Impact of an Implementation Facilitation Strategy to Improve Task-Shifted CBT Across Education and Health Sectors in Kenya: A Mixed Methods Study

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Abstract

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Background. Evidence suggests mental health interventions can be effectively delivered via task-shifting in low- and middle-income countries (**LMIC**) with high need for mental health services. However, implementation challenges have impeded adoption and sustainment in LMIC, and methods to scale and sustainably deliver interventions with minimal governmental funding are lacking. Implementation strategies for scale-up are needed. The purpose of the present study is to examine the impact of *facilitation* or *coaching*, a multifaceted implementation strategy, on improving task-shifted delivery of a mental health intervention for children in Kenya. Facilitation has helped improve the uptake and quality of medical and mental health services in the U.S.; however, no empirical studies have examined its impact on mental health program implementation in LMIC. This study adds to the sparse implementation literature on methods to reduce the substantial mental health treatment gap in LMIC.

Methods. The present study employed a mixed methods quasi-experimental design to determine the impact and perceived value of coaching in supporting trauma-focused cognitive behavioral therapy (**TF-CBT**) implementation in two governmental sectors: education (delivery by teachers) and health (delivery by community health volunteers [**CHVs**]). Participants for this study's quantitative arm included 150 lay counselors (75 teachers, 75 CHVs) from Sequences 1-4 of an NIMH-funded stepped-wedge clustered randomized controlled trial, to compare outcomes between counselors who did not received coaching (Sequence 1) to those that did (Sequences 2-4). Participants completed surveys at the end of receiving TF-CBT training (post-training), and after delivering two sequential TF-CBT groups at their sites (post-implementation). Generalized estimating equations were used to examine the relation between coaching condition and early implementation outcomes (*acceptability, feasibility, appropriateness*), provider-level determinants (*self-efficacy, behavioral intentions*), and organization-level determinants (*organizational readiness, implementation climate, implementation leadership*) of TF-CBT implementation. Semi-structured interviews were conducted with 32 lay counselors (16 teachers, 16 CHVs) from Sequences 2-3 to explore perceptions of acceptability, feasibility and utility of the coaching strategy itself.

Results. Quantitative results revealed that coaching condition predicted higher acceptability and feasibility of TF-CBT among teacher counselors at post-training, and lower feasibility, appropriateness and self-efficacy to implement TF-CBT among CHV counselors at post-implementation. Coaching condition did not predict differences in counselor-reported behavioral intentions, organizational readiness, implementation climate or implementation leadership. Qualitative results indicated that coaching was perceived as highly acceptable, feasible

and useful by both teacher and CHV counselors that delivered TF-CBT. Counselor perspectives indicated that coaching was most helpful in increasing counselor readiness to implement TF-CBT and developing tailored implementation workplans to target barriers throughout implementation.

Conclusion. To our knowledge, this is the first global study to assess the impact of an implementation coaching strategy to successfully deliver a child mental health intervention in an LMIC. Findings from this study have significant implications on replicable methods that can be used to provide tailored implementation support for task-shifted interventions in LMIC.

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List of Abbreviations

BASIC	Building and Sustaining Interventions for Children
BCT	BASIC Collaborative Teams
CHEW	Community Health Extension Worker
CHV	Community Health Volunteer
EBP	Evidence-Based Practices
GEE	Generalized Estimating Equations
HIC	High-Income Countries
HT	Head Teacher
IPP	Implementation Policies & Practices
LMIC	Low- and Middle-Income Countries
MINC	Minimum Intervention Needed for Change
PT	*Pamoja Tunaweza*
RAP	Rapid Assessment Process
SW-CRT	Stepped Wedge Cluster Randomized Trial
TF-CBT	Trauma-Focused Cognitive Behavioral Therapy

Introduction

Implementation Gap in LMIC

Eighty percent of the world's population lives in low- and middle-income countries (**LMIC**), yet very few of the world's mental health resources are in LMIC. A recent Lancet study estimated that the global burden of mental illness accounts for 32.4% of years lived with disability (YLDs) and 13.0% of disability-adjusted life-years (DALYs) (Vigo, Thornicroft, & Atun, 2016). Mental illness is the leading cause of YLDs for children, adolescents and young adults 5 to 24 years of age (Vos et al., 2017), and 75% of mental disorders begin during this early developmental period of life (Kessler et al., 2005). Despite the high burden of mental disorders in LMIC, there is a substantial treatment gap between individuals who need mental health services and those who receive them (World Health Organization [**WHO**], 2008). Governments in LMIC spend less than 2% of their health budgets on mental health (Thornicroft et al., 2010), with most resources targeting care for adults with serious mental illness. The treatment gap is further compounded by a severe shortage of mental health professionals in LMIC; estimates indicate a low mental health staff ratio of 1 per 100,000 population in LMIC, compared to more than 50 per 100,000 population in high-income countries (**HIC**; (Bruckner et al., 2011). Among adults, the treatment gap is as high as 78% (Kohn, Saxena, Levav, & Saraceno, 2004). This gap is even greater for children, with less than 1% of children in LMIC with mental disorders receiving any care (Saxena, Thornicroft, Knapp, & Whiteford, 2007; WHO, 2009).

One of the strategies recommended by the WHO for addressing the shortage of mental health professionals in LMIC and reducing the mental health treatment gap is task-shifting (Patel et al., 2007; WHO, 2008b). Task-shifting involves using non-specialists or paraprofessionals (lay

counselors) with little to no prior mental health training or experience to deliver mental health treatments under supervision (Patel, Chowdhary, Rahman, & Verdeli, 2011; WHO, 2008b). A growing body of research indicates that task-shifting can be used to effectively deliver evidence-based practices (**EBP**) for mental health in LMIC (Galvin & Byansi, 2020; Van Ginneken et al., 2013). Multiple randomized controlled trials (**RCTs**) have established the feasibility and effectiveness of delivering EBPs via task-shifting among diverse LMIC populations: for example, studies have used trauma-focused cognitive-behavioral therapy (**TF-CBT**) to treat trauma-related disorders among orphans and vulnerable children in Zambia, Tanzania and Kenya (Dorsey et al., 2020; Murray et al., 2015), interpersonal psychotherapy to treat depression among war-affected adolescents and adults in Uganda (Bolton et al., 2003, 2007), CBT to treat maternal depression in Pakistan (Rahman, Malik, Sikander, Roberts, & Creed, 2008), CBT to treat depressive/anxiety disorders among adults in primary care settings in India (Patel et al., 2010), and CBT-based transdiagnostic treatments to treat common mental disorders among displaced Burmese in Thailand (Bolton et al., 2014) and torture survivors in Southern Iraq (Weiss et al., 2015). These studies have reported medium to large effect sizes for their primary outcomes with a range of comparison conditions, and outcomes appear to be sustained in trials that included 6-12 month follow-ups (Bass et al., 2006; Dorsey et al., 2020; Rahman et al., 2008).

The use of task-shifting has significantly advanced the delivery of mental health treatments in LMIC. However, the potential for this strategy to close the mental health treatment gap is limited without addressing the substantial implementation challenges of integrating EBPs into complex LMIC community settings (Singla et al., 2017). Multiple barriers at the individual, provider, organization, and system levels impede successful integration and scale-up of EBPs in LMIC (Esponda et al., 2020; Murray et al., 2017; Saraceno et al., 2007). As such, while evidence for the

effectiveness of EBPs exists, uptake and implementation by nongovernmental organizations (**NGOs**), community-based organizations, and governments has been slow (Murray et al., 2017). Even when EBPs are adopted, they are often implemented in the context of a research trial and are not sustained past the life of the research study (Betancourt & Chambers, 2016). Therefore, there is a critical need for strategies to help embed, effectively deliver and sustain task-shifted EBPs within existing, government-funded systems in which they could be scaled up. There has been limited implementation research to do this in global mental health (Betancourt & Chambers, 2016; Eaton et al., 2011), and applying implementation science methods is a priority to be able to reduce the mental health treatment gap in LMIC.

The purpose of the present study is to examine the impact of *facilitation*, a multifaceted implementation strategy, on the delivery of a task-shifted mental health intervention for children in two government sectors in Kenya. Facilitation holds promise for being able to identify context-specific barriers, tailor appropriate strategies to meet those barriers, and therefore help reduce the mental health treatment gap in LMIC community settings. However, most of the evidence for this implementation strategy comes from research conducted in the U.S., with limited studies from LMIC. In the following sections, we review the implementation science literature on known barriers and facilitators of implementation success, the role of implementation strategies to address these barriers, and the evidence for *facilitation* to be able to improve the implementation of mental health EBPs.

Determinants of Implementation

In order to implement and scale up EBPs in community settings, the implementation science field has focused on understanding key determinants that might be related to

implementation success or failure. Simply defined, determinants are "*factors that might prevent or enable improvements in practice*" (Flottorp et al., 2013). These can be barriers, facilitators, problems and needs, as well as disincentives or incentives. Implementation reviews have summarized over 600 determinants of healthcare practice (Flottorp et al., 2013; Powell et al., 2020). Multiple conceptual models and frameworks have been developed to better understand determinants that affect the implementation of mental health services (e.g., Aarons, Hurlburt, & Horwitz, 2011; Damschroder et al., 2009; Michie et al., 2005; Proctor et al., 2009; Tabak, Khoong, Chambers, & Brownson, 2012). Most emphasize considering barriers to implementation at multiple "levels," such as the individual (including providers and consumers), the organization (including organizational culture, climate, leadership, and processes), and the policy context (including funding and governments) (Shortell, 2004). There is also general consensus that determinants can influence implementation success across different phases: pre-implementation, early-mid implementation, and longer-term maintenance and sustainment (Aarons et al., 2011).

Recent studies have used mixed methods to describe determinants or examine the relations between determinants and a number of implementation outcomes outlined by Proctor and colleagues (2011) (Beidas et al., 2015; Beidas et al., 2017; Locke et al., 2017; Palinkas et al., 2017; Stein, Celedonia, Kogan, Swartz, & Frank, 2013). Implementation outcomes are considered key indicators of implementation success and include constructs such as adoption (the initial decision or action to deliver an EBP), fidelity (the degree to which an EBP is implemented as designed in its original protocol), and sustainment (the extent to which the EBP is maintained or institutionalized within a setting) (see **Table 1**; Proctor et al., 2011). Research has shown that most variability in EBP implementation success is accounted for by factors at the individual and organizational levels, suggesting that these levels are important targets for intervention (Beidas et

al., 2015). A summary of studies on the impact of key provider- and organization-level determinants on various aspects of EBP implementation is provided below, and a more comprehensive review is available by Williams and Beidas (2019).

Table 1

Taxonomy of Implementation Outcomes[a]

Implementation Outcome	Definition
Acceptability	The perception that a given EBP is agreeable, palatable, or satisfactory.
Adoption/Uptake	The intention, initial decision, or action to try or employ an EBP.
Appropriateness	The perceived fit, relevance, or compatibility of the EBP: 1) for a given setting, provider, or consumer; and/or 2) to address a particular issue or problem.
Cost	The additional expense of implementing an EBP and the cost-effectiveness of it.
Feasibility	The extent to which an EBP can be successfully used within an organization, in a particular setting, or with a certain population.
Fidelity/Quality of program delivery	The degree to which an EBP was implemented as it was designed in its original protocol.
Penetration/Access to Services	The integration of an EBP within and across a service setting (e.g., across a population).
Sustainability	The extent to which the EBP is maintained or institutionalized within a setting's ongoing operations.

[a] As defined by Proctor et al., 2011

Provider-level Determinants

Knowledge & Attitudes. Two of the most commonly studied provider-level determinants theorized to impact implementation success of child mental health EBPs are a provider's *knowledge* and *attitudes/beliefs* (Damschroder et al., 2009; Flottorp et al., 2013; Michie et al., 2005). Provider *knowledge* is defined as an "awareness, familiarity and exposure to facts related to EBP", and provider *attitudes* are defined as "perceptions about the EBP and implementation" (Damschroder et al., 2009; Flottorp et al., 2013; Michie et al., 2005). Theories of behavior change posit that provider knowledge and attitudes play a fundamental role in adoption of EBPs (Michie

et al., 2005); however, findings from studies examining these associations have been mixed. In an observational, cross-sectional study of 130 providers from 23 public mental health agency sites in Philadelphia, researchers found an association between open attitudes towards new practices and greater likelihood of using evidence-based CBT techniques (Beidas et al., 2015). Furthermore, providers with less knowledge about EBPs were more likely to use non-evidence based therapeutic techniques (Beidas et al., 2015; Beidas et al., 2017). While other studies have found a similar positive relation between provider knowledge and attitudes, and use of EBPs (Garner, Godley, & Bair, 2011; Henggeler et al., 2008; Jensen-Doss, Hawley, Lopez, & Osterberg, 2009; Locke et al., 2019; Okamura, Jackson, & Nakamura, 2019; Rohrbach, Graham, & Hansen, 1993; Stephan et al., 2012), some have not found evidence for this relationship (Beidas et al., 2014; Brookman-Frazee, Haine, Baker-Ericzén, Zoffness, & Garland, 2010; Higa-McMillan, Nakamura, Morris, Jackson, & Slavin, 2015). For example, in an RCT where 115 providers delivered CBT for youth anxiety, more positive provider attitudes towards CBT before training predicted *lower* fidelity to CBT following three months of consultation, and attitudes were not associated with percentage of anxious youth treated with CBT over the past three months (defined as *penetration*; Beidas et al., 2014). These mixed findings may be attributed to the way in which "EBPs" are conceptualized and operationally defined, variability in how the knowledge and attitude constructs are measured, and use of measures with poor psychometric properties.

While provider knowledge and attitudes are important, multiple training studies have demonstrated that improvements in a provider's knowledge and skills are not enough to increase EBP use (Beidas, Edmunds, Marcus, & Kendall, 2012; Beidas & Kendall, 2010; Herschell, Kolko, Baumann, & Davis, 2010; Sholomskas et al., 2005). Moreover, exposure to EBPs is limited in LMIC. Most lay counselors delivering mental health care for the first time do not have established

knowledge of and attitudes towards EBPs, thus these constructs were not included in the present study. With EBP training typically being the first point of exposure to EBPs, other provider-level constructs such as *self-efficacy* and *intentions* may be even more relevant in impacting provider behaviors following training in LMIC.

Intentions. Provider *intention* has been defined as the "extent to which providers intend to perform the EBP," and is known to be one of the most proximal determinants of provider behaviors (Huijg, Gebhardt, Crone, Dusseldorp, & Presseau, 2014). Theoretical models that include provider intentions have proposed that changes in intentions are followed by changes in behavior, if providers have the skills required to perform the new behavior (Albarracin, Johnson, Fishbein, & Muellerleile, 2001; Fishbein & Ajzen, 2011). The predictive validity of provider intentions has been extensively examined in the health services literature; meta-analyses have found strong correlations between healthcare professionals' intentions and their healthcare practice behaviors (Eccles et al., 2006; Godin, Belanger-Gravel, Eccles, & Grimshaw, 2008). However, there have been fewer studies examining this relationship among mental health providers. In an observational study that enrolled 72 public school teachers working with students with autism, researchers assessed the degree to which teachers' intentions predicted EBP use. Teachers completed self-administered questionnaires on their intentions, and reported on their use of a specific autism-related EBP three weeks later. Teachers who reported strong intentions were 5.2 times more likely to use the EBP than teachers who reported weak intentions (Fishman, Beidas, Reisinger, & Mandell, 2018). In another study of 197 clinicians from 13 U.S. mental health agencies, clinicians who reported higher EBP intentions at baseline had significantly higher odds of attending an EBP training workshop one month later (odds increased by 92%). An even stronger relationship was observed between baseline EBP intentions, and increased EBP adoption and use with clients one

year later. EBP intentions accounted for 17% of the variance in number of EBPs adopted and 25% of the variance in EBP use with clients (Williams, 2015). This preliminary research suggests that provider intention may be a strong predictor of provider behaviors related to EBP implementation of mental health services.

Self-efficacy. Provider *self-efficacy* is an "individual's beliefs about his or her ability to achieve desired levels of performance" (Bandura, 1977). This determinant is believed to play a key role in the initiation and maintenance of human behavior (Schwarzer & Renner, 2000). Research examining the relation between provider self-efficacy and implementation of mental health-related EBPs for youth has been sparse (Shapiro, Watson MacDonell, & Moran, 2021). In a cluster RCT that randomized schools to one of two strategies to improve implementation, 60 teachers from 25 schools were trained to deliver a psychosocial substance use prevention program to students. Teachers who reported higher self-efficac*y* or confidence in being able to implement the program effectively were more likely to deliver it (Rohrbach et al., 1993).

In another multisite RCT where 91 school mental health clinicians were randomized to receive a quality improvement intervention vs. enhanced treatment as usual, a secondary aim was to examine clinician self-efficacy as a predictor of EBP knowledge, attitudes and use at the 2-year follow-up. Results showed that clinicians' post-intervention self-efficacy scores significantly predicted quality of services delivered, clinicians' EBP knowledge, and clinicians' use of an EBP for treating youth depression after two years (Schiele, Weist, Youngstrom, Stephan, & Lever, 2014). A recent mixed methods study situated within the Los Angeles public child mental health service system found that therapists with a higher sense of self-efficacy in delivering an EBP were less likely to discontinue that EBP (Lau et al., 2020). These studies suggest that providers' self-

efficacy may be an important target to facilitate change in provider behaviors during EBP implementation.

In summary, research on provider-level determinants offers initial evidence to support the idea that characteristics such as *intentions* and *self-efficacy* can differentially impact providers' use of EBPs in U.S. mental health systems. Looking at the evidence on provider-level determinants, some limitations to note are that the majority of studies examining these determinants are observational, cross-sectional studies using non-randomized convenience samples. Among those that use longitudinal designs, both predictor (i.e., provider-level determinants) and outcome variables (i.e., EBP use) are often measured using self-report. These studies provide preliminary support to suggest that provider-level determinants might be important targets to enhance the adoption of EBPs in community settings, though the causal relationships between these and other determinants as well as many implementation outcomes remain unknown. More experimental studies are needed to better understand the specific causal pathways through which provider-level determinants can impact implementation outcomes.

Organization-level Determinants

Organizational culture and climate. Organizational context matters for implementation, and the leading implementation frameworks posit several organization-level determinants that can influence implementation success (Aarons et al., 2011; Damschroder et al., 2009). *Organizational culture* and *climate* have been studied for a long period across multiple disciplines. *Organizational culture* refers to "the shared views of norms and expectations within organizations" (Glisson, Landsverk, et al., 2008). *Organizational climate* is defined as "organizational members' shared perception of the psychological impact of the work environment on their own well-being"

(Glisson, Landsverk, et al., 2008). Organizational culture and climate have been associated with provider attitudes towards EBPs (Aarons et al., 2012; Williams et al., 2019), provider turnover (Beidas et al., 2016; Glisson, 2002; Glisson et al., 2008), quality of services including EBP fidelity (Glisson & Hemmelgarn, 1998; Williams et al., 2019), sustainment of new practices (Glisson, Schoenwald, et al., 2008), and youth mental health outcomes (Glisson & Hemmelgarn, 1998; Glisson, Hemmelgarn, Green, & Williams, 2013).

Organizational readiness. A related but distinct organization-level determinant that is important for promoting EBP use is an *organization's readiness for change*, defined as "the extent to which organizational members are psychologically and behaviorally prepared to implement organizational change" (Weiner, Amick, & Lee, 2008). Organizational theory proposes that readiness for change is a two-dimensional construct reflected in the level of change commitment and change efficacy in an organization (Weiner et al., 2008; Weiner, Lewis, & Linnan, 2009). *Change commitment* refers to "targeted employee and management's shared resolve to pursue courses of action that will lead to successful implementation;" in other words, being *willing* to implement the change. *Change efficacy* refers to "targeted employees' shared beliefs in their collective capabilities to organize and execute courses of action that will lead to successful implementation;" i.e., being *able* to implement the change (Weiner et al., 2009). Readiness is thought to be a critical precursor to successful implementation, and theories posit that organizations exhibiting high readiness are more likely to initiate changes in organizational structures, policies and practices that are necessary to support a new innovation (Weiner et al., 2009).

Multiple studies have examined the association between organizational readiness for change and various aspects of EBP implementation. In a cross-sectional study that enrolled 69

substance use treatment programs, patients on treatment units with higher readiness (as indicated by increased autonomy, communication and openness to change among staff) also reported greater treatment satisfaction and higher rapport with their counselor providers (Lehman, Greener, & Simpson, 2002). One prospective study examined the relationship between baseline organizational readiness and EBP implementation at nine substance use disorder clinics, using a broader conceptualization of organizational readiness (Hagedorn & Heideman, 2010). Clinics were categorized as "high" vs. "low" implementation depending on number of EBPs integrated into their practice. They found that "high" implementation clinics had significantly higher scores on the leadership subscales of the organizational readiness to change assessment (ORCA; Helfrich, Li, Sharp, & Sales, 2009) compared to "low" implementation clinics. Staff who more strongly endorsed that their clinic leadership provided effective management, clearly defined staff responsibilities, and promoted team building and communication, were associated with clinics that implemented more EBPs. Interestingly, implementation differences were not explained by other factors (facility type, clinic size, number of team members trained), suggesting that organizational readiness may capture other organizational factors that influence implementation success (Hagedorn & Heideman, 2010).

