was used to achieve the function of expansion or explanation, where qualitative methods are used to explain or elaborate on quantitative study findings. The integration of quantitative and qualitative data was achieved through embedding data, which occurs when data is used to provide answers to related questions simultaneously.

Quantitative data was analyzed using a one-sample *t*-test to examine whether the sample mean was significantly different from a hypothesized value, which in this study was a mean of 3.0 for each implementation outcome (e.g., acceptability, feasibility, appropriateness) to identify content/processes modifications or confirmation that FIT was viewed as favorable (De Winter, 2013). The hypothesized criterion value for comparison was set to 3.0, as it served as a neutral point above or below favorable or unfavorable ratings of FIT could be detected. Means for FIT were compared to the criterion and those that were significantly lower than the hypothesized value were examined for significant modification and further refinement. Means for FIT that were significantly higher than the hypothesized value indicated that the component was rated as favorable by stakeholders and served as confirmation with potential minor refinements as necessary based on stakeholder feedback. Metrics of dispersion (i.e., outliers) and skewness were also be used to identify potential cases or stakeholder groups that warranted further examination.

Similar to RQ1-1, qualitative data were analyzed using directed content analysis (Hickey & Kipping, 1996; Hsieh & Shannon, 2005; Mayring, 2000). Principles for ensuring usability, outlined by Lyon and colleagues (2016) were used to identify key concepts or variables as initial coding categories (Potter & Levine-Donnerstein, 1999) and understand factors influencing FIT usability and stakeholders' perceptions of FIT acceptability, appropriateness, and feasibility. As analysis proceeded, additional codes were developed for data that were not captured by the selected frameworks and theories, and the initial coding scheme was iteratively revised and refined until a stable set of codes was reached. Specifically, using a codebook with the a priori codes defined, the

lead researcher coded and discussed transcripts with supervision and consultation from co-sponsors. Additional codes were added when content was not captured by the existing framework. After a stable set of codes was reached, the lead researcher and the trained additional coder coded each transcript independently. Inter-rater reliability (IRR) was calculated which resulted in discussions about codes and disagreements, modifications to the coding scheme as needed to ensure clear operationalization, and recoding and recalculation of IRR when $k < .80$ (McDonald et al., 2019). As in RQ1-1, a final review of basic, organizing, and global themes was conducted after coding was complete. Overarching (organizing and global) themes were refined for RQ1-2 to identify patterns in the data and understand how themes may interrelate and explain stakeholder perceptions and needs (Atteride-Sterling, 2001).

Following analysis of data, the lead researcher convened with fellowship mentors to review results and develop a set of revisions (i.e., blueprint) to the FIT theory of change and strategy, using results from RQ1-1 and RQ1-2, to address the stakeholder recommendations. Overall, this information will inform the modifications to be made to FIT, along with a blueprint outlining how and why they would be made, consistent with best practice standards in innovation modification reporting in implementation science (Wiltsey Stirman et al., 2019). The result of the study was a revised FIT theory of change, structure and content that can serve as the basis for future development and demonstration research.

Chapter 4: Results

The results below are organized according to each of the primary research questions guiding the study.

RQ1-1 Recommendations for any school-based facilitation strategy

Stakeholders were asked how facilitation may be helpful or unhelpful in a school-based mental health implementation effort, as well as how or why facilitation might affect implementation to articulate the core components of feasible, acceptable, appropriate, and effective facilitation strategies. Stakeholders were also asked about specific design parameters and contextual constraints that may cause facilitation strategies to be viewed as feasible, acceptable, appropriate, and effective to identify broad factors that may impact FIT packaging, dissemination, and use. Core components are described first below followed by design parameters and contextual constraints.

Core components of feasible, acceptable, appropriate, and effective facilitation strategies

Component #1: Shared or Common Understanding. Participants discussed the need for facilitation tools to build shared or common understanding among stakeholders within and outside of the team to be acceptable, appropriate, feasible, and likely effective. Specifically, participants suggested that for a facilitation strategy to be successful it needs to cultivate: (a) common knowledge of the roles and responsibilities of professionals within the building; (b) shared understanding of mental health services in schools; and (c) shared understanding of the vision for mental health service integration in schools; and (d) buy-in from staff.

Roles and Responsibilities. Stakeholders noted that barriers to implementation

often occurred due to a lack of understanding about the specific roles of mental health support staff and how each role uniquely contributed to effective and efficient school-based mental health services for students. For example, one stakeholder indicated:

A lot of people don't understand the credentialing differences. They don't understand kind of the day-to-day differences. They just sort of lump all of the people like us into one pool. And there's a lot of misunderstanding about the role everybody plays and the specific lane that everyone's in and how those things can complement each other and how they don't. So yeah, I think anytime you can keep people aware of those pieces. I think that's another huge piece of the whole process. (P4, school administrator)

Another stakeholder noted:

When I first came to this work, we had school psychologists doing assessments. We had school-based mental health practitioners. We had family support workers. But they never talked to each other. So, I drew my little, like the three circles, and then we talked about sort of a tiered approach. Like who's doing what -- a definition of roles. I needed them to see the value in one another and how they don't all do the same thing, but they're so interconnected. (P2, district administrator)

Stakeholders expressed the need for facilitation strategies that structured the sharing of knowledge about roles and responsibilities and accentuated the interdependency and complementary nature of roles to create shared expectations and processes at a system level.

Understanding Mental Health Care in Schools and Equitable Priority for

Students. Majority of participants indicated that successful facilitation strategies had to develop a shared value or commitment to the need for mental health services in schools and the belief that school-based professional can provide such services in an effective manner. For example:

I think there's a little bit of a misunderstanding that some of these models can't happen in a school setting and I just... that's just not true. And I wonder if something like this will help that barrier of why people think that. (P10)

Additionally, “Yeah, those are big issues... teachers not really believing in the mental health stuff. I've seen that before.” (P11, provider)

Stakeholders noted that using a strategy to cultivate shared beliefs about the utility and need for mental health services in schools would prevent additional barriers from occurring. For example, stakeholders indicated that scheduling sessions with students can be difficult when there is no shared staff belief that it would be useful or necessary. One stakeholder indicated:

[A successful facilitation strategy] would help [staff] to look at [mental health services in schools] as a win versus a sacrifice of seat time or education time. I think they want [mental health services] in the schools, but only within a small sliver of time availability: recess, lunchtime, music time. So, helping to find the value in it and understanding of the why there is such a duration for it. For example, some kids may need a couple weeks or if we're doing evidence-based practice, it may be several week sessions or months even. (P12, provider)

Shared Vision. Stakeholders noted that effective facilitation strategies needed to provide a way to develop a shared vision across all stakeholders' groups (i.e., within and

outside an implementation team). One district administrator noted:

I think a lot of what you're saying really speaks to me as the person who's dealing with the systemic issues. And I personally have relationships with over... I think I manage 30 plus schools, so I'm definitely dealing with the different personalities and different understandings of the program and mental health. (P7, clinical supervisor)

Developing a shared vision was noted as particularly challenging and ripe for structured facilitation, as ongoing efforts and siloed initiatives caused competing priorities and lack of cohesion in implementation efforts. For example:

That's where we get stuck of years and years and years of trying to decide what we're going to do around SEL, and all of us do something different. We all think that what we do is the best. So, now we're stuck because we are all surviving and we're attached onto something. When I'm supposed to lead this district to adopt and have a process and interventions and all these things around SEL, but not all the stakeholders are at the table. (P6, school administrator)

For a facilitation to be feasible, acceptable, appropriate, and effective, it needs to provide a process to develop shared understanding about the programs in place as well as the roles and responsibilities of staff and how they fit together to achieve a greater goal. Facilitation also can serve as a method to develop the broader goal or shared vision that everyone could internalize to guide their work.

Buy-In. Overall, stakeholders noted that buy-in needed to be a core outcome of a facilitation strategy for it to be viewed as acceptable, appropriate, and likely effective. Buy-in was a theme that resurfaced frequently throughout stakeholder interviews and was

viewed as a prerequisite to staff engagement and behavior change. For example, “We had to go through the steps and the motions and get the buy-in and feedback from the community, get feedback from our teachers so that people are bought into what needs to happen” (P1, district administrator). Stakeholders noted that a lack of buy-in was a key differentiator between districts that were willing to integrate mental health programming and those that were not. One stakeholder noted:

I think there's times where we get some pushback or you know, there's certain districts or schools that are a little bit less willing to work with us I think those are often the ones with less buy-in where maybe some of this kind of more zoomed out techniques would be needed to help them really understand our services and our, the benefit. (P10, clinical supervisor)

Component #2: Planned Action and Engagement. Participants discussed the need for facilitation tools that spurred action and engagement specifically around solving logistical barriers to implementation (e.g., aligning schedules, allocating time for necessary interventions to occur). For example:

P11: What is [implementation] going to look like?... I actually started a group with the police department in the school district here. And one of the biggest [barriers to implementation] was the scheduling piece. ‘How are we going to get the kids when they are in class?’ We don't want them missing the same class every day. So maybe week one, you pull them out a first period, week two [you pull them out of] second period, week three [you pull them out of] third period, [and so on] ... Well, that's going to change everybody's schedule every single week for this select population of kids. It's, it's just challenging.

Interviewer: Do you feel like facilitation might be something that would be helpful to have to figure this out?

P11: Yeah, for sure. (P11, provider)

Having protected time to go through a process of problem solving and action planning was essential. For example, “one of the things that, that I think worked well in the more favorable situation was we, we did have protected time to come back as a group. It was intentional. We committed as a group that problem solving would come back to this group of leaders” (P4). Another stakeholder noted, “I think just help with problem solving and knowing that you know, some of the ancillary, if you will, that the time and that stuff, just the education process, I think for others and, and just having help with that” (P5, provider).

Component #3: Prosocial Relationships and Trust. Underlying all of the components was a foundational component of building prosocial relationships and trust between people and within groups as part of the facilitation process. One stakeholder noted, “The relationships we have with the school really is what hinges on the success of the programming and getting the referrals and having a program that's sustainable” (P7, clinical supervisor). Regarding building common understanding and shared vision, providers noted that listening to staff and being respectful of the initiatives already ongoing was essential to preserving relationships, showing respect, and establishing trust:

I couldn't come in and I couldn't just say, "So be it" because then you alienate all of the work and the partnerships. So, part of it is going through that process, starting over, honoring the work that's been done, talking about best practice, what works, what doesn't. And so then, you know, arriving at that mutual goal.

(P1, district administrator)

Regarding shared understanding of roles and responsibilities, one stakeholder noted the importance of foundational trust by saying:

We have a lot of resources and we're all doing the best we can, but it doesn't feel like it's a very coordinated effort right now [because] there are turf wars that occur. So, the counselor doesn't want to let go of the student, even though the needs probably should be met by the mental health practitioner.... Or the therapist thinks they're the expert and they know it all and they don't value the input that the teachers or the student support specialist, who's seeing them on a day-to-day basis. So, it's about building trust between those different partners. I want them to be partners. (P2, district administrator)

Trust and safety were viewed as essential to effective facilitation but having methods or strategies to build it was identified as an area of need. For example:

People are so focused on trying to figure out, 'Is what I'm seeing face value. Is there something behind this? Is, am I being manipulated? Is there an agenda here?' Yeah, I think psychological safety is just huge in every situation and I think addressing that is really difficult. (P4, school administrator)

Thus, stakeholders welcomed tools that would integrate strategies to build prosocial relationships, trust, and psychological safety. For instance, one stakeholder noted:

I think just going back to the relationship aspect, I think any tools have to be relationally centered. I think that's a really important part and we want to approach things and have tools in a way that will continue to further the collaboration and, and the connection between people. And obviously that's hard

because everyone is on their own spectrum in terms of like how, of where they're at. But I think that that's just a really important thing to remember... We really want things I think with the school district to feel very collaborative. And so, you know, I think of, I want the tools to be collaborative in that way also. (P7, clinical supervisor)

Within these skills, stakeholders acknowledged the need to have strategies for establishing and maintaining prosocial relationships and trust to effectively collaborate and affect change in their systems.

Design Parameters and Contextual Constraints

Appropriate Organizational Level: District-Level. All participants indicated that facilitation needed to occur at the appropriate organizational level to be appropriate, acceptable, feasible, and likely effective. Most participants indicated that the district level was most ideal for facilitation activities to occur, with participation from frontline staff as needed. Providers noted that school and district administrators were in ideal positions to build their facilitation skills, as they were already in these roles but may not know who to act effectively as an implementation facilitator without strategic support. For example:

I think principals are placed in a position of needing to facilitate just by nature of their job. So, equipping them with a set of tools, and [having them] practice with it and see their superintendent using it or other district directors using it, yeah [it would be effective]. (P2, district administrator)

District-level administrators noted that they had ample time and existing meeting structures within which facilitation strategies would be optimally acceptable, appropriate, feasible, and effective. For example, one administrator described their meeting structures:

Cabinet is once a week from [times], so a two-hour cabinet meeting. The admin meeting is once a week from [times], so a two-hour chunk. And the structure is that it starts whole group... A Google doc is sent out with the calendar invite, which includes the agenda and it will have topics for the large group. Then, there are breakout groups for both elementary and secondary. In addition, building leadership is once a week for an hour. And then I have two coordinators and an assistant director and I meet with my coordinators each weekly. (P2, district administrator)

Another administrator described:

We meet twice a month and the first meeting is typically just informational from our superintendent... The second [meeting] is supposed to be a leadership meeting where we [split into] our three groups where we identified our goals and that is supposed to be work group [to move] forward on those goals. (P6, school administrator)

Thus, stakeholders noted that district-level meetings would be an ideal setting to use facilitation tools and strategies to guide the integration and implementation of high-quality school-based mental health services.

Administrators also noted structures within their systems that would allow for facilitation activities to occur across organizational levels. For example, administrators noted times in June and August, when staff and principals were back on contract, that could be used to bridge facilitation activities across the district and building level. Throughout the year, administrators noted that district professional development days could be used for continued facilitation across levels.

