

30

Optimizing Implementation of School-based Programming by Leveraging Motivational Interviewing

Andy J. Frey, Elise T. Pas, Keith C. Herman, and Jason R. Small

Introduction

Schools are an essential context for the prevention and treatment of mental health problems and the promotion of behavioral health in children and youth. Though education research has received increased attention and achieved greater rigor over the last two decades, schools' use and adequate implementation of evidence-based interventions and practices, hereafter referred to as evidence-based practices (EBPs), are still lacking (e.g., Durlak & DuPre, 2008). This gap is best described as an issue of translation, whereby interventions are developed, tested, and shown to be effective, but do not translate into real-world settings (Spath et al., 2013). Implementation science focuses on factors related to translation, including dissemination, adoption, high-fidelity implementation, and sustained use (Pas & Bradshaw, 2015).

The process by which a school and educators may come to adopt and implement any EBP with

fidelity is complex and nuanced. Implementation is a multilevel process that occurs over time; involves a range of stakeholders (e.g., administrators, teachers, and parents); moreover, it necessitates numerous decisions, actions, and adjustments along the way (National Research Council and Institute of Medicine, 2009). More specifically, the successful translation of EBPs is propelled by the presence of competency drivers (e.g., strategies and methods for selecting staff, training, coaching, and monitoring fidelity), organizational drivers (e.g., institutional supports such as policies, procedures, data systems, and feedback loops), and leadership drivers (e.g., technical and adaptive skills (Fixsen et al., 2005). Motivational interviewing (MI) has been introduced as a possible strategy to address gaps in translational school-based research and practice (Frey et al., 2015; Pas & Bradshaw, 2021).

To help these gaps in translational school-based research, this chapter focuses on optimizing the implementation of EBPs that address mental health and social, emotional, and behavioral concerns in school settings using MI (Miller & Rollnick, 2012). Herein, we define MI and discuss its relevancy to implementation science. Next, we highlight several pioneering efforts that paved the way for the field of education to use MI as an approach to support implementation. Then, we describe the mechanisms believed to make MI work, including a summary of the empirical evidence demonstrating the effective-

A. J. Frey (✉) · K. C. Herman
University of Missouri, Columbia, MO, USA
e-mail: afrey@health.missouri.edu;
hermankc@missouri.edu

E. T. Pas
Johns Hopkins University, Baltimore, MD, USA
e-mail: epas1@jhu.edu

J. R. Small
Oregon Research Institute, Springfield, OR, USA
e-mail: jason@ori.org

© The Author(s), under exclusive license to Springer Nature Switzerland AG 2023
S. W. Evans et al. (eds.), *Handbook of School Mental Health*, Issues in Clinical Child Psychology,
https://doi.org/10.1007/978-3-031-20006-9_30

ness of these mechanisms in school-based settings. We conclude by highlighting several aspects of MI practice and research that are important to consider as educators and researchers continue to use this promising approach to support the translation of EBPs by optimizing implementation efforts.

Motivational Interviewing and Implementation Science

Motivational interviewing is a “collaborative conversational style for strengthening a person’s own motivation and commitment to change” (Miller & Rollnick, 2012, p. 12). Building on the work of Miller and Rose (2009) and Magill et al. (2014) highlighted three core ingredients that make MI effective: the *technical component*, the *relational component*, and [the avoidance of] *MI inconsistent behavior*. The technical component refers to the practitioner’s ability to shape the conversation, and evoke participant change talk (i.e., language that supports a shift from the status quo) of greater depth, strength, and frequency; while acknowledging but not reinforcing sustain talk, or language that supports the status quo (Miller & Moyers, 2017). This shaping is done by intentionally and strategically utilizing core MI consistent skills, which are represented by the acronym OARS (i.e., open-ended questions, affirmations, reflections, and summaries) to strengthen the participant’s motivation for change. MI-inconsistent behavior are behaviors to avoid and involve the use of confrontation (e.g., lecturing, shaming, coaxing, arguing) and persuasion (e.g., being overly directive with the participant or offering unsolicited advice or advice without permission). The relational component is comprised of accurate empathy, respect for participant autonomy, and egalitarian collaboration. These three active ingredients, used in combination in the context of overlapping and recursive processes that include *engaging*, *focus-ing*, *evoking*, and *planning*, should be central to any definition of MI quality.

Increasingly, MI is recognized as an important intervention across multiple fields (e.g.,

child welfare, education, health, behavioral health, mental health, and social work) and has been applied to address numerous problems, including alcohol use, smoking cessation, illicit drug use, sexually transmitted infections, unplanned pregnancy, HIV, diet, heart disease, exercise, obesity, oral health, depression, ineffective parenting practices, school dropout, academic failure, and challenging behavior or social-emotional development (Miller & Rollnick, 2012; Sanci et al., 2015). Despite application to a variety of problems, to our knowledge, the field of education is the first to apply MI within the context of implementation science, or as an approach to optimize the implementation of existing EBPs (Larson et al., 2021; Pas et al., 2021).

Use of MI (i.e., the technical and relational components, and avoidance of MI inconsistent behavior) within the context of the four MI processes (i.e., engaging, focusing, evoking, and planning) relates directly to competency drivers within the implementation science literature. Competency drivers include the offering of support and guidance to school-based implementers who may not want to, have the knowledge or skills to, or feel they have time to engage with identified programming (Domitrovich et al., 2008) and are essential for ensuring an intervention or practice is implemented as intended—referred to as *implementation fidelity* (Pas & Bradshaw, 2015). Motivational interviewing can also be viewed as an implementation strategy related to organizational drivers, although the relevance to this driver is narrower. Specifically, because MI practice places a premium on values, it can be effective for increasing buy-in among educators tasked with implementing a given EBP (Rogers, 2002). In this respect, MI might be useful in the process of getting information about EBPs to large numbers of educators (i.e., *dissemination*) and getting them to commit to and initiate the use of EBPs (i.e., *adoption*; Brownson et al., 2017). Next, we provide an overview of some of the pioneers who paved the way for MI as an approach for optimizing implementation in the context of school-based research and practice.