Other observational studies have found organizational readiness to be associated with organizational commitment (Ingersoll, Kirsch, Merk, & Lightfoot, 2000), EBP adoption (Flaherty et al., 2021), provider motivation (Fuller et al., 2007; Saldana, Chapman, Henggeler, & Rowland, 2007), and a number of barriers experienced when implementing new EBPs (Lundgren, Chassler, Amodeo, D'Ippolito, & Sullivan, 2012). A recent experimental study tested the impact of an organizational readiness intervention on provider-level implementation outcomes in a hybrid type 2 RCT aimed at increasing the uptake of various substance use disorder (SUD) treatments among

adults in primary care settings (*N*=18 medical providers and 24 general clinic staff; Ober et al., 2017). The study had mixed findings; the organizational readiness intervention significantly improved perceptions of *appropriateness* of treating SUD in primary care as well as *acceptability* of one SUD treatment medication among medical providers. However, the intervention did not significantly improve perceived *feasibility* or *intention* to adopt SUD-related EBPs among providers (Ober et al., 2017). One of this study's limitations was the lack of a control group, and therefore findings cannot be attributed solely to the organizational readiness intervention. While additional experimental studies are needed to better understand the impact of organizational readiness on various implementation outcomes, the existing literature provides some support for the importance of organizational readiness in impacting EBP implementation.

Leadership. *Leadership* is conceptualized as the "extent to which leaders or supervisors are capable of guiding, directing, and making necessary changes to support implementation" (Aarons et al., 2011; Damschroder et al., 2009). Theory suggests that leadership impacts implementation both directly and indirectly by shaping the organizational context, which influences employee behaviors (Dinh et al., 2014). Two types of leadership models have been studied in the literature. The first is *general or full-range leadership*, which includes *transformational leadership* behaviors that motivate and inspire providers to pursue a goal, and *transactional leadership* behaviors that include rewards to maintain provider motivations and appropriate management of interactions (Bass, Avolio, Jung, & Berson, 2003; Judge & Piccolo, 2004). This model also includes a style of non-leadership, *passive-avoidant leadership*, characterized as taking a "hands off" approach by altogether avoiding making decisions or managing employees (Judge & Piccolo, 2004). The second model includes *implementation leadership*, which is strategically focused on a specific EBP. *Implementation leadership* involves

being knowledgeable about the EBP, supporting providers in implementing the EBP, being proactive in anticipating and addressing implementation challenges, and persevering through the ups and downs of EBP implementation (Aarons, Ehrhart, & Farahnak, 2014).

Two large observational, cross-sectional studies were conducted in U.S. public mental health systems to examine the relationships between leadership and other provider- and organization-level determinants (*N*=130 providers, 23 sites; Powell et al., 2017; *N*=303 providers, 49 sites; Aarons, 2006). These studies found that higher levels of transformational leadership, transactional leadership, and more proactive implementation leadership were associated with more positive provider attitudes towards adoption of EBPs. Higher transformational leadership was also associated with greater provider knowledge of EBPs (Powell et al., 2017). In a longitudinal mixed-methods study of a statewide EBP implementation in the Oklahoma Children's Services system, state regions were randomized to deliver the EBP SafeCare vs. services as usual (Aarons & Sommerfeld, 2012). Data was collected from 140 provider participants across multiple time points during the active implementation of SafeCare. Results of multigroup path analyses indicated that transformational leadership had a strong direct association with organizational climate, but this effect was only found among teams actively implementing SafeCare. Moreover, organizational climate among these teams was also associated with more positive provider attitudes towards EBP adoption, suggesting that transformational leadership may play a greater role in influencing organizational climate and provider attitudes during an active implementation phase (Aarons & Sommerfeld, 2012).

Another longitudinal study examined the influence of 39 leaders on the *sustained* use of EBPs across 11 service systems representing child welfare, public health and mental health (Aarons et al., 2016). Organizations' sustained use of SafeCare was classified as fully-, partially-,

or non-sustained 2-10 years after initial implementation. Transformational leadership was associated with greater odds of full sustainment relative to non- and partial sustainment. Passive-avoidant leadership negatively predicted sustainment, such that increased passive-avoidant leadership was associated with greater odds of *non*-sustainment. The relation between transactional leadership and sustainment was marginally significant but suggested that a unit increase in transactional leadership was associated with greater odds of non-sustainment (Aarons et al., 2016). This is one of the few studies that objectively measured implementation outcomes, providing the strongest empirical support for the influence of leadership on actual sustained use of EBPs.

The importance of leadership has also been well established in the broader health and allied services literature. For example, stronger transformational leadership has been associated with positive work attitudes in for-profit and non-profit organizations (Aarons, Ehrhart, Moullin, Torres, & Green, 2017; De Hoogh et al., 2005; Judge & Piccolo, 2004). More positive leadership has been associated with higher staff organizational commitment (Glisson & Durick, 1988) (Glisson 1988), and more positive organizational climate (Green, Albanese, Cafri, & Aarons, 2014). Effective leadership has also been found to support the implementation of task-shifting in surgical units (Henderson, Paterson, Burmeister, Thomson, & Young, 2013), person-centered care in nursing homes (Rokstad, Vatne, Engedal, & Selbaek, 2015), and hand hygiene in hospital settings (Touveneau et al., 2013). Taken together, this body of literature supports the importance of the role of leaders in the EBP implementation process.

Implementation climate. *Implementation climate* has been defined as "employees' shared perception that a specific innovation is expected, supported, and rewarded within their organization" (Ehrhart, Aarons, & Farahnak, 2014; Jacobs, Weiner, & Bunger, 2014; Klein &

Sorra, 1996). Implementation climate differs from organizational climate in that it has a strategic focus (i.e., implementation) and it is innovation or EBP-specific (Weiner, Belden, Bergmire, & Johnston, 2011). Organizations that have a strong implementation climate typically ensure their employees are adequately skilled to use an EBP, incentivize the use of the EBP, and consistently remove barriers to EBP use throughout implementation (Klein & Sorra, 1996). Conceptual models have posited that implementation climate is positively associated with implementation effectiveness, which refers to the consistency, quality or appropriateness of innovation use (Klein & Sorra, 1996; Weiner et al., 2009).

The majority of empirical evidence for this relationship comes from the information systems implementation literature (Weiner et al., 2011). Fewer empirical studies have tested the relationship between implementation climate and EBP use in the health sciences and mental health, and findings to date have been equivocal (Williams, Ehrhart, Aarons, Marcus, & Beidas, 2018). One study examined this conceptual framework using structural equation modeling among 481 physician participants in the National Cancer Institute's Community Clinical Oncology Program (CCOP) (Jacobs et al., 2015). This study found that perceptions of implementation climate had a statistically significant direct effect on implementation effectiveness, and implementation climate partially mediated the relationship between organizational implementation policies and practices (IPPs) and implementation effectiveness. This finding suggested that managers looking to increase implementation effectiveness of an innovation should focus on creating an environment that encourages implementation (Jacobs et al., 2015).

In a large observational, cross-sectional study that enrolled 130 providers from 23 sites working in the Philadelphia public mental health system, implementation climates that provided more educational support were associated with more positive provider attitudes towards EBPs

(Powell et al., 2017). However, other cross-sectional research has failed to link implementation climate to providers' EBP use (Becker-Haimes et al., 2017; Beidas et al., 2015; Beidas et al., 2017). One potential explanation for this is that these studies used an implementation climate measure that asks about EBPs more broadly (Ehrhart et al., 2014), rather than assessing implementation climate for a specific innovation (e.g., CBT; Jacobs et al., 2014). Another possible explanation for these mixed findings comes from a prospective two-year observational study conducted with 235 providers working in 20 U.S. behavioral health organizations. This study found that in organizations with more positive general organizational climates at baseline, higher levels of implementation climate predicted increased EBP use among clinicians at baseline and two years later. However, in organizations with less supportive organizational climates at baseline, implementation climate was *not* related to clinicians' use of EBP at either time point (Williams et al., 2018). Therefore, the effects of implementation climate on clinicians' EBP use appeared to be moderated by general organizational climate. As such, behavioral health organizations must simultaneously develop implementation climates that expect, support and reward clinicians' EBP use, while also fostering positive organizational climates that support clinicians' well-being to optimize clinicians' use of EBPs.

There is limited data on how EBP implementation climate changes over time, and how these changes might be associated with changes in clinicians' behaviors. A recent 5-year longitudinal, quasi-experimental difference-in-differences study collected data from 496 clinicians across 30 outpatient child mental health clinics (Williams, Wolk, Becker-Haimes, & Beidas, 2020). Researchers found that when organizations improved in implementation leadership, they experienced a greater increase in EBP implementation climate (Cohen's $d = 0.92$), which in turn contributed to greater EBP use by clinicians (Cohen's $d = 0.55$). This is the first mechanistic study

to provide evidence for the indirect effect of implementation leadership on clinicians' EBP use via improvement in EBP implementation climate. Findings suggest that both implementation leadership and implementation climate are important targets to improve EBP implementation.

In summary, organizational factors are critical to successful implementation of EBPs in mental health. Research has documented that implementation is influenced by both general organizational determinants (e.g., organizational culture, climate and readiness) and implementation-specific determinants related to a specific EBP (e.g., implementation leadership, implementation climate). Similar to the evidence base on provider-level determinants, the majority of data on the relationships between organization-level and other provider-level determinants as well as implementation outcomes comes from observational cross-sectional studies. While more experimental studies focused on developing and testing integrated causal theories are needed (Williams & Beidas, 2019), the existing literature provides a signal for which organizational factors may be playing a role in influencing EBP implementation. Additionally, nearly all conceptual models and many of the studies summarized above emphasize that effective implementation requires consideration of *both* provider- and organization-level determinants. Emerging evidence has started to unpack the complex interplay between factors at both of these levels (Becker-Haimes, Williams, Okamura, & Beidas, 2019; Powell et al., 2017). For example, Becker-Haines and colleagues (2019) found that the extent to which organizational factors influence a provider's practice may be dependent on the provider's attitudes towards and knowledge of EBPs. Taken together, identifying and addressing context-specific provider and organizational determinants is an important step in improving the use of EBPs in mental health, with the most optimal outcomes potentially achieved when there is synergy between provider and organizational determinants.

Implementation Strategies

To target provider- and organization-level determinants, the National Institutes of Health (NIH) and the Institute of Medicine (IOM) have prioritized efforts to identify, develop, refine and test implementation strategies, (Cassel et al., 2009; Chao, 2007; Hoagwood & Olin, 2002; NIH, 2017) defined as "*methods or techniques used to enhance adoption, implementation, sustainment or scale-up of interventions.*" (Kirchner, Smith, Powell, Waltz, & Proctor, 2020; Powell, Beidas, et al., 2015; Powell et al., 2019). Implementation strategies can be "discrete" strategies with a single component. Examples include providing reminders to clients or developing quality monitoring systems (Powell, Waltz, et al., 2015). Implementation strategies can also be "multifaceted," i.e., involving more than one discrete component (Powell, Waltz, et al., 2015). For example, the Leadership and Organizational Change for Implementation (LOCI) intervention is a multifaceted strategy targeted at leadership development, and includes several discrete components such as leaders conducting a self-assessment, attending a didactic training, making a leadership development plan, and receiving coaching (Aarons, Ehrhart, Farahnak, & Hurlburt, 2015).

Multiple taxonomies of implementation strategies have been proposed in the literature (Cochrane Effective Practice and Organisation of Care Review Group, 2015; Mazza et al., 2013; Michie et al., 2013; Powell, Waltz, et al., 2015). In the Expert Recommendations for Implementing Change (**ERIC**) study, Powell and colleagues (2015) compiled a list of 73 strategies for implementing evidence-based mental health services in U.S. communities. ERIC implementation strategies may target determinants at multiple levels, such as the patient (e.g., distribute educational materials), provider (e.g., revise professional roles), organization (e.g.., develop an implementation blueprint), community (e.g., create advisory boards and workgroups), and policy

and financing (e.g., alter incentive/allowance structures). Powell and colleagues (2015) further highlight that once context-specific determinants are identified, they should be prioritized, and implementation strategies should be selected and tailored to address prioritized barriers and facilitators (Damschroder et al., 2009; Powell, Beidas, et al., 2015). Recent reviews in the implementation science literature suggest that providing this type of systematic implementation support, tailored to each organization and context's specific needs, is critical to achieving implementation success (Baker et al., 2015; Baker et al., 2010; Bosch, Van Der Weijden, Wensing, & Grol, 2007).

Implementation Facilitation

Brief Overview of Implementation Facilitation

One multifaceted implementation strategy included in the ERIC compilation is Implementation Facilitation (**IF**). Facilitation has been widely used in many healthcare organizations to support the implementation of clinical innovations (Powell, Waltz, et al., 2015; Ritchie, 2017). Implementation facilitation has been defined as a "*a multifaceted and dynamic strategy involving the provision of interactive problem-solving and support during the implementation of a new program*" (Midboe et al., 2018). The integrated Promoting Action on Research Implementation in Health Services (i-PARIHS) framework suggests that facilitation plays an active role in successful implementation by "*integrating action around the innovation and its recipients within their local, organizational and wider system context*" (Harvey & Kitson, 2016). The facilitation process helps adapt the EBP innovation to enhance its fit with the implementation setting, and uses tailored strategies to target barriers related to recipients (i.e., clients, staff, and leaders), the inner context (i.e., the local organization/team), and the outer

context (i.e., the wider healthcare and policy system that the organization is embedded in) (Harvey & Kitson, 2016).

A facilitation strategy can include external facilitators, internal facilitators, or both (Cranley, Cummings, Profetto-McGrath, Toth, & Estabrooks, 2017). External facilitators bring expertise about the EBP, its evidence base and general implementation strategies. Internal facilitators are knowledgeable about their organization's structure, processes, policies and culture. In addition, facilitators typically also have a variety of interpersonal effectiveness skills to successfully work with stakeholders in a complex implementation environment (Ritchie, 2017). The duration and frequency of facilitation can be variable and is often impacted by factors such as the complexity of the EBP, the organization's size, and available resources. Facilitators may use multiple mediums including in-person meetings, phone or video calls, live or recorded webinars, and any other technology-based mediums when travel resources are scarce (Ritchie, 2017).

Current Evidence for the Effectiveness of Implementation Facilitation

There is a growing body of evidence in the U.S. that implementation facilitation is effective in improving implementation outcomes such as adoption and fidelity of complex healthcare innovations (Kilbourne et al., 2014; Waxmonsky et al., 2014). In a systematic review, Baskerville and colleagues (2012) found that primary care practices that received a facilitation intervention were 2.76 times more likely to adopt evidence-based guidelines, and facilitation had a moderate effect size of 0.56 (Baskerville, Liddy, & Hogg, 2012). Among the 23 trials reviewed, the most commonly used facilitation strategies were audit and feedback, interactive consensus building, goal setting, providing reminders, and quality improvement tools such as Plan-Do-Study-Act (PDSA) cycles. Across these trials, 74% reported that the facilitator tailored the intervention to the

needs of their practice. Moreover, the effect size among facilitation studies that reported intervention tailoring to the context was significantly larger (0.62) compared with studies that did not report tailoring. The following sections summarize the most rigorous studies in the U.S. on the effectiveness of facilitation. One proposed benefit of facilitation is that it is a multilevel intervention that can influence implementation factors at more than one socioecological level (Weiner, Lewis, Clauser, & Stitzenberg, 2012). However, a major critique of facilitation has been that being a multifaceted strategy, there is little knowledge around which specific components of facilitation matter most. Facilitation includes a wide range of discrete strategies such as identification and engagement of key stakeholders, problem identification and resolution, provision of local technical support, creation of learning collaboratives, presentation of the evidence that supports an EBP, staff training, patient education, formative evaluation, and engagement of opinion leaders and clinical champions (Ritchie, Parker, & Kirchner, 2020). While outcomes from facilitation studies have generally supported its utility, no research has looked at specifically *what* aspects of facilitation are associated with implementation success. This lack of knowledge limits generalizability and replicability of facilitation in other community-based settings. As such, there is a need for research on facilitation that moves away from a "kitchen-sink" approach and provides empirical support to guide selection of specific strategies within facilitation to address barriers in a given implementation setting.

Evidence for Facilitation from High-Income Countries

In two recent cluster RCTs, researchers compared the impact of an enhanced implementation strategy that included facilitation to that of a standard implementation strategy (without facilitation) on adoption and fidelity of mental health related EBPs (Kilbourne et al.,

2014; Waxmonsky et al., 2014). The first study randomized 88 VA medical centers and community outreach clinics to receive either the enhanced (*n*=49 sites) or standard (*n*=40 sites) implementation strategy to support the implementation of an outreach EBP for patients with serious mental illness (Kilbourne et al., 2014). At the 6-month follow-up, sites in the enhanced condition had significantly higher adoption of the outreach program among providers as measured by number of attempted and completed provider-patient contacts. However, there were no significant effects on patient-level outcomes such as utilization and quality of care (Kilbourne et al., 2014). As such, facilitation impacted select provider behaviors, but did not appear to have a downstream impact on patient outcomes.

In the second cluster RCT, five U.S. community-based practices were randomly assigned to receive an enhanced implementation strategy (with facilitation; *n*=3 sites, 177 patients) or a standard implementation strategy (without facilitation; *n*=2, 140 patients) to deliver a psychosocial intervention for bipolar disorder among adults (Waxmonsky et al., 2014). In the enhanced strategy condition, external facilitators provided technical assistance to sites in implementing the EBP. They also worked with internal facilitators at each site to set measurable goals and problem-solve implementation challenges. Internal facilitators engaged each site's leadership on a regular basis to support implementation. Primary outcomes to assess fidelity were number of group sessions, number of care management contacts, and total number of sessions between providers and patients. At the 6-month follow-up, sites in the enhanced condition reported a significantly higher number of care management contacts and total sessions between providers and patients; there were no significant differences in number of group sessions conducted between conditions (Waxmonsky et al., 2014). In this study, facilitators were able to help providers secure resources required for group sessions. Facilitators also conducted provider follow-up and engaged leaders, which may

have contributed to overall acceptance of the EBP at these sites. As such, facilitation impacted the "adherence" component of fidelity; however, the impact of facilitation on other components of fidelity, such as provider skill, was not assessed in this study.

Facilitation has been used to integrate evidence-based mental health services into primary care settings in the VA healthcare system, though findings on affected implementation outcomes have been mixed. Kirchner and colleagues (2014) developed a facilitation strategy that included both external and internal facilitation to implement Primary Care-Mental Health Integration (PC-MHI) at primary care clinics within two VA regional networks. Facilitators engaged stakeholders at multiple levels and helped them adapt PC-MHI to meet their local needs, and also proactively addressed implementation barriers at each site. The facilitation strategy was evaluated in a multi-site, quasi-experimental hybrid type III study (n=7 facilitation sites; n=7 matched comparison sites). Outcomes were assessed using the RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance; (Glasgow, Klesges, Dzewaltowski, Estabrooks, & Vogt, 2006) framework during the late implementation phase (9-15 months since start of implementation) and maintenance phase (21-27 months since start of implementation). The results of this study indicated that reach, measured by the percentage of primary care patients seen in PC-MHI, was significantly higher at facilitation sites compared to non-facilitation sites. Adoption, measured by percentage of primary care providers referring patients to PC-MHI, was also significantly higher at facilitation sites compared to non-facilitation sites. The authors noted that both these findings were sustained through the maintenance phase (Kirchner et al., 2014). Effectiveness of facilitation in this study was based on patient process measures (rather than clinical outcomes), i.e., the percentage of primary care patients with an initial visit to mental health specialty care. Implementation fidelity was operationalized as the percentage of patients referred to PC-MHI that

were seen on the same day, as a key component of co-collaborative care is the ability to provide "warm handoffs" or same-day referrals. There were no significant differences for effectiveness or implementation fidelity between facilitation and non-facilitation sites. Taken together, facilitation appeared to significantly improve reach and adoption of PC-MHI, but did not appear to have an impact on effectiveness or implementation fidelity in this study. Recent empirical studies have also found evidence for the impact of facilitation on increasing reach and adoption (Chinman et al., 2020; Sayer et al., 2021), and implementation effectiveness (i.e., consistency and quality of implementation; Garner et al., 2020) of mental health EBPs.

In a qualitative study of the PC-MHI implementation, Ritchie and colleagues (2017) found that *all* facilitation sites implemented PC-MHI (signaling 100% adoption), whereas non-facilitation sites reported only 60% adoption of the PC-MHI program. In addition, clinical practice quality and adherence to the evidence for PC-MHI was also higher at facilitation sites. Interestingly, the most successful sites were those that received facilitation *and* had strong leadership support throughout the implementation. Implementation success was variable at facilitation sites with moderate leadership support as well as non-facilitation sites with strong leadership support. Non-facilitation sites with moderate leadership support were the least successful in implementing PC-MHI. As such, facilitation and strength of leadership support appeared to have a synergistic impact on program implementation in this context (**Figure 1**; Ritchie et al., 2017).