Meeting Structures and Constraints: Building-Level. Frontline stakeholders (i.e., providers) whose main role was to provide services to students, found facilitation to be less acceptable, appropriate, and feasible at the building-level. Building-level staff noted that they had many more constraints on their meeting structures and availability than district- and building-level administrators, as their time was already accounted for, and schedules were largely dictated by school and district administrators. Thus, competing priorities and demands for time, as well as frontline staff preferences for time use, could limit school-based providers from participating in structured building level facilitation.

Building-level meetings typically involved the school-linked clinicians, the school social worker, a guidance counselor, and when available the principal or assistant principal. Meeting frequency and duration varied widely from twice monthly for an hour, to 10-minute check-ins weekly with one or two key stakeholders (e.g., the school social worker and mental health provider), to quarterly check-ins as needed. Meeting structures and constraints were a major determinant of facilitation strategy feasibility and appropriateness at the building-level. Providers noted that building staff may not have the capability or opportunity to participate in a structured facilitation approach due to their already overloaded capacity. One participant noted:

Buy-In, from the school would probably be the biggest thing and then just the ability to implement it, you know, time, you know, do they want another task? So, who's on board with it? Who wants to take on another task and how are we going to do it? Yeah, so I guess those are kind of the biggest things. (P11, provider)

Providers also noted that they would rather use their time to see students than engaging in longer meetings that focused on long-term planning or visioning. Providers were open to being involved in processes that produced solutions to their implementation barriers or were directly related to their students' needs but felt that their time was best spent discussing student cases with the team and planning interventions. For example:

Well, I mean, if it was something directly related mental health, then I would look at that as part of my job. It wouldn't even be a consideration to me that it would be a waste of my time. [However,] sometimes on the MTSS meetings, I find myself being like, 'Well, this is a waste of my time,' because they're talking about a kid that I don't even work with. So as long as it was applicable to me and what I do, then yeah. But [I would] want to back out if it wasn't. (P11, provider)

Logistical barriers also arose with frontline staff regarding the flexibility they had for meeting times. Thus, providers noted that facilitation strategies at the building level need to be embedded into existing structures such as professional development meetings or training before school started while teachers were on contract and then extend the work through weekly professional learning circles (PLCs). For example:

Where would this go? Great to have training at the beginning of a school year where people gathered together to learn about a new process where they're able to have it count in their contractual day. They would show up for those trainings and work on implementation and follow up that week in weekly professional learning circles (PLCs) and have [facilitation] be a supplement to that. Our school staff are already feeling burdened down by processes and plans... So, I'm wondering if it

could be somehow incorporated into one of the educational plans that they're already doing. (P12, provider)

Overall, comments across groups indicated that implementation facilitation would be most acceptable, appropriate, feasible, and likely effective at the district level with the participation of principals from each school building and strategic inclusion of frontline staff (i.e., teachers, support professionals) in ways that aligned with their service delivery roles.

Facilitator Type: Third Party, Administrator or Hybrid Model. Participants were asked to identify the type of professional they viewed as an optimal implementation facilitator. Majority of stakeholders felt that district administrators, third party purveyors, or a blended model (wherein a third-party purveyor works to transfer skills to a set of internal facilitators) would be most feasible, acceptable, appropriate, and likely effective.

Third Party Purveyor. Majority stakeholders felt that a contracted third-party purveyor, or external facilitator, would be the ideal facilitator type. This was confirmed by the follow-up survey (n = 9), of which 56% of stakeholders completing the survey endorsed the third-party purveyor model as optimal. For example:

It needs to be somebody from outside facilitating. [Administrators] will lead it, but it needs to be from someone from outside just supporting the process so that we are running it with fidelity because we are so attached to what we do. (P6, school administrator)

Some stakeholders noted that internal facilitators may struggle to be effective as they would need to hold different roles (e.g., impartial facilitator versus active agent and participant). Others noted that an internal facilitator may inadvertently impart their own

motives and biases during the facilitation process. For example, “I think that the third-party person can hold everyone that's in [the group] and then they don't have a bias towards one or the other.” (P5, provider). Another stakeholder noted:

I think that, when you go internally, everybody's going to have their own motives really, like what's going to be for their best interest?... Having somebody who is trained in being able to come up with compromises and get everybody's needs met, I think that would be better versus somebody internally doing it. And you've also got relationships established. I think that would be the other thing. And you certainly don't want to damage a relationship with somebody in the school that you're going to be working with. (P11, provider)

Stakeholders also recognized the differences in accountability structures that come with a contracted external facilitator versus an internal facilitator who may be overlooked by other internal staff. For example:

[It feels like just] another two-year cycle of the newest, latest thing that won't get followed through. And that makes me think that maybe it would be good to have an outside facilitator come in versus a staff member or person inside the school that can get rescheduled and rescheduled and put off and put off. (P12, provider)

Stakeholders noted that it would be particularly important to use a third-party purveyor, or external facilitator at the beginning of a change initiative to establish guidelines, ways of working, and the overall tone for the effort. For example: “I think a third party at [the beginning], at least to train or kind of set the tone... to help establish those parameters and kind of get things started off on the right foot, probably would be helpful” (P4, school administrator).

Administrator. Stakeholders also recognized the utility of using school and district administrators as internal facilitator of change initiatives. One stakeholder noted:

I could see it being really helpful to have a district person lead something like that. I could see that person holding the umbrella of across the district. How do we want services and support to kind of look?... We've struggled with things and needed district support to help us get on the same page as schools and make decisions and move forward. Those folks have been key. So, I just think that's why I lean towards that district level. (P3, clinical supervisor)

This desire across all stakeholder groups for the facilitation to at least start at the district level seemed to stem from a desire to feel less “disjointed.” For example: “So that's what I'm thinking in my mind, that with you know, the district level having that education and holding that, and then moving that down... there would be more of a flow, maybe less disjointed” (P5, provider). Likewise, an administrator noted:

I think at this point like we're really trying to be a school district, not a district of schools... so right now [it has to be] district because we don't want all of our elementaries... doing something different. So that's why it's district. We used to be separate sites and everybody did whatever they wanted to do. Now with our superintendent, we really want to be on the same track having the same MTSS process, having the same SEL curriculum or support. So, that's why at this point we're really trying to be a school district and it's really hard because we are all very strong people. (P6, school administrator)

Administrators noted that they were suited for this role and welcomed training in implementation facilitation skills, as they currently lacked them. For example:

I think the facilitation piece, especially for people in roles like mine, it is just super helpful. I think just the idea of it is super helpful; learning how to do it. And I think that it really does make a huge difference in terms of what actually gets implemented. You know, it's having someone who can pull back and just sort of prompt those pieces over time. I think that's just a huge, huge support in general. As someone who's learned more and more about implementation science and just really understanding how systems [work]... We just don't know how to do this. We don't know how to do this. (P4, school administrator)

Hybrid Model. Overall, majority of stakeholders supported a hybrid model, wherein external facilitators would be more heavily involved in implementation facilitation at the outset of an endeavor and then work to transfer the role of facilitation over to an internal stakeholder who would then, in turn, use an approach akin to “train-the-trainer,” with the ultimate goal of training principals to utilize a consistent facilitation approach across organizational levels. One stakeholder described this scenario, saying:

I think it it's that hybrid approach. It's having somebody that comes in and does the initial gathering, whatever it is... I think you need to have like a, somebody that can at least kick it off. And then if we can equip the in-house people to carry it on. (P2, district administrator)

Another stakeholder described:

And maybe that's a train-the-trainers kind of model, where the whole group is part of this big rollout. The first round is facilitated so we can learn the [facilitation] toolkit and then we can carry it out within our smaller sites. Or as a district, we do that, but then at the sites, we also do train-the-trainer with smaller groups. That's

kind of what we need. So that district wide we're doing some process, the same process. The process should not change if it's a literacy adoption versus social-emotional adoption, versus just going through continuous improvement each year or even at a staff meeting; the process should be the process... It shouldn't be different every time. (P6, school administrator)

Administrators noted that having an expert facilitator acting as a model would be essential to building the internal capacity necessary to successfully carry facilitation forward. For example, "Having that model beside you and getting repetition with that person, that's a huge advantage. Because you can't help, but just sort of diffuse that information. So, I mean, that's a really good piece" (P4, school administrator).

RQ1-2 Specific changes to the features and core components of FIT

The purpose of RQ 1-2 was to understand participant's perceptions of the acceptability, feasibility, and appropriateness of FIT. Prior to gather quantitative and qualitative data, I reviewed FIT and its core components with each of the participants. To answer RQ 1-2, data analysis and interpretation occurred in three parts. First, descriptive statistics representing the general valence of ratings were examined and interpreted. Second, the results of one-sample t-tests were examined to identify whether ratings across outcomes (i.e., acceptability, appropriateness, feasibility) were significantly higher or lower than a criterion value (i.e., mean rating of 3) to understand the degree to which FIT was rated as favorable by stakeholders as well as understand potential minor refinements or major modifications to FIT necessary based on stakeholder feedback. Third, the results of one-way ANOVAs were examined to determine whether there were any significant differences between or within stakeholder groups, including describing

differences descriptively due to the small sample size. Fourth, the dispersion of the data was examined to identify outliers and skewed distributions that may pinpoint further consideration for modifications. Fifth, and last, findings from qualitative data reflecting stakeholder recommendations to improve FIT acceptability, appropriateness, and feasibility were examined to expand upon the quantitative data.

General Impressions of FIT

Based on descriptive statistics, stakeholders rated FIT somewhat favorably, with mean scores for the whole sample falling slightly above the neutral value on ratings scales (Table 6). Overall, acceptability had the highest mean rating among the three perceptual implementation outcomes, followed by feasibility and then appropriateness. According to the one-sample *t*-test, FIT ratings were significantly higher than the criterion value (i.e., mean of 3) for acceptability, $t(11) = 6.46, p = <.001$, appropriateness, $t(11) = 2.85, p = .016$, and feasibility, $t(11) = 3.44, p = .006$ (Table 7), confirming that FIT was viewed as favorable by stakeholders.

Differences in Perceptions within and between Stakeholder Groups.

No statistically significant differences in ratings were found between or within groups (Table 8); however, differences were interpreted descriptively given the small sample size. Within groups, ratings of FIT acceptability were highest out of the three ratings within the provider and administrator groups. The clinical supervisor group rated FIT appropriateness highest out of the three ratings within their group. Within groups, ratings were generally lowest for FIT feasibility out of the three ratings. Across groups, FIT acceptability, feasibility, and appropriateness were rated most positively by providers, followed by clinical supervisors, and then school administrators; however,

school administrator means seemed to be skewed by one minimum rating (see below for review of descriptive of dispersion and outliers).

Cases that Yielded Further Consideration for Modifications

Outliers and skewness of distributions were used to identify scores that may be higher or lower than majority of responses and warrant further investigation regarding facets of FIT that work well or may need to be revised or revisited. Identifying outliers can be helpful to understand the number of scores or cases that differ greatly from majority of scores, while skewness can provide insight into the direction of outliers. No outliers were identified; however, distributions were negatively skewed for school administrator appropriateness ratings, with skewness of -1.78 ($SE = 1.01$), and feasibility ratings, with skewness of -1.76 ($SE = 1.01$; Figures 4 and 5). Data were skewed by one administrator who rated FIT appropriateness and feasibility lower than other administrators. Negatively skewed distributions suggested the need to closely review the qualitative data for this case to identify any major concerns that might warrant further consideration for modifications.

While review of the administrator transcript (P2, administrator) revealed the need for major revisions to FIT, comments made by this administrator regarding recommendations for improvement aligned with other stakeholders' recommendations and were subsumed by saturated codes and overarching themes. Thus, findings from this administrator's interview are discussed as part of all recommendations provided by stakeholders below.

Recommendations to Improve Acceptability, Appropriateness, and Feasibility

Notwithstanding the quantitative findings, all participants provided recommendations to improve the acceptability, appropriateness, and feasibility of FIT, or highlighted key components of FIT that should remain the same to maintain its appropriateness and acceptability. Qualitative analysis revealed four overarching themes with interconnections between them.

Theme 1: Maintain a Sense of Structure. Most participants appreciated the structure of FIT. For example, “It comforts me to say, ‘Nope. This is what this step means, and this is what we're doing in this step.’ Yeah, [the structure] doesn't feel gross to me.... This would be exactly what we need right now” (P6, school administrator). Stakeholders thought that the structure of FIT provided concrete, step-by-step processes that aided in: (1) developing skill fluency for internal facilitators; or (2) making it easier to proactively discuss topics that could cause conflict and help prevent dissension in groups. One participant noted,

It's a really concrete model. Especially if this is more of a foreign concept, so I think anytime you have something tangible and modeled and clear that takes you through the, the process steps while you're developing fluency. I think that's super helpful.... you can go back and have a concrete tool to really help you walk through the steps. So yeah, I really like that part of it. (P4, school administrator)

Another participant said, “I liked the structure. I think that we're, when we're talking about tense things, you know, and things we might not all be open to; having more structure is helpful” (P5, provider).

Theme 2: Promote Flexibility. While majority of stakeholders suggested we maintain the structure, they also noted the need to promote flexibility and not be overly

rigid in our packaging of the tools. For example, “I like the structure to give you guidance; however, I just don't know... sometimes too much structure doesn't leave you for that flexibility and ability to adapt it to the circumstance” (P10, clinical supervisor).

Another stakeholder described:

It has to be... I hate this word, but I can't think of a better one... ‘organic.’

Sometimes I think it can be too structured and too prescribed... That it's like, you can't quite... It doesn't feel authentic. That's always a struggle I've seen. (P1, district administrator)

Stakeholders discussed pros and cons to different types of tools and activities. For example, some stakeholders viewed the most highly structured tools to be less acceptable than the interactive, conversation-based components. For example:

The idea of like doing worksheets with school people, they're just going to be like, ‘No.’ I can just see all of them being like, ‘I don't have time for this,’ or ‘There's other things to do.’... I would love tools, I guess, around how to have those conversations. I think I do a fairly good job, but I think anything that can help me in supporting those conversations, I would welcome. (P7, clinical supervisor)

Theme 3: Use a “Pick & Choose” Model. One suggested way to maintain structure while promoting flexibility was to provide tools and facilitation activities using a “Pick-and-Choose” model. Instead of developing tools for a facilitation process that spanned the length of an implementation phase or a quality improvement cycle, stakeholders wanted FIT to be structured in such a way where each component could be used in tandem over a sequence of meetings or could be individually selected for a

specific, time-sensitive need. For example, “I think [a Pick-and-Choose mode] makes a lot of sense because it, you know, just like many things, one approach doesn't always fit, you know, every situation, every situation” (P10, clinical supervisor). Another participant said, “I think that could be helpful to have kind of different ways of implementing it, so that it could be more flexible to meet a broader range of needs. Yeah. I could see that being helpful” (P3, clinical supervisor).