Intervention to Implementation Support

To our knowledge, the earliest MI-informed school-based intervention was the Family Check Up (FCU; Dishion et al., 2003). Modeled after the Drinker’s Check Up (Miller et al., 1988), the FCU was designed as a brief motivational enhancement intervention delivered in family resource rooms in schools. The FCU focuses on gathering ecological data about family and child adjustment, especially malleable aspects of the family context that are known to influence youth development and provides caregivers with detailed feedback about their strengths and potential areas of improvement. The initial interview and feedback sessions are delivered using an MI style focused on evoking change talk in the caregiver(s) and moving them to goal setting and action steps to address any areas of concern. Although the FCU has since been adapted for delivery in other settings including community clinics and hospitals (see Stormshak & Dishion, 2009), Dishion and Stormshak originally developed it for use in schools as part of a multi-tiered system of support for families (Dishion et al., 2003; Stormshak et al., 2011). At the universal level, family resource rooms provide education and information support (e.g., pamphlets, videos, and books) that are available to any family regardless of need. The FCU is delivered by trained staff members as an indicated support for families with concerns about their child. A nod should also be given to Patterson and Forgatch’s seminal studies on family consultation that influenced Dishion’s leanings toward MI. In the mid-1980s, they reported a series of studies demonstrating a functional relationship between therapist speech and the subsequent language used by families (Patterson & Forgatch, 1985). The Classroom Check Up (CCU) was borne of the same types of observations (Reinke et al., 2008). Reinke, a student of Dishion, noted similar barriers to change in the context of teacher

consultation to improve classroom management. Like Dishion, she identified leverage points in classroom management and developed efficient objective measures of these domains. She then created a teacher interview and feedback session that would fit within the context of schools. The CCU can be delivered as universal support for all teachers and/or as a selective or indicated support for teachers struggling with classroom management. Consultants meet with teachers to gather information about their background, current classroom management strategies, and prior consultation experiences. The consultant then conducts a series of structured classroom observations using direct observation tools such as the Brief Classroom Interaction Observation–Revised (BCIO-R, Reinke et al., 2015) and Student–Teacher Classroom Interaction Observation (ST-CIO; Reinke et al., 2016). Prior to the second meeting with the teacher, the consultant compiles the results of these observations into a single feedback form. The feedback form includes several domains of effective classroom management practices (e.g., ratio of positive to negative behavior management, and opportunities to respond). The consultant reviews the feedback in a teacher meeting using an MI style, co-develops a menu of options based on teacher choice, and helps the teacher select a specific goal and action plan for improving their classroom management. Ongoing progress monitoring and feedback are provided, and the plan is altered as needed. Evidence supports the efficacy of the CCU (Reinke et al., 2008, 2011).

It is noteworthy that, while both the FCU and CCU have procedures that mirror the MI processes (engaging, focusing, evoking, and planning) and promote an interaction style similar to the relational component of MI for moving caregivers and teachers in the direction of change, neither model measures MI proficiency as an indicator of implementation fidelity nor considers the mediating role of change talk within their logic models.

Coaching as an Implementation Support

As MI applications in school-based settings advanced, so too did the field of education's awareness of barriers to the translation of EBP's into schools and coaching being studied as a promising solution to optimize implementation efforts. Denton and Hasbrouck (2009) described coaching as a professional development practice in which a person with specialized knowledge works collaboratively with a teacher to change current teaching or management practices as a competency implementation driver. Comparing and contrasting coaching with traditional school-based consultation, Erchul (2015) suggested both involve indirect service delivery, a systematic problem-solving process, and prevention and remediation. An important distinction, he noted, involves the teacher's choice to participate. In the *consultant-teacher dyad*, the teacher typically initiates the relationship, and the goal(s) of the intervention are developed collaboratively—if not driven by the teacher. In the traditional *coach-teacher relationship*, however, teachers often have little choice, as they are typically required to implement an EBP that has been chosen at the building, school, or state level for system-wide implementation (e.g., coaches to support school- or district-wide behavior or academic initiatives).

Early reviews of the coaching literature suggested the practice was an efficacious implementation support strategy. For example, Driscoll et al. (2011) found teachers were 13 times more likely to implement mandatory interventions when they had access to a coach. Other reviews yielded similar results (Forman et al., 2009; Ransford et al., 2009; Wenz-Gross & Upshur, 2012; Stormont et al., 2015). These reviews suggested several activities including assessment, performance feedback, and planning are key elements of coaching. While these syntheses identified coaching as important implementation support and noted consistency in the processes that comprise the process, scant attention was provided to quality control measures related to coaching. For example, the studies treated coach-

ing as an independent variable with implementation serving as the dependent variable; yet the coach training, coaching procedures, and defining and measuring of fidelity—particularly the quality of coaching—were often not described and were rarely measured. Thus, while coaching appears beneficial, how it was done and the mechanisms or active ingredients that made it effective are still unclear.

Motivational Interviewing to Inform Coaching

The only formal and well-established school-based applications of MI used in school settings as of 2011 were the FCU and CCU, with the exception of Blom-Hoffman and Rose (2007), who proposed the general use of MI in school-based consultation. Building on the pioneering work of Reinke (CCU) and Dishion (FCU), Frey et al. (2011) conceptualized multiple uses of MI in school-based practice and research. Specifically, these authors suggested that in addition to stand-alone interventions, MI could be used (a) informally in conversations with students, parents, and teachers; (b) to encourage teachers or administrators to adopt existing EBPs; and (c) to increase the fidelity with which EBPs are implemented. Extending each of these MI applications, Reinke et al. (2014) further distinguished between MI as a framework to guide stand-alone interventions and the use of adapted versions of the FCU and CCU procedures with existing interventions to optimize implementation by improving caregiver/teacher engagement in the intervention process. Following this work, Frey et al. (2015) proposed the *Motivational Interviewing Navigation Guide* (MING). Procedurally, the MING is very similar to the FCU and CCU interventions, as well as coaching models that did not specifically invoke MI, in that all embrace similar processes: engagement, assessment, performance feedback, and intervention planning. An important distinction of the MING, however, is that it considered MI fidelity derived from Miller and Moyer's (2006) eight strategies for learning MI, as a prerequisite for

using the model to support the implementation of existing EBPs and identified the mediating role of change talk within its logic model.

With increased attention to implementation science and coaching to improve adoption and implementation of EBPs, several research groups leveraged the CCU as a coaching model. The CCU provided an organization and structure to increase motivation to adopt new EBPs. Thus, the CCU evolved from a framework to use MI and provide personalized feedback to evoke teacher readiness to change and implement effective classroom management practices, to an organizational platform to support implementation in other ways. Evidence supporting the efficacy of several recent CCU adaptations include improving teacher implementation of social-emotional curriculum (Reinke et al., 2012), culturally responsive practices (Bradshaw et al., 2018), and the First Step to Success program (Frey et al., 2013). Additionally, CCU adaptations have been used to reduce bullying behavior (Pas et al., 2019) and disproportionality (Gion et al., 2022).