Figure 1

Reproduced from Ritchie et al., 2017: Combined effects of implementation facilitation and strength of leadership structure on implementation success of evidence-based programs

Strength of Leadership Structure:	Implementation Facilitation Intervention: Yes	Implementation Facilitation Intervention: No
Strong	Network A Sites: Most Successful	Network B Sites: Variable Success
Moderate	Network C Sites: Variable Success	Network D Sites: Least Successful

Evidence for Facilitation from Low- and Middle-Income Countries

Implementation facilitation has only recently started gaining attention as a promising approach for implementing EBPs in LMIC, with only one study focused on mental health. Two recent RCTs in LMIC used facilitation to support the delivery of healthcare programs in low resource primary care settings. A cluster RCT in Vietnam tested the impact of a facilitation strategy to improve quality and coverage of perinatal services and neonatal survival (Persson et al., 2013). The study randomized 90 community health centers; 44 centers received a facilitation intervention that included identification of local perinatal health problems followed by a problem-solving cycle, and 46 centers were allocated to the control condition. There was a significant *increase* in attendance at antenatal care clinics and *reduced* neonatal mortality over a period of three years for intervention versus control centers (Persson et al., 2013). Lay female members of a Women's Union served as facilitators in this study; they primarily used plan-do-study-act cycles, brainstorming techniques and problem-solving to support healthcare staff and key community members in their efforts to implement evidence-based neonatal care in community health centers (Eriksson et al., 2016). In another cluster RCT, 51 government health institutions in low-resource suburban areas in Tanzania were randomized to either a facilitation intervention condition (n=26) or to a control condition (n=25) (Pallangyo, Mbekenga, Olsson, Eriksson, & Bergström, 2018).

Results indicated improved quality of postpartum care, increased knowledge and confidence among healthcare providers, and increased awareness and attendance for postpartum care among mothers seen at institutions in the intervention condition (Pallangyo et al., 2018; Pallangyo, Mbekenga, Olsson, Rubertsson, & Källestål, 2017). Other studies evaluating facilitation interventions in LMIC have shown similar results of its impact on improving maternal and child health outcomes (Harris-Fry et al., 2016; Prost et al., 2013; Younes et al., 2015).

Only one study in an LMIC has utilized facilitation to improve the implementation of mental health services. The Program for Improving Mental Health Care (PRIME) study implemented a comprehensive mental health program to integrate EBPs for depression, psychosis, and alcohol use disorders into primary healthcare settings in five countries (Lund et al., 2012). Results from mixed methods case studies from the pilot testing of PRIME indicated poor translation of EBPs into routine practice due to multiple implementation barriers, such as low support from service providers, non-availability of psychotropic drugs, lack of reporting of mental health indicators in routine health management information systems, and low priority accorded to mental disorders. Subsequently, PRIME team members acted as external facilitators and designed strategies to address these barriers. Facilitation included identifying patients who needed services, mobilizing community resources, and setting up drug procurement and information systems (Shidhaye et al., 2016). This study did not empirically test the impact of facilitation; however, lessons learned from subsequent implementations after the pilot suggested that external facilitation played a key role in addressing multiple implementation barriers to mental health service delivery in this setting (Shidhaye, 2015; Shidhaye et al., 2016). Taken together, there is a small but growing body of evidence on the impact of facilitation to support EBP implementations in LMIC, with empirical studies only coming from the health sciences field. To our knowledge, no studies have

empirically tested the impact of facilitation to improve implementation outcomes of mental health programs in LMIC.

Summary of Evidence

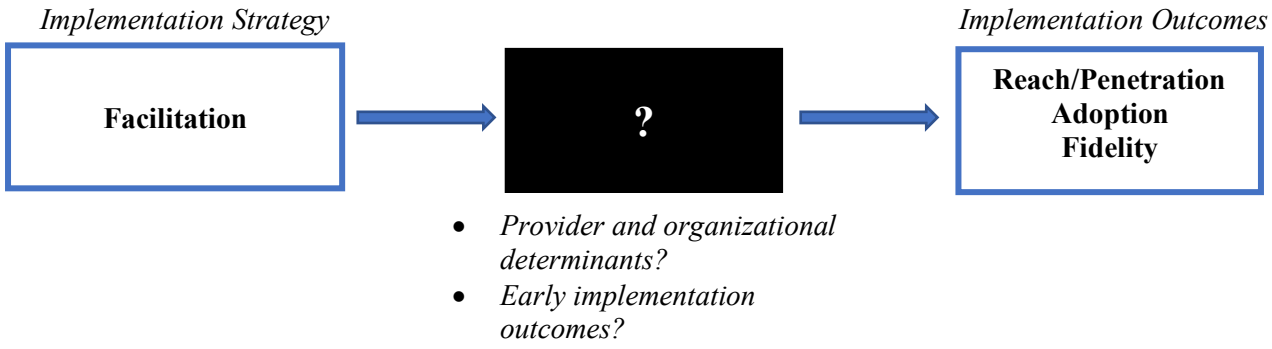
Provider and organization-level determinants can influence implementation success. The implementation science field emphasizes the use of implementation strategies to target known determinants as a way to improve implementation outcomes, which are critical indicators of implementation success (Proctor et al., 2009). Facilitation is a multifaceted implementation strategy that targets multiple levels of determinants related to the innovation (i.e., the EBP being implemented), recipients (i.e., providers and clients), inner contexts (i.e., local teams and organizations) and outer contexts (i.e., system and policy contexts) (Harvey & Kitson, 2016). The majority of evidence for the effectiveness of facilitation comes from U.S. studies, which have predominantly examined its impact on implementation outcomes such as adoption, fidelity and reach/penetration, and service outcomes such as effectiveness. Findings from these studies have been mixed, with the most compelling evidence coming from rigorous U.S.-based RCTs demonstrating that facilitation improves the adoption of mental health EBPs. Facilitation studies in LMIC have been sparse. These have primarily focused on facilitation's effectiveness in improving more distal clinical and service outcomes for maternal and child healthcare programs in primary care settings (Proctor et al., 2009). No studies have looked at the impact of facilitation on implementation outcomes when delivering mental health services in LMIC.

While current studies show promise for the potential of facilitation to improve implementation of mental health EBPs, several research gaps exist in the empirical evidence base of facilitation as an implementation strategy. First, there is limited research on the impact of

facilitation on early implementation outcomes such as acceptability, feasibility, and appropriateness when delivering mental health EBPs (**Table 1**; Proctor et al., 2011). Compared to outcomes that have been assessed in the facilitation literature (e.g., adoption, fidelity or effectiveness), these are more proximal indicators of success. Therefore, implementation strategies that can target these *early* implementation outcomes can be helpful in addressing early barriers that prevent implementation success. Second, to our knowledge, no studies have assessed the impact of facilitation on provider and organization-level determinants that are known to impact implementation success. Evaluating the impact of facilitation on known determinants is critical to understanding *how* facilitation impacts implementation success in community settings. Taken together, examining the relation between facilitation and more proximal factors such as provider and organizational determinants, as well as early implementation outcomes, is a step towards unpacking the black box on how facilitation works (**Figure 2**). This is particularly relevant for low resource settings such as LMIC, where implementation strategies are much needed to help reduce the large mental health treatment gap.

Figure 2

Research gap in the evidence-base for facilitation as an implementation strategy



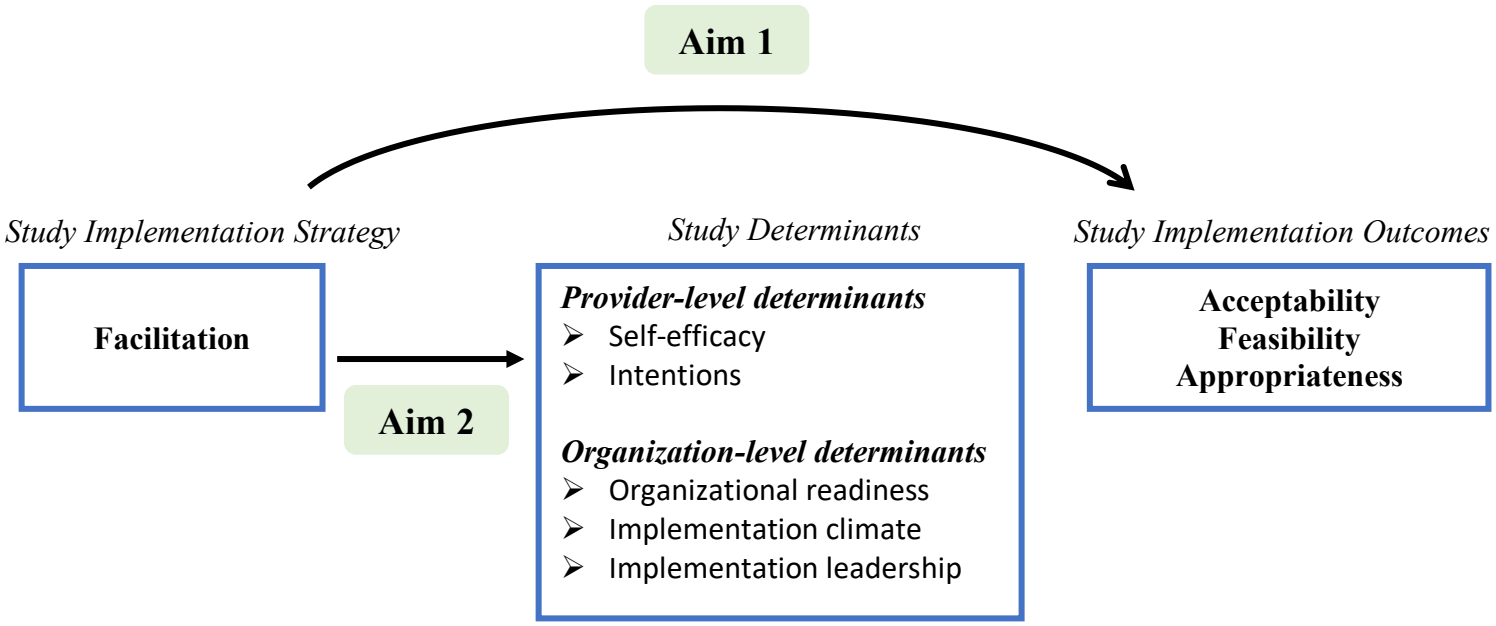
Current Study

The present study builds on a larger National Institute of Mental Health-funded study: *Building and Sustaining Interventions for Children (**BASIC**): Task-sharing mental health care in low-resource settings* (Dorsey, Gray, et al., 2020). In BASIC, we test the implementation of Trauma-focused Cognitive Behavioral Therapy (**TF-CBT**) in two governmental sectors prioritized by our Kenyan partners as potential options for scale up. We test treatment delivery via task-shifting in Education (delivery by teachers) and Health (delivery by community health volunteers [**CHVs**]), with the goal of identifying implementation practices and policies (**IPPs**) that predict implementation success of TF-CBT in each sector. The parent grant employs a stepped wedge cluster randomized trial (**SW-CRT**) design, which includes 40 schools and the 40 surrounding communities (120 lay counselors in each) who provide TF-CBT to up to 1,280 youth. In Aim 1 of the parent grant, we first studied TF-CBT implementation in 10 schools and 10 communities (clusters in Sequence 1 of the SW-CRT) to identify actionable IPPs that led to successful implementation. Leveraging the SW-CRT design, we then used these findings to inform implementation facilitation for future sites (clusters in Sequences 2-7). Facilitation was delivered by staff from our partner NGO, Ace Africa, and experienced counselors who delivered TF-CBT in Sequence 1.

The current study presents a unique opportunity to better understand the delivery and impact of facilitation in supporting a task-shifted mental health treatment in two child-relevant sectors in Kenya. The parent grant systematically guides the selection of IPPs to inform implementation facilitation, and characterizes the use of various IPPs targeted during facilitation in subsequent sites. The present study extends the parent grant by evaluating the impact of external facilitation on key implementation determinants and outcomes, by comparing outcomes from

Sequence 1 sites who did not receive facilitation to those from Sequence 2-4 sites that received facilitation. To our knowledge, this is the first study to explore the impact of facilitation on implementation determinants and outcomes for a child mental health treatment in an LMIC. The results of the present study will generate knowledge around facilitation as a tool to tailor implementation support for task-shifted interventions in other low-resource settings.

Figure 3
Current Study Aims



<u>Aim 1:</u> Test the impact of facilitation on early implementation outcomes related to TF-CBT delivery in the Education and Health sectors.

In this aim, we test the impact of facilitation on a subset of implementation outcomes from Proctor and colleagues' (2011) conceptual model (**Figure 3**). *Acceptability* is conceptualized as the perception among stakeholders that an intervention is agreeable or satisfactory, with lack of intervention acceptability a well-established barrier to implementation (Davis, 1993). *Feasibility*

is the extent to which an intervention can be successfully carried out within a given context. *Appropriateness* is defined as the perceived relevance or compatibility of an intervention to a given setting and problem. While these constructs are related, each is conceptually distinct and may have different implications for implementation. For example, an intervention could have high appropriateness but low feasibility in a low-resource setting.

Facilitation activities are designed to target each of these implementation outcomes. In BASIC, facilitation targets *feasibility* in two ways: enhancing new counselor skills by encouraging practice and supervision attendance, and actively problem-solving barriers to implementation such as lack of resources, transportation issues, and time needed for TF-CBT delivery. Facilitation targets *appropriateness* by helping new lay counselors and sites integrate TF-CBT delivery into their existing roles and practices. Finally, BASIC facilitators belong to the same community as new teacher and CHV counselors, and have prior experience delivering TF-CBT themselves. As such, facilitators share information about their own satisfaction with and positive attitudes towards TF-CBT with new counselors, thereby indirectly targeting *acceptability* among new counselors. Based on this, our first hypothesis was:

- H1: Lay counselor perspectives on acceptability, feasibility, and appropriateness of TF-CBT will be *higher* among counselors who received facilitation compared to those who did not.

<u>Aim 2:</u> Test the impact of facilitation on provider- and organization-level determinants as reported by lay counselors delivering TF-CBT in the Education and Health sectors.

In this aim, we test the impact of facilitation on a subset of provider and organizational determinants outlined in multiple determinant frameworks (Aarons et al., 2011; Damschroder et

al., 2009; Flottorp et al., 2013) (**Figure 3**). We are unable to conduct mediation analyses in the current study due to design and sample size; however, understanding the relationship between facilitation and determinants is a first step towards this goal. Assessing the impact of facilitation on key provider- and organization-level determinants of implementation success can help inform future mechanistic studies of the pathways through which facilitation impacts implementation outcomes.

We examine the impact of facilitation on two provider-level determinants: *self-efficacy* and *intentions*. Several facilitation activities in BASIC directly target new lay counselors in the education and health sectors that are delivering TF-CBT for the first time. These include helping new counselors get protected time for training, supervision and skill building prior to starting TF-CBT delivery, as well as enhancing counselors' beliefs in their own capabilities by encouraging and rewarding them (targeting *self-efficacy*). Facilitators in BASIC also engage new counselors early prior to the start of TF-CBT delivery, connect program implementation to their values such as caring for orphans, and actively address logistical barriers that might influence their motivation and intentions (targeting counselors' *intentions* to deliver TF-CBT). We hypothesized that:

- H2: Lay counselors who received facilitation will report *higher* perceived self-efficacy and intentions to implement TF-CBT compared to lay counselors who did not receive facilitation.

The organization-level determinants examined in this study are *organizational readiness*, *implementation climate* and *implementation leadership*, all of which can significantly impact implementation success (Aarons et al., 2011; Weiner et al., 2009). Facilitation activities in BASIC target each of these determinants in multiple ways, such as preparing sites to procure materials that will be required for delivering TF-CBT groups, helping sites generate solutions for workload

adjustment to create time for counselors to deliver TF-CBT, encouraging leaders to set clear expectations around TF-CBT implementation, having leaders attend TF-CBT training and facilitation meetings to increase their knowledge about the program, helping leaders find ways to signal support for the new program, and setting up rewards systems for TF-CBT implementation at each site. Therefore, we hypothesized that:

- H3: Lay counselor perspectives on organizational readiness, implementation climate and implementation leadership will be *higher* among counselors at sites that received facilitation compared to those that did not.

<u>Aim 3:</u> Explore differences in the impact of facilitation on implementation outcomes and determinants by sector.

Given the exploratory nature of these analyses, we do not have specific hypotheses about the differences in the impact of facilitation by sector. One key difference between the sectors lies in their organizational structures. In the education sector, schools have a clear organizational structure and hierarchy. Teachers have paid positions, work in the same physical space every day, and interact with their leaders and peers in a similar manner to what we would find in typical organizations. The health sector, on the other hand, has a looser organizational structure; CHVs hold volunteer positions, are much more embedded in the community for most of their time, and travel to households to provide services. They less frequently interact with their leaders (once a month reporting) and function less within a typical leadership hierarchy. Given these differences in organizational structures between sectors, it is possible that facilitation has differing impacts on organization-level constructs such as organizational readiness, implementation climate and implementation leadership between the two sectors. Relatedly, CHVs have more flexibility in their

schedules than teachers. As a result, workload adjustment to create time for BASIC activities such as attending supervision or conducting additional make-up sessions may be easier for CHVs. Therefore, it is possible that facilitation may not have as much of an impact on implementation outcomes such as *feasibility* or *appropriateness* among CHVs.

<u>Aim 4:</u> Examine the perceived value of the novel facilitation intervention itself, including the degree to which it was acceptable, feasible, and useful to counselors that received facilitation.

Similar to Aim 3, we did not have hypotheses about this aim due to its exploratory nature. To our knowledge, this is the first study that uses a locally developed facilitation strategy to support the implementation of TF-CBT for children across two sectors in an LMIC. The purpose of this exploratory aim is to better understand the perceived value of and satisfaction with facilitation, and barriers and facilitators to providing facilitation in these low-resource settings. We also aim to understand its unintended consequences and recommendations to improve future iterations of implementation facilitation. Results from this aim will help inform how to tailor a facilitation strategy to better fit this LMIC context.

Method

Study Setting

In 2010, the Kenyan government began a decentralization process (National Council for Law Reporting, n.d.). Kenya is now divided into 47 counties that have significant political decision-making, organizational power, and funding. Kenya's newly enacted National Mental Health Policy demonstrates a commitment to addressing mental health needs (Kenyan National Assembly, 2014; Ministry of Medical Services, 2012; Muraya, 2016). Bungoma County (**Figure 4**) is the third most populated county in Kenya with 1.7 million residents. The study takes place in Bungoma South within Bungoma County, which contains both urban and rural areas. Nearly 50% of Bungoma County's population are children ≤15 years. Mental health professionals are largely unavailable. In Bungoma, there are 2 psychiatric nurses for its 1.7 million residents. The closest psychiatrist is 1.5 hours away in Kakamega.

Figure 4 *Study region*

Parent Trial Design

The present study is part of a larger NIH-funded Hybrid Type II Implementation-Effectiveness trial (Curran, Bauer, Mittman, Pyne, & Stetler, 2012), BASIC, that identifies IPPs to support scale-up of TF-CBT for orphans in the Education and Health sectors in Bungoma South in Kenya. BASIC is founded on a 15-year history of collaborations with NGO Ace Africa in Kenya, prior NIH-funded work, and iterative and collaborative intervention adaptation and testing (Dorsey et al., 2020; Whetten et al., 2014). Ace Africa has collaborated with the Ministries of Education and Health on a range of child/orphan and HIV-related programming, with a desire on

both sides to expand these collaborations to address mental health. BASIC employs a SW-CRT design with mixed methods. Forty out of the 137 primary schools in Bungoma South were randomly selected to participate in this study. As CHVs are connected to a health facility, but "extend" healthcare services to the community, the surrounding community in which each school is nested is the health sector setting for the trial. The school and the surrounding community are considered a "village cluster." Each of the 40 "village clusters" has 1 team of teachers and 1 team of CHVs delivering TF-CBT (Cohen, Mannarino, & Deblinger, 2006). The 40 clusters were randomly ordered. The study began with 10 clusters enrolled in the first of 7 sequences of the SW-CRT, with 5 clusters being added in each subsequent sequence of the trial. Each cluster includes 3 teacher counselors, 3 CHV counselors and up to 16 youth per sector, for a total of 240 providers and 1,280 youth over the 7 sequences.

Detailed BASIC study procedures are outlined elsewhere (Dorsey et al., 2020). In brief, Ace Africa first introduced the BASIC study at each site, and worked with site leadership to recruit three lay counselors per site (given the 3-counselor structure for group TF-CBT which involves 2 child group counselors and 1 guardian group counselor). In each sequence, teachers and CHVs participated in separate, 6-day TF-CBT trainings. Training and supervision were provided by five experienced local Kenyan TF-CBT lay counselors from the previous RCT (Dorsey et al., 2020), who worked for Ace Africa. Following the Apprenticeship Model (Murray et al., 2011), these counselors became local trainers in BASIC. Training was followed by two weeks of practice with trainer and peer feedback. The TF-CBT intervention, called *Pamoja Tunaweza* (**PT**; Together We Can), was adapted for this setting and shown to be effective in an open trial in Tanzania (*N*=64; O'Donnell et al., 2014) and in a large RCT in Kenya and Tanzania (*N*=640; (Dorsey et al., 2020). In BASIC, *Pamoja Tunaweza* included eight group-based sessions and 2-3 individual sessions.

Children and guardian groups met concurrently with conjoint activities included in the final three sessions. All sites implemented two sequential TF-CBT groups (one boys' group, one girls' group) during the implementation period. Teachers and CHVs received ongoing, weekly supervision that included fidelity monitoring by the Ace Africa trainers throughout the implementation period. The education sector delivered PT in schools and opted to conduct PT during games time, a 1-hour period where students participate in clubs and sports. The health sector had autonomy to decide the location of PT delivery given CHVs' services are integrated within the community. During sensitization meetings in schools, Head Teachers welcomed CHVs to deliver PT in schools given the availability of space. To date, all health facilities have opted to deliver PT in schools.