One participant likened the adapted Pick-and-Choose approach to a Rolodex of facilitation tools:

If I'm a leader facilitating a conversation, I want to be able to go to my little Rolodex and say, “Here's what we need to get to today. We're trying to figure this out. What should we be using?” I want to be able to have my resources that I could grab and say, “Okay, today we're going to do a brain dump. You're going to put it on big post-it notes. We're going to take a highlighter and we're going to circle where our themes are.” Like I would want something that is accessible and usable for me to just grab; so, like short, detailed protocols for different purposes. Like different types of things that you would be doing. And if it could be a one-page protocol that you could print out or pull and then tailor it to whatever conversation or whatever thing you were trying to do, that would be like super useful and feasible and helpful... I could just go to my little like toolkit whether it's a link on something that would take me to a file that would have options or an actual printout of something and be like, “Oh, let's try this strategy. I think this is going to get consensus quickly.” I would want that. (P2, district administrator)

Multiple stakeholders suggested that this Rolodex of Pick-and-Choose tools could be hosted on a website that's freely accessible to internal and external facilitators as a: (1) refresher of skills when partnering with a 3rd party facilitator in a longer effort to avoid a "bottleneck" of load on an external facilitator; or (1) a way to build fluency and consume skills over time if engaging in facilitation alone. For example:

You've got some of those tools that you can consume in your own time and reflect on. And even as you get your skills built up because of the model, some of those other more on-demand types of opportunities where you can just kind of do that mental checklist or check yourself on that really specific thing that you're working on. I think that would be super helpful. (P4, school administrator)

Stakeholders noted that, as part of this "Pick-and-Choose" model, an overview of the role and purpose of implementation facilitation to keep going back to "that 30,000-foot view" (P4, school administrator) would be an essential component to build out and provide to consumers.

Chapter 5: Discussion

Facilitation is an implementation strategy with significant promise to increase youth access to high quality mental health services as part of routine practice in schools, if designed to be feasible, acceptable, and appropriate for the use in schools. While facilitation offers significant promise as an implementation strategy (Baskerville et al., 2012; Waltz et al., 2015), little is known from stakeholders about how best to design and deploy facilitation in the context of school-based mental health. One way to develop interventions that have a higher likelihood of being adopted and utilized following testing and reduce “research waste” (Hoddinott, 2015; Lyon et al., 2015) is to conduct usability-focused development studies early in the intervention science continuum. Thus, this dissertation involved a development study to design a usable facilitation technique (prior to demonstration and rigorous evaluation) by gathering qualitative and mixed-method data from stakeholders to answer specific research questions aimed at understanding: 1) what recommendations school-based mental health stakeholders have for any facilitation strategy to be viewed as feasible, acceptable, appropriate, and likely effective; and 2) what specific changes to the features and core components of FIT school-based mental health stakeholders recommend to improve FIT usability.

Overall, findings from this study highlight the need to engage end-users at the outset of implementation strategy design. This is consistent with the growing momentum within the implementation science community to begin implementation strategy development with stakeholder involvement and input (Proctor et al., 2012; Stanick et al., 2018). While all stakeholders welcomed the use of facilitation for school-based implementation efforts, several major and minor recommendations were gleaned from

stakeholder feedback to inform key revisions and refinements to the FIT strategy.

General information about factors that would make any facilitation strategy successful or unsuccessful yielded necessary changes to FIT components (e.g., knowledge exchange to shared or common understanding), and feedback about contextual constraints clearly defined the primary end-users of FIT (i.e., district and school administrators) as well as the existing structures within which FIT could be seamlessly integrated. In particular, stakeholders noted that facilitation needed to occur at the district level, as direction from the top-down could support clarity, role definition, and opportunity to engage in and commit to EBP delivery for school mental health.

Additionally, specific feedback about changes to FIT that would enhance its acceptability, appropriateness, and feasibility yielded major revisions to the overall packaging of FIT. For example, stakeholders indicated a flexible yet structured "Pick-and-Choose" model (e.g., discrete implementation skills or protocols that can be selected or easily adapted based on the specific and salient needs present) that was comprehensive yet not over packaged was needed to base strategies in stakeholders' preferences and needs. A more adaptive facilitation strategy is supported by evidence suggesting that many practitioners believe manualized approaches may not fully address the complexities seen in community settings (Nelson & Steele, 2007) and that flexible, modularized protocols are viewed as more acceptable by practitioners (Borntrager et al., 2009). An adaptive or modularized approach to facilitation would involve a catalog of discrete facilitation strategies for specific uses and intended purposes (e.g., visioning strategy to be performed in the preparation phase of implementation to build buy-in and promote mutual understanding or clarity) that could be matched with the level of need or be

layered depending upon the barriers that are most salient in the implementation context. This approach would not only be responsive to stakeholder preferences but would also more clearly integrate and attend to the three components of evidence-based practice: practitioner expertise, community values, and the best available research evidence (Sackett et al., 1996).

Overall, targeting the optimal end-users within school systems who would ‘facilitate’ facilitation is essential, as these groups represent the target audiences for purposes of dissemination and professional learning to transfer effective facilitation methods into the school context (Lyon et al., 2015). Knowing the target audiences to precisely target for information dissemination could increase the likelihood that FIT is adopted and sustained in school systems to support implementation of EBPs, and is consistent with prior research on stakeholder-informed implementation strategy development (Stanick et al., 2018). Findings from the study yielded implications for theory and practice as well as avenues for future research. Limitations are also discussed prior to overall study conclusions.

Theoretical Implications

Stakeholders' comments regarding the components of facilitation strategies that would make them acceptable, appropriate, and feasible aligned closely with the original FIT components in the theory of change (i.e., solution-oriented consensus-driven process, knowledge exchange, prosocial interactions); however, the original conceptualizations were slightly misaligned with stakeholder experience and lacked nuance and clear mapping to each facilitation skill. Stakeholder feedback indicated that there are likely more than three process variables (e.g., hypothesized mechanisms of change) associated

with each of the three FIT components, as well as more proximal outcomes aligned with each FIT component. While stakeholders discussed the need to share information, their comments indicated a deeper process of shared understanding across a range of activities and topics (e.g., shared vision, shared commitment, shared, understanding of roles). Thus, in a revised theory of change, Shared/Common Understanding tools (*component*) could be developed and used to affect buy-in, perceived value and commitment, and readiness for engagement (*proximal outcomes*) via cooperative goal interdependence, shared mental models, and psychological meaningfulness (*mechanisms*; Jonker et al., 2010; Kahn, 1990; May et al., 2004). As an example, shared mental models is a critical element that emerges from the team science literature (Mathieu et al., 2000) and also appears to be an active ingredient of effective facilitation. Facilitation ultimately helps bring people together with shared understanding of the objectives around common goals they want to achieve as a result of what the group does together (e.g., increase youth access to high quality mental health services).

Similarly, while the original theory of change included solution-oriented consensus-driven process as a component, stakeholder feedback differed from the proposed theory in that they were less concerned with consensus and more concerned with having tools that ultimately spurred action and stakeholder engagement, particularly for overcoming barriers that negatively influenced implementation outcomes. Thus, revising the theory of change based on stakeholders' needs and perceptions, the Planned Action & Engagement tools (*component*) could be developed and used to affect implementation behavior (*proximal outcome*) via cooperative goal interdependence and psychological availability (*mechanisms*; Chen & Tjosvold, 2008; Kahn, 1990; May et al.,

2004). For example, behavioral engagement in a change process is predicated by powerful psychological antecedents, including psychological availability (i.e., the feeling or belief that stakeholders have the resources necessary to engage in the work; Christian & Slaughter, 2007; Kahn et al., 1990). Considering this, FIT would need to include specific experiences and supports that act on psychological availability. This could occur through a structured problem-solving process that results in the realization of resources allocated at the district level to ensure those who are implementing feel and believe that they have the resources they need to fully engage in and sustain a practice or program.

Finally, while prosocial interactions were included as a component of FIT in the original theory of change, stakeholders were clear that relationships and trust between stakeholders were the “linchpin” of success and teamwork. Thus, in a revised theory of change grounded in stakeholder perceptions, Cooperative Prosocial Relationships and Trust tools (*component*) could be developed and used to affect positive interpersonal relationships and sense of community or group identification (*proximal outcomes*) via psychological safety (*mechanism*; Kahn, 1990; Leung et al., 2015; May et al., 2004). For example, psychological safety, which is a cognitive and emotional mechanism, which often drives collaboration and continuous improvement through the cultivation of a work environment where stakeholders feel safe to voice their ideas, willingly seek feedback, provide honest insights, collaborate, take risks and experiment, and overcome threats to individual and organizational learning (Edmondson, 1999; Newman et al., 2017).

This expanded and revised theoretical model of facilitation provides greater precision to target specific active ingredients of change with specific facilitation methods. For example, a vision coaching protocol (e.g., Howard et al., 2015), in which a facilitator

guides stakeholders through a structured, step-by-step process to brainstorm their own hopes, strengths, and desired future (Ideal) organization and professional selves, develop ideas into themes, prioritize themes, and brand their vision, could be developed and used as one of several Shared/Common Understanding tools that would activate mechanisms such as shared mental models and psychological meaningfulness (*mechanisms*; Jonker et al., 2010; Kahn, 1990; May et al., 2004) and affect buy-in, perceived value and commitment, and readiness for engagement (*proximal outcomes*). Theoretical precision with implementation strategies is important for purposes of lean and potent strategies that ultimately result in changes in service quality and service recipient outcomes (Lewis et al., 2018). Moreover, the theoretical implications from this study also make connections to other theories such as psychological safety and shared mental models, which are keystone theories in the teaming literature (Mathieu et al., 2000; Newman et al., 2017).

Practice Implications

This study shows that implementation facilitation is perceived as acceptable, appropriate, feasible, and potentially effective by school-based stakeholders, particularly when tailored to be used by school and district administrators who are already leading implementation efforts yet lack the concrete communication and collaboration techniques that would enhance their teaming work (Pauling et al., 2021). All participants noted that district-level direction was necessary for implementation to occur, and that facilitation would enhance their ability to create a sense of direction and support for staff. Some facilitation strategies already exist that can be adopted by districts (e.g., Technology of Participation, <https://www.top-training.net/w/privateevent/>; Motivational Interviewing for groups, <https://motivationalinterviewing.org/>; The Center for Implementation,

<https://thecenterforimplementation.com/implementation-in-action-bulletin/oct-2020>).

While highly useful for implementation practice, these resources require extensive, time-intensive, and costly training, with the development of FIT potentially filling this gap.

However, for any implementation strategy to be used, it needs to be successfully disseminated. Dissemination requires strategic, persuasive communication to specific target audiences that increase awareness, knowledge, and motivation to act up information (Baker et al., 2021).

Related to dissemination, stakeholders indicated that a hybrid or train-the-trainer approach would be ideal for transferring skills. Train-the-trainer models have been empirically supported as a method to transfer behavior change skills and techniques like facilitation and scale up technique use more efficiently and cost-effectively than expert training when employed using a combination of active training workshops (e.g., modeling, practicing, receiving feedback on skills taught) and ongoing supervision or consultation during skill use (Martino et al., 2011).

During discussions of the highly favored “Pick-and-Choose” model, district and school administrators, who were ultimately identified by all participants as the primary end users of facilitation, noted that facilitation resources (e.g., one-page protocols, videos modeling facilitation activities, example adaptations) should be freely available and housed online. This is an important finding, as it could prevent a “bottlenecking” of information that can occur during contracted consultation (e.g., systems cannot move forward without involvement of external consultant) and allow for districts to improve on their own when contracts with external entities are not feasible (e.g., no funding available). Additionally, this finding has important implications for the consideration of

validating promising tools while simultaneously making them rapidly accessible for those who need them in practice. A rapid development and testing process combined with an ever-evolving online platform through which practitioners can access the best available facilitation tools and readily utilize them in their day-to-day work would be greatly amenable to this research and practice need (Lyon et al, 2021).

Limitations

This study has limitations that are important to discuss and pinpoint directions for future research. First, this study did not preliminarily test process variables (mechanisms) through a demonstration study or experimental pilot trial. Considering that the revised model proposes several candidate process variables and proximal outcomes for each component, much work is needed to refine the theoretical models of each FIT component to enhance parsimony and predictive, explanatory power. Since this study did not demonstrate or pilot a revised version of FIT, our claims are limited to forecasted perceptions as opposed to perceptions following actual exposure to FIT. While development studies are an important first step in a line of work (Lyon et al., 2021), ratings across implementation outcomes in this study (i.e., acceptability, appropriateness, feasibility) are likely to be different when gathered after stakeholders' actual participation in a facilitation experience (Proctor et al., 2011), which is an important next step in this line of inquiry. Additionally, while our sample size was adequate based on recommendations for development studies (Dey, 1999; Hamilton, 2019; Malterud et al., 2016; Nelson, 2017), it was limited geographically and culturally which may limit the generalizability of findings to public school districts of varying urbanicity and size. Moreover, while the study included three stakeholder groups (i.e., administrators,

supervisors, clinicians), it lacked the inclusion of other stakeholders who may engage in facilitation activities (e.g., teachers, district employed support staff) which could limit generalizability. For instance, facilitation could be useful for a range of student educational needs beyond indicated mental health difficulties (e.g., social-emotional learning, academic achievement). Thus, future research should include a wider range of stakeholders, in terms of geography, culture, and role, to ensure facilitation tools are acceptable, feasible, and appropriate for all school-based professionals who could be involved in a systems change effort. While the study was completed within the context of a larger, statewide effort to increase implementation of CBITS in schools, none of the recruited providers had utilized CBITS in practice. Thus, data collection focused on CBITS as appropriate but gleaned information on implementation of EBPs more broadly as providers were indeed implementing a range of EBPs in schools, some of which were trauma-focused (e.g., TF-CBT, EMDR). Thus, while this study cannot support to the usability of FIT within the context of active CBITS implementation specifically, it can support the usability of FIT within the context of EBP implementation in schools.