Recently, Owens and colleagues incorporated techniques from MI and cognitive-behavioral therapy, as well as structural components from the CCU and the broader consultation literature, into a multi-component consultation framework designed to support teachers working with students with, or at risk of developing, Attention Deficit Hyperactivity Disorder (ADHD) (Coles et al., 2015; Owens et al., 2017). This multi-component consultation model targets teacher knowledge, skills, and beliefs with the intent of improving the implementation of general classroom management strategies and targeted intervention supports such as the Daily Report Card. Their model utilizes MI-informed strategies to increase perceived acceptability, self-efficacy, agency, and motivation and in turn improve implementation quality. Owens et al. (2017) implemented their consultation model with 58 teachers in 8 schools and found that, although the skills of teachers across both conditions improved, the multi-component model utilizing MI proved most beneficial to teachers whose knowledge, skills, and beliefs served as barriers to implementation integrity.

Another recent study conducted by Lyon et al. (2019) utilized MI as part of a brief, group-based, multi-component pre-implementation strategy designed to improve the implementation of existing EBPs by targeting factors (e.g., attitudes, subjective norms, and perceived behavioral control) associated with an individual's intent to implement an intervention or practice. In this study, Lyon and his colleagues used the Beliefs and Attitudes for Successful Implementation in Schools (BASIS) strategy to improve the implementation of the Cognitive Behavioral Intervention for Trauma in Schools (CBITS) intervention. BASIS consists of three components: strategic education, social influence, and intervention. BASIS has also been feasibility tested to support the implementation of the Good Behavior Game (Larson et al., 2021).

Finally, Chen and his colleagues (2018) recently developed a novel group-based implementation model to help school leadership teams with the adoption, installation, and implementation of School Wellness Integration Targeting Child Health (SWITCH), an evidence-based obesity-prevention program. The implementation process, which was designed to support the uptake and delivery of the SWITCH intervention, includes (a) an in-person, 6-h school wellness conference, (b) a 1-h follow-up webinar to support the setup of the program's content

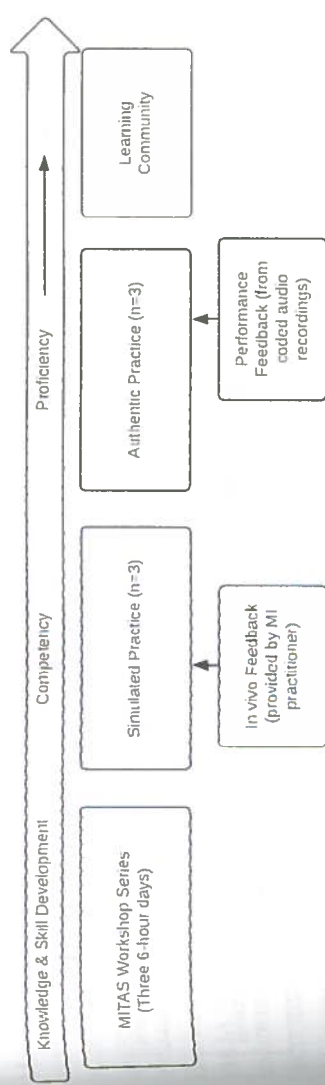


Fig. 30.1 The motivational interviewing training and assessment system

Bradshaw, 2021. However, only a few studies have applied quality control measures, or provided descriptions of training procedures and MI fidelity measurement, which are foundational to better understand the unique contribution MI makes to the coaching literature. Recently, Frey et al. (2020) incorporated training as an ongoing process of skill development and acquisition into the existing two-path framework (Magill et al., 2014; Miller & Rose, 2009) used to understand how MI works to achieve its desired effects. Frey et al.'s (2020) expansion of this framework involves the addition of a path (referred to in Fig. 30.2 as a link) between initial training and fidelity in simulation—referred to as competency—and a link between competency and fidelity in practice—referred to as proficiency—which is where Magill and colleagues' two-path framework begins (see Fig. 30.2).

As can be seen in Fig. 30.2, link 1 represents the association between MI skills training and competency. Link 2 emphasizes the association between competency and proficiency. The technical component, the relational component, and that distinct mechanisms in the initial training to competency (link 1) and competency to proficiency (link 2) links. Frey et al. differentiate fidelity or the degree to which providers deliver an EBP according to its standards and critical ingredients (Bond & Drake, 2020), uniquely in the two contexts. *Fidelity in Simulation* (Competency) is assessed in simulated contexts and *Fidelity in Practice* (Proficiency) is assessed in practice conditions with participants.

School-Based Motivational Interviewing Fidelity Outcomes

Although many school-based mental health researchers have not described training

ticipants receive performance feedback on their use of MI. Finally, the learning community component includes monthly consultation groups, or professional learning communities, in which school personnel come together to discuss conversations they have had with teachers, parents, or adolescents; as well as to reflect on successes and challenges of implementation.

As demonstrated in this section, the early efforts to bring MI into school-based prevention efforts were stand-alone interventions that utilized processes consistent with the MI approach and were grounded, primarily, in the relational component of the practice. While multiple lines of practice and research have evolved from these efforts, our focus in this chapter has been on MI to improve the implementation of existing EBPs delivered by teachers. Toward this end, we have documented how the initial work of the CCU has been adapted to inform multiple coaching models and frameworks, which vary in the extent to which MI skills are considered a required component of training and a formal measure of implementation fidelity, as well as a professional development model (i.e., MITAS). In the next section, we highlight several efforts that isolate MI as a change mechanism for optimizing the implementation of EBPs.

Mechanisms of MI in Schools

Although the outcomes associated with MI are impressive overall, inconsistent effect sizes (i.e., variability) in trials evaluating MI effectiveness in multiple fields have prompted efforts to develop a more nuanced understanding of how MI produces behavior change (Miller & Rollnick, 2014; Miller & Moyers, 2015). Magill et al. (2018), referencing several experts in the field, stated “our understanding of exactly how MI works remains elusive, and this is particularly concerning given the pervasive dissemination of MI into community-based settings” (p. 141). As noted throughout this chapter, several lines of research currently focus on MI as an implementation strategy to optimize the implementation of EBPs in school settings (Frey et al., 2020; Pas &

management system, and (c) monthly MI-infused, capacity building, and quality improvement webinars. SWITCH targets school leadership teams and focuses on building school capacity, promoting “autonomy and ownership of change,” and “building the capacity of school leaders to lead school wellness programming” (p. 2; Chen et al., 2018). Data collected in eight schools as part of a small feasibility study indicated that participants demonstrated moderate to high levels of adherence to the SWITCH intervention's quality elements and demonstrated high levels of compliance with the program's best practice elements.