In Aim 1 of BASIC, we investigated TF-CBT implementation in the first sequence of the SW-CRT to identify actionable (i.e., modifiable) IPPs associated with successful implementation in 10 schools and 10 communities. Following delivery of TF-CBT in Sequence 1, we conducted a case comparison analysis in which we identified six sites per sector (12 total) that represented unique aspects of the sites (e.g., urban vs. rural; higher/lower levels of leader support; student-teacher ratio) that might result in different ways in which sites successfully implemented TF-CBT. Each site (school or village) was considered a case. Both qualitative and quantitative data were collected from counselors (n=36) and leaders (n=12) to understand barriers and facilitators to TF-CBT implementation and IPPs that are unique to each sector (Education vs. Health), overlapping across sectors, and those that may be related to site characteristics (e.g., rural location; small school) (Martin et al., 2019). We then used these findings to inform implementation facilitation for subsequent sites (Sequences 2-7). Kenyan staff used the term "coaching" to describe facilitation, as they determined the word "coaching" would be more easily understood by teachers

and CHVs at implementing sites. Going forward, the terms "coaching" and "facilitation" are used interchangeably in this manuscript.

Description of Implementation Facilitation/Coaching in Kenya

Implementation coaching in this study was designed based on three main principles to increase its acceptability, feasibility and impact in a low resource Kenyan context. First, we used a community-based, collaborative approach to develop and provide implementation coaching (Hurlburt et al., 2014; Saldana & Chamberlain, 2012), given its substantial promise for local ownership and fit with the cultural context. This approach offers a potentially sustainable avenue in low resource settings where budgets are severely constrained and monetary incentives are low; it allows for shared oversight and opportunities for alternate incentives such as leadership or career advancement. As such, external facilitation/coaching was delivered by BASIC collaborative teams (**BCTs**), comprised of Ace Africa staff and selected lay counselor teachers/CHVs from high performing Sequence 1 sites. Second, all coaches in this study were Kenyans belonging to the target communities. In U.S. studies, facilitation/coaching has most frequently been provided by external researchers, and facilitation models have recently been shifting to build capacity among staff from the local inner context so that facilitation practices sustain over time (Ritchie, Parker, & Kirchner, 2021). Given the ongoing shortage of resources in LMICs, building local capacity for any new implementation strategy is critical to its scale up and sustainment. Therefore, in BASIC, coaching was fully led by Kenyan staff to support TF-CBT implementation at new sites, with the U.S.-based research team only providing consultation during the process. This allowed our Kenyan partners to take ownership over the coaching strategy and tailor it to best fit their context. Finally, the components of coaching were designed keeping the principle of "minimum intervention

needed to produce change" (MINC) in mind, which is "*the minimal or lowest level of intervention intensity, expertise, and resources needed to achieve a significant improvement in a specified outcome for a particular target population*" (Glasgow et al., 2014). Key features of MINC interventions include low intensity, low cost, fewer resources (e.g., least trained staff that can effectively implement the intervention), use of a minimum number of empirically-based components, and low complexity. While MINC interventions typically refer to clinical interventions, these principles can also be applied to implementation strategies such as coaching. This is particularly important when considering resource-constrained LMIC settings, where complex, high intensity coaching strategies that have been implemented in the U.S. are unlikely to be feasible or sustainable.

After Sequence 1 sites completed TF-CBT implementation, a 3-day BASIC Collaborative Team (BCT) meeting was held with BASIC counselors, leaders and stakeholders, with the goal of collaboratively designing implementation coaching plans for subsequent sites. The Ace Africa team presented results from Sequence 1 sites, including identified barriers and IPPs from the case study analyses. Members split into Education and Health teams to discuss identified IPPs, and generated ideas for strategies to address actionable IPPs that would be practical in their setting. By the end of the meeting, we had a menu of strategies linked to each implementation barrier by sector. BCTs could use these menus during coaching to help sites in Sequences 2-7 select and tailor strategies for their own implementation planning.

Coaches initiated meetings with each site two months prior to their planned start date for *Pamoja Tunaweza* implementation. Implementation support planning involved meeting with a) newly trained counselors (teachers and CHVs) delivering *Pamoja Tunaweza* at each site, and b) site leaders, i.e., Head Teachers & Deputy Head Teachers in schools and Community Health

Extension Workers (**CHEWs**) in communities. Coaching teams met with sites up to six times over the course of *Pamoja Tunaweza* implementation: 2-times prior to implementation, 2-3 times during implementation, and 1-2 times at the start of the sustainment phase (6 total coaching meetings; **Figure 6**). Each coaching meeting was 1-2 hours in duration. During coaching meetings, counselors and site leaders completed detailed workplans to select and tailor strategies to address context-specific barriers and facilitators across the following major domains: community and leader sensitization, workload adjustment, resource provision, leadership engagement, child and guardian attendance, community outreach, attitudes and communication about *Pamoja Tunaweza*, rewards and incentives, and Ministry-level engagement. **Table 2** outlines examples of selected strategies by Sequence 2-4 sites across these domains. In addition to in-person meetings, coaches regularly used phone calls and WhatsApp messages for communication with counselors and leaders at each site.

Table 2

Major Components of Coaching During Preparation and Implementation Phases

Target Goal	Examples of Strategies
1. **Sensitization**	Conduct sensitization meetings with leaders and chosen teacher & CHV counselors; Provide overview of Pamoja Tunaweza (**PT**), review support provided by Ace Africa, review training and PT delivery details, review incentives, share experiences of child improvement and passion for PT, review rationale and format for coaching.
2. Plan for **workload adjustment** for PT counselors to attend PT training, prepare for PT delivery, and implement PT groups at their site	CHEWs exempt CHVs from other responsibilities or reporting during the 6-day training; Head Teachers allow teachers to adjust their teaching time or other teaching responsibilities to participate in PT activities; Leaders and counselors collaboratively decide when to hold groups; Leaders reschedule school meetings to not interfere with PT activities.

3.	Develop a plan for **resource provision**	Head Teacher provides materials for PT delivery (chalk, duster, paper/books, pens, board); Head Teacher provides space for delivery (classrooms, desks).
4.	**Engage leaders** early and facilitate increase in **leaders' knowledge** about PT	CHEW attends part of the PT training; Teachers meet with their Head Teacher after the training to inform them about PT (e.g., teachers provide a verbal or written summary of PT).
5.	Support **child and guardian attendance** and participation in PT	CHVs request class teachers to release children on time for groups; CHVs provide reminders to children and guardians to attend groups.
6.	Leaders and counselors conduct **community outreach** to increase community enthusiasm and engagement in PT	Head Teacher makes an announcement of support for PT to families (e.g., at an assembly or parents' meetings); CHEW informs chief, village elder, county administrator and other community leaders about PT.
7.	Encourage **persuasive and supportive communication by leader** to convey the organization's commitment to delivering PT	Head Teacher informs other teachers at a staff meeting about launch of PT delivery at their school and states their support for the program.
8.	**Engage Ministries of Education and Health** to keep them updated, enthusiastic and supportive of PT	Set up a tiered reporting plan for counselors to report to leaders, and leaders to report to the Ministry on PT progress.
9.	Provide **rewards/incentives** to motivate and encourage counselors to deliver PT	Head Teacher provides recognition for the efforts of teacher counselors in a public forum (e.g., assembly, closing day, staff meetings); CHEW requests village elder to talk positively about PT in a public forum; leaders offer one-on-one praise to their counselors.

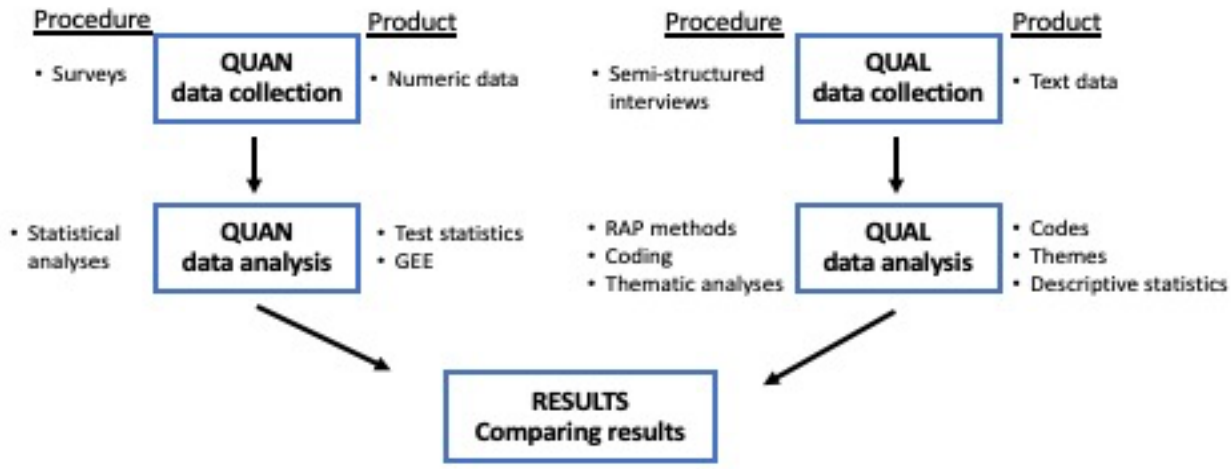
Current Study: Mixed Method Design Elements

The present study uses a mixed methods quasi-experimental design to understand the impact and perceived value of implementation coaching. The importance of mixed methods has increasingly been recognized in implementation research (Aarons, Fettes, Sommerfeld, &

Palinkas, 2012; Palinkas, Aarons, et al., 2011). Mixed methods can be used to understand facilitators and barriers to implementation, outcomes and processes of implementation, and to test novel implementation strategies (Palinkas, Aarons, et al., 2011; Palinkas, Horwitz, Chamberlain, Hurlburt, & Landsverk, 2011b; Waitzkin, Schillaci, & Willging, 2008). In this study, quantitative and qualitative data were collected simultaneously and were given equal weight for the purpose of understanding and evaluating implementation coaching (QUAN + QUAL; Palinkas, Aarons, et al., 2011). The mixed methods approach in this study served two distinct functions: 1) *complementarity* to answer related questions, i.e., using quantitative data to evaluate outcomes and qualitative data to evaluate process; and 2) *expansion*, i.e., using qualitative data to explain quantitative findings (Bishop, 2015; Palinkas, Aarons, et al., 2011). **Figure 5** presents a visual model of the concurrent mixed methods design of this study.

Figure 5

Concurrent mixed methods design visual model



Quantitative data for this study came from Sequences 1-4 of the parent grant. Sequence 1 included 10 site clusters. These sites did not receive coaching, and were therefore conceptualized to be in the "no coaching" condition for the purpose of the present study. Sequences 2-4 each consisted of 5 site clusters (15 total); these sites received coaching and were considered to be in the "coaching" condition for the present study. All sites were randomly assigned to one of seven sequences of the SW-CRT in the parent grant. With the exception of the coaching intervention, all other study procedures including participant selection, TF-CBT delivery, training and clinical support via supervision remained the same across sequences and sites.

Qualitative data for this study were collected using a rapid assessment process (**RAP**) (Neal, Neal, VanDyke, & Kornbluh, 2015; QualRIS, 2019; Tessier, 2012; Vindrola-Padros & Vindrola-Padros, 2018). Based on previous applications and benefits of RAP methods in implementation science, we opted to use a rapid approach for the following reasons: 1) time reduction due to the specific timeframe for data collection and analyses (<1 year), 2) decreased cost of research, 3) to maximize efficiency and feasibility of data collection and analyses (due to limited resources in Kenya), 4) use of specific, targeted questions for the study's research aims, 5) suitability for a mixed methods study, and 6) being able to provide our partners at Ace Africa with rapid feedback to inform coaching in real-time and improve future iterations of the coaching intervention (Vindrola-Padros & Johnson, 2020). The specific RAP methods applied during instrument development, data collection and analyses are outlined in each of the sections below.

Current Study Participants

Quantitative Aims 1-3: Participants were 150 lay counselors; 30 teachers and 30 CHVs from Sequence 1 (n=60 in the "no coaching" condition), and 45 teachers and 45 CHVs from

Sequences 2-4 (n=90 in the "coaching" condition). Ace Africa worked with site leaders (Head Teachers and CHEWs) to identify teachers and CHVs who would be appropriate for delivering TF-CBT. Each site leader nominated three individuals who worked well with children, may have had some counseling experience (but not required), had time to deliver PT each week, and who had no immediate plans for leaving their school/community (e.g., ideally in the same school or village for two years). Interviewers met with nominated teachers and CHVs to describe the parent study aims and obtain written informed consent.

Qualitative Aim 4: Participants were 32 lay counselors (16 teachers and 16 CHVs) from Sequences 2 and 3 who had received coaching. Counselors were only recruited from sites in Sequences 2 and 3 as those were the sites that had completed all coaching meetings at the time of data collection. Sample sizes for this aim were estimated based on recommendations from previous qualitative research to reach thematic saturation (Guest, Bunce, & Johnson, 2006; Palinkas, 2014). We followed a mixed purposive and probability sampling strategy that involved both random sampling and maximum variation sampling to ensure representativeness and diversity of counselors (Palinkas et al., 2015; Teddlie & Yu, 2019). We recruited 1-2 counselors from each of the 20 sites in Sequences 2 and 3. This ensured that we sampled counselors from education and health (capturing maximum variation in sector), urban and rural areas (capturing maximum variation in setting), and small and large schools/communities (capturing maximum variation in site size). This sampling strategy was utilized to identify important shared patterns that emerge across heterogenous cases (Palinkas et al., 2015). Within each site, we randomly selected the counselors that were invited to participate in the qualitative interview. If a counselor was unavailable to participate, an alternate counselor was recruited from that site. We relied on random sampling of counselors within each site to further reduce systematic biases during recruitment.

Interviewers obtained verbal informed consent from counselors to participate in the qualitative interviews. **Table 3** summarizes the participants and sample size for the current study.

Table 3
Participants for Current Study

Category	Sequence 1 (No Coaching)	Sequences 2-4 (Coaching)	Total N
Aims 1-3 [Quantitative]			
Site Clusters	10	15	25
Counselors	60	90	150
Aim 4 [Qualitative]			
Counselors[a]		32	32

[a] *Recruited from Sequences 2 and 3 that had completed coaching*

Data Collection

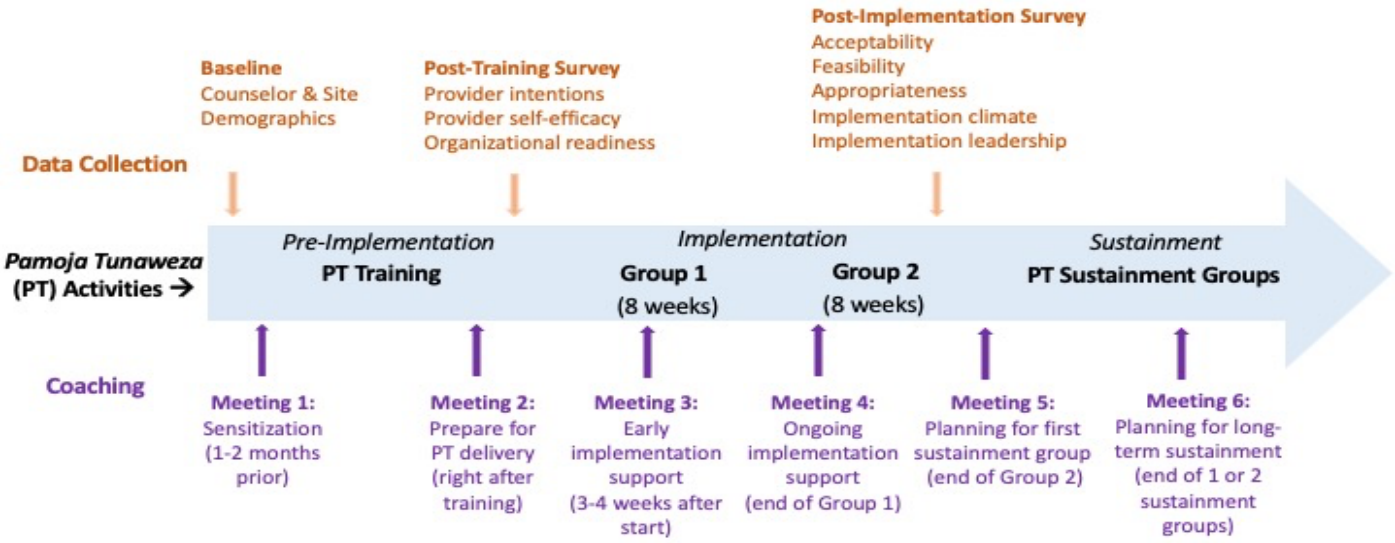
The data for this study were collected via in-person interviews conducted by Ace Africa staff. All interviewers in this study had at least a bachelor's degree and prior experience with quantitative and qualitative data collection. The lead author (PM) provided a 1-week in-person training prior to each data collection time point focused on question-by-question analysis of cultural appropriateness and translation quality to Kiswahili, practicing interviews, and finalizing data collection protocols. Following training, interviewers practiced with feedback until certified by their coordinator, who had extensive experience training and supervising interviewers. Interviewers periodically shadowed each other, were observed by the coordinator, and maintained weekly communication with the U.S. team.

Quantitative data for the present study (Aims 1-3) came from two time points. Counselors completed Qualtrics surveys administered by Ace Africa interviewers: 1) at the end of the TF-

CBT clinical training prior to starting delivery of *Pamoja Tunaweza* groups (referred to as the "post-training" time point), and 2) at the end of the implementation period after having delivered two sequential *Pamoja Tunaweza* groups at their sites (referred to as the "post-implementation" time point). Quantitative data for Sequences 1-4 were collected between July 2018 – April 2021. Teacher counselor surveys were administered in English and CHV counselor surveys were administered in Kiswahili to accommodate language preferences. Counselors received an incentive of 500 KSh, approximately $5, for completing a survey at each time point. **Figure 6** summarizes the timeline of *Pamoja Tunaweza* activities, quantitative data collection and coaching for Sequences 2-4[1].

Figure 6

Data collection timeline for quantitative surveys



[1] Sequence 2 counselors participated in 6 coaching meetings. Based on feedback from coaching teams, meetings 3 and 4 were merged for Sequences 3 and beyond.

Qualitative data for Aim 4 were collected via in-person semi-structured interviews conducted between December 2020 – January 2021. Interviewers received a 1-week training in research ethics, qualitative interviewing methods, and qualitative coding by the lead author (PM). Training was provided using Skype due to COVID-related travel restrictions. The training involved didactic and experiential learning via role plays with feedback, emphasizing open-ended, nonleading questions and probes to reduce interviewer influence and bias. Interviewers first conducted all teacher interviews in English. Interviewers received an additional day of training focused on interview adaptations for the health sector and translation to Kiswahili right before starting CHV interviews. During the trainings, interviewers provided in-depth feedback on both English and Kiswahili versions of the interview to ensure use of the most appropriate language and translations for the target population. To minimize recall bias, interviewers showed participants copies of their completed coaching workplans at the start and referenced the workplans throughout the interview. Interviewers were also trained to help participants stay focused on implementation coaching activities, rather than provide information about PT groups or clinical supervision.

Interviewers worked in pairs, where one interviewer asked questions and the second took detailed notes of participant's responses on a standard interviewing form. The note-taker could interject when they identified a problem in the interview (e.g., a leading question or insufficient probing). Notes were reviewed and consolidated to ensure consensus. Interviews were approximately 1.5-2 hours in duration and were audio-recorded. During data collection, the lead author (PM) and a Kiswahili-speaking coder (CS) reviewed audio recordings and notes immediately post-interview to ensure consistency and provide daily feedback for interviewers and notetakers to improve the interviewing process. Counselors received an incentive of 500 KSh,

approximately $5, for interview participation. All procedures were approved by the Institutional Review Boards at Duke University and the Kenya Medical Research Institute.

Data Storage and Security

Box is a secure, web-based software platform designed to support data capture for research studies. Box was designed with an emphasis on data security and meets HIPAA requirements for data collection and storage. Additionally, participants' identities were masked using numeric codes, which were stored in a secure database separate from study data. Only study staff members had access to the key linking a participant's study code number to their name and contact information.

Measures

Measurement Approach. The majority of instruments that have been used to measure implementation constructs have been developed for use in HIC, and are often based on assumptions that do not fit LMIC contexts. For example, many measures assume the presence of an established health care system that includes mental health services, whereas mental health services are rarely integrated as part of a general health system in LMIC (Haroz et al., 2019; Kane et al., 2018). Recently, efforts to develop and test pragmatic, relevant and feasible implementation science measures in LMIC have been prioritized (Haroz et al., 2019). In this study, we used three approaches to measurement selection: 1) When available, we assessed implementation constructs using existing measures developed for use in low-resource LMIC contexts (Haroz et al., 2019) (relevant for constructs like appropriateness). 2) When existing measures in LMIC were not available, we used standardized measures developed in the U.S. to assess implementation constructs (relevant for constructs like acceptability (Weiner et al., 2017), feasibility (Weiner et

al., 2017), organizational readiness (Shea, Jacobs, Esserman, Bruce, & Weiner, 2014), implementation climate (Jacobs et al., 2014), and implementation leadership (Aarons, Ehrhart, & Farahnak, 2014)). Given differences in our context, we undertook a rigorous adaptation process that has previously been used to select and adapt U.S.-based measures to LMIC settings (Haroz et al., 2019). During this process, the U.S. team and Ace Africa staff reviewed each of the standardized measures and all of their items along with their construct definitions (Proctor et al., 2011). Survey questions were edited to best fit the language used by the community, while still retaining core information about the construct. Items were translated into Kiswahili by a bilingual supervisor. Another Ace Africa team member who had not seen the original English items back-translated the measure. In some cases, the English words in distinct items were indistinguishable in Kiswahili (i.e., one Kiswahili word encapsulated both English terms), in which case we retained the item that would be most relevant and easily understood by the community in Kiswahili. These practices were undertaken to ensure cultural appropriateness and construct validity of adapted standardized measures. 3) Finally, for constructs where existing LMIC measures were not available or the items on standardized U.S. measures were not relevant to our LMIC context, we followed measurement construction guidelines from the Theoretical Domains Framework (**TDF**; relevant for constructs like self-efficacy and behavioral intentions, (Atkins et al., 2017; Huijg, Gebhardt, Crone, et al., 2014; Huijg, Gebhardt, Dusseldorp, et al., 2014). Appendix A includes all the quantitative measures used in this study.