Additionally, the mixed methodology used (i.e., quantitative ratings to prompt qualitative feedback) was designed to be narrow and highly deductive to gain specific insights; however, this narrow focus could have created missed opportunities for identification of a broader range of recommendations from stakeholders. Alternative methods that were considered included cognitive walkthrough or “think aloud” sessions; however, these methods may be more appropriate for future development tests when FIT materials are revised. Additionally, research and the interpretation of findings are inherently influenced by the positionality (i.e., an individual’s worldview and the position

they adopt about a research task and its social and political context) of those involved in the research process (Foote & Bartell, 2011; Holmes et al., 2020; Savin-Baden & Major, 2013; Rowe, 2014). To check potential biases and influences on analysis and interpretation, the lead researcher worked in tandem with project staff and mentors to develop the coding scheme, discuss results and interpretations, and report findings. Moreover, the lead researcher used participant checks to ensure accurate representation of stakeholders' experiences.

Directions for Future Research

Several avenues of future research are borne from the study findings and limitations. First, additional brief, pragmatic group testing (Lyon et al., 2021) should take place in partnership with an instructional design expert to build out and continue to refine the 'Rolodex' of facilitation strategies as well as any participant-facing materials prior to pilot testing. In parallel to subsequent user testing, additional studies should be completed to strengthen the theoretical bases for strategies included in FIT through expert and stakeholder consensus building techniques, such as Delphi processes (Lewis et al., 2018) to develop putative causal pathways (Lewis et al., 2021) that can be tested in future trials of FIT. When FIT is ready for testing, it may be helpful to utilize a Sequential Multiple Assignment Randomized Trial (SMART) design, which entails a sequential, experimental approach whereby an intervention is adapted and readapted over time in response to the specific needs and evolving status of the individual or system. Adaptive implementation strategies provide one way to operationalize the pathways (e.g., continue, augment, switch, step-down) leading to individualized sequences of discrete implementation strategies (Almirall et al., 2014). For example, there may be light touch

facilitation strategy that could be successful as a first line approach and depending on responsiveness, there may need to be more intensive facilitation strategies (increase frequency of meetings, accountability mechanisms, trust building, etc.) based on the reasons for lack of responsiveness. Ultimately, future research should conduct a hybrid type 3 implementation-effectiveness trial (Curran et al., 2012) that examines the effectiveness of FIT in the context of an implementation effort involving the integration of an evidence-based mental health services (e.g., CBITS, TF-CBT). This research should gather data on process and moderator variables to answer questions regarding under what conditions and how or why facilitation works to improve implementation and youth mental health outcomes.

In addition to work directly related to FIT, there is a need to establish conceptual clarity when identifying, developing, and testing implementation strategies (Colquhoun et al., 2014; Powell et al., 2015). This is particularly true for the leadership roles and specific activities (i.e., implementation strategies) that occur at a systems-level (i.e., inner and outer context) during implementation. Overall, terms and definitions for system-level strategies, such as consultation, coaching, and facilitation are inconsistent. For example, systems consultation may have multiple meanings (i.e., homonymy, same term has multiple meanings), or systems consultation and facilitation may be used interchangeably (i.e., synonymy, different terms have the same meanings), or terms may change over time, which limits evidence syntheses, impedes communication and collaboration, and undermines knowledge translation of research findings. Moreover, published descriptions of activities and roles often do not include sufficient detail to enable either replication in research or practice. The inconsistent use of language and the lack of specificity about

what is occurring within these roles or activities creates complications that ultimately prevent the translation and application of empirical studies that could inform organizational change and implementation processes in practice. Thus, future work should delineate the differences between system level strategies and consistently use reporting recommendations (Proctor et al., 2013) to guard against idiosyncratic language and nondescript science.

Conclusion

First and foremost, this study highlights the need for significant investment of time and resources in implementation strategy design and development prior to testing to ensure that what is built has a chance of being adopted and sustained in the real world. Implementation strategies should be designed in partnership or co-designed with stakeholders, who are primary and secondary end users, to prevent problems that further widen the research to practice gap (Hoddinott, 2015; Lyon et al., 2015). With regard to implementation facilitation, our study indicates that this approach is welcome in schools and can likely complement or augment existing structures and processes at the system-level (i.e., building and district level); however, researchers must carefully craft and package facilitation strategies based on stakeholders' specific needs and preferences for them to be acceptable, appropriate, feasible, and likely effective.

Table 1

Differentiation of Leadership Roles in Systems Change

	Hierarchical Leaders	Trainers	Coaches	Consultants	Facilitators
Assumes	The leader is the authority	The group is seeking wisdom	The group is stalled or troubled	The group needs expertise	The group has both experience and wisdom
Knows	What to do	Content	Adult learning strategies	Content expertise/Sectoral strategies	How to help the group move forward – Process Expertise
Seeks	The right decisions	Learner clarity	Behavioral changes or action	Compliance to their recommendations	Decisions owned by everyone
Relies on	Individual abilities	Research and their own learning/training	Research and their own experience/training	Their own experience and training	Ability of the group
Results expected	Decisions and plans	Understanding and knowledge	Engagement in a behavior	Leadership approved change	Commitment to action

Table 2

Models, Frameworks, and Taxonomies Associated with Key Constructs within the

Simplified Model for Implementation Success

Name	Acron.	Description	Citation
Implementation Strategy Taxonomies			
Expert Recommendations for Implementing Change	ERIC	Established taxonomy of implementation strategies, providing information regarding strategies hypothesized to be likely feasible and effective in influencing implementation outcomes.	Waltz et al., 2014
School Implementation Strategies, Translating ERIC Resources	SISTER	While ERIC includes strategies that may be relevant across a range of public services settings, SISTER is tailored specifically to the school context and may be most useful for selecting strategies for school-based implementation research and practice.	Lyon and colleagues, 2019
Implementation Determinant Frameworks			
Consolidated Framework for Implementation Research	CFIR	A list of constructs that can be used to guide diagnostic assessments of implementation context, evaluate implementation progress, and help explain findings in research studies or quality improvement initiatives. Overall, the goal of CFIR is to provide consistent taxonomy, terminology, and definitions on which a knowledge base of findings across multiple contexts can be built.	Damschroder, 2009
Exploration, Preparation, Implementation, Sustainment Framework	EPIS	A widely used implementation framework that not only outlines the essential temporal and dynamic stages of implementation (i.e., Exploration, Preparation, Implementation, Sustainment) but also the factors that matter at each stage of the implementation process and level of the implementation context (i.e., inner setting and outer setting).	Aarons et al., 2011; https://episframework.com/
Implementation Outcome Taxonomy			
Taxonomy of Implementation Outcomes	n/a	Taxonomy outlining and defining eight main implementation outcomes of interest that constitute the desired endpoints of implementation efforts. These include: acceptability, feasibility, appropriateness, adoption, penetration/reach, fidelity, cost, and sustainability	Proctor et al., 2011

Table 3*FIT Strategy*

FIT “Steps”	Steps defined
Step 1) Identify and prioritize context-specific barriers	NGT: (1) frame the topic of context-specific barriers using existing empirical information from implementation science, (2) silent idea generation, (3) round-robin sharing out of context-specific barriers influencing stakeholders adoption and use of the EBP, and (4) prioritization through voting to select the subset of barriers that are most readily amenable and important to address via strategies.
Step 2) Select strategies that address the prioritized context-specific barriers	NGT: 1) frame the topic of linking strategies to the prioritized barriers using existing empirical information from implementation science, (2) stakeholder silent idea generation, (3) round-robin sharing out regarding recommendations for strategy-barrier linkages, and (4) prioritization through voting to the strategies that are most feasible, malleable, and important to include in action planning.
Step 3) Develop an implementation plan to integrate and deploy feasible yet effective implementation strategies tailored to context-specific needs.	Action Planning: Support stakeholders through completion of a template to detail what, how, with whom, where/when, and the environmental cues and resources needed to initiate delivery of implementation strategies to increase the likelihood that motivation will translate into action.

Table 4*Demographic and Descriptive Information for Sample*

	Providers		Clinical Supervisors		School & District Administrator	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Total	4	33.33%	4	33.33%	4	33.33%
Primary race						
Native Hawaiian or Pacific Islander	1	25%				
White	2	50%	4	100%	4	100%
Somali	1	25%				
Gender						
F	4	100%	4	100%	4	100%
Highest ed						
Masters	4	100%	4	100%	4	100%
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age	37.33	4.62	34.00	.97	45.75	4.92
Including this year, how many years have you served in your role?	7.75	2.06	2.75	2.90	4.75	2.30
Including this year, how many years have you served in your role at this clinic?	6.50	1.78	2.75	2.90	--	--
Including this year, how many years have you served in your role at this school?	4.50	3.92	--	--	--	---
Including this year, how many years have you served in your role in this district?	--	--	--	--	5.75	1.71

Note. “—” indicates that the item was not applicable to the stakeholder group and thus data on the item was not collected from the group.

Table 5*Measures and Data Collection Tools*

Construct	Measure Description	Source
<i>Demographics</i>		
School characteristics/context	School size, % eligible for free/reduced lunch, racial/ethnic composition, % English Language Learners, % in special education	R
Stakeholder demographics	Team members will self-report their age, gender, race/ethnicity, and years of experience.	Q
<i>FIT Feasibility, Acceptability and Appropriateness</i>		
Feasibility, Acceptability, Appropriateness	FIM, AIM, and IAM are four-item measures of feasibility, acceptability, and appropriateness. Alphas were between 0.87 and 0.89; test-retest reliability coefficients ranged from 0.73 to 0.88. ⁶⁴	Q, I
<i>Follow-Up Survey</i>		
Follow-up survey	The follow up survey included closed and open-ended questions regarding participant's perceptions regarding the ideal model of facilitation.	Q

Note. Informant: R=Records; Q=Questionnaire; I=Interview. a-g = measure included in Appendices A.1-A.7.

Table 6*Acceptability, Appropriateness, and Feasibility Ratings*

Role		<i>n</i>	Min.	Max.	<i>M</i>	<i>SD</i>
Whole Sample	Acceptability	12	2.75	4.00	3.73	0.39
	Appropriateness	12	2.00	4.75	3.58	0.71
	Feasibility	12	2.00	4.25	3.58	0.59
School Administrators	Acceptability	4	2.75	4.00	3.63	0.60
	Appropriateness	4	2.00	4.75	3.56	1.16
	Feasibility	4	2.00	4.25	3.50	1.02
School-based Providers	Acceptability	4	3.75	4.00	3.88	0.14
	Appropriateness	4	3.50	4.25	3.81	0.38
	Feasibility	4	3.50	4.00	3.81	0.24
Clinical Supervisors	Acceptability	4	3.25	4.00	3.69	0.38
	Appropriateness	4	3.00	4.00	3.76	0.48
	Feasibility	4	3.25	3.75	3.44	0.24

Table 7*One-Sample t-Test*

	<i>t</i>	<i>df</i>	<i>p</i> -value (two- tailed)	95% Confidence Interval		Cohen's <i>d</i>
				Lower	Upper	
Acceptability	6.46	11	<.001	.48	0.98	.39
Appropriateness	2.85	11	.016	.13	1.03	.71
Feasibility	3.44	11	.006	.21	0.96	.59

Table 8*ANOVA Testing Within and Between Group Differences*

		Sum of Squares	<i>df</i>	<i>M</i> ²	<i>F</i>	<i>p</i> -value
Acceptability	Between Groups	0.135	2	.07	.39	.69
	Within Groups	1.56	9	.17		
	Total	1.69	11			
Appropriateness	Between Groups	0.39	2	.19	.34	.72
	Within Groups	5.16	9	.57		
	Total	5.54	11			
Feasibility	Between Groups	0.32	2	.16	.42	.67
	Within Groups	3.47	9	.39		
	Total	3.79	11			