Motivational Interviewing Training

The unique skills associated with MI-based coaching were synthesized by Lee et al. (2014) and Herman et al. (2014), both of whom described not only the process and relational components but also the technical component of MI. They suggested a substantial need for coaching models that clearly and comprehensively specify: (a) the conversational skills coaches need to successfully influence teacher implementation of effective practices; (b) the scope and sequence of professional development systems capable of equipping coaches with these requisite conversational skills; and (c) skill-based proficiency standards. The Motivational Interviewing Training and Assessment System (MITAS) was designed to address these needs (Frey et al., 2017).

The MITAS is a comprehensive professional development system that closely matches training procedures used to train skilled practitioners to use MI in the field of substance and alcohol use. As depicted in Fig. 30.1, the MITAS consists of a multi-session workshop series, a simulated practice routine, authentic practice, and a learning community. All professional development scenarios are contextualized to represent situations school-based interventionists might encounter when working with caregivers, teachers, administrators, or adolescents. The simulated and authentic practice components can include up to three individualized sessions each, in which par-

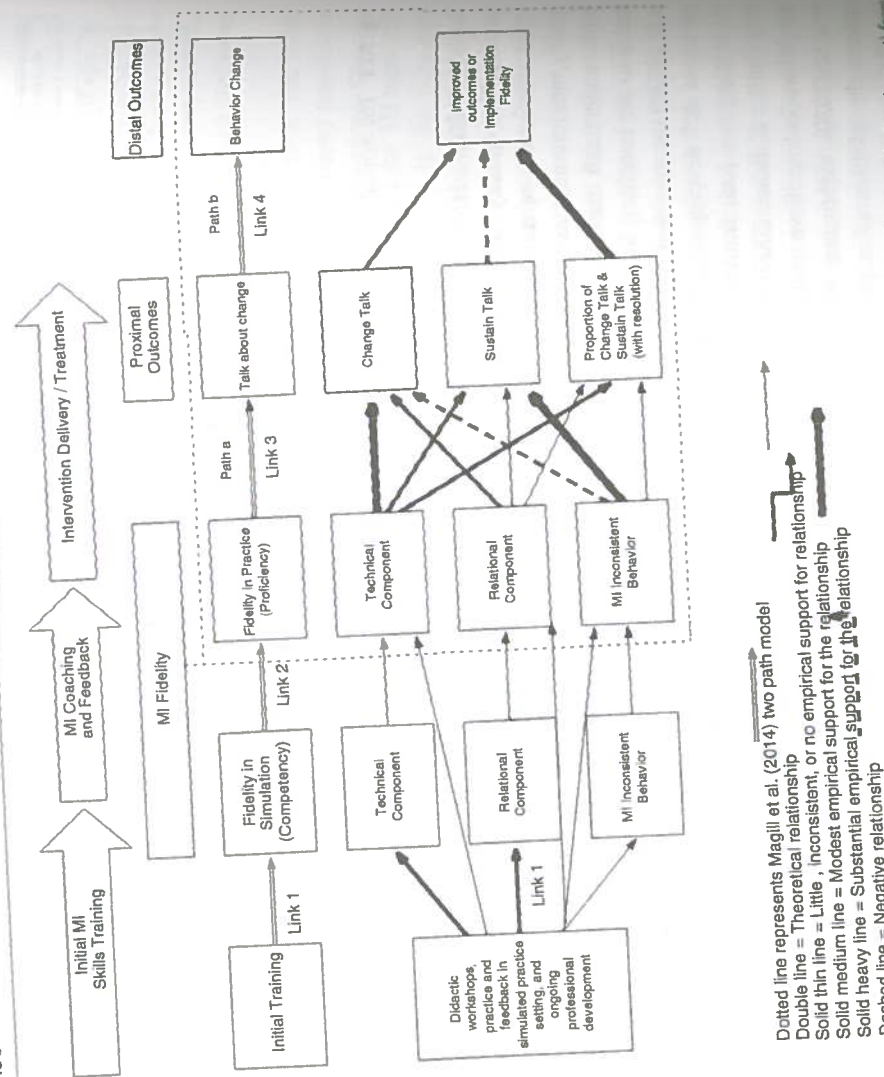


Fig. 30.2 Mechanisms of motivational interviewing conceptual framework. (Reprinted with permission (not yet) from Prevention Science)

procedures or measured MI quality as a critical aspect of fidelity, this trend has also been observed in other fields. For example, Hall et al. (2016) conducted a review of MI training and competency literature in the field of substance abuse and found that only 15 of 400 studies assessed proficiency at follow-up. Of these 15 studies, only two reported that interventionists reached a 75% proficiency standard following initial training. Weisner and Satre (2016) further noted that “it is striking how little research has focused on the effectiveness of training in MI skills and their stability in practices” (p. 1155). The absence of measuring MI quality is particularly concerning given Mitcheson et al.’s (2009) observation that MI is intuitive and can be misleading given that the difficulty of the practice is often obscured by what appears simple. Although not frequently studied, there is quite a bit of lit-

erature about the acquisition of MI skills from research conducted outside of school-based contexts. For example, in the field of addiction, Dunn et al. (2015) noted that neither experience nor professional background predicted MI skill acquisition. Several experts have anecdotally observed baseline empathic listening may be the best predictor of MI learning readiness (Miller & Moyers, 2015). Additionally, it is well established that to use MI competently (i.e., in contrived practice settings) and proficiently (in authentic practice settings) requires 8–15 h of context-specific, didactic training and individualized practice in a simulated setting (Miller & Mount, 2001).