Counselor demographics. Counselor demographics and background information was collected via questionnaires at baseline prior to the launch of *Pamoja Tunaweza* at each site. Counselors provided information on their gender, age, education level, previous training and experience providing psychosocial counseling, years providing part-time or full-time psychosocial

counseling, experience working with children and parents/guardians, years in current profession and current school/village, and current role.

Acceptability. We used the U.S. standardized 4-item Acceptability of Intervention (Weiner et al., 2017) to measure acceptability (e.g., *Pamoja Tunaweza met my approval*, *I liked Pamoja Tunaweza*). Weiner and colleagues' (2017) reported acceptable internal consistency ($\alpha = 0.85$) and test-retest reliability ($r = 0.80$) for this measure. Internal consistency in the current study was acceptable for scales with less than 10 items ($\alpha = 0.62$; Cortina, 1993). Mean inter-item correlation was 0.29 (optimal range 0.2-0.5; Briggs & Cheek, 1986). For the items in this scale, we replaced "CBT" with "*Pamoja Tunaweza*" to refer to the program name used by study participants. All acceptability items were assessed on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Counselors completed this measure at the post-implementation time point.

Feasibility. We used the U.S. standardized 4-item Feasibility of Intervention measure (Weiner et al., 2017) to assess feasibility (e.g., *Pamoja Tunaweza seems implementable in this school*, *Pamoja Tunaweza seems doable in this school*). Weiner and colleagues' (2017) reported acceptable internal consistency ($\alpha = 0.89$) and test-retest reliability ($r = 0.88$) for this measure. Internal consistency in the current study was good ($\alpha = 0.81$). Mean inter-item correlation was 0.52. All feasibility items were assessed on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Counselors completed this measure at the post-implementation time point.

Appropriateness. For the Appropriateness measure, there were more perceived challenges for fit within a task-shifting context. Given the differences in provider types (professionals in HICs with experience delivering different types of mental health treatments vs. lay counselors in LMICs new to mental health treatment delivery of any treatment type), Weiner and colleagues' (2017) Intervention Appropriateness measure did not capture the broader need to assess the

appropriateness of the individuals' role or setting for delivering the treatment. Therefore, we adapted five items from the Johns Hopkins University (**JHU**) implementation measures that aligned with Proctor and colleagues' (2011) definition of appropriateness. The validity study of the consumer-level JHU measure found acceptable test-retest reliability (rho: 0.79) and support for criterion validity (Haroz et al., 2019). Minor changes were made to the wording of items to fit the local context. Three additional items were developed to measure appropriateness domains for which JHU items did not exist. Given challenges in creating new items, we used Huijg's Theoretical Domains Framework when possible to guide item creation (Huijg, Gebhardt, Crone, et al., 2014). In the resulting 8-item measure, four items assessed the perceived fit of delivering *Pamoja Tunaweza* with one's role (e.g., *I believe that teachers should be providing Pamoja Tunaweza*). The additional four items assessed the perceived fit of delivering *Pamoja Tunaweza* in the respective delivery setting (e.g., *Pamoja Tunaweza fits with my school's approach to helping orphaned children*). Internal consistency in the current study was good ($\alpha = 0.81$). Mean inter-item correlation was 0.35. All appropriateness items were assessed on a 5-point scale ranging from 1 (not at all) to 5 (extremely). Counselors completed this measure at the post-implementation time point.

Organizational readiness. This construct was measured using the U.S. standardized measure, Organizational Readiness for Implementing Change (**ORIC**), developed by Shea and colleagues (2014). Items on this measure captured the construct of organizational readiness across two domains: 1) change commitment, i.e., organizational members' shared resolve to implement a change (e.g., *People you work with are committed to implementing Pamoja Tunaweza*), and 2) change efficacy, i.e., organizational members' shared belief in their collective capability to implement a change (e.g., *People you work with feel confident that they can coordinate the tasks*

so that implementation of Pamoja Tunaweza goes smoothly) (Shea et al., 2014). Shea and colleagues (2014) reported high internal consistency for the Change Commitment Scale ($\alpha = 0.91$) and the Change Efficacy scale ($\alpha = 0.89$). They also reported acceptable reliability of organizational-level means for the Change Commitment Scale (ICC = 0.72) and the Change Efficacy scale (ICC = 0.51). Following the psychometric research reported by Shea et al. (2014), two of the 12 items related to the Change Efficacy scale were removed because participants interpreted them to be associated with motivation, a concept related to the Change Commitment scale. Therefore, the 10-item version of the ORIC became the revised recommended English version that was adapted and translated for the present study. Minor edits were made to fit the language to the local context (e.g., replacing "this change" with "*Pamoja Tunaweza*"). Internal consistency in the current study was high ($\alpha = 0.94$). Mean inter-item correlation was 0.61. All organizational readiness items were assessed on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Counselors completed this measure at the post-training time point.

Implementation climate. To measure implementation climate, we used the U.S. standardized 12-item Implementation Climate Scale (**ICS**) by Jacobs, Weiner and Bunger (2014), which captured three dimensions of implementation climate (i.e., the innovation is expected, supported and rewarded) (Klein & Sorra, 1996). Fernandez and colleagues (2018) reported acceptable internal consistency ($\alpha = 0.72$), and acceptable reliability of organizational-level means (ICC = 0.22). We made minor edits to the items to improve fit with our implementation context (e.g., replacing the words "clients" with "children," "clinicians" with "teachers/CHVs," and "agency" with "school"). These items included individual-referenced items (e.g., *I am expected to use Pamoja Tunaweza with children at my school*) as well as group-referenced items (e.g., *Teacher counselors are expected to use Pamoja Tunaweza with children in their school*). Given the

differences in organizational structure and leadership between the two sectors, we also asked participants to report on which individuals they were referring to when they answered these questions. Internal consistency in the current study was good (α = 0.85). Mean inter-item correlation was 0.38. All implementation climate items were assessed on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Counselors completed this measure at the post-implementation time point.

Implementation leadership. In order to measure implementation leadership, we used the U.S. standardized 12-item Implementation Leadership Scale (**ILS**) by Aarons, Ehrhart and Farahnak (2014). The ILS includes four subscales to capture multiple domains of implementation leadership: proactive leadership (e.g., *[Leader] has developed a plan to facilitate implementation of Pamoja Tunaweza*), knowledgeable leadership (e.g., *[Leader] is knowledgeable about Pamoja Tunaweza*), supportive leadership (e.g., *[Leader] supports teacher counselor efforts to learn more about Pamoja Tunaweza*), and perseverant leadership (e.g., *[Leader] perseveres through the ups and downs of implementing Pamoja Tunaweza*). Aarons and colleagues (2014) reported overall high internal consistency (α = 0.98), and acceptable reliability of organizational-level means (ICC = 0.29). Lay counselors completed an ILS measure for their primary leader (e.g., Head Teacher, CHEW) who played a leadership role in supporting the delivery of *Pamoja Tunaweza* at their site. They were instructed specifically to not think about Ace Africa staff when answering these questions, so as to best report on leadership within their organization. Internal consistency in the current study was high (α = 0.93). Mean inter-item correlation was 0.52. All implementation leadership items were assessed on a 5-point scale ranging from 0 (not at all) to 4 (very great extent). Counselors completed this measure at the post-implementation time point.

Intentions & Self-Efficacy. For these constructs, existing standardized measures were not as relevant to our LMIC context. Therefore, we followed measurement construction guidelines from the Theoretical Domains Framework (Huijg, Gebhardt, Crone, et al., 2014; Huijg, Gebhardt, Dusseldorp, et al., 2014). Items on lay counselors' intentions to adopt practices related to *Pamoja Tunaweza* implementation were adapted from the Evidence-Based Treatment Intentions Scale (Williams, 2015), the TDF Intentions domain items (Huijg, Gebhardt, Dusseldorp, et al., 2014) and the JHU Implementation Science scale (Haroz et al., 2019). This resulted in a 4-item intentions measure that asked about counselors' intentions related to specific *Pamoja Tunaweza* activities within a given timeframe (e.g., *I intend to provide Pamoja Tunaweza to orphaned children in my school in the next month*). Internal consistency in the current study was acceptable for scales with less than 10 items ($\alpha = 0.61$). Mean inter-item correlation was 0.28. All intention items were assessed on a 4-point scale ranging from 1 (not at all) to 4 (a lot). A similar process was followed for questions related to lay counselors' self-efficacy and perceived control related to delivering *Pamoja Tunaweza*. Six items for this measure were adapted from the TDF Beliefs about capabilities domain (Huijg, Gebhardt, Dusseldorp, et al., 2014), and assessed counselors' confidence and sense of control over conducting various *Pamoja Tunaweza* activities within a given timeframe (e.g., *I am confident that I could deliver two consecutive groups of Pamoja Tunaweza (one this term, one next term) in my school*). Internal consistency in the current study was good ($\alpha = 0.77$). Mean inter-item correlation was 0.39. Items on lay counselors' self-efficacy were assessed on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Counselors completed these measures at the post-training time point.

Acceptability, ***Feasibility & Utility of Coaching***. Qualitative data on the acceptability, feasibility and utility of coaching were collected via semi-structured interviews. The interview was

collaboratively developed by the lead author (PM) and Ace Africa staff. The interview included open-ended questions related to participants' experience receiving coaching, what participants liked and disliked about coaching, factors impacting the feasibility of participating in coaching, barriers and facilitators to enacting implementation strategies selected during coaching, and recommendations to improve coaching in the future. In addition, we made two modifications to the interview guide based on RAP methods: 1) we included rating questions, where participants also rated acceptability, feasibility, and utility of various coaching activities on a scale of 1-10; and 2) we included *a priori* codes for potential participant responses to the open-ended questions. These codes were developed by Ace Africa supervisors, who were closely involved in coaching. Interviewers were trained to ask open-ended questions without reading any of the codes out aloud to the participant; when the interview was complete, each interviewer-note-taker pair discussed and selected applicable codes based on the participant's response. We adopted this strategy of partial coding of data during data collection in order to reduce coding time during data analyses. **Table 4** summarizes qualitative interview questions.

Table 4

Questions from Coaching Qualitative Interview

Construct/Category	Question
General	▪ Tell me about your experience of participating in coaching to deliver Pamoja Tunaweza.
Acceptability	▪ What did you like about coaching? ▪ What did you not like about coaching? ▪ What would make coaching *more* acceptable or satisfactory to you?
Feasibility	▪ What made it possible or feasible for you to participate in coaching activities ▪ What made it challenging or less possible for you to participate in coaching activities?

	▪ What would make it *more* possible or feasible for you to attend coaching meetings and participate in coaching activities?
Utility	▪ On a scale of 1-10, with 1 being not at all useful and 10 being extremely useful, please rate how useful coaching was in helping you deliver a new program like Pamoja Tunaweza at your site.
Barriers/facilitators to implementing strategies selected during coaching	▪ What helped you to carry out the solutions you had planned? ▪ What got in the way of carrying out all the solutions you had planned?
Future recommendations	▪ How can the coaching program be improved in the future?

Note. "Solutions" refers to discrete implementation strategies selected during coaching

Data Analysis

Quantitative Analyses. For quantitative aims, we first used descriptive statistics to compare counselors from Sequences 1-4 based on pre-randomization demographic characteristics. For our primary analyses, we examined the relation between coaching condition and our study outcomes with Generalized Linear Models (GLM) that used generalized estimating equations (**GEE**) with an exchangeable correlation structure, accounting for the nesting of counselors within sites (Hubbard et al., 2016). GEE models account for clustering by using residuals to iteratively estimate a correlation matrix for within cluster observations, which are then used to produce updated estimates of the regression coefficients that account for clustering (McNeish, Stapleton, & Silverman, 2017). First, we conducted GEE models to examine the effect of coaching on early implementation outcomes (*acceptability*, *feasibility*, and *appropriateness*) at the post-implementation time point (i.e., after counselors had delivered two sequential *Pamoja Tunaweza* groups at their sites). Next, we conducted GEE models to examine the effect of coaching on determinants at both the provider level (*self-efficacy* and *intentions*) and organizational level

(*organizational readiness*, *implementation climate*, and *implementation leadership*). We also replicated the analyses using regression models to compare the results with and without accounting for nesting. For the exploratory analyses, we looked at: 1) differences in counselor-reported implementation outcomes and determinants between conditions by counselor type (teachers vs. CHVs), 2) differences in outcomes using measure sub-scales (e.g., the ILS has four subscales comprising different forms of implementation leadership), and 3) implementation outcomes at the more immediate, post-training time point prior to starting PT delivery (vs. the post-implementation time point). Given the high number of tests and multiple outcomes, we used the Benjamini-Hochberg procedure to control for the false discovery rate (Benjamini & Hochberg, 1995). For these corrections, we set a conservative false discovery rate of 5% and used adjusted p-values to interpret our results. All analyses were conducted using SPSS 27.0.

Qualitative Analyses. Thematic analysis was conducted by initially taking a deductive approach that considered pre-identified multilevel factors that might impact acceptability, feasibility and perceived utility of coaching. These included factors related to (1) Individual Characteristics (coach and PT counselor characteristics), (2) Coach Behaviors and Role, (3) Counselor Benefits, (4) Counselor Conflicts, (5) Leadership, (6) Staff Support, (7) Relationships, (8) Coaching Characteristics, and (9) Miscellaneous Factors.

First, four senior authors with prior qualitative research experience (PM, SK, CS, JN), two of whom were Kiswahili-speaking Kenyans researchers, created a codebook based upon a close reading of the first four interviews (two English, two Kiswahili interviews). Both *a priori* codes (including codes already identified by Ace Africa staff) and *emergent theme* codes were compared, refined, and organized into thematic categories. As per RAP methods, data reduction involved

coding text that specifically answered the research questions, rather than coding all data segments (Hamilton & Finley, 2020). For example, participant responses that were clearly unrelated to coaching were not coded during analyses. The codebook domains thus lined up with the interview guide. The codebook was then trialed independently through multiple iterations in which all team members coded additional transcripts and met for discussion until a stable set of codes was reached. The updated codebook was applied to 16 Kiswahili (SK, CS) and 16 English (PM, JN, SS, NT, RA, CJ) interviews.

English interviews had been transcribed by RAs using a standard transcription protocol; English coders used both the transcripts and audio files to code English interviews. Due to time and resource constraints, Kiswahili interviews were not transcribed; instead, Kiswahili-speaking coders used detailed interview notes by the note-taker as a reference and coded directly from the Kiswahili audio files. While English transcripts were available for coding, we emphasized use of audio files for coding both English and Kiswahili interviews to capture nonverbal information that would improve the accuracy and richness of data interpretation, and reduce interpretive bias (Vindrola-Padros & Johnson, 2020). All interviews were independently coded by two coders and discrepancies were resolved through consensus discussions (DeSantis & Ugarriza, 2000; Hill et al., 2005; Hill, Thompson, & Williams, 1997). If consensus was not reached, a third coder was consulted. We relied heavily on our Kenyan coders (SK, CS) to help resolve discrepancies that arose during consensus meetings so that analytic decisions were made based on a deep understanding of Kenyan culture and language-related nuances. The lead author (PM) also participated in consensus discussions with Kiswahili-speaking coders to ensure consistency across languages.

We chose not to use coding or analytic software in this study to use pragmatic methods that can be replicated in LMIC at no additional cost. The analysis process was simple, and consisted of calculating frequencies and percentages of codes. Per qualitative methodology used in LMIC, this relative frequency was used as an indicator of prioritization, where more frequently mentioned items were considered to be relatively more important to counselors (e.g., Bolton, Michalopoulos, Ahmed, Murray, & Bass, 2013; Murray et al., 2006). Only codes mentioned by three or more participants were included in the final analyses. Coded data were also entered into an excel matrix and examined for patterns and cross-cutting themes (Averill, 2002), as well as thematic differences between teacher and CHV counselor groups. Quotes in Kiswahili were translated into English and marked with an asterisk (*). Overall, we utilized three main strategies to maximize the rigor and trustworthiness of our qualitative data throughout data collection, coding and analyses (QualRIS, 2019): 1) *member checking*, where interviewers recontacted participants by phone to verify parts of the data or its interpretation, 2) *triangulation*, where we used multiple sources of data in the form of transcripts, interview notes and audio files during analyses, and 3) *peer debriefing and support*, where the study team met regularly to share findings and methods to identify potential biases, and adopted a systematic, team-based approach with discussion and consensus on themes and preliminary conclusions.

Results

Demographics & Baseline Characteristics

Our sample included the 75 teachers and 75 CHVs who delivered *Pamoja Tunaweza*/TF-CBT in Sequences 1-4 of the BASIC trial (**Table 5**). Counselors in the "no coaching" or control condition (Sequence 1) were mostly female (70%), had completed secondary education (40%) or held a certificate (28.3%), and were on average 43.6 (SD = 8.6) years old. Counselors in the "coaching" condition (Sequences 2-4) were mostly female (64.4%), had completed secondary education (34.4%) or held a certificate (26.7%), and were on average 43.8 (SD = 10.7) years old. More than half (56.7% control, 57.8% coaching) reported receiving some prior psychosocial training; although, no counselors had prior experience with TF-CBT or other evidence-based interventions for child and adolescent mental health problems. More than half reported having some experience working with children/adolescents outside their current role (70% control, 78.9% coaching), and experience working with parents/guardians (71.7% control, 72.2% coaching). As outlined earlier, sites were randomly assigned to sequences of the SW-CRT, and there were no significant differences in baseline characteristics between counselors in different conditions.

Table 5
Demographics & Baseline Characteristics

Characteristic	**No Coaching Sequence 1 (*n*=60)** *No. (%)*	**Coaching Sequences 2-4 (*n*=90)** *No. (%)*
Sector (Counselor Type)		
Education (Teachers)	30 (50.0)	45 (50.0)
Health (CHVs)	30 (50.0)	45 (50.0)
Sex		
Male	18 (30.0)	32 (35.6)

Female	42 (70.0)	38 (64.4)
Highest level of education		
Primary education	7 (11.7)	11 (12.2)
Secondary education	24 (40.0)	31 (34.4)
Certificate	17 (28.3)	24 (26.7)
Diploma Certificate	4 (6.7)	18 (20.0)
Master's degree	8 (13.3)	5 (5.6)

	No Coaching Sequence 1 (*n*=60) ***No. (%)***	**Coaching Sequences 2-4 (*n*=90)** ***No. (%)***
Received prior training in psychosocial counseling		
No	26 (43.3)	38 (42.2)
Yes	34 (56.7)	52 (57.8)
Provided prior psychosocial counseling		
No	13 (21.7)	26 (28.9)
Yes	47 (78.3)	64 (71.1)
Experience working with children/adolescents		
No	18 (30.0)	19 (21.1)
Yes	42 (70.0)	71 (78.9)
Experience working with parents/guardians		
No	17 (28.3)	25 (27.8)
Yes	43 (71.7)	65 (72.2)
Current role (teachers only)		
Teacher	25 (41.7)	40 (44.4)
Senior Teacher	4 (6.7)	3 (3.3)
Deputy Head Teacher	1 (1.7)	2 (2.2)
	M (SD)	***M (SD)***
Age, yrs	43.63 (8.6)	43.82 (10.7)
Years in profession (as a teacher/CHV)	12.62 (8.9)	11.55 (8.0)
Years in current school/village	8.40 (6.7)	7.13 (5.7)
Years of part-time psychosocial counseling experience	6.87 (5.5)[a]	7.09 (7.6)[b]
Years of full-time psychosocial counseling experience	2.38 (5.1)[a]	1.08 (2.3)[b]

[a] $n = 47$, [b] $n = 64$

Quantitative Data

Descriptive Statistics

Table 6 provides descriptive statistics for variables for the study's primary and exploratory analyses by coaching condition and counselor type. All outcome measures were rated on a scale of 1 to 5, unless specified otherwise. For each of the study outcomes, we present the GLM model using GEE for the overall sample as well as models for different counselor types in each sector (teacher vs. CHV). Tables include adjusted *p*-values based on the Benjamini-Hochberg correction. Across all outcomes, estimates from the GLM and regression models were comparable, and therefore only GLM estimates are presented here.