Figure 1

Translational Research Process

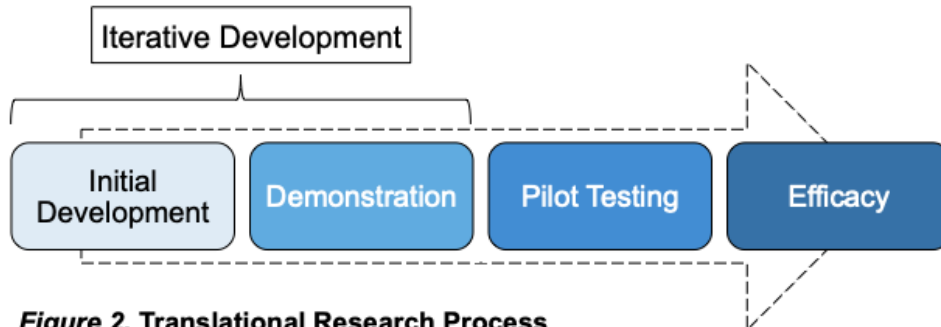


Figure 2. Translational Research Process

Figure 2

FIT Components, Process Variables, and Target Outcomes

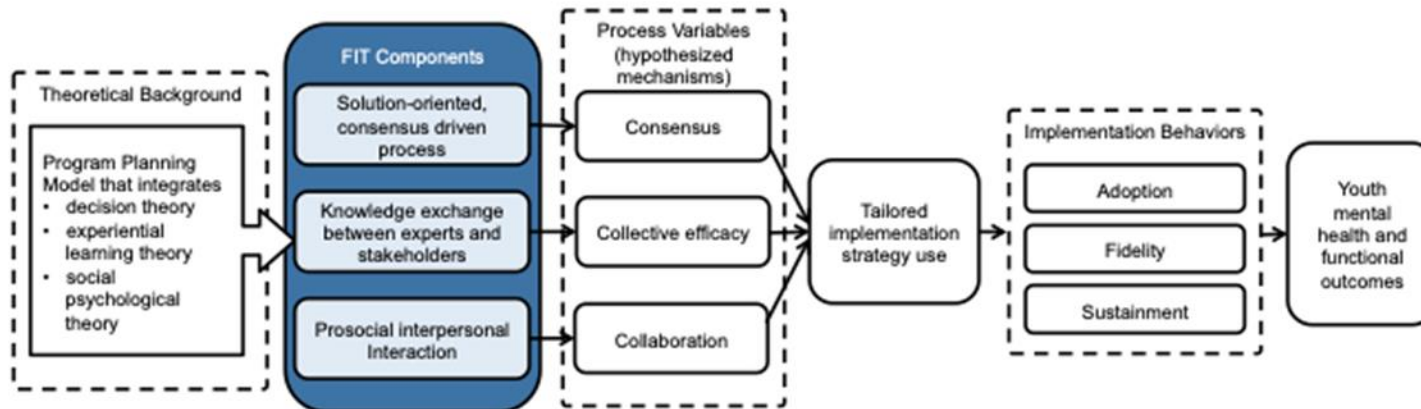
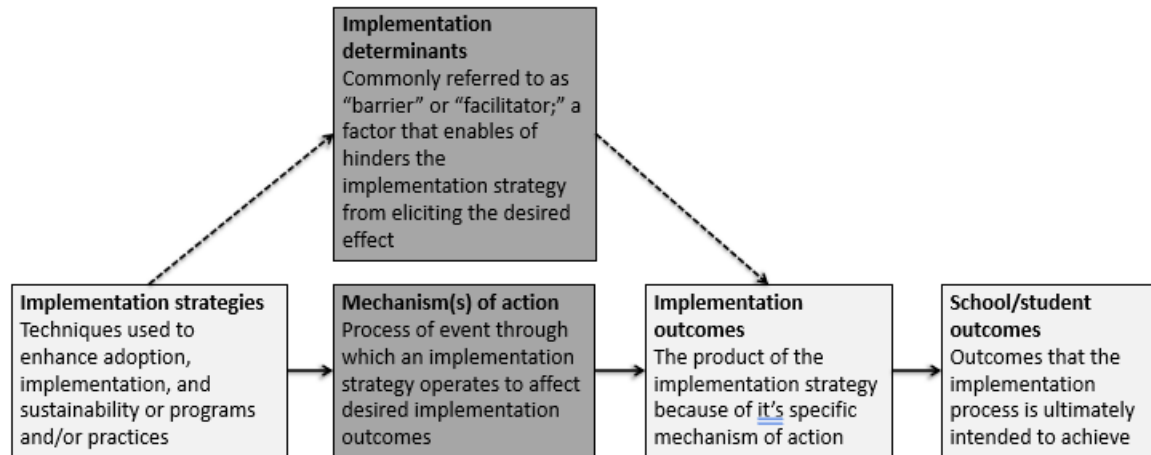


Figure 3*Causal Model for Applying Implementation Strategies*

Note. Adapted from Lyon & Bruns, 2019 and based on Lewis, 2017.

Figure 4

Box Plots Showing Dispersion and Skew of Acceptability Rating Distribution for School

Administrators

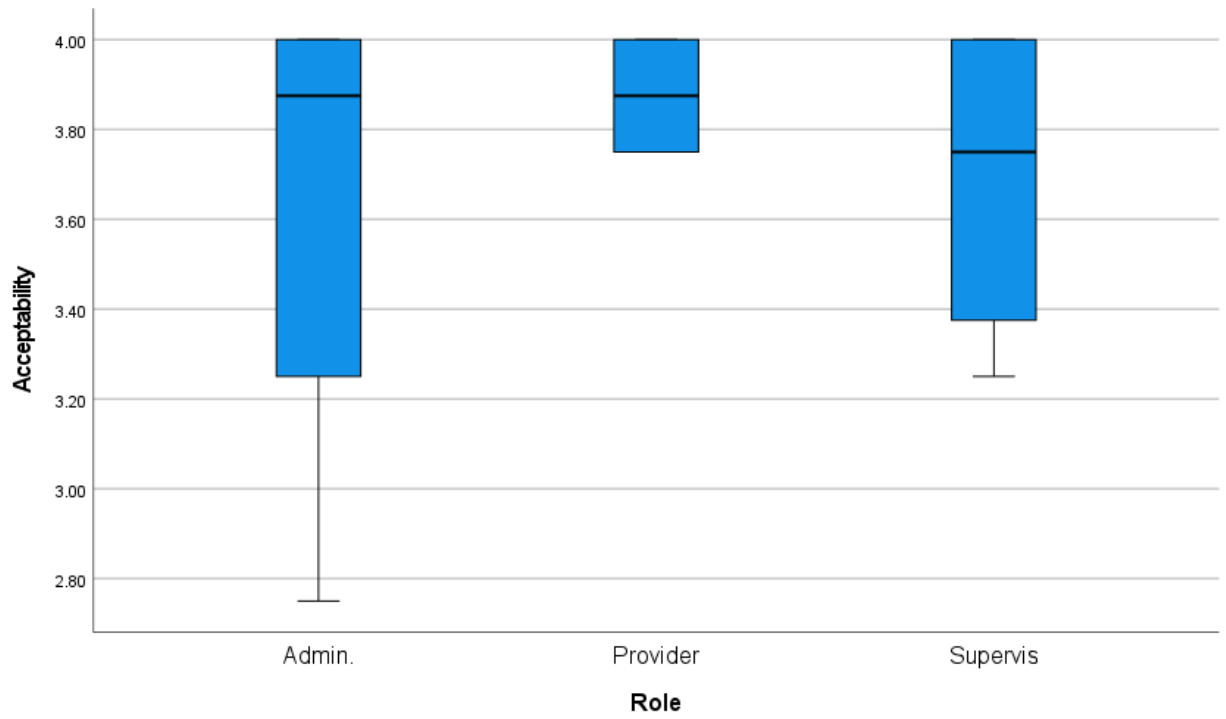
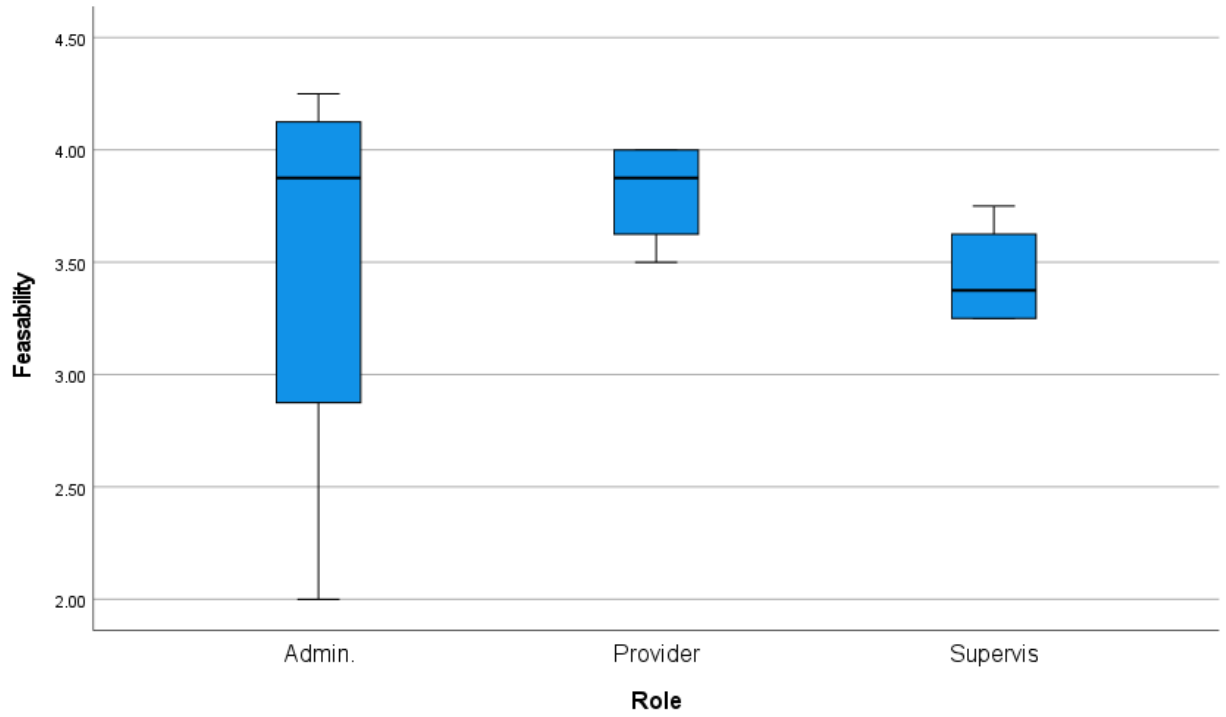


Figure 5

Box Plots Showing Dispersion and Skew of Feasibility Rating Distribution for School

Administrators



References

- Albers, B., Shlonsky, A., & Mildon, R. (Eds.). (2020). *Implementation Science 3.0*. Springer.
- Allison, A. C., & Ferreira, R. J. (2017). Implementing cognitive behavioral intervention for trauma in schools (CBITS) with Latino youth. *Child and Adolescent Social Work Journal, 34*(2), 181-189.
- Allison, A. C., & Ferreira, R. J. (2017). Implementing cognitive behavioral intervention for trauma in schools (CBITS) with Latino youth. *Child and adolescent social work journal, 34*(2), 181-189.
- Almirall, D., Nahum-Shani, I., Sherwood, N. E., & Murphy, S. A. (2014). Introduction to SMART designs for the development of adaptive interventions: with application to weight loss research. *Translational Behavioral Medicine, 4*(3), 260-274.
- Any Disorder Among Children. (n.d.) Retrieved January 16, 2015, from <http://www.nimh.nih.gov/health/statistics/prevalence/any-disorder-among-children.shtml>
- Aram, J. D., Morgan, C. P., & Esbeck, E. S. (1971). Relation of collaborative interpersonal relationships to individual satisfaction and organizational performance. *Administrative Science Quarterly, 16*(3).
- Arango, C., Díaz-Caneja, C. M., McGorry, P. D., Rapoport, J., Sommer, I. E., Vorstman, J. A., ... & Carpenter, W. (2018). Preventive strategies for mental health. *The Lancet Psychiatry, 5*(7), 591-604.
- Attride-Stirling, J. (2001). Thematic networks: an analytic tool for qualitative research. *Qualitative Research, 1*(3), 385-405.

- Balas, E. A., & Boren, S. A. (2000). Managing clinical knowledge for health care improvement. In Bommel J, McCray AT (eds.), *Yearbook of Medical Informatics 2000: Patient-Centered Systems*. Stuttgart, Germany: Schattauer.
- Baskerville, N. B., Liddy, C., & Hogg, W. (2012). Systematic review and meta-analysis of practice facilitation within primary care settings. *The Annals of Family Medicine*, *10*(1), 63-74.
- Bastian, B., Jetten, J., Thai, H. A., & Steffens, N. K. (2018). Shared adversity increases team creativity through fostering supportive interaction. *Frontiers in Psychology*, *9*.
- Bazeley, P., & Jackson, K. (Eds.). (2013). *Qualitative data analysis with NVivo*. Sage Publications Limited.
- Beidas, R. S., & Kendall, P. C. (2010). Training therapists in evidence-based practice: A critical review of studies from a systems-contextual perspective. *Clinical Psychology: Science and Practice*, *17*(1), 1-30.
- Bellis, M. A., Lowey, H., Leckenby, N., Hughes, K., & Harrison, D. (2013). Adverse childhood experiences: retrospective study to determine their impact on adult health behaviours and health outcomes in a UK population. *Journal of Public Health*, *36*(1), 81-91.
- Bidassie, B., Williams, L. S., Woodward-Hagg, H., Matthias, M. S., & Damush, T. M. (2015). Key components of external facilitation in an acute stroke quality improvement collaborative in the Veterans Health Administration. *Implementation Science*, *10*(1), 69.

- Borntrager, C. F., Chorpita, B. F., Higa-McMillan, C., & Weisz, J. R. (2009). Provider attitudes toward evidence-based practices: Are the concerns with the evidence or with the manuals? *Psychiatric Services, 60*, 677–681.
- Bowen, D. J., Kreuter, M., Spring, B., Cofta-Woerpel, L., Linnan, L., Weiner, D., ... & Fernandez, M. (2009). How we design feasibility studies. *American Journal of Preventive Medicine, 36*(5), 452-457.
- Burns, B. J., Costello, J. E., Angold, A., Tweed, D., Stangl, D., Farmer, E. M. Z., & Erkanli, A. (1995). Children's mental health service use across service sectors. *Health Affairs, 14*(3), 148–159.
- Campbell, B. & Mark, M. M. (2006). Toward more effective stakeholder dialogue: Applying theories of negotiation to policy and program evaluation. *Journal of Applied Social Psychology, 36*, 2834–2863.
- Cartwright, D., & Zander, A. (1968). *Group dynamics* (3rd ed.). Oxford, England: Harper + Row.
- Center for Health and Health Care in Schools. (2003). *Caring for kids is giving children the help they need at school: This is how it works*. Washington, DC: George Washington University. (ERIC Reproduction Document Service: ED480805).
- Chafouleas, S. M., Briesch, A. M., Neugebauer, S. R., & Riley-Tillman, T. C. (2011). *Usage Rating Profile – Intervention (Revised)*. Storrs, CT: University of Connecticut.
- Chambers, D. A., Shenkman, E. A., Louviere, J. J., & Salloum, R. G. (2017). Application of discrete choice experiments to enhance stakeholder engagement as a strategy for advancing implementation: a systematic review. *Implementation*

Science, 12(1), 140.

Chen, G., & Tjosvold, D. (2008). Organizational values and procedures as antecedents for goal interdependence and collaborative effectiveness. *Asia Pacific Journal of Management*, 25(1), 93-112.

Chorpita, B. F., & Daleiden, E. L. (2009). Mapping evidence-based treatments for children and adolescents: Application of the distillation and matching model to 615 treatments from 322 randomized trials. *Journal of Consulting and Clinical Psychology*, 77(3), 566.

Choy-Brown, M., Padgett, D. K., Smith, B. T., & Tiderington, E. (2016). Sorting it out: Eliciting consumer priorities for recovery in supportive housing. *American Journal of Psychiatric Rehabilitation*, 19(3), 223-234.