There have been a few studies that have explored the effectiveness of training school-based personnel with varying degrees of success. For example, Lyons et al. (2017) investigated a

Motivational Coaching Model via a “semi-randomized” waitlist control study with 38 experienced teachers who functioned as instructional coaches, providing less experienced teachers with mentoring and coaching. These instructional coaches participated in 3 days of coursework (18 h). The training included content on core MI competencies, classroom instruction, and classroom management. Before and after the training, the instructional coaches delivered MI through a “mock consultation” session, providing support to a novice teacher based on a hypothetical class (i.e., standardized patient) with three disruptive students and a teacher. For their study, Lyons et al. audio recorded the first 10 min of each consultation, coded the recordings using The Motivational Interviewing Treatment Integrity (MITI) tool (Moyers et al., 2014), and analyzed the raw number of MI-consistent and inconsistent utterances. Lyons et al. reported that 84% of the instructional personnel’s statements were coded as MI-inconsistent and that there were no statistically significant differences between treatment and control conditions on the frequency of MI-inconsistent speech after training. These findings, however, must be interpreted with caution given that they did not adhere to the MITI developers’ procedural guidelines. Specifically, the guidelines indicate a random 20-min audio segment be selected for coding, and that coding includes counts for each of the ten behavior categories (e.g., simple reflections, complex reflections, affirmations, questions, and MI inconsistent) and a global rating for each of four global dimensions. Further, the behavior counts should be used to calculate five proficiency summary scores. As per the author’s note, their lack of findings suggested the content and structure of their training model requires revisions given that teachers participating in the training did not develop skills in MI sufficient to distinguish them from comparable control teachers. Perhaps more than anything, this study demonstrates well Mitcheson et al.’ (2009) observation that MI is intuitive and can be misleading given the difficulty of the practice.

In another study, Frey et al. (2013) evaluated the MI proficiency of interventionists trained

using the MITAS training model to implement a modified version of the CCU in the context of the First Step to Success early intervention program. Specifically, interventionist training consisted of three, 4-h workshop series (12 h total), simulated practice with feedback being provided on two occasions, authentic practice within the context of intervention delivery, and weekly learning community meetings. The MITI was used to evaluate MI proficiency for three coaches. Fifteen of the 30 digital recordings of conversations with coaches and teachers were externally coded using the MITI. A trained coder used the MITI to review a random 20-min audio segment within a single pass, tallying counts for each of the ten behavior categories. After listening to the audio segment, the coder provided a global rating on a 5-point scale for each of the four global dimensions. In this study, coaches exceeded the MITI competency criteria for the Global Spirit Rating ($M = 4.47, SD = .50$). Coaches met the Beginning Proficiency level for the Reflection-to-Question ratio with a mean ratio of 1.81 ($SD = 1.67$) and for Percent Open-ended Questions with an average percent of 58 ($SD = 22$) across the 15 audio-recorded sessions. This study provided the first empirical evidence to suggest the existing, clinical proficiency thresholds from the MITI are feasible in school-based practice.

Next, Frey et al. (2017) implemented the MITAS with 12 early childhood resource teachers who were working with teachers to improve their classroom management skills. In this study, the *Written Assessment of Simulated Encounters-School Based Applications* (WASE-SBA) and the *Video Assessment of Simulated Encounters-School Based Applications* (VASE-SBA) were used to evaluate change from pretest to post-test standardized feedback sessions (see Small et al., 2014). The WASE-SBA measures a person’s ability to generate reflective responses whereas the VASE-SBA utilizes three video-recorded vignettes, and respondents are prompted to generate written responses consistent with the MI skills. The measure contains four subscales: open-ended questions, affirmations, reflections, and summaries. This study documented encouraging gains (i.e., large effect sizes) in participants’

use of reflections; as well as their use of open-ended questions, affirmations, reflections, and summaries from pre- to post-test. All participants showed improvement on both measures. Similar findings have been observed with a much larger sample of school-based mental health providers outside the context of coaching to optimize the implementation of EBPs (Small et al., 2021).

Motivational Interviewing Proficiency and Talk About Change

As noted earlier, when MI is leveraged to optimize the implementation of EBPs, talk about change (i.e., change talk, sustain talk, and the proportion of change to sustain talk) has been shown to mediate the association between MI skill (i.e., fidelity) and change in behaviors that are indicators of high-fidelity implementation. Importantly, and as can be seen in Fig. 30.2, evidence from other fields suggests the technical component and [absence of] MI inconsistent behavior may be more influential than the relational component for impacting talk about change, and the proportion of change to sustain talk may be the most important mechanism for impacting behavior change- in this case, implementation fidelity. To date, only a single school-based MI application has examined this association between MI fidelity and talk about change empirically, and no studies have examined the association between talk about change and implementation fidelity. Specifically, Pas et al. (2021) conducted a sequential analysis to examine the relationship between coach MI proficiency and teacher talk about change. Data were collected from eight coaches and 87 teachers in 16 elementary and middle schools randomized in a trial testing the Double Check preventive intervention (see Bradshaw et al., 2018). Audio-recorded coaching feedback sessions were coded using an adapted version of the Motivational Interviewing Sequential Code for Observing Process Exchanges (MI-SCOPE). Sequential analyses indicated that specific coach and teacher language were significantly more likely than chance to occur consecutively. MI-consistent lan-

guage and change talk were significantly linked as Teachers' sustained talk was more likely to occur consecutively with coach MI-consistent language and teacher change talk. MI-inconsistent language was rarely used and its occurrence was only associated with more MI-inconsistent language. This novel school-based study illustrated how MI consistent language evoked teacher change talk related to the use of an existing EBP. A limitation of the study is that the MI-SCOPE was modified substantially; in turn, additional evidence is needed to support the reliability of the modified coding system and the validity of the measure with respect to coaches' MI proficiency and teachers' change talk. Nevertheless, this study represents the type of rigorous analysis, aligned with the theoretical tenets of how MI works, that is required to advance the field.

Future Directions

Taken together, there is a robust evidence base to support the use of MI in multiple fields, however, there is a growing line of research illustrating how MI complements and can support the adoption of existing initiatives in schools (Pas & Bradshaw, 2021). MI can be used to support efforts to guide administrator, teacher, or parent perceptions and actions through informal conversations, encourage teachers or administrators to embrace existing EBPs (i.e., adoption), and to implement stand-alone school-based interventions for which MI skills are helpful perquisites (e.g., FCU and CCU) and when MI skills are critical indicators of implementation fidelity (e.g., homeBase (Frey et al., 2019), Student Check-up (Iachini et al., 2018), Motivational Assessment, and Planning (Suldo et al., 2018), Supporting Teens' Autonomy Daily (Sibley et al., 2016)). It is important to note, however, that empirical examination of EBPs is critical. MI on the implementation of EBPs is critical both because school-based applications are distinct from traditional applications in clinical settings, and because MI applications to improve the implementation of EBPs are novel. The

following three areas should be prioritized to improve our understanding of MI to optimize the implementation of EBPs: teaching and learning MI, measuring MI fidelity, and evaluating MI mechanisms of change.