Table 6

Descriptive Statistics of Study Outcomes by Coaching Condition, Time Point, and Sector

Outcome	**No Coaching (Sequence 1)**		**Coaching (Sequences 2-4)**	
	Teachers (*n*=30)	**CHVs (*n*=30)**	**Teachers (*n*=45)**	**CHVs (*n*=45)**
	M (SD)	*M (SD)*	*M (SD)*	*M (SD)*
Post-training				
Acceptability	4.44 (0.43)	4.75 (0.31)	4.71 (0.34)	4.66 (0.33)
Feasibility	3.93 (0.39)	4.40 (0.46)	4.30 (0.44)	4.43 (0.45)
Appropriateness (total)	4.46 (0.45)	4.82 (0.28)	4.46 (0.44)	4.66 (0.35)
Appropriateness (provider fit)	4.59 (0.48)	4.80 (0.32)	4.48 (0.49)	4.68 (0.43)
Appropriateness (setting fit)	4.33 (0.58)	4.83 (0.32)	4.43 (0.48)	4.63 (0.43)
Behavioral Intentions[a]	3.83 (0.32)	3.94 (0.14)	3.84 (0.26)	3.84 (0.30)
Organizational readiness (total)	4.02 (0.58)	4.60 (0.48)	4.01 (0.62)	4.52 (0.39)
Change commitment	4.00 (0.61)	4.69 (0.52)	4.02 (0.63)	4.54 (0.38)
Change efficacy	4.05 (0.60)	4.52 (0.53)	3.99 (0.63)	4.49 (0.45)
Self-efficacy	4.21 (0.51)	4.53 (0.39)	4.16 (0.44)	4.29 (0.45)
Post-implementation				

Acceptability	4.67 (0.34)	4.77 (0.31)	4.62 (0.36)	4.61 (0.28)
Feasibility	4.35 (0.60)	4.67 (0.40)	4.36 (0.43)	4.31 (0.40)
Appropriateness (total)	4.34 (0.49)	4.85 (0.24)	4.50 (0.47)	4.64 (0.33)
Appropriateness (provider fit)	4.39 (0.58)	4.81 (0.32)	4.51 (0.59)	4.73 (0.38)
Appropriateness (setting fit)	4.29 (0.51)	4.90 (0.25)	4.49 (0.46)	4.54 (0.48)
Implementation climate (total)	4.32 (0.53)	4.62 (0.42)	4.36 (0.45)	4.41 (0.37)
Individual referenced items	4.34 (0.47)	4.66 (0.43)	4.35 (0.45)	4.44 (0.38)
Group referenced items	4.31 (0.62)	4.58 (0.43)	4.37 (0.49)	4.38 (0.42)
Implementation leadership (total)[a]	2.61 (0.72)	2.99 (0.89)	2.84 (0.72)	3.02 (0.54)
Proactive leadership[a]	2.51 (0.75)	2.82 (1.10)	2.78 (0.82)	3.07 (0.62)
Knowledgeable leadership[a]	2.34 (0.95)	2.68 (1.20)	2.66 (0.84)	2.64 (0.96)
Supportive leadership[a]	3.13 (0.71)	3.53 (0.60)	3.13 (0.79)	3.48 (0.54)
Perseverant leadership[a]	2.43 (0.98)	2.94 (1.07)	2.77 (0.86)	2.89 (0.67)

Note. All scales are 1 to 5 unless otherwise specified
[a] Scale range is 0 to 4

Acceptability of Pamoja Tunaweza

The average acceptability score for the clinical intervention, *Pamoja Tunaweza*, in the full sample at post-implementation was 4.65 (*SD* = 0.32, scale 1 to 5). The full sample here refers to all counselors across Sequence 1-4. **Figure 7** shows a boxplot graphically depicting mean acceptability scores by condition and counselor type (teacher vs. CHV). The results of the GEE suggested that coaching condition was not significantly related to acceptability of *Pamoja Tunaweza* among counselors, *B* = -0.103, *SE* = 0.05, *p* = 0.294 (**Table 7**). At post-implementation, mean acceptability score for teachers was 4.64 (*SD* = 0.34) and for CHVs was 4.67 (*SD* = 0.30). Among teachers, coaching condition was not significantly related to perceived acceptability of *Pamoja Tunaweza*, *B* = -0.043, *SE* = 0.09, *p* = 0.829. Compared to CHV counselors that did not receive coaching, mean acceptability scores were 0.161 units lower among CHVs that received

coaching; however, this relationship was not significant after applying the Benjamini-Hochberg correction, B = -0.161, SE = 0.07, p = 0.234 (**Table 7**).

Figure 7

Clustered Boxplot of Mean Acceptability Scores at Post-Implementation by Condition & Counselor Type

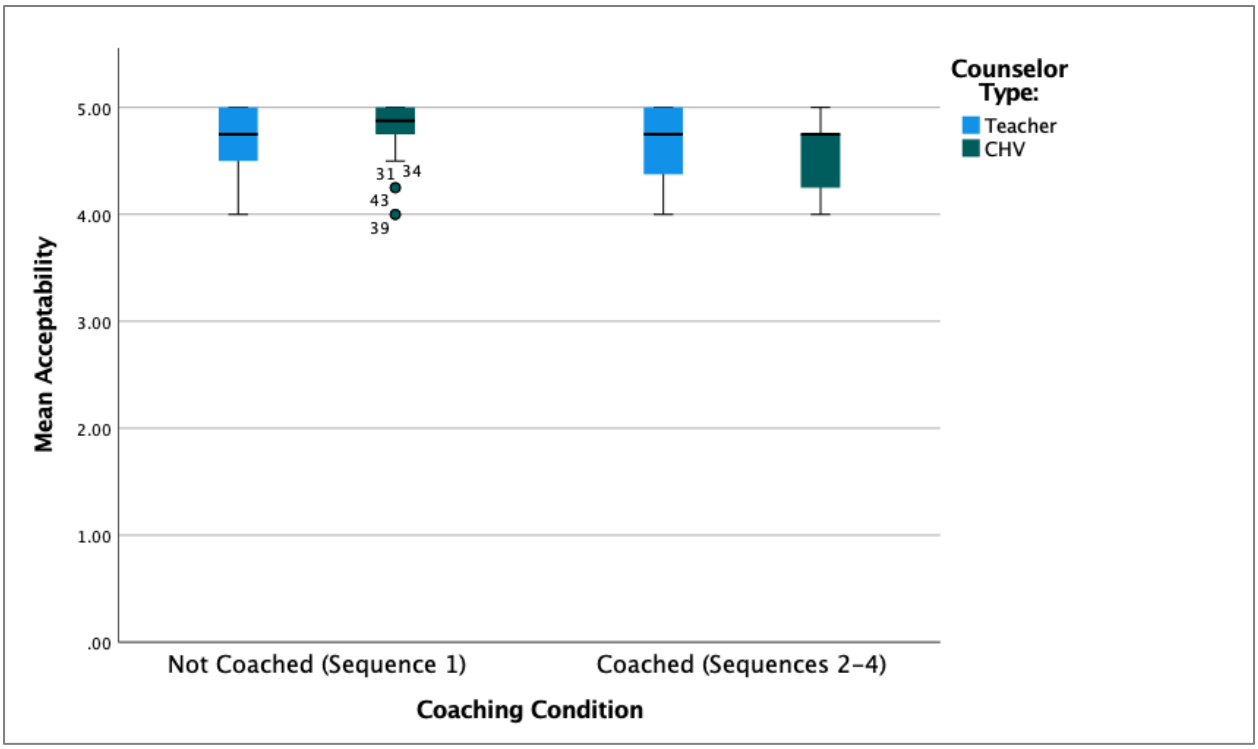


Table 7

Generalized Estimating Equations (GEE) Model Predicting Acceptability of Pamoja Tunaweza at Post-Implementation (n = 148 counselors; n = 25 site clusters)

	B	***SE***	***95% CI***	***p***
Full sample *(n = 148)*				
Intercept	4.717	0.04	[4.62, 4.81]	<.001
Condition	-0.103	0.05	[-0.20, 0.01]	0.294
Teachers *(n = 73)*				
Intercept	4.667	0.06	[4.54, 4.79]	<.001
Condition	-0.043	0.07	[-0.19, 0.10]	0.829
CHVs *(n = 75)*				
Intercept	4.767	0.07	[4.62, 4.91]	<.001
Condition	-0.161	0.07	[-0.31, -0.01]	0.234

Additional exploratory analyses that tested differences in mean acceptability scores at post-training indicated that acceptability was significantly higher by 0.269 units among teachers who received coaching, compared to teachers who did not receive coaching, $B = 0.269$, $SE = 0.08$, $p = 0.022$. Coaching condition was not significantly related to perceived acceptability of *Pamoja Tunaweza* among CHVs at post-training, $B = -0.094$, $SE = 0.06$, $p = 0.402$ (**Table 8**).

Table 8

Generalized Estimating Equations (GEE) Model Predicting Acceptability of Pamoja Tunaweza at Post-Training (n = 150 counselors; n = 25 site clusters)

	B	***SE***	***95% CI***	***p***
Full sample *(n = 150)*				
Intercept	4.596	0.04	[4.51, 4.68]	<.001
Condition	0.087	0.05	[-0.09, 0.18]	0.298
Teachers *(n = 75)*				
Intercept	4.442	0.07	[4.29, 4.58]	<.001
Condition	0.269	0.08	[0.11, 0.44]	0.022[a]
CHVs *(n = 75)*				
Intercept	4.750	0.04	[4.66, 4.84]	<.001
Condition	-0.094	0.06	[-0.22, -0.03]	0.402

[a] Significant at p<0.05 after Benjamini-Hochberg correction

Feasibility of Pamoja Tunaweza

The average feasibility score at post-implementation for the full sample was 4.40 ($SD = 0.46$, scale 1 to 5). **Figure 8** shows a boxplot graphically depicting mean feasibility scores by condition and counselor type (teacher vs. CHV). The GEE results indicated that coaching condition was not significantly related to perceived feasibility of *Pamoja Tunaweza* among counselors, $B = -0.174$, $SE = 0.09$, $p = 0.298$ (**Table 9**). At post-implementation, mean feasibility score for teachers was 4.35 ($SD = 0.50$) and for CHVs was 4.45 ($SD = 0.43$). Among teachers, coaching condition was not significantly related to perceived feasibility of *Pamoja Tunaweza*, $B = 0.009$, $SE = 0.12$,

p = 0.984. However, coaching condition significantly predicted perceived feasibility among CHVs, where mean feasibility scores were 0.356 units lower among CHVs that received coaching compared to CHVs that did not, B = -0.356, SE = 0.10, p = 0.022 (**Table 9**).

Figure 8

Clustered Boxplot of Mean Feasibility Scores at Post-Implementation by Condition & Counselor Type

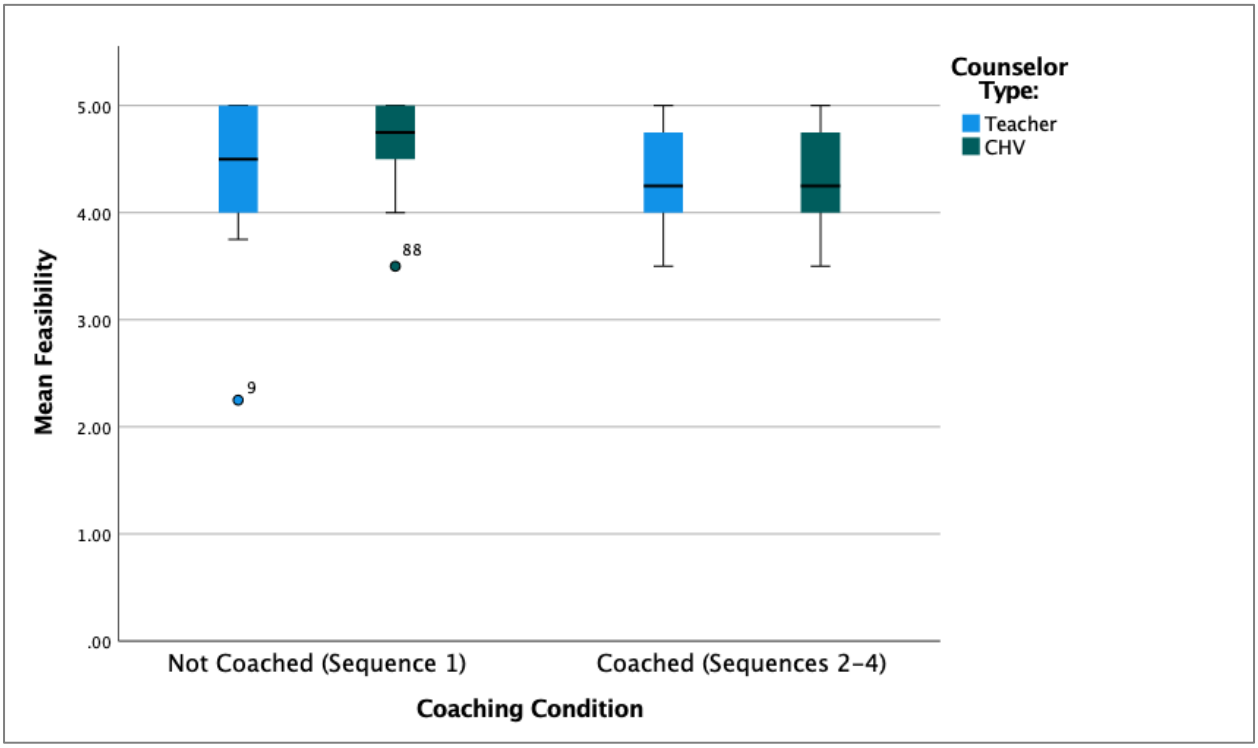


Table 9

Generalized Estimating Equations (GEE) Model Predicting Feasibility of Pamoja Tunaweza at Post-Implementation (n = 148 counselors; n = 25 site clusters)

	B	***SE***	***95% CI***	***p***
Full sample *(n = 148)*				
Intercept	4.508	0.08	[4.34, 4.66]	<.001
Condition	-0.174	0.09	[-0.3, 0.01]	0.298
Teachers *(n = 73)*				
Intercept	4.350	0.09	[4.16, 4.53]	<.001
Condition	0.009	0.12	[-0.23, 0.25]	0.984

CHVs *(n = 75)*				
Intercept	4.667	0.08	[4.49, 4.84]	<.001
Condition	-0.356	0.10	[-0.56, -0.15]	0.022[a]

[a] Significant at p<0.05 after Benjamini-Hochberg correction

Additional exploratory analyses that tested differences in mean feasibility scores at post-training indicated that feasibility was significantly higher by 0.367 units among teachers who received coaching compared to teachers who did not receive coaching, $B = 0.367$, $SE = 0.11$, $p = 0.022$. Coaching condition was not significantly related to perceived feasibility of *Pamoja Tunaweza* among CHVs at post-training, $B = 0.033$, $SE = 0.09$, $p = 0.919$ (**Table 10**).

Table 10

Generalized Estimating Equations (GEE) Model Predicting Feasibility of Pamoja Tunaweza at Post-Training (n = 150 counselors; n = 25 site clusters)

	B	***SE***	***95% CI***	***p***
Full sample *(n = 150)*				
Intercept	4.167	0.05	[4.06, 4.26]	<.001
Condition	0.200	0.07	[0.06, 0.34]	0.047[a]
Teachers *(n = 75)*				
Intercept	3.933	0.08	[3.76, 4.10]	<.001
Condition	0.367	0.11	[0.15, 0.58]	0.022[a]
CHVs *(n = 75)*				
Intercept	4.400	0.07	[4.27, 4.53]	<.001
Condition	0.033	0.09	[-0.16, -0.23]	0.919

[a] Significant at p<0.05 after Benjamini-Hochberg correction

Appropriateness of Pamoja Tunaweza

The average appropriateness score at post-implementation for the full sample was 4.58 ($SD = 0.43$, scale 1 to 5). **Figure 9** shows a boxplot graphically depicting mean appropriateness scores by condition and counselor type (teacher vs. CHV). GEE results suggested that coaching condition did not significantly predict perceived appropriateness of *Pamoja Tunaweza* among counselors, *B*

= -0.031, *SE* = 0.08, *p* = 0.914 (**Table 11**). At post-implementation, mean appropriateness score was 4.43 (*SD* = 0.48) for teachers and 4.72 (*SD* = 0.32) for CHVs. Among teachers, coaching condition was not significantly associated with perceived appropriateness of *Pamoja Tunaweza*, *B* = 0.153, *SE* = 0.14, *p* = 0.558. However, mean appropriateness scores were significantly lower by 0.218 units among CHVs that received coaching compared to CHVs that did not receive coaching, *B* = -0.218, *SE* = 0.07, *p* = 0.022 (**Table 11**).

Figure 9

Clustered Boxplot of Mean Appropriateness Scores at Post-Implementation by Condition & Counselor Type

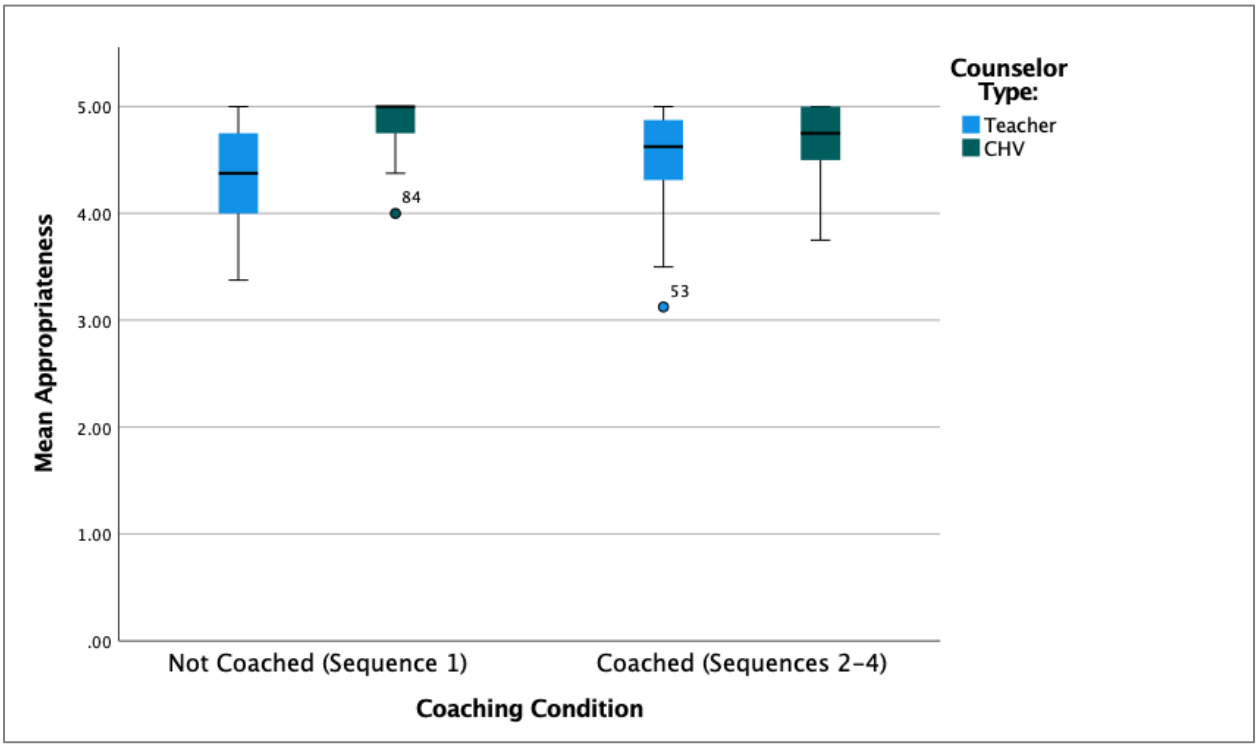


Table 11

Generalized Estimating Equations (GEE) Model Predicting Appropriateness of Pamoja Tunaweza at Post-Implementation (n = 148 counselors; n = 25 site clusters)

	B	***SE***	***95% CI***	***p***
Full sample *(n = 148)*				
Intercept	4.598	0.06	[4.48, 4.72]	<.001
Condition	-0.031	0.08	[-0.19, 0.13]	0.914
Teachers *(n = 73)*				
Intercept	4.342	0.11	[4.13, 4.55]	<.001
Condition	0.153	0.14	[-0.12, 0.42]	0.558
CHVs *(n = 75)*				
Intercept	4.854	0.08	[4.76, 4.95]	<.001
Condition	-0.218	0.07	[-0.35, -0.08]	0.022[a]

[a] Significant at p<0.05 after Benjamini-Hochberg correction

Additional exploratory analyses that tested differences in mean appropriateness scores by subscale at post-implementation indicated that coaching condition did not predict perceived fit of delivering *Pamoja Tunaweza* with one's role ("provider appropriateness") among teachers or CHVs (**Table 12**). On the other hand, CHVs who received coaching rated lower perceived fit for delivering *Pamoja Tunaweza* in their respective delivery setting ("setting appropriateness"), compared to CHVs who did not receive coaching, B = -0.357, SE = 0.11, p = 0.022 (**Table 12**). Coaching condition did not predict mean appropriateness scores for teachers or CHVs at post-training.

Table 12

Generalized Estimating Equations (GEE) Model Predicting Provider & Setting Appropriateness of Pamoja Tunaweza at Post-Implementation (n = 148 counselors; n = 25 site clusters)

	B	***SE***	***95% CI***	***p***
Provider Appropriateness				
Teachers *(n = 73)*				
Intercept	4.392	0.12	[4.16, 4.62]	<.001
Condition	0.110	0.16	[-0.20, 0.42]	0.750

CHVs *(n = 75)*				
Intercept	4.808	0.06	[4.69, 4.92]	<.001
Condition	-0.081	0.07	[-0.22, -0.06]	0.558

	B	***SE***	***95% CI***	***p***
Setting Appropriateness				
Teachers *(n = 73)*				
Intercept	4.292	0.11	[4.07, 4.51]	<.001
Condition	0.196	0.13	[-0.07, 0.46]	0.418
CHVs *(n = 75)*				
Intercept	4.900	0.05	[4.80, 4.99]	<.001
Condition	-0.357	0.11	[-0.56, -0.15]	0.022[a]

[a] Significant at p<0.05 after Benjamini-Hochberg correction

Behavioral Intentions to Implement Pamoja Tunaweza

The average counselor behavioral intentions score at post-training was 3.85 (*SD* = 0.27, scale 1 to 4). **Figure 10** shows a boxplot graphically depicting mean behavioral intentions scores by condition and counselor type (teacher vs. CHV). Results of the GEE with the full sample indicated that coaching condition was not significantly associated with counselors' intentions to implement *Pamoja Tunaweza*, *B* = -0.05, *SE* = 0.04, *p* = 0.518 (**Table 13**). Mean intentions score was 3.84 (*SD* = 0.29) for teachers and 3.88 (*SD* = 0.25) for CHVs. Among teachers, coaching condition was not significantly related to intentions to implement *Pamoja Tunaweza*, *B* = 0.006, *SE* = 0.06, *p* = 0.984. Compared to CHV counselors that did not receive coaching, mean intentions scores were 0.106 units lower among CHVs that received coaching; however, this relationship was not significant after applying the Benjamini-Hochberg correction, *B* = -0.106, *SE* = 0.04, *p* = 0.191 (**Table 13**).