Christian, M. S., & Slaughter, J. E. (2007, August). Work engagement: a meta-analytic review and directions for research in an emerging area. In *Academy of Management Proceedings* (Vol. 2007, No. 1, pp. 1-6). Briarcliff Manor, NY: Academy of Management.

Cohen, J. A., & Mannarino, A. P. (2015). Trauma-focused Cognitive Behavior Therapy for Traumatized Children and Families. *Child and Adolescent Psychiatric Clinics of North America*, 24(3), 557–570. <https://doi.org/10.1016/j.chc.2015.02.005>

Collier, J. (1957). Photography in anthropology: A report on two experiments. *American Anthropologist*, 59(5), 843-859.

Colquhoun, H., Leeman, J., Michie, S., Lokker, C., Bragge, P., Hempel, S., ... & Grimshaw, J. (2014). Towards a common terminology: a simplified framework of interventions to promote and integrate evidence into health practices, systems, and

- policies. *Implementation Science*, 9(1), 1-6.
- Committee on School Health. (2004). School-based mental health services. *Pediatrics*, 113(6), 1839-1845.
- Connors, E. H., Prout, J., Vivrette, R., Padden, J., & Lever, N. (2021). Trauma-Focused Cognitive Behavioral Therapy in 13 Urban Public Schools: Mixed Methods Results of Barriers, Facilitators, and Implementation Outcomes. *School Mental Health*, 13(4), 772-790.
- Cook, C.R., & Zhang, Y. (2014). Merging measures to develop a more robust measure of perceptual predictors of implementation. Presentation delivered at the annual School Mental Health.
- Cook, C. R., Lyon, A. R., Kubergovic, D., Wright, D. B., & Zhang, Y. (2015). A supportive beliefs intervention to facilitate the implementation of evidence-based practices within a multi-tiered system of supports. *School Mental Health*, 7(1), 49-60.
- Cook, C. R., Kilgus, S. P., & Burns, M. K. (2018). Advancing the science and practice of precision education to enhance student outcomes. *Journal of School Psychology*, 66, 4-10.
- 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(6), 914-935.
- Cooper, B. R., Bumbarger, B. K., & Moore, J. E. (2015). Sustaining evidence-based prevention programs: Correlates in a large-scale dissemination initiative. *Prevention Science*, 16(1), 145-157.

- Copeland, W. E., Keeler, G., Angold, A., & Costello, E. J. (2007). Traumatic events and posttraumatic stress in childhood. *Archives of General Psychiatry*, *64*(5), 577-584.
- Copeland, W. E., Angold, A., Shanahan, L., & Costello, E. J. (2014). Longitudinal patterns of anxiety from childhood to adulthood: the Great Smoky Mountains Study. *Journal of the American Academy of Child & Adolescent Psychiatry*, *53*(1), 21-33.
- Courage, C., & Baxter, K. (2005). *Understanding your users: A practical guide to user requirements methods, tools, and techniques*. San Francisco, CA: Elsevier.
- Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2008). Developing and evaluating complex interventions: the new Medical Research Council guidance. *BMJ*, *337*, a1655.
- Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced methods research designs. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 240). Thousand Oaks, CA: Sage Publications.
- Curtis, M. J., & Stollar, S. A. (2002). Best Practices in System-Level Change. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology IV* (pp. 223-234). Washington, DC, US: National Association of School Psychologists.
- D. A. Norman, & S. W. Draper (Eds.). (1986). *User centered system design: New perspectives on human-computer interaction*. Hillsdale, NJ: Erlbaum.
- Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into

practice: a consolidated framework for advancing implementation science.

Implementation Science, 4(1), 1-15.

Daymon, C., & Holloway, I. (2010). *Qualitative research methods in public relations and marketing communications*. New York: Routledge.

De Dreu, C. K. W., Weingart, L. R., & Kwon, S. (2000). Influence of social motives on integrative negotiation: A meta-analytic review and test of two theories. *Journal of Personality and Social Psychology*, 78, 889-905.

De Winter, J. C. (2013). Using the Student's t-test with extremely small sample sizes. *Practical Assessment, Research & Evaluation*, 18(10).

Delbecq, A. L. (1983). The nominal group as a technique for understanding the qualitative dimensions of client needs. *Assessing Health and Human Service Needs*, 210-218.

Delbecq, A. L., & Van de Ven, A. H. (1971). A group process model for problem identification and program planning. *The Journal of Applied Behavioral Science*, 7(4), 466-492.

DeSantis, L., & Ugarriza, D. N. (2000). The concept of theme as used in qualitative nursing research. *Western Journal of Nursing Research*, 22(3), 351-372.

Destephen, R. S. (1983). Group interaction differences between high and low consensus groups. *Western Journal of Speech Communication*, 47(4), 340-363.

Destephen, R. S. (1983). Group interaction differences between high and low consensus groups. *Western Journal of Speech Communication*, 47(4), 340-363.

Dey, I. (1999). *Grounding grounded theory*. San Francisco, CA: Academic Press.

- Dogherty, E. J., Harrison, M. B., Baker, C., & Graham, I. D. (2012). Following a natural experiment of guideline adaptation and early implementation: a mixed-methods study of facilitation. *Implementation Science, 7*(1), 1-12.
- Durlak, J. A., & DuPre, E. P. (2008). Implementation matters: A review of research on the influence of implementation on program outcomes and the factors affecting implementation. *American Journal of Community Psychology, 41*(3-4), 327.
- Eccles, M., & Mittman, B. (2006). Welcome to Implementation Science. *Implementation Science, 1*(1), 1.
- Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly, 44*(2), 350-383.
- Erskine, H. E., Norman, R. E., Ferrari, A. J., Chan, G. C., Copeland, W. E., Whiteford, H. A., & Scott, J. G. (2016). Long-term outcomes of attention-deficit/hyperactivity disorder and conduct disorder: a systematic review and meta-analysis. *Journal of the American Academy of Child & Adolescent Psychiatry, 55*(10), 841-850.
- Etchell, L., & Yelding, D. (2004). Inclusive design: Products for all consumers. *Consumer Policy Review, 14*(6).
- Flottorp, S. A., Oxman, A. D., Krause, J., Musila, N. R., Wensing, M., Godycki-Cwirko, M., ... & Eccles, M. P. (2013). A checklist for identifying determinants of practice: a systematic review and synthesis of frameworks and taxonomies of factors that prevent or enable improvements in healthcare professional practice. *Implementation Science, 8*(1), 1-11.
- Frey, K. S., Hirschstein, M. K., & Guzzo, B. A. (2000). Second Step: Preventing aggression by promoting social competence. *Journal of Emotional and*

Behavioral Disorders, 8(2), 102-112.

Gallagher, M., Hares, T., Spencer, J., Bradshaw, C., & Webb, I. A. N. (1993). The nominal group technique: a research tool for general practice?. *Family Practice*, 10(1), 76-81.

Garland, A. F., Lau, A. S., Yeh, M., McCabe, K. M., Hough, R. L., & Landsverk, J. A. (2005). Racial and ethnic differences in utilization of mental health services among high-risk youths. *American Journal of Psychiatry*, 162(7), 1336-1343.

Glasgow, R. E., Vogt, T. M., & Boles, S. M. (1999). Evaluating the public health impact of health promotion interventions: the RE-AIM framework. *American Journal of Public Health*, 89(9), 1322-1327.

Grimshaw, J. M., Eccles, M. P., Lavis, J. N., Hill, S. J., & Squires, J. E. (2012). Knowledge translation of research findings. *Implementation Science*, 7(1), 50.

Grudin, J., & Pruitt, J. (2002). Personas, participatory design and product development: An infrastructure for engagement. In T. Binder, J. Gregory, & I. Wagner (Eds.), *PDC 2002 Proceedings of the Participatory Design Conference, Sweden* (pp. 144–161). Palo Alto, CA: Computer Professionals for Social Responsibility.

Hamilton, A. B. (July, 2019). *Implementation research: Using qualitative research methods to improve policy and practice*. Workshop presented at the 16th Annual Qualitative Research Summer Intensive, Chapel Hill, North Carolina.

Hannan, S., Davis, E., Morrison, S., Gueorguieva, R., & Tolin, D. F. (2019). An open trial of intensive cognitive-behavioral therapy for school refusal. *Evidence-Based Practice in Child and Adolescent Mental Health*, 4(1), 89-101.

- Harvey, G., & Kitson, A. (2015). PARIHS Revisited: Introducing the i-PARIHS Framework. *Implementing evidence-based practice in healthcare: A facilitation guide*. London: Routledge, 25-46.
- Harvey, N., & Holmes, C. A. (2012). Nominal group technique: an effective method for obtaining group consensus. *International Journal of Nursing Practice, 18*(2), 188-194.
- Harvey, G., Loftus-Hills, A., Rycroft-Malone, J., Titchen, A., Kitson, A., McCormack, B., & Seers, K. (2002). Getting evidence into practice: the role and function of facilitation. *Journal of Advanced Nursing, 37*(6), 577-588.
- Heider, F. (2013). *The psychology of interpersonal relations*. Psychology Press.
- Hennink, M. M., Kaiser, B. N., & Marconi, V. C. (2017). Code saturation versus meaning saturation: how many interviews are enough?. *Qualitative Health Research, 27*(4), 591-608.
- Hickey, G., & Kipping, C. (1996). Issues in research. A multi-stage approach to the coding of data from open-ended questions. *Nurse Researcher, 4*, 81-91.
- Hill, C. E., Knox, S., Thompson, B. J., Williams, E. N., Hess, S. A., & Ladany, N. (2005). Consensual qualitative research: An update. *Journal of Counseling Psychology, 52*(2), 196–205.
- Hoddinott, P. (2015). A new era for intervention development studies. *Pilot and Feasibility Studies, 1*(1), 36.
- Hopfer, C., Salomonsen-Sautel, S., Mikulich-Gilbertson, S., Min, S. J., McQueen, M., Crowley, T., ... & Hewitt, J. (2013). Conduct disorder and initiation of substance

- use: a prospective longitudinal study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 52(5), 511-518.
- Hovmand, P. S., & Gillespie, D. F. (2010). Implementation of evidence based practice and organizational performance. *Journal of Behavioral Health Services & Research*, 37(1), 79–94.
- Howard, A. R. (2015). Coaching to vision versus coaching to improvement needs: a preliminary investigation on the differential impacts of fostering positive and negative emotion during real time executive coaching sessions. *Frontiers in Psychology*, 6, 455.
- Hoyer, W. D., Chandy, R., Dorotic, M., Krafft, M., & Singh, S. S. (2010). Consumer cocreation in new product development. *Journal of Service Research*, 13(3), 283-296.
- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277-1288.
- Hwang, W., & Salvendy, G. (2010). Number of people required for usability evaluation: the 10±2 rule. *Communications of the ACM*, 53(5), 130-133.
- Jaycox, L. H., Langley, A. K., & Hoover, S. A. (2018). *Cognitive behavioral intervention for trauma in schools (CBITS)*. Santa Monica, CA: RAND Corporation.
- Johnston, M., Carey, R. N., Connell Bohlen, L., Johnston, D. W., Rothman, A., de Bruin, M., & Michie, S. (2018). Linking behavior change techniques and mechanisms of action: Triangulation of findings from literature synthesis and expert consensus. *PsyArXiv*, 12.

- Jonker, C. M., Riemsdijk, M., & Vermeulen, B. (2010, August). Shared mental models. In *International Workshop on Coordination, Organizations, Institutions, and Norms in Agent Systems* (pp. 132-151). Springer: Berlin, Heidelberg.
- Karsh, B. T. (2004). Beyond usability: designing effective technology implementation systems to promote patient safety. *BMJ Quality & Safety*, *13*(5), 388-394.
- Kellam, S. G., Mackenzie, A. C., Brown, C. H., Poduska, J. M., Wang, W., Petras, H., & Wilcox, H. C. (2011). The good behavior game and the future of prevention and treatment. *aDDiction Science & Clinical Practice*, *6*(1), 73.
- Kessler, R. C., Angermeyer, M., Anthony, J. C., De Graaf, R. O. N., Demyttenaere, K., Gasquet, I., ... & Üstün, T. B. (2007). Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World Psychiatry*, *6*(3), 168.
- Kilbourne, A. M., Smith, S. N., Choi, S. Y., Koschmann, E., Liebrecht, C., Rusch, A., ... & Almirall, D. (2018). Adaptive School-based Implementation of CBT (ASIC): clustered-SMART for building an optimized adaptive implementation intervention to improve uptake of mental health interventions in schools. *Implementation Science*, *13*(1), 1-15.
- Kirchner, J. E. (n.d.). *The Use of Facilitation as an Implementation Strategy*. Retrieved from https://www.hsrp.research.va.gov/for_researchers/cyber_seminars/archives/1233-notes.pdf
- Kirchner, J. E., Ritchie, M. J., Pitcock, J. A., Parker, L. E., Curran, G. M., & Fortney, J. C. (2014). Outcomes of a partnered facilitation strategy to implement primary

- care–mental health. *Journal of General Internal Medicine*, 29(4), 904-912.
- Kolb, D. A., Boyatzis, R. E., & Mainemelis, C. (2001). Experiential learning theory: Previous research and new directions. *Perspectives on Thinking, Learning, and Cognitive Styles*, 1(8), 227-247.
- Kvale, S., & Brinkmann, S. (2009). *InterViews: Learning the craft of qualitative research interviewing*. Thousand Oaks, CA: Sage Publications.
- LaFasto, F., & Larson, C. (2001). *When teams work best: 6,000 team members and leaders tell what it takes to succeed*. Thousand Oaks, CA: Sage Publications.
- Landeta, J. (2006). Current validity of the Delphi method in social sciences. *Technological Forecasting and Social Change*, 73(5), 467–482.
- Landis, J. R., & Koch, G. G. (1977). An application of hierarchical kappa-type statistics in the assessment of majority agreement among multiple observers. *Biometrics*, 363-374.
- Langford, B. E., Schoenfeld, G., & Izzo, G. (2002). Nominal grouping sessions vs focus groups. *Qualitative Market Research: An International Journal*, 5(1), 58-70.
- Langley, A. K., Nadeem, E., Kataoka, S. H., Stein, B. D., & Jaycox, L. H. (2010). Evidence-based mental health programs in schools: Barriers and facilitators of successful implementation. *School Mental Health*, 2(3), 105-113.
- Lawler, E. J. (2001). An affect theory of social exchange. *American Journal of Sociology*, 107(2), 321-352.
- Leung, K., Deng, H., Wang, J., & Zhou, F. (2015). Beyond risk-taking: Effects of psychological safety on cooperative goal interdependence and prosocial behavior. *Group & Organization Management*, 40(1), 88-115.