Teaching and Learning Motivational Interviewing

As noted by Herman et al. (2020), reinforced throughout this chapter, and articulated for decades in non-school-based applications of MI (Miller & Rollnick, 2014); learning MI does not occur by happenstance; it is critical for those using MI to be sufficiently trained and to document fidelity of implementation. At the very least, implementing MI with fidelity requires school-based interventionists to participate in didactic workshops, individualized feedback, and ongoing support to promote reflection and improved implementation. It is clear from research in other fields that learning MI must involve skills related to both the relational and the technical components of the practice, as well as strategies to help practitioners avoid MI-inconsistent behavior. It is important to note the pioneering efforts that have generated promising outcomes within schools conceptualize MI narrowly, largely aligning with the relational component.

The field would benefit from studies comparing various levels (e.g., none, light, and intense) of MI training. While a substantial evidence base is beginning to emerge that demonstrates the MITAS (Frey et al., 2017) is effective for developing MI competency and proficiency (Frey et al., 2019; Iachini et al., 2018; Suldo et al., 2018), it is possible other MI training models, including some that are less resource intensive, could be efficacious. When other models are used, they should be described and evaluated using established MI fidelity tools. This line of research would help to identify the resources needed to promote competency among school-based interventionists similar to those standards used to train MI practitioners in other fields.

Since multiple school-based efforts have embraced primarily the relational component of MI (Reinke et al., 2012; Bradshaw et al., 2018; Gion et al., 2022; Lyon et al., 2019; Owens et al., 2017), it is critical future efforts describe any MI training provided and consider MI skill as a marker of implementation fidelity, even if it is only the relational component. It is also important for these relational component-only applications to attempt to isolate MI as a mechanism within their framework. Specifically, it would be helpful to know what impact MI has above and beyond business as usual or compared to MI that includes all aspects of the practice (i.e., relational component, technical component, and in MI inconsistent). While research in non-school-based settings has demonstrated the technical component of MI is more impactful on talk about change (Magill et al., 2018), it is possible this dynamic is different within the context of a school. However MI is used, future school-based MI efforts must not only describe how MI is infused into the model or practice but also report the procedures used to train interventionists.

Measuring Motivational Interviewing Fidelity

In addition to framing MI proficiency as a critical marker of implementation fidelity, it should be formally measured. There is an extensive literature base on MI fidelity and therefore researcher or practitioner-created measures to assess MI competency or proficiency (either through self-report or direct assessment) should be viewed with great caution, especially in the absence of strong theoretical support and at least some evidence of reliability and validity. Using established psychometrically-sound measures or adaptations of established measures such as the MITI or MI-SCOPE (see Frey et al., 2021; Pas et al., 2021), allows for comparisons of proficiency to well-regarded, albeit clinically based standards. That said, multiple fields (e.g., child welfare, education, health, behavioral health, mental health, social work) would benefit from the creation of less intensive measures with

strong evidence of reliability and validity to evaluate indicators of the technical component, the relational component, and MI inconsistent behavior in simulated settings (i.e., competency). Similarly, further development of, and research on, measures that can be used within practice (i.e., and not just in research studies) are needed.

Mechanisms of Change

More research is needed within and across all four links describing the mechanisms of MI, as outlined in Fig. 30.2 (Frey et al., 2020; Magill et al., 2018). For example, with regard to Link 1, while the school-based literature is developing, we need to develop a better understanding of what methods are useful for minimizing participant's use of MI-inconsistent behavior. To date, no school-based studies have directly examined the relationship between competency and proficiency and therefore this relationship requires additional research. There is very little evidence to support the hypothesized relationship between MI proficiency and talk about change (Link 3) and none to date that supports the relationship between talk about change and improvements in implementation fidelity. This area is ripe with possibilities, and additional information related to these causal relationships would benefit school-based applications of MI and advance the MI literature base generally.

Conclusion

A coaching framework based on the MI approach (Lee et al., 2014), a training and assessment system (Frey et al., 2017), three books (Herman et al., 2014, 2020; Rollnick et al., 2016), as well as two special issue journals (i.e., *Advances in School Mental Health Promotion*, volume 7, 2014; *Prevention Science*, 2021) have solidified interest in MI as a promising approach for optimizing the implementation of school-based preventive interventions and practices addressing mental health specifically, and social, emotional, and behavioral concerns more broadly.

Denton, C. A., & Hasbrouck, J. A. N. (2009). A description of instructional coaching and its relationship to consultation. *Journal of Educational & Psychological Consultation, 19*(2), 150–175.

Dishion, T. J., Nelson, S. E., Kavanagh, K., Beidel, D., Brown, T. A., Lochman, J., & Haaga, D. A. F. (2003). The family check-up with high-risk young adolescents: Preventing early-onset substance use by parent monitoring. *Behavior Therapy, 34*(4), 553–571.

Domitrovich, C. E., Bradshaw, C. P., Poduska, J. M., Hoagwood, K., Buckley, J. A., Olin, S., Romanelli, L. H., Leaf, P. J., Greenberg, M. T., & Jalongo, N. S. (2008). Maximizing the implementation quality of evidence-based preventive interventions in schools: A conceptual framework. *Advances in School Mental Health Promotion, 1*(3), 6–28. <https://doi.org/10.1080/1754730X.2008.9715730>

Driscoll, K. C., Wang, L., Mashburn, A. J., & Pianta, R. C. (2011). A description of instructional coaching and its relationship to consultation. *Early Education and Development, 22*, 593–619. <https://doi.org/10.1080/10409289.2010.502015>

Dunn, C., Darnell, D., Carmel, A., Atkins, D. C., Bumgardner, K., & Roy-Byrne, P. (2015). Comparing the motivational interviewing integrity in two prevalent models of brief intervention service delivery for primary care settings. *Journal of Substance Abuse Treatment, 51*, 47–52.

Durlak, J. A., & DuPre, E. P. (2008). Implementation matters: A review on the influence of implementation on program outcomes and the factors of affecting implementation. *American Journal of Community Psychology, 41*, 327–350.

Eckul, W. P. (2015). Put me in, coach: Observations on selected studies implementing supportive interventions to teachers. *School Mental Health, 7*, 74–79.

Finsen, D. L., Naom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). *Implementation research: A synthesis of the literature*. University of South Florida.

Fisman, S. G., Olin, S., Hoagwood, K., Crowe, M., & Saka, N. (2009). Evidence-based intervention in schools: Developers' views of implementation barriers and facilitators. *School Mental Health, 1*, 26–36.