Figure 10

Clustered Boxplot of Mean Behavioral Intentions Scores at Post-Training by Condition & Counselor Type

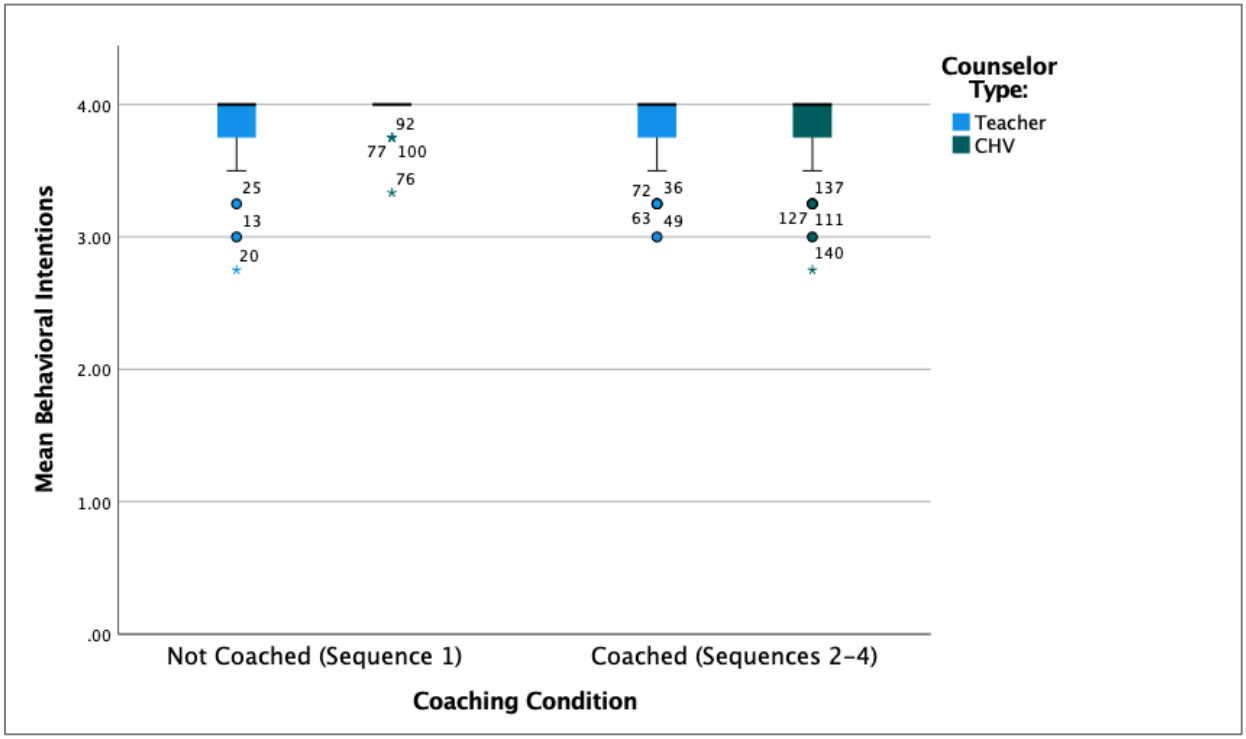


Table 13

Generalized Estimating Equations (GEE) Model Predicting Intentions to Implement Pamoja Tunaweza at Post-Training (n = 150 counselors; n = 25 site clusters)

	B	***SE***	***95% CI***	***p***
Full sample *(n = 150)*				
Intercept	3.889	0.03	[3.83, 3.94]	<.001
Condition	-0.050	0.04	[-0.13, 0.03]	0.518
Teachers *(n = 75)*				
Intercept	3.833	0.05	[3.72, 3.94]	<.001
Condition	0.006	0.06	[-0.12, 0.13]	0.984
CHVs *(n = 75)*				
Intercept	3.944	0.02	[3.88, 4.00]	<.001
Condition	-0.106	0.04	[-0.20, -0.01]	0.191

Note. Intentions Scale is 1 to 4

Self-Efficacy

The average counselor self-efficacy score at post-training was 4.28 (*SD* = 0.46, scale 1 to 5). **Figure 11** shows a boxplot graphically depicting mean self-efficacy scores by condition and counselor type (teacher vs. CHV). Results of the GEE with the full sample indicated that coaching condition was not significantly related to counselors' self-efficacy around implementing *Pamoja Tunaweza*, *B* = -0.139, *SE* = 0.07, *p* = 0.298 (**Table 14**). Mean self-efficacy score was 4.18 (*SD* = 0.46) for teachers and 4.39 (*SD* = 0.44) for CHVs. Among teachers, coaching condition was not significantly associated with their perceived self-efficacy around implementing *Pamoja Tunaweza*, *B* = -0.043, *SE* = 0.14, *p* = 0.919. However, coaching condition significantly predicted perceived self-efficacy among CHVs, where mean self-efficacy scores were 0.235 units lower among CHVs that received coaching compared to CHVs that did not, *B* = -0.235, *SE* = 0.07, *p* = 0.022 (**Table 14**).

Figure 11

Clustered Boxplot of Mean Self-Efficacy Scores at Post-Training by Condition & Counselor Type

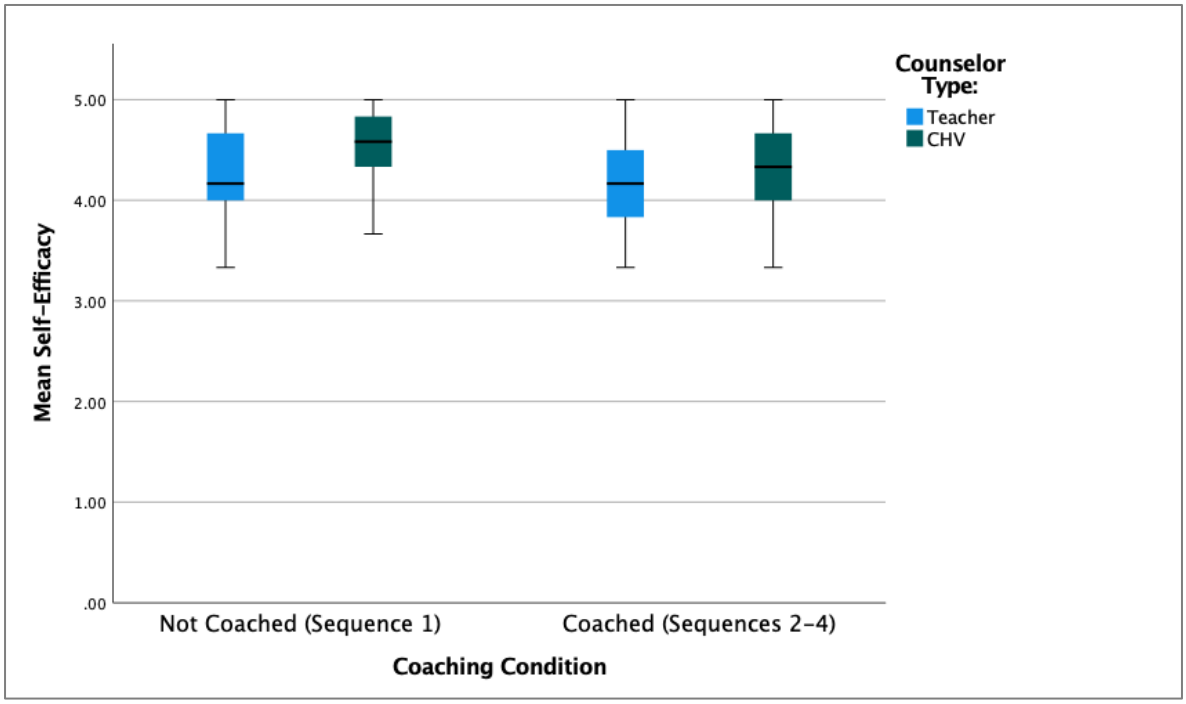


Table 14

Generalized Estimating Equations (GEE) Model Predicting Counselor Self-Efficacy Around Delivering Pamoja Tunaweza at Post-Training (n = 150 counselors; n = 25 site clusters)

	B	***SE***	***95% CI***	***p***
Full sample *(n = 150)*				
Intercept	4.367	0.06	[4.25, 4.49]	<.001
Condition	-0.139	0.07	[-0.29, 0.01]	0.298
Teachers *(n = 75)*				
Intercept	4.206	0.12	[3.97, 4.44]	<.001
Condition	-0.043	0.14	[-0.31, 0.23]	0.919
CHVs *(n = 75)*				
Intercept	4.528	0.03	[4.46, 4.59]	<.001
Condition	-0.235	0.07	[-0.38, -0.08]	0.022[a]

[a] Significant at p<0.05 after Benjamini-Hochberg correction

Organizational Readiness

The average counselor perception of organizational readiness for change at post-training was 4.28 (*SD* = 0.58, scale 1 to 5). **Figure 12** shows a boxplot graphically depicting mean organizational readiness by condition and counselor type (teacher vs. CHV). GEE results indicated that coaching condition was not significantly related to counselors' perceptions of organizational readiness for change, *B* = -0.056, *SE* = 0.07, *p* = 0.442 (**Table 15**). Mean organizational readiness score was 4.01 (*SD* = 0.59) among teachers and 4.55 (*SD* = 0.42) among CHVs. Coaching condition did not significantly predict perceptions of organizational readiness among teachers, *B* = -0.023, *SE* = 0.13, *p* = 0.862, or among CHVs, *B* = -0.089, *SE* = 0.08, *p* = 0.248 (**Table 15**). Additional exploratory analyses examined the two ORIC subscales as outcomes: change commitment and change efficacy. Coaching condition did not significantly predict differences in change commitment or change efficacy at post-training.

Figure 12

Clustered Boxplot of Mean Organizational Readiness Scores at Post-Training by Condition & Counselor Type

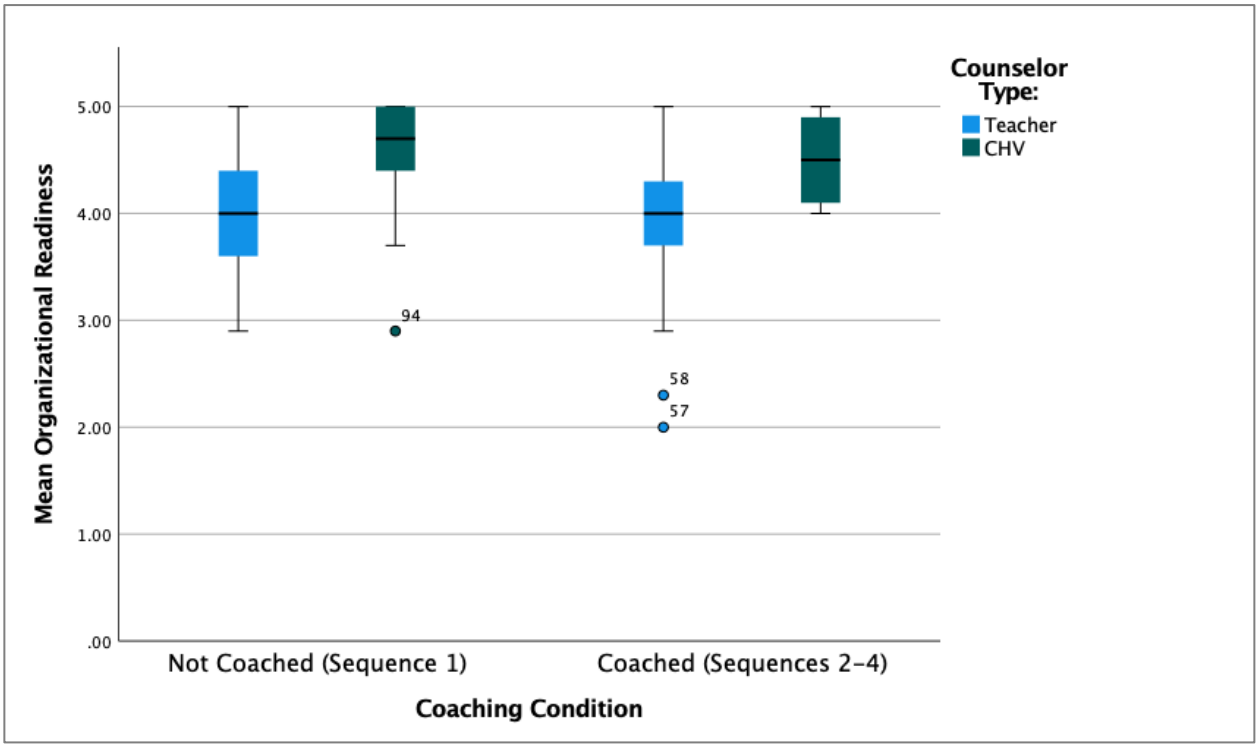


Table 15

Generalized Estimating Equations (GEE) Model Predicting Organizational Readiness at Post-Training (n = 150 counselors; n = 25 site clusters)

	B	***SE***	***95% CI***	***p***
Full sample *(n = 150)*				
Intercept	4.317	0.06	[4.21, 4.43]	<.001
Condition	-0.056	0.07	[-0.19, 0.08]	0.442
Teachers *(n = 75)*				
Intercept	4.030	0.09	[3.83, 4.22]	<.001
Condition	-0.023	0.13	[-0.28, 0.24]	0.862
CHVs *(n = 75)*				
Intercept	4.604	0.05	[4.49, 4.71]	<.001
Condition	-0.089	0.08	[-0.24, 0.06]	0.248

Implementation Climate

The average counselor perceived implementation climate score at post-implementation was 4.42 (*SD* = 0.45, scale 1 to 5). **Figure 13** shows a boxplot graphically depicting mean implementation climate by condition and counselor type (teacher vs. CHV). GEE results with the full sample indicated that coaching condition was not significantly related to counselors' perceptions of implementation climate, *B* = -0.086, *SE* = 0.09, *p* = 0.660 (**Table 16**). Mean implementation climate score was 4.34 (*SD* = 0.48) for teachers and 4.49 (*SD* = 0.39) for CHVs (scale range 1 to 5). Coaching condition did not significantly predict counselor perceptions of implementation climate among teachers, *B* = 0.034, *SE* = 0.13, *p* = 0.934, or among CHVs, *B* = -0.209, *SE* = 0.12, *p* = 0.304 (**Table 16**).

Figure 13

Clustered Boxplot of Mean Implementation Climate Scores at Post-Implementation by Condition & Counselor Type

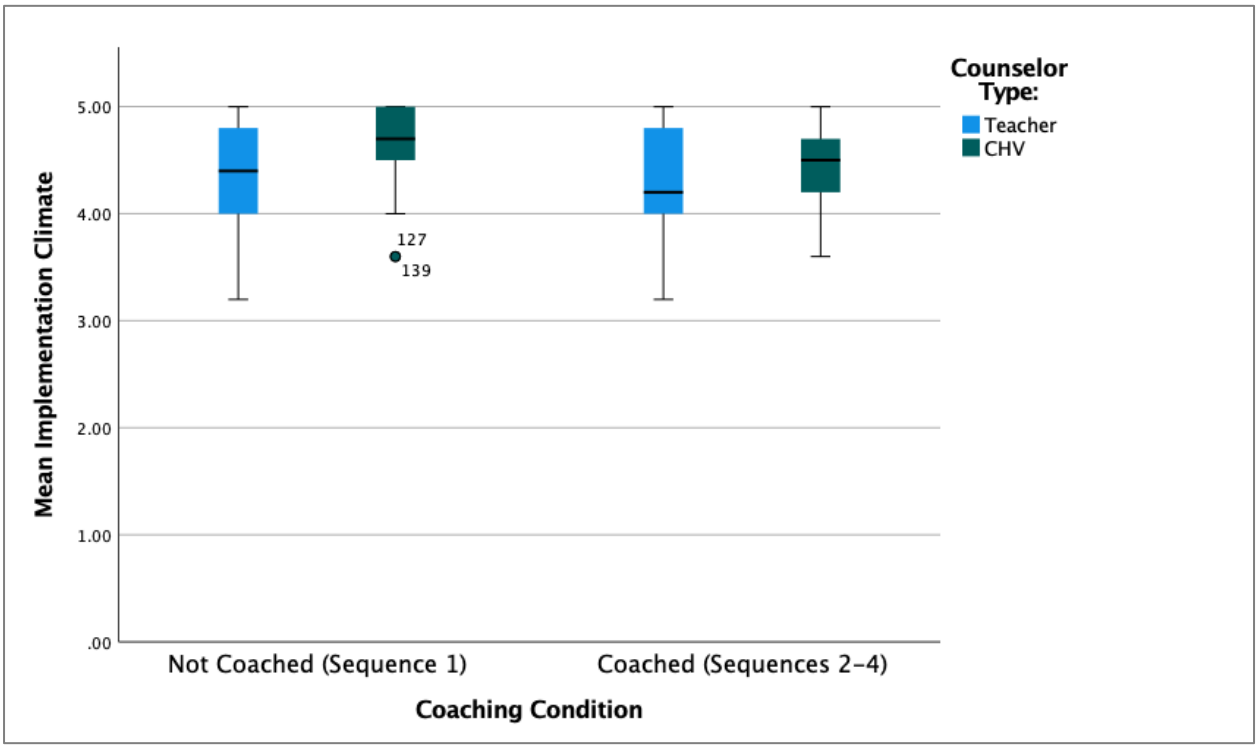


Table 16

Generalized Estimating Equations (GEE) Model Predicting Counselor Perceptions of Implementation Climate at Post-Implementation (n = 148 counselors; n = 25 site clusters)

	B	***SE***	***95% CI***	***p***
Full sample *(n = 148)*				
Intercept	4.472	0.08	[4.31, 4.63]	<.001
Condition	-0.086	0.09	[-0.27, 0.10]	0.660
Teachers *(n = 73)*				
Intercept	4.323	0.09	[4.13, 4.52]	<.001
Condition	0.034	0.13	[-0.22, 0.29]	0.934
CHVs *(n = 75)*				
Intercept	4.620	0.10	[4.42, 4.82]	<.001
Condition	-0.209	0.12	[-0.44, -0.03]	0.304

Implementation Leadership

The average counselor perceived implementation leadership score at post-implementation was 2.87 (*SD* = 0.72, scale 0 to 4). **Figure 14** shows a boxplot graphically depicting mean implementation leadership by condition and counselor type (teacher vs. CHV). GEE results indicated that coaching condition was not significantly related to counselors' perceptions of implementation leadership, *B* = 0.125, *SE* = 0.13, *p* = 0.648 (**Table 17**). Mean implementation leadership score was 2.74 (*SD* = 0.72) for teachers and 3.01 (*SD* = 0.69) for CHVs (scale range 0 to 4). Coaching condition did not significantly predict counselor perceptions of implementation leadership among teachers, *B* = 0.218, *SE* = 0.21, *p* = 0.568, or among CHVs, *B* = 0.026, *SE* = 0.18, *p* = 0.960 (**Table 17**). Additional exploratory analyses looked at each of the ILS subscales as outcomes: proactive, knowledgeable, supportive, and perseverant leadership. Coaching condition did not significantly predict differences in these varying forms of implementation leadership at post-implementation.