- Lewis, C. C., Fischer, S., Weiner, B. J., Stanick, C., Kim, M., & Martinez, R. G. (2015). Outcomes for implementation science: an enhanced systematic review of instruments using evidence-based rating criteria. *Implementation Science, 10*(1), 155.
- Lewis, C. C., Klasnja, P., Powell, B., Tuzzio, L., Jones, S., Walsh-Bailey, C., & Weiner, B. (2018). From classification to causality: advancing understanding of mechanisms of change in implementation science. *Frontiers in Public Health, 6*, 136.
- Lewis, C. C., Powell, B. J., Brewer, S. K., Nguyen, A. M., Schriger, S. H., Vejnaska, S. F., ... & Mittman, B. (2021). Advancing mechanisms of implementation to accelerate sustainable evidence-based practice integration: protocol for generating a research agenda. *BMJ Open, 11*(10), e053474.
- Littlejohns, P., Wyatt, J. C., & Garvican, L. (2003). Evaluating computerised health information systems: hard lessons still to be learnt. *BMJ, 326*(7394), 860-863.
- Lyon, A. R., & Koerner, K. (2016). User-centered design for psychosocial intervention development and implementation. *Clinical Psychology: Science and Practice, 23*(2), 180-200.
- Lyon, A. R., Bruns, E. J., Ludwig, K., Vander Stoep, A., Pullmann, M. D., Dorsey, S., ... & McCauley, E. (2015). The Brief Intervention for School Clinicians (BRISC): A mixed-methods evaluation of feasibility, acceptability, and contextual appropriateness. *School Mental Health, 7*(4), 273-286.
- Lyon, A. R., & Bruns, E. J. (2019). From evidence to impact: Joining our best school mental health practices with our best implementation strategies. *School Mental*

Health, 11(1), 106-114.

Lyon, A. R., Cook, C. R., Locke, J., Davis, C., Powell, B. J., & Waltz, T. J. (2019).

Importance and feasibility of an adapted set of implementation strategies in schools. *Journal of School Psychology, 76, 66-77.*

Lyon, A. R., Coifman, J., Cook, H., McRee, E., Liu, F. F., Ludwig, K., ... & McCauley,

E. (2021). The Cognitive Walkthrough for Implementation Strategies (CWIS): a pragmatic method for assessing implementation strategy usability.

Implementation Science Communications, 2(1), 1-16.

Malterud, K., Siersma, V. D., & Guassora, A. D. (2016). Sample size in qualitative

interview studies: guided by information power. *Qualitative Health Research, 26(13), 1753-1760.*

Martens, B. K., Witt, J. C., Elliott, S. N., & Darveaux, D. X. (1985). Teacher judgments

concerning the acceptability of school-based interventions. *Professional Psychology: Research and Practice, 16(2), 191.*

Martino, S., Ball, S. A., Nich, C., Canning-Ball, M., Rounsaville, B. J., & Carroll, K. M.

(2011). Teaching community program clinicians motivational interviewing using expert and train-the-trainer strategies. *Addiction, 106(2), 428-441.*

Mathieu, J. E., Heffner, T. S., Goodwin, G. F., Salas, E., & Cannon-Bowers, J. A. (2000).

The influence of shared mental models on team process and performance. *Journal of Applied Psychology, 85(2), 273.*

May, D. R., Gilson, R. L., & Harter, L. M. (2004). The psychological conditions of

meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology, 77(1), 11-37.*

- Mayring, P. (2000). Qualitative content analysis. *Forum: Qualitative Social Research*, 1(2). Retrieved March 10, 2005, from <http://www.qualitative-research.net/fqs-texte/2-00/02-00mayring-e.htm>
- McDonald, N., Schoenebeck, S., & Forte, A. (2019). Reliability and inter-rater reliability in qualitative research: Norms and guidelines for CSCW and HCI practice. *Proceedings of the ACM on Human-Computer Interaction*, 3(CSCW), 1-23.
- McElroy, S., & Hevey, D. (2014). Relationship between adverse early experiences, stressors, psychosocial resources and wellbeing. *Child Abuse & Neglect*, 38(1), 65-75.
- McLaughlin, K. A., Koenen, K. C., Hill, E. D., Petukhova, M., Sampson, N. A., Zaslavsky, A. M., & Kessler, R. C. (2013). Trauma exposure and posttraumatic stress disorder in a national sample of adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 52(8), 815-830.
- Mittman, B.S. (2012). Implementation science in health care. In Brownson R.C., Colditz G.A., Proctor E.K., editors. *Dissemination and Implementation Research in Health: Translating Science to Practice* (pp. 400–418). New York, NY: Oxford University Press.
- Morgan, D. L. (1997). *The focus group guidebook* (Vol. 1). Thousand Oaks, CA: Sage Publications.
- Morgan, D. L. (1997). *The focus group guidebook*. Thousand Oaks, CA: Sage Publications.

- Morsette, A., Swaney, G., Stolle, D., Schuldberg, D., van den Pol, R., & Young, M. (2009). Cognitive behavioral intervention for trauma in schools (CBITS): School-based treatment on a rural American Indian reservation. *Journal of Behavior Therapy and Experimental Psychiatry, 40*(1), 169-178.
- Morsette, A., Swaney, G., Stolle, D., Schuldberg, D., van den Pol, R., & Young, M. (2009). Cognitive behavioral intervention for trauma in schools (CBITS): School-based treatment on a rural American Indian reservation. *Journal of Behavior Therapy and Experimental Psychiatry, 40*(1), 169-178.
- Nadeem, E., Saldana, L., Chapman, J., & Schaper, H. (2018). A mixed methods study of the stages of implementation for an evidence-based trauma intervention in schools. *Behavior Therapy, 49*(4), 509-524.
- Nelson, J. (2017). Using conceptual depth criteria: Addressing the challenge of reaching saturation in qualitative research. *Qualitative Research, 17*(5), 554-70.
- Nelson, T. D., & Steele, R. G. (2007). Predictors of practitioner self-reported use of evidence-based practices: Practitioner training, clinical setting, and attitudes toward research. *Administration and Policy in Mental Health, 34*, 319–330.
- Newell, M. L., & Coffee, G. (2015). School Psychologists as Systems-Level Consultants: Interdisciplinary Perspectives. *Journal of Educational & Psychological Consultation, 25*(2/3), 67–71.
- Newman, A., Donohue, R., & Eva, N. (2017). Psychological safety: A systematic review of the literature. *Human Resource Management Review, 27*(3), 521-535.
- Noltemeyer, A., Palmer, K., James, A. G., & Petrusek, M. (2019). Disciplinary and achievement outcomes associated with school-wide positive behavioral

- interventions and supports implementation level. *School Psychology Review*, 48(1), 81-87.
- Olson, E. L., & Bakke, G. (2001). Implementing the lead user method in a high technology firm: A longitudinal study of intentions versus actions. *Journal of Product Innovation Management*, 18, 388– 395. doi:10.1111/1540-5885.1860388
- Overstreet, S., & Chafouleas, S. M. (2016). Trauma-informed schools: Introduction to the special issue. *School Mental Health*, 8(1), 1-6.
- Owens, J. (2016). Early childhood behavior problems and the gender gap in educational attainment in the United States. *Sociology of Education*, 89(3), 236-258.
- Oxman, A. D., Thomson, M. A., Davis, D. A., & Haynes, R. B. (1995). No magic bullets: a systematic review of 102 trials of interventions to improve professional practice. *CMAJ: Canadian Medical Association Journal*, 153(10), 1423.
- Palinkas, L. A., Aarons, G. A., Horwitz, S., Chamberlain, P., Hurlburt, M., & Landsverk, J. (2011). Mixed method designs in implementation research. *Administration and Policy in Mental Health and Mental Health Services Research*, 38(1), 44-53.
- Palinkas, L. A., Campbell, M., & Saldana, L. (2018). Agency leaders' assessments of feasibility and desirability of implementation of evidence-based practices in youth-serving organizations using the stages of implementation completion. *Frontiers in Public Health*, 6, 161.
- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration And Policy in Mental Health and Mental Health Services Research*, 42(5), 533-544.

- Palinkas, L. A., Mendon, S. J., & Hamilton, A. B. (2019). Innovations in mixed methods evaluations. *Annual Review of Public Health, 40*, 423-442.
- Park, J., Lennon, S. J., & Stoel, L. (2005). On-line product presentation: Effects on mood, perceived risk, and purchase intention. *Psychology & Marketing, 22*(9), 695-719.
- Pauling, S., Cook, C., Pekel, K., Larson, M., & Zhang, Y. (2021). A Cross-Sectional Survey of School Administrators' Implementation of Evidence-Based Practices and Programs: Training, Knowledge, and Perceived Barriers. *Leadership and Policy in Schools, 1-19*.
- Paulus, P. (2000). Groups, teams, and creativity: The creative potential of idea-generating groups. *Applied Psychology, 49*(2), 237-262.
- Pellecchia, M., Mandell, D. S., Nuske, H. J., Azad, G., Benjamin Wolk, C., Maddox, B. B., ... & Hadley, T. (2018). Community-academic partnerships in implementation research. *Journal of Community Psychology, 46*(7), 941-952.
- Powell, B. J., Beidas, R. S., Lewis, C. C., Aarons, G. A., McMillen, J. C., Proctor, E. K., & Mandell, D. S. (2017). Methods to improve the selection and tailoring of implementation strategies. *The journal of Behavioral Health Services & Research, 44*(2), 177-194.
- Powell, B. J., Fernandez, M. E., Williams, N. J., Aarons, G. A., Beidas, R. S., Lewis, C. C., ... & Weiner, B. J. (2019). Enhancing the Impact of Implementation Strategies in Healthcare: A Research Agenda. *Frontiers in Public Health, 7*, 3.
- Powell, B. J., Waltz, T. J., Chinman, M. J., Damschroder, L. J., Smith, J. L., Matthieu, M. M., ... & Kirchner, J. E. (2015). A refined compilation of implementation strategies: results from the Expert Recommendations for Implementing Change

- (ERIC) project. *Implementation Science*, 10(1), 21.
- Potter, M., Gordon, S., & Hamer, P. (2004). The nominal group technique: a useful consensus methodology in physiotherapy research. *New Zealand Journal of Physiotherapy*, 32, 126-130.
- President's New Freedom Commission on Mental Health. (2003). Achieving the promise: Transforming mental health care in America. Final Report. (DHHS Publication No. SMA-03-3832). Rockville, MD: Author.
- Proctor, E., Silmere, H., Raghavan, R., Hovmand, P., Aarons, G., Bunger, A., ... & Hensley, M. (2011). Outcomes for implementation research: conceptual distinctions, measurement challenges, and research agenda. *Administration and Policy in Mental Health and Mental Health Services Research*, 38(2), 65-76.
- Proctor, E. K., Powell, B. J., Baumann, A. A., Hamilton, A. M., & Santens, R. L. (2012). Writing implementation research grant proposals: ten key ingredients. *Implementation Science*, 7(1), 1-13.
- Proctor, E. K., Powell, B. J., & McMillen, J. C. (2013). Implementation strategies: recommendations for specifying and reporting. *Implementation Science*, 8(1), 1-11.
- Racine N, McArthur BA, Cooke JE, Eirich R, Zhu J, Madigan S. (2021). Global Prevalence of Depressive and Anxiety Symptoms in Children and Adolescents During COVID-19: A Meta-analysis. *JAMA Pediatrics*, 175(11):1142–1150.
- Radez, J., Reardon, T., Creswell, C., Lawrence, P. J., Evdoka-Burton, G., & Waite, P. (2021). Why do children and adolescents (not) seek and access professional help

- for their mental health problems? A systematic review of quantitative and qualitative studies. *European Child & Adolescent Psychiatry*, 30(2), 183-211.
- Reimers, T. M., & Lee, J. (1991). Parental acceptability of treatments for children's hypercholesterolemia. *Journal of Behavioral Medicine*, 14(3), 225-239.
- Repenning, N. P. (2002). A simulation-based approach to understanding the dynamics of innovation implementation. *Organization Science*, 13(2), 109–127.
- Ringwalt, C., Ennett, S. T., Vincus, A. A., Rohrbach, L. A., & Simons-Rudolph, A. (2004). Who's calling the shots? Decision-makers and the adoption of effective school-based substance use prevention curricula. *Journal of Drug Education*, 34(1), 19-31.
- Rosen, A., & Proctor, E. K. (1981). Distinctions between treatment outcomes and their implications for treatment evaluation. *Journal of Consulting and Clinical Psychology*, 49(3), 418–425.
- Rowe, G., & Wright, G. (2011). The Delphi technique: Past, present, and future prospects: Introduction to the special issue. *Technological Forecasting and Social Change*, 78(9), 1487–1490.
- Sackett, D. L., Rosenberg, W. M., Gray, J. M., Haynes, R. B., & Richardson, W. S. (1996). Evidence based medicine: what it is and what it isn't. *BMJ*, 312(7023), 71-72.
- Sanders, E. B. N. (2002). From user-centered to participatory design approaches. In J. Frascara (Ed.), *Design and the social sciences: Making connections* (pp. 18-25). London, England: CRC Press.