Frey, A. J., Cloud, R. N., Lee, J., Small, J. W., Seeley, J. R., Feil, E., & Golly, A. (2011). The promise of motivational interviewing in school mental health. *School Mental Health, 3*, 1–12.

Frey, A. J., Lee, J., Small, J. W., Seeley, J. R., Walker, H. M., & Feil, E. G. (2013). Transporting motivational interviewing to school settings to improve engagement and fidelity of Tier 2 interventions. *Journal of Applied School Psychology, 29*, 183–202.

Frey, A. J., Small, J. W., Lee, J., Walker, H. M., Seeley, J. R., Feil, E. G., & Golly, A. (2015). Expanding the range of the First Step to Success intervention: Out-of-school support for teachers and families. *Early Childhood Research Quarterly, 30*, 1–11.

Frey, A. J., Lee, J., Small, J. W., Walker, H. M., & Seeley, J. R. (2017). Motivational interviewing training and

support for school-based applications. *Emotional & Behavioral Disorders in Youth, 17*, 86–92.

Frey, A. J., Small, J. W., Lee, J., Crosby, S., Seeley, J. R., Forness, S., & Walker, H. M. (2019). homeBase: Participation, engagement, alliance, and social validity of a motivational parenting intervention. *Children & Schools*. Advance online publication. <https://doi.org/10.1093/cs/cdz016>

Frey, A. J., Lee, J., Small, J. W., Skidmore, B., Johnson, L., Sibley, M., Owens, J. S., & Bradshaw, C. (2020). Mechanisms of Motivational Interviewing: A conceptual framework to guide practice and research. *Prevention Science*. Advance online publication. <https://doi.org/10.1007/s11211-020-01139-x>

Frey, A. J., Lee, J., Small, J. W., *Skidmore, B., Johnson, L., Sibley, M., Owens, J. S., & Bradshaw, C. (2021). Mechanisms of Motivational Interviewing: A conceptual framework to guide practice and research. *Prevention Science, 22*, 689–700. <https://doi.org/10.1007/s11211-020-01139-x>

Gion, C., McIntosh, K., & Falcon, S. (2022). Effects of a multifaceted classroom intervention on racial disproportionality. *School Psychology Review, 51*(1), 67–83. <https://doi.org/10.1080/2372966X.2020.1788906>

Hall, K., Staiger, P. K., Simpson, A., Best, D., & Lubman, D. I. (2016). After 30 years of dissemination, have we achieved sustained practice change in motivational interviewing? *Addiction, 111*(7), 1144–1150.

Hartzler, B., Beadnell, B., Rosengreen, D. B., Dunn, C., & Baer, J. S. (2010). Deconstructing proficiency in motivational interviewing: Mechanics of skillful practitioner delivery during brief simulated encounters. *Behavioural and Cognitive Psychotherapy, 38*, 611–628.

Herman, K. C., Reinke, W., Frey, A., & Shepard, S. (2014). *Motivational interviewing in schools: Strategies for engaging parents, teachers, and students*. Springer.

Herman, K., Reinke, W., & Frey, A. J. (2020). *Motivational interviewing in schools: Strategies to engage parents, teachers, and students* (2nd ed.). Springer.

Iachini, A. L., Lee, J., DiNovo, R., Lutz, & Frey, A. J. (2018). Integrating motivational interviewing into social work education: A practical example. *Journal of Social Work Education, 54*, S103–S112.

Larson, M., Cook, C. R., Brewer, S. K., Pullmann, M. D., Hamlin, C., Merle, J. L., Duong, M., Gaia, L., Sullivan, M., Morrell, N., Kulkarni, T., Weeks, M., & Lyon, A. R. (2021). Examining the effects of a brief, group-based motivational implementation strategy on mechanisms of teacher behavior change. *Prevention Science, 22*, 722. <https://doi.org/10.1007/s11211-020-01191-7>

Lee, J., Frey, A., Herman, K. C., & Reinke, W. M. (2014). Motivational Interviewing as a framework to guide school-based coaching and consultation. *Advances in School Mental Health Promotion, 7*, 225–239.

Lyon, A. R., Cook, C. R., Duong, M. T., Nicodimos, S., Pullmann, M. D., Brewer, S. K., & Cox, S. (2019). The influence of a blended, theoretically-informed

- pre-implementation strategy on school-based clinician implementation of an evidence-based trauma intervention. *Implementation Science*, 14(1), 54. <https://doi.org/10.1186/s13012-019-0905-3>
- Lyons, M. D., Jones, S. J., Smith, B. H., McQuillin, S. D., Richardson, G., Reid, E., & McClellan, A. (2017). Motivation coaching training for instructional coaches: A pilot study of motivational interviewing skills training. *Mentoring and Tutoring: Partnership in Learning*, 25(5), 548–565.
- Magill, M., Gaume, J., Walthers, J., Mastroiolo, N. R., Longabaugh, R., Apodaca, T. R., & Borsari, B. (2014). The technical hypothesis of Motivational Interviewing: A meta-analysis of MI's key causal model. *Journal of Consulting & Clinical Psychology*, 82(6), 973–983. <https://doi.org/10.1037/a0036833>
- Magill, M., Apodaca, T. R., Borsari, B., Gaume, J., Hoadley, A., Gordon, R. E. F., Tonigan, J. S., & Moyers, T. (2018). A meta-analysis of motivational interviewing process: Technical, relational, and conditional process models of change. *Journal of Consulting and Clinical Psychology*, 86(2), 140–157. <https://doi.org/10.1037/ccp0000250>
- Miller, W. R., & Mount, K. A. (2001). A small study of training in motivational interviewing: Does one workshop change clinician and client behavior? *Behavioural and Cognitive Psychotherapy*, 29(4), 457–471.
- Miller, W. R., & Moyers, T. B. (2006). Eight stages in learning motivational interviewing. *Journal of Teaching in the Addictions*, 5, 3–17.
- Miller, W. R., & Moyers, T. B. (2015). The forest and the trees: Relational and specific factors in addiction treatment. *Addiction*, 110(3), 401–413.
- Miller, W. R., & Moyers, T. B. (2017). Motivational interviewing and the clinical science of Carl Rogers. *Journal of Consulting & Clinical Psychology*, 85(8), 757–766.
- Miller, W. R., & Rollnick, S. R. (2012). *Motivational interviewing: Helping people change (applications of motivational interviewing)* (3rd ed.). The Guilford Press.
- Miller, W. R., & Rollnick, S. (2014). The effectiveness and ineffectiveness of complex behavioral interventions: Impact of treatment fidelity. *Contemporary Clinical Trials*, 37, 234–241.
- Miller, W. R., & Rose, G. S. (2009). Toward a theory of motivational interviewing. *American Psychologist*, 64, 527–537.
- Miller, W. R., Sovereign, R. G., & Klege, B. (1988). Motivational interviewing with problem drinkers: II. The Drinker's Check-up as a preventive intervention. *Behavioural and Cognitive Psychotherapy*, 16(4), 251–268.
- Mitcheson, L., Bhavsar, K., & McCambridge, J. (2009). Randomized trial of training and supervision in motivational interviewing with adolescent drug treatment practitioners. *Journal of Substance Abuse Treatment*, 37(1), 73–78.
- Moyers, T. B., Manuel, J. K., & Ernst, D. (2014). *Motivational interviewing treatment integrity coding manual 4.0*. Unpublished manual.
- National Research Council (US) and Institute of Medicine (US) Committee on the prevention of mental disorders and substance abuse among children, youth, and young adults: research advances and promising interventions. O'Connell, M. E., Boat, T., & Warner, K. E. (Eds.). (2009). Preventing mental, emotional, and behavioral disorders among young people: progress and possibilities. national academies press (US).
- Owens, J. S., Coles, E. K., Evans, S. W., Himawan, L. K., Giralto-Herrera, E., Holdaway, A. S., & Schulte, A. C. (2017). Using multi-component consultation to increase the integrity with which teachers implement behavioral classroom interventions: A pilot study. *School Mental Health*, 9(3), 1–17.
- Pas, E. T., & Bradshaw, C. P. (2015). Dissemination of evidence-based prevention programs. In L. M. Scheier (Ed.), *Handbook of adolescent drug use prevention: Research, intervention strategies, and practice* (pp. 527–540). American Psychological Association.
- Pas, E. T., & Bradshaw, C. P. (2021). Introduction to the special issue on optimizing the implementation and effectiveness of preventive intervention through Motivational Interviewing. *Prevention Science*, 22, 683.
- Pas, E. T., Waasdorp, T. E., & Bradshaw, C. P. (2019). Coaching teachers to detect, prevent, and respond to bullying using mixed reality simulation: An efficacy study in middle schools. *International Journal of Bullying Prevention*, 1(1), 58–69.
- Pas, E., Borden, L., Herman, K., & Bradshaw, C. P. (2021). Leveraging Motivational Interviewing to coach teachers in the implementation of preventive evidence-based practices: A sequential analysis of the Motivational Interviewing process. *Prevention Science*, 22, 786. <https://doi.org/10.1007/s1121-021-01238-3>
- Patterson, G. R., & Forgatch, M. S. (1985). Therapist behavior as a determinant for client noncompliance: A paradox for the behavior modifier. *Journal of Consulting and Clinical Psychology*, 53, 846–851.
- Pfeiffer, K. A., Robbins, L. B., Ling, J., Sharma, D. B., Dalimonte-Merckling, D. M., Voskuil, V. R., & Resnicow, K. (2019). Effects of the Girls on the Move randomized trial on adiposity and aerobic performance (secondary outcomes) in low-income adolescent girls. *Pediatric Obesity*, 14, e12559. <https://doi.org/10.1111/ijpo.12559>
- Ransford, C., Greenberg, M., Domitrovich, C., Small, M., & Jacobson, L. (2009). The role of teachers' psychological experiences and perceptions of a social and learning supports on the implementation of a social and emotional learning curriculum. *School Psychology Review*, 38(4), 510–532.
- Reinke, W. M., Lewis-Palmer, T., & Merrell, K. (2008). The classroom check-up: A classroom teacher consultation model for increasing praise and decreasing disruptive behavior. *School Psychology Review*, 37(1), 73–78.
- Small, J. W., Frey, A., Lee, J., Seeley, J. R., Scott, T. M., & Sibley, M. H. (2021). Fidelity of Motivational Interviewing in school-based intervention and research. *Prevention Science*, 22, 712. <https://doi.org/10.1007/s1121-020-01167-7>
- Spoth, R., Rohrbach, L., Greenberg, M., Leaf, P., Brown, C., Fagan, A., Catalano, R. F., Pentz, M. A., Sloboda, Z., & Hawkins, J. (2013). Addressing core challenges for the next generation of Type 2 translation research and systems: The Translation Science to Population Impact (TSCI Impact) framework. *Prevention Science*, 14(4), 319–351. <https://doi.org/10.1007/s1121-012-0362-6>
- Stormont, M., Reinke, W. M., Newcomer, L., Marchese, D., & Lewis, C. (2015). Coaching teachers' use of social behavior interventions to improve children's outcomes: A review of the literature. *Journal of Positive Behavior Interventions*, 17(2), 69–82.
- Stormshak, E. A., & Dishion, T. J. (2009). *Intervening in children's lives: An ecological, family-centered approach to mental health care*. American Psychological Association.
- Stormshak, E. A., Connell, A. M., Ve'ronneau, M. H., Myers, M. W., Dishion, T. J., Kavanagh, K., & Caruthers, A. S. (2011). An ecological approach to promoting early adolescent mental health and social adaptation: Family-centered intervention in public middle schools. *Child Development*, 82, 209–225.
- Strait, G. G., Smith, B. H., McQuillin, S., Terry, J., Swan, S., & Malone, P. S. (2012). A randomized trial of Motivational Interviewing to improve middle school students' academic performance. *Journal of Community Psychology*, 40(8), 1032–1039. <https://doi.org/10.1002/jcop.21511>
- Suldo, S. M., O'Brennan, L., Storey, E. D., & Shaunessy-Dedrick, E. (2018). Supporting high school students in accelerated courses. *Communication*, 46(6), 1.
- Terry, J., Smith, B., Strait, G., & McQuillin, S. (2013). Motivational interviewing to improve middle school student's academic performance: A replication study. *Journal of Community Psychology*, 41(7), 902–909.
- Weisner, C., & Saure, D. D. (2016). A key challenge for motivational interviewing: Training in clinical practice. *Addiction*, 111(7), 1154–1156.
- Wenz-Gross, M., & Upshur, C. (2012). Implementing a primary prevention social skills intervention in urban preschools: Factors associated with quality and fidelity. *Early Education and Development*, 23, 427–450.