- Schei, V., Rognes, J., & Shapiro, D. L. (2011). Can individualists and cooperators play together? The effect of mixed social motives in negotiations. *Journal of Experimental Social Psychology, 47*, 371 – 377.
- Singh, S., Wang, H., & Zhu, M. (2018). Perceptions of social loafing during the process of group development.
- Slovic, P., Fischhoff, B., & Lichtenstein, S. (1977). Behavioral decision theory. *Annual Review of Psychology, 28*(1), 1-39.
- Southam-Gerow, M. A., Cox, J. R., & Kinnebrew, A. (2020). Managing and Adapting Practice (MAP). In T. W. Farmer, M. A. Conroy, E. M. Z. Farmer, & K. S. Sutherland (Eds.), *Handbook of research on emotional and behavioral disorders: Interdisciplinary developmental perspectives on children and youth* (pp. 321–340). Routledge/Taylor & Francis Group. <https://doi.org/10.4324/9780429453106-22>
- Southam-Gerow, M. A., & Dorsey, S. (2014). Qualitative and mixed methods research in dissemination and implementation science: Introduction to the special issue. *Journal of Clinical Child & Adolescent Psychology, 43*(6), 845-850.
- Stanick, C. F., Halko, H. M., Dorsey, C. N., Weiner, B. J., Powell, B. J., Palinkas, L. A., & Lewis, C. C. (2018). Operationalizing the ‘pragmatic’ measures construct using a stakeholder feedback and a multi-method approach. *BMC Health Services Research, 18*(1), 1-12.
- Stirman, S. W., Baumann, A. A., & Miller, C. J. (2019). The FRAME: an expanded framework for reporting adaptations and modifications to evidence-based interventions. *Implementation Science, 14*(1), 58.

- Stein, B. D., Jaycox, L. H., Kataoka, S. H., Wong, M., Tu, W., Elliott, M. N., & Fink, A. (2003). A mental health intervention for schoolchildren exposed to violence: a randomized controlled trial. *JAMA*, *290*(5), 603-611.
- Stetler, C. B., Legro, M. W., Rycroft-Malone, J., Bowman, C., Curran, G., Guihan, M., ... & Wallace, C. M. (2006). Role of "external facilitation" in implementation of research findings: a qualitative evaluation of facilitation experiences in the Veterans Health Administration. *Implementation Science*, *1*(1), 23.
- Thibaut, J. W. (2017). *The Social Psychology of Groups*. London: Routledge.
- Use of Mental Health Services and Treatment Among Children. (n.d.). Retrieved January 16, 2015, from <http://www.nimh.nih.gov/health/statistics/prevalence/use-of-mental-health-services-and-treatment-among-children.shtml>
- Vaivio, J. (2012). Interviews: Learning the craft of qualitative research interviewing. *European Accounting Review*, *21*(1), 186-189.
- Van de Ven, A. H. (1980). Problem solving, planning, and innovation. Part I. Test of the program planning model. *Human Relations*, *33*(10), 711-740.
- Van de Ven, A. H., & Delbecq, A. L. (1972). The nominal group as a research instrument for exploratory health studies. *American Journal of Public Health*, *62*(3), 337-342.
- Vella, K., Goldfrad, C., Rowan, K., Bion, J., & Black, N. (2000). Use of consensus development to establish national research priorities in critical care. *BMJ*, *320*(7240), 976-980.
- Ven de Ven, A. H., & Delbecq, A. L. (1974). The effectiveness of nominal, Delphi, and interacting group decision making processes. *Academy of Management Journal*,

17(4), 605-621.

- von Hippel, E. (1989). New product ideas from lead users. *Research Technology Management*, 32(3), 24– 27.
- Waltz, T. J., Powell, B. J., Matthieu, M. M., Damschroder, L. J., Chinman, M. J., Smith, J. L., ... & Kirchner, J. E. (2015). Use of concept mapping to characterize relationships among implementation strategies and assess their feasibility and importance: results from the Expert Recommendations for Implementing Change (ERIC) study. *Implementation Science*, 10(1), 1.
- Wandersman, A., & Florin, P. (2003). Community interventions and effective prevention. *American Psychologist*, 58(6-7), 441.
- Weiner, B. J., Lewis, C. C., Stanick, C., Powell, B. J., Dorsey, C. N., Clary, A. S., ... & Halko, H. (2017). Psychometric assessment of three newly developed implementation outcome measures. *Implementation Science*, 12(1), 108.
- Weist, M. D. (1997). *Expanded school mental health services: A national movement in progress*. In T. H. Ollendick & R. J. Prinz (Eds.), *Advances in clinical child psychology*, Volume 19 (pp. 319–352). New York: Plenum Press.
- Weist, M. D., & Evans, S. W. (2005). Expanded school mental health: Challenges and opportunities in an emerging field. *Journal of Youth and Adolescence*, 34(1), 3-6.
- Weist, M. D., Paternite, C., & Adelsheim, S. (2005). School based mental health services. Report to the Institute of Medicine, Board on Health Care Services, Crossing the Quality Chasm Project, Adaptation to Mental Health and Addictive Disorders Committee.

- Weisz, J. R., & Kazdin, A. E. (Eds.). (2010). *Evidence-based Psychotherapies for Children and Adolescents*. New York, NY: Guilford Press.
- 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.
- Wilkinson, C. R., & De Angeli, A. (2014). Applying user centered and participatory design approaches to commercial product development. *Design Studies*, *35*(6), 614-631.

Appendix 1

Acceptability of Intervention Measure (AIM), Intervention Appropriateness Measure (IAM), and Feasibility of Intervention Measure (FIM)

Acceptability of Intervention Measure (AIM)

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
1. FIT meets my approval.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. FIT is appealing to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I like FIT.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I welcome FIT.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Intervention Appropriateness Measure (IAM)

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
1. FIT seems fitting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. FIT seems suitable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. FIT seems applicable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. FIT seems like a good match.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Feasibility of Intervention Measure (FIM)

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
1. FIT seems implementable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. FIT seems possible.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. FIT seems doable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. FIT seems easy to use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix 2

Semi-structured Interview Guide for Study 1

Sample FIT Development Study Questions

The goal of these interviews is to understand that context in which facilitation should occur, given stakeholder current experiences and preferences, and how FIT needs to be changed in order to accommodate for stakeholder thoughts/needs.

RQ-1: What recommendations do internal and external school-based stakeholders have for any facilitation strategy to be viewed as feasible, acceptable, appropriate, and effective?

First we would like to discuss implementation of mental health services. We know that this can often be incredibly complicated. We often have the best intentions of making things work and delivering high quality services to students who wouldn't otherwise access care; however, this is often easier said than done. There have been a few people across the country who have used this strategy called "facilitation" to empower systems and service providers with the resources, tools, and interpersonal setting to support successful implementation. In this way, facilitation acts as an ongoing problem-solving process set within the context of a known need and a positive interpersonal relationship. As such, facilitation is used to engage in never-ending, continual improvement as there always opportunities to learn, grow, and improve our skills and abilities to serve students and families as well as our systems that support the work we do.

Here are some examples of how facilitation can be used:

- *A clinician learns a new EBP, such as TF-CBT, and their clinical supervisor (with whom they have a supportive relationship) helps them navigate how to get referrals and start using the new practice.*
- *An outside consultant works with an interdisciplinary team to coordinate the delivery of school-based mental health services in a public school setting.*
- *A principal hosts a meeting with school-linked clinicians to work through logistical barriers (e.g., scheduling, space, resource deficits) that are getting in the way of efficiently and effectively delivering services in schools.*

In all of these cases, there is a person working with providers within the context of a problem to continuously improve. In other words, there is always someone who is the facilitator or does/leads the facilitation. Part of what we are trying to figure out is who in our systems would be the most effective person to do facilitation, how facilitation may or may not be helpful, and also what models of facilitation fit best in your role or setting.

1. How do you think it might be helpful/not helpful in an implementation effort?
 - If we were to utilize facilitation in your setting, what do you think would go well? Alternatively, what do you think wouldn't go well?
 - What would make you want to stay engaged in a facilitation effort? What might make you want to pull away from engaging in facilitation efforts?
2. Who do you see leading something like this? (Ex: Someone who you go to for help already or has expertise in solving implementation problems)
 - Would a clinical supervisor benefit from learning how to engage in implementation facilitation?
 - When, if ever, would it be better for someone outside of your organization to come in and do facilitation?

Let's talk about how this would actually occur. Often times, meetings are utilized to set the stage for initial discussions and problem-solving; however, we don't know much about the actual environmental

constraints, as well as benefits, of meetings to know how to make this work really fit within your setting, and not cause more burden than added productive.

3. What type of meeting would allow you the best opportunity to effectively engage in discussion about your current barriers to implementation and gain support in actively problem-solving barriers to implementation? [Please rank order the contexts listed below]

EXAMPLES:

- Individual supervision with clinical supervisor
- Group supervision/team meetings with other school-based clinicians
- Interdisciplinary team meetings with a range of professionals as your school site

4. Would there ever be a time when team meetings with multiple types of professionals would be helpful to identify and resolve implementation problems?

POSSIBLE PROBES:

- What is most helpful about team meetings? What is most unhelpful? When you think about the team meeting you have been a part of, what goes well? What doesn't?)
- What do you think about having ongoing meetings versus one/two-time meetings to identify and resolve implementation problems?

5. If so or not, what are the typical structures and constraints of team meetings:
 1. How frequently do you meet? What time of day do you typically meet?
 2. How long are the meetings (what is reasonable)?
 3. What are the meeting conditions (physical environment)?

RQ-2: What specific changes to the features and core components of FIT do internal and external school-based stakeholders recommend that will improve FIT usability and likely effectiveness?

Thank you for your feedback! This is wonderful information. So in prepping for this meeting, we have been working on creating some mockups of resources and a process that we would like to get your feedback about to inform further refinement or total reproduction.

[Run through the FIT Model with providers/supervisors using the handout and engage in rating using FIM, AIM,]

Acceptability of Intervention Measure (AIM)

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
1. FIT meets my approval.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. FIT is appealing to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I like FIT.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I welcome FIT.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Intervention Appropriateness Measure (IAM)

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree

1. FIT seems fitting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. FIT seems suitable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. FIT seems applicable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. FIT seems like a good match.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Feasibility of Intervention Measure (FIM)

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
1. FIT seems implementable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. FIT seems possible.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. FIT seems doable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. FIT seems easy to use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Why did you give FIT X rating on [feasibility, acceptability, or appropriateness] and not a higher one?
7. What would you recommend to make a facilitation strategy, like FIT, more [feasible, acceptable and appropriate]?

[If time, outline different models of facilitation and gain feedback on most appropriate/feasible/acceptable]

Thank you so much for your time!

Appendix 3

Post-Interview Survey for Study 1

Q9
Follow-up Survey

You are receiving this survey because you recently completed an individual interview via Zoom focused on different approaches to continuously improve the delivery of high quality mental health services in schools. This post-interview survey is an optional portion of the research. You will receive a \$20.00 gift certificate for completing this post-interview survey.

Your signature documents your permission to take part in this optional portion of the research.

Signature of participant:

Q10 Participant printed name:

Q7
Follow-up Survey

Below, we describe three scenarios, or three different problem-solving models, that could help clinicians resolve implementation problems that get in the way of consistently selecting and using EBPs with students on their caseload.

Please read the three model descriptions below and answer the subsequent questions with your own job in mind, including constraints and strengths of your school and/or clinic context (e.g., availability of staff, resources, time, priority for mental health in schools, etc.).

Q3 Which model of support described above would: (1) fit reasonably into your workload as a school-based clinician; and (2) result in improved circumstances that would increase the likelihood that you would feel more motivated, confident, and supported to select and implement EBPs? [Select one]

- Model #1 – External facilitator working with the school and clinic (1)
- Model #2 – Clinical supervisor working with the clinician and subsequently with the school (2)
- Model #3 – Learning collaborative working together to “self-solve” site-based problems (3)

Q4 Why would the model you selected work best for you and your school and/or clinic?

Q5 If there were a time that a team of individuals needed to meet to discuss concerns, would Model #1 work? Why or why not?

Q8 You are almost done with this survey. We appreciate your time and participation.

Below, please provide the email address where you would like us to send your \$20 gift card. Shortly after you submit this survey, you should receive an email from Tango with instructions for redeeming your Tango card for a wide variety of gift card options. If you do not receive an email with this information by the end of the day, please check your junk or spam mail. If you still do not receive it, please contact us at lars5424@umn.edu.

Email address where you would like your gift card sent:

End of Block: Default Question Block

Appendix 4

Codes and Themes

CODES:

RQ1-1 Recommendations for any school-based facilitation strategy

Shared Understanding of Roles

Shared Understanding of school MH

Shared Vision

Buy-in

Action Planning

Consensus Building

Problem Solving Barriers

Prosocial Relationships & Interpersonal Skills

Meetings

District Level

Stakeholders

Structures

Availability

Building Level

Stakeholders

Structure

Unavailability

Funding for Effort

Facilitator

3rd Party Purveyor

Administrator

Blended or Hybrid / TTT

RQ1-2 Specific changes to the features and core components of FIT

Structured Tools

Conversational Tools

Pick & Choose Model

CATEGORIES/THEMES:

RQ1-1 Recommendations for any school-based facilitation strategy

Core components of feasible, acceptable, appropriate, and effective facilitation strategies

Component #1: Shared or Common Understanding

Roles and Responsibilities

Shared Understanding of Roles

Understanding Mental Health Care in Schools and Equitable Priority for Students

Shared Understanding of school MH

Shared Vision

Shared Vision

Building Buy-In

Buy-in

Component #2: Planned Action and Engagement

Action Planning

Consensus Building

Problem Solving Barriers

Component #3: Prosocial Relationships and Trust.

Prosocial Relationships & Interpersonal Skills

Design Parameters and Contextual Constraints

Appropriate Organizational Level: District-Level.

Meetings

*District Level**Stakeholders**Structures**Availability*

Meeting Structures and Constraints: Building-Level.

*Meetings**Building Level**Stakeholders**Structure**Unavailability**Funding for Effort*

Facilitator Type: Third Party, Administrator or Hybrid Model.

Third Party Purveyor.

3rd Party Purveyor

Administrator.

Administrator

Hybrid Model.

Blended or Hybrid / TTT

RQ1-2 Specific changes to the features and core components of FIT

Recommendations to Improve Acceptability, Appropriateness, and Feasibility

Maintain a Sense of Structure.

Structured Tools

Promote Flexibility.

Conversational Tools

Use a "Pick & Choose" Model.

Pick & Choose Model