Figure 14

Clustered Boxplot of Mean Implementation Leadership Scores at Post-Implementation by Condition & Counselor Type

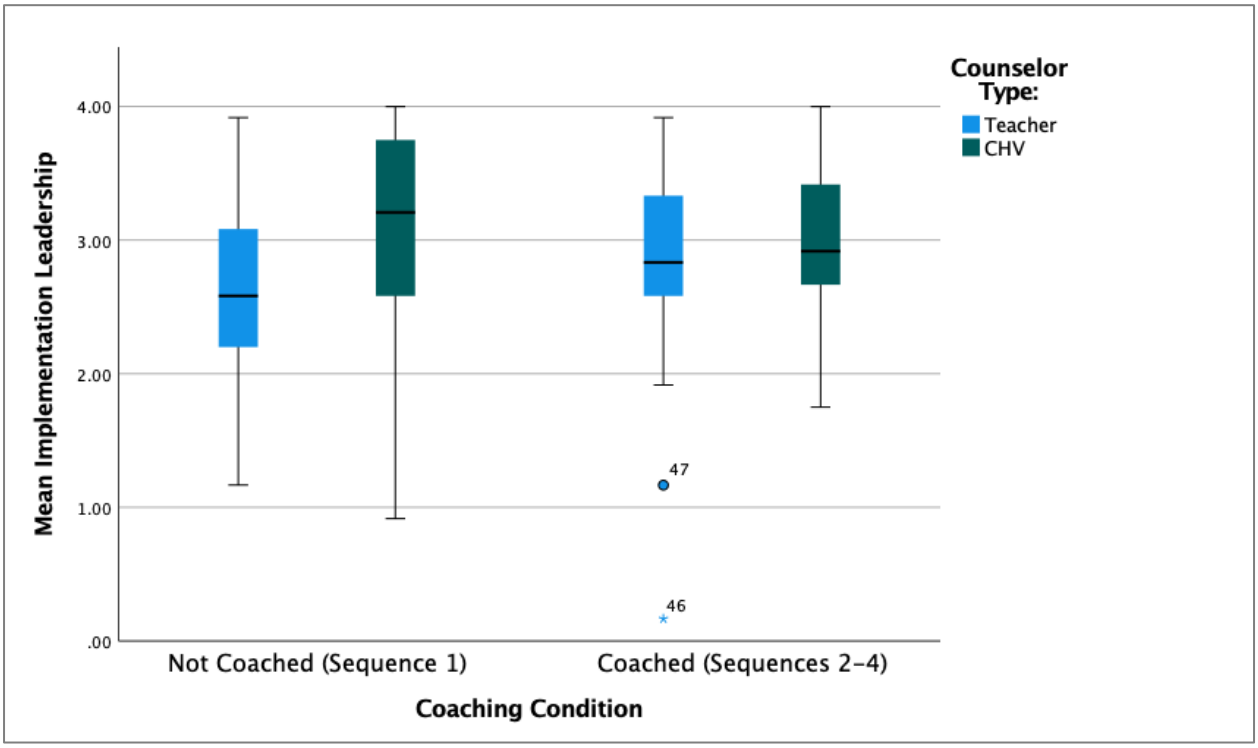


Table 17

Generalized Estimating Equations (GEE) Model Predicting Counselor Perceptions of Implementation Leadership at Post-Implementation (n = 148 counselors; n = 25 site clusters)

	B	***SE***	***95% CI***	***p***
Full sample *(n = 148)*				
Intercept	2.804	0.09	[2.62, 2.98]	<.001
Condition	0.125	0.13	[-0.13, 0.38]	0.648
Teachers *(n = 73)*				
Intercept	2.613	0.13	[2.35, 2.87]	<.001
Condition	0.218	0.21	[-0.18, 0.62]	0.568
CHVs *(n = 75)*				
Intercept	2.994	0.16	[2.68, 3.30]	<.001
Condition	0.026	0.18	[-0.32, -0.37]	0.960

Summary of Results from GEE Models Examining Perceptions of Pamoja Tunaweza

Coaching condition significantly predicted higher perceived acceptability and feasibility of PT at post-training among teachers who received coaching, compared to teachers who did not receive coaching. However, these differences were not observed at the post-implementation time point. There were no significant differences in perceived acceptability or feasibility among CHVs in different coaching conditions at the post-training time point. However, results suggested lower perceived feasibility, appropriateness and self-efficacy at post-implementation among CHVs who received coaching, compared to CHVs who did not receive coaching. These relationships remained significant after a conservative Benjamini-Hochberg correction (false discovery rate of 5%; Benjamini & Hochberg, 1995) applied to all models that were run with this data. Effect sizes for these outcomes were calculated based on raw data, and represent the difference in mean scores between the two coaching conditions (**Table 18**). Given the high means across both coaching conditions, small beta estimates from GEE models, and large confidence intervals for effect sizes, these results should be interpreted with caution.

Table 18

Means, GEE Parameter Estimates and Effect Sizes for Significant Outcomes Related to Perceptions of Pamoja Tunaweza

	No Coaching (Seq 1)	**Coaching (Seq 2-4)**	**GEE Parameter Estimates**				**Effect Size[a]**	
Outcome	***M (SD)***	***M (SD)***	***B***	***SE***	***95% CI***	***p***	***Cohen's d***	***95% CI***
Teachers								
Acceptability[b]	4.44 (0.43)	4.71 (0.34)	0.269	0.08	[0.11, 0.44]	0.022	0.37	[0.23, 1.19]
Feasibility[b]	3.93 (0.39)	4.30 (0.44)	0.367	0.11	[0.15, 0.58]	0.022	0.42	[0.38, 1.35]
CHVs								
Feasibility[c]	4.67 (0.39)	4.31 (0.39)	-0.356	0.10	[-0.56, -0.15]	0.022	0.39	[-1.37, -0.41]
Appropriateness (Total)[c]	4.85 (0.24)	4.64 (0.33)	-0.218	0.07	[-0.35, -0.08]	0.022	0.30	[-1.19, -0.24]
Appropriateness (Setting)[c]	4.90 (0.25)	4.54 (0.48)	-0.356	0.11	[-0.56, -0.15]	0.022	0.40	[-1.35, -0.39]
Self-Efficacy[b]	4.52 (0.39)	4.29 (0.45)	-0.235	0.07	[-0.38, -0.08]	0.022	0.43	[-1.01, -0.07]

Note. All scales for above outcomes are 1 to 5; table presents adjusted *p*-values after Benjamini-Hochberg correction

[a] Effect sizes (Cohen's *d*) calculated based on raw data means

[b] Collected at the post-training time point

[c] Collected at the post-implementation time point

Acceptability, Feasibility and Utility of Implementation Coaching

Data from semi-structured interviews with teachers and CHVs who received coaching provided information about the acceptability, feasibility and utility of the coaching strategy itself. Counselor ratings on a scale of 1-10 (10 being the highest) indicated high perceived acceptability, feasibility, and utility of coaching among both teachers and CHVs, and in both urban and rural settings (**Table 19**). Mean perceived acceptability of coaching was 7.62 (SD = 1.67) for teachers and 9.37 (SD = 1.36) for CHVs. Mean perceived feasibility of coaching was 7.62 (SD = 1.26) for teachers and 8.56 (SD = 1.93) for CHVs. Mean perceived utility of coaching was 8.62 (SD = 1.50) for teachers and 9.69 (SD = 0.48) for CHVs. These ratings were slightly higher among CHVs compared to teachers. Mean acceptability, feasibility and utility ratings on coaching appeared to be similarly high across counselors working in both urban and rural settings (**Table 19**).

Counselor ratings also indicated high perceived utility of the specific components of implementation coaching, including attending coaching meetings with an experienced teacher/CHV coach from another school/community, creating implementation workplans, selecting goals and solutions (i.e., discrete implementation strategies to target goals) in the workplan, implementing selected solutions at each site, and communicating with coaches in between coaching meetings. There was some variability in how frequently counselors referred to their workplans outside of coaching meetings. Teacher counselors most frequently reported referring to their workplans either once a week (44%) or two or more times a week (19%). CHV counselors most frequently reported referring to their workplans two or more times a week (25%), followed by daily (19%), once a week (19%) or right before the coaching meeting (19%).

Table 19

Acceptability, Feasibility and Utility of Implementation Coaching

Outcome/Category (Rating Scale)	Ratings by Counselor Type		Ratings by Setting	
	Teachers (*n*=16)	CHVs (*n*=16)	Urban (n=8)	Rural (n=24)
	M (SD); Range	***M (SD); Range***	***M (SD); Range***	***M (SD); Range***
Acceptability (1-10)	7.62 (1.67); 4-10	9.37 (1.36); 5-10	9.00 (1.41); 6-10	8.33 (1.83); 4-10
Feasibility (1-10)	7.62 (1.26); 5-9	8.56 (1.93); 5-10	7.87 (1.46); 5-10	8.17 (1.76); 5-10
Utility				
Overall (1-10)	8.62 (1.50); 5-10	9.69 (0.48); 9-10	9.50 (0.53); 9-10	9.04 (1.37); 5-10
Coaching meetings (1-10)	8.50 (1.51); 5-10	9.19 (1.72); 5-10	8.87 (1.64); 5-10	8.83 (1.66); 5-10
Workplans (1-10)	8.56 (1.41); 5-10	9.62 (1.09); 6-10	9.12 (1.46); 6-10	9.08 (1.35); 5-10
Selecting goals & solutions[a] (1-10)	8.19 (1.22); 5-10	9.31 (1.25); 6-10	9.25 (0.89); 8-10	8.58 (1.44); 5-10
Implementing solutions (1-10)	8.12 (1.31); 5-10	9.37 (1.36); 5-10	9.00 (1.07); 7-10	8.67 (1.58); 5-10
Communications with coaches (1-10)	8.31 (1.30); 6-10	9.06 (1.65); 5-10	8.75 (1.58); 5-10	8.67 (1.52); 5-10
	No. (%)	***No. (%)***	***No. (%)***	***No. (%)***
Workplan Use				
Daily	2 (13%)	3 (19%)	1 (13%)	4 (17%)
2 or more times a week	3 (19%)	4 (25%)	2 (25%)	5 (21%)
Once a week	7 (44%)	3 (19%)	0 (0%)	10 (42%)
Every two weeks	2 (13%)	0 (0%)	2 (25%)	0 (0%)
Once a month	0 (0%)	2 (13%)	1 (13%)	1 (4%)
Once every 2-3 months	1 (6%)	1 (6%)	1 (13%)	1 (4%)
Only right before next coaching meeting	1 (6%)	3 (19%)	1 (13%)	3 (13%)
Did not refer to the workplan	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Don't remember	0 (0%)	0 (0%)	0 (0%)	0 (0%)

[a] "Solutions" refers to discrete implementation strategies selected during coaching

Qualitative Data

The themes that emerged in the qualitative data indicated high levels of perceived acceptability, feasibility, and utility of coaching among lay counselors in the Education and Health sectors (**Tables 20-23**). The tables are organized by implementation construct and interview guide questions, and codes are presented in decreasing order of frequency in the total sample. There was substantial overlap across factors that made coaching acceptable, feasible and useful. Therefore, the following results highlight frequently endorsed themes that appeared across all constructs and themes that were unique to each construct, and are summarized in three sections: (1) Facilitators of acceptability, feasibility, and implementation of coaching strategies; (2) Barriers to acceptability, feasibility, and implementation of coaching strategies; (3) Recommendations to further improve acceptability, feasibility, and the overall coaching program. In the qualitative data, the word "coaching" continues to refer to the bundled external facilitation strategy. Coaching also helped counselors and leaders implement discrete strategies to target specific goals across different stages of implementation at their sites. Coaches used the term "solutions" to describe these discrete implementation strategies that were discussed during coaching, as they felt that term would be better understood by counselors. Therefore, use of the term "solutions" in participant quotes refers to discrete implementation strategies selected and implemented during coaching.

Facilitators of acceptability, feasibility, and implementation of coaching strategies

Major themes on facilitators of acceptability, feasibility and implementation of coaching strategies appeared across seven of the nine major domains: Individual Characteristics, Coach

Behaviors and Role, Counselor Benefits, Relationships, Leadership, Staff Support, and Coaching Characteristics.

I. Individual Characteristics

***Coach Characteristics*.** Lay counselors reported multiple characteristics or attributes of coaches that enhanced the acceptability and feasibility of coaching. A coach's personal qualities of being humble, respectful, friendly, patient, punctual, cooperative, and collaborative increased acceptability (63%) and feasibility (19%). CHV counselors particularly emphasized the importance of coaches being humble and treating counselors with respect, and noted that this increased their willingness to participate in coaching. As one counselor explained:

> *"The coach was a lady of respect, she didn't look down on others… they didn't harass us, they talked in good language, with respect … they were understanding and they kept time … they treated us like adults, not children, that respect made me be very responsive to any calls I received from the coach."* – CHV Counselor*

For teacher counselors, being patient and punctual were important qualities in a coach that contributed to acceptability and feasibility of coaching:

> *They were patient during and even before the meeting. Like the coach would come around and find maybe one of the teacher counselors was engaged…they would sit and be patient enough to wait so that they could start the meeting with all of us. They would not start the meeting with one or two of us in case they thought one teacher was committed or a bit busy...They would be patient and wait. And also during the meeting, they were also patient with us, they were not rushing to finish the meeting early."…"What I liked about coaching*

is that the teacher coach and supervisor were time punctual…that is if they had prepared to come at 1pm, they would come at 1pm and it would help us not miss our lessons in the classes. If it was 11am, they would come at 11am, that is the time we have agreed. So they never kept us waiting." – Teacher Counselor

Counselors also reported liking how knowledgeable and competent the coaches were (56%), and that the coach's expertise about orphaned children, their problems and the PT program increased both feasibility of participating in coaching activities (16%) and implementing the strategies selected during coaching (19%). The coach's knowledge and expertise was the most frequently mentioned factor that increased acceptability among CHVs (81%).

"Through the coach sharing their experience and other challenges/issues they had previously gone through, I was aware of what possible challenges/issues I could also face [in this program]. Also, the coach was able to direct us to where we could find the help we needed, e.g., if we needed resources/materials, we could get that through the school, if we needed to round up the children, we could approach the Head teacher for help."… "When the coach comes, they are normally very organized, I mean that's a person who knows what they are talking about, so I am very satisfied with them, even the supervisor too." – CHV Counselor*

The third coach characteristic that was frequently reported in the interviews was the coach's ability to provide moral support and encouragement to counselors during preparation and implementation phases. Counselors frequently noted that this attribute improved their morale,

which increased acceptability of coaching (50%) and facilitated implementation of strategies selected during coaching (19%).

> *"So, I was, given the courage, especially by the coach. They told me those are the things that take time; we shall familiarize. To me, I feel, it was a bit of a good boost. The morale…it gave me the energy."* – Teacher Counselor

> *"Coach said they would be there for our sake, you see that? For anything, be it the knowledge/education, if we forget anything, any of our needs that might arise due to knowledge/education, they would be there for our sake. If you call them, or just message them, they would avail themselves even if it meant they would appear on the ground. They made us have faith and hope that they were in our corner, and that was very encouraging and gave us motivation to keep going."* – CHV Counselor*

Counselor Characteristics. Counselors reported multiple individual characteristics that influenced acceptability and feasibility of coaching. Some counselors noted that having a positive attitude towards the coach, the Ace supervisor and the PT program made it more feasible for them to participate in coaching (25%). Many counselors stated that their own personal desire, aspiration or passion to help children who are orphaned facilitated their engagement in coaching (acceptability 13%; feasibility 38%; facilitator of implementation strategies 13%). This strong personal commitment to serving orphaned children and their families was one of the most frequently mentioned contributors to perceived feasibility of coaching among CHVs (38%). As one CHV explained:

"I just loved this work, I just loved the work of Ace Africa of teaching children and all the meetings that were a part of this project is something I really love. I also saw that this was important work and if I missed my work, then the work would not have happened… I also love orphaned children. As I received more coaching, I was even more determined to continue with this community project of teaching these orphaned children and it gave me more ability as a counselor to be able to find ways to help them and also enable their thoughts at school to be less about those who have passed away." – CHV Counselor*

A less frequently reported but relevant theme that emerged in the data was a counselor's internal sense of self-responsibility towards fulfilling their role as a PT counselor. Counselors described this as feeling a sense of duty and determination to do whatever it takes to implement PT at their site. Counselors noted that coaching instilled this sense of self-responsibility towards their new role (acceptability 13%), which influenced the feasibility of engaging in coaching activities (19%) and implementing strategies selected during coaching (9%).

II. Coach Behaviors and Role

Accessibility. Both teachers and CHVs reported being satisfied with how easily they could access their coach in between meetings (28%); counselors typically contacted their coaches using phone/WhatsApp, and liked how available the coaches were to provide additional implementation support or help counselors catch up if the counselor missed a coaching meeting.

"They were readily available. And in the case of any question, we would ask them. And they were in the position to answer those questions that we had for them. Because, at times we find some challenges while working out these programs, so we had to consult them, so

that they give us a way forward when we would encounter the challenge, they give us the remedy about that challenge." – Teacher Counselor

Due to their busy schedule, teachers found regular visits and reminders by the coaches to be particularly helpful (25%); they indicated that the regularity of in-person visits and frequent phone follow-up increased coaching acceptability and likelihood of implementing strategies selected during coaching.

"Regular calls from the coach was helpful…It was just a reminder, a reminder just to make us alert. The thing is that the continuous contact and communication with the coach and the supervisor also helped me carry out the solutions." – Teacher Counselor

Planning & Communication. Counselors frequently reported that early planning and communication between the coaches increased feasibility of participating in coaching (31%), and also contributed to acceptability of coaching (19%). For both teachers and CHVs, early communication and advance notice by the coach about when they would like to hold coaching meetings was critical for counselors to be able to plan and address any barriers that might prevent them from attending coaching meetings.

"Another thing they did is they would prepare us early for the coaching. They prepared us in advance. They would call us and inform us that they would be coming for the coaching. They also assisted me to find a time to be there with the coach and supervisor. That is, I did not plan for my other activities during that time." – Teacher Counselor

Goal Setting, Problem-Solving & Tailoring. Counselors described the process whereby coaches helped counselors set goals, select tailored strategies to meet those goals, and problem-solved barriers as another factor that enhanced coaching acceptability (59%), feasibility (28%), and implementation of chosen strategies (47%). Counselors liked that coaches openly shared about their own challenges during PT implementation, and provided solutions based on their own experience of having delivered PT at another school or community. Counselors also noted that the physical act of completing a detailed workplan that required setting objectives and specifying who would implement the chosen strategies, by when, at what frequency, and required resources increased the feasibility of implementing those strategies. Counselors overall reported the coach's role of guiding counselors through completing workplans and following up on their progress to be one of the most helpful aspects of coaching.

> *"When we first met, even the thought of what a work plan was, was nowhere near my mind, I really loved how we were directed about the work plan; what it was and what we were to do about and with it. I really liked that. Another thing I liked, the coach shared what kind of challenges we would probably face."* – CHV Counselor*

> *"They [coaches] taught us on how to set the goals, they were giving us the timeframe to achieve the goals. They also gave us the tactics in order to achieve our goal in offering the teachings that you are offering to these orphans. They give us the ways, the tactics on how to go about"... "you see when the coaching staff would come to the school to talk about what has to be done in the teaching or in the delivering of the knowledge to the orphans, we could share with them the challenges that we thought might occur, or the ones that you are experiencing. Now out of the challenges that we shared with them, they could give us*

a solution, like they encourage you, they tell you if you face such a situation, this is what you are going to do, this is how you talk to the child, or this is how you talk to the guardian, this is what you are going to do. Now out of that you could just feel motivated in a way, and you feel like you want to go in and continue doing that because you are being given how to deal with challenges that you are going through." – Teacher Counselor

III. Counselor Benefits

Counselor Knowledge, Self-Efficacy & Skills. One of the most frequently reported benefits of coaching was counselors gaining knowledge about orphans and their needs, and improving their skills in how they interacted with children and guardians. Counselors described that coaches gave them tools on how to better engage children and guardians and create a more supportive environment for them. This overall de-stigmatization of orphans and an improved understanding of how to work with them contributed to increasing counselors' perceptions of coaching acceptability (59%), feasibility (22%), and implementation of strategies selected during coaching (13%).

"I may say that the other benefit that I got from the coaching was it helped me to understand the children better than what I used to know about them, it made me open and created some good relationships between me and the coaching staff and the children that were undertaking lessons [PT groups]. I got encouraged also…they [coaches] let me believe in myself. They give me that ability to believe in myself and to take myself that I can carry out this work, and they made me to be independent and to have self-esteem. They also made me develop that deeper love towards these children that you are dealing with"… they [coaches] were telling us, when you are delivering the Pamoja Tunaweza program

we should show love to the children, we should take them as our own children, we should not condemn them, we should not make them to see that it was their mistake, their parents have died. They [coaches] also taught us to be kind, to show love, and to be empathetic to the children"... "it gave me hope, it promoted love for these children cause I could understand them more and recognize their backgrounds. One time, when the madam coach had come, I told her "Madam, from the knowledge you have taught us, I've been able to get a child from a number twenty-nine to number three [referring to child's rank in class]." By being close and friendly to the child, the child sees that apart from somebody somewhere who can love me, my teacher also loves me. So, I brought the standard up." – Teacher Counselor

Counselors also perceived general knowledge acquisition about PT implementation and appropriate supports needed to make implementation successful as something that they found satisfactory about coaching (34%). Another perceived benefit of coaching was counselors' improved self-efficacy and skills to implement PT (53%). Counselors explained that coaching improved their motivation and confidence in their ability to handle challenges related to PT implementation.

"Coaching made it possible for me to gain more experience to be able to stand in front of others, I didn't know how to talk in front of others like you, previously, if I was to stand in front of people, I would shake but coaching helped me be less fearful. Through coaching I also gained the experience to be more confident in my activities as a counselor." – CHV Counselor*

"For myself as an individual, coaching has helped me. Before coaching, I was quick to anger, but coaching has helped me change." – CHV Counselor*

Overall, CHVs more frequently endorsed knowledge gain about orphaned children and guardians (75%), knowledge gain about general PT implementation (56%), and increased self-efficacy and motivation to deliver PT (81%) compared to teachers. Some counselors also perceived their ability to share this new knowledge and expertise about orphaned children and PT with fellow staff and community members as a benefit of coaching (16%).

Counselor Readiness. The impact of coaching on improving counselors' readiness to implement PT emerged as a prominent theme throughout the qualitative interviews. During early coaching meetings in the pre-implementation phase, coaches sensitized counselors to the PT program, its importance, its various components (i.e., PT groups, training, supervision and coaching), and what to expect during PT implementation. Both teacher and CHV counselors noted that coaching helped them feel more prepared to deliver PT and fulfill their new roles as PT counselors. Feeling prepared about PT expectations was one of the most frequently mentioned drivers of coaching acceptability (63%), and counselors reported that this also helped them implement strategies selected during coaching (31%).

"The coaching really prepared us because we didn't really know what it meant by Pamoja Tunaweza. But when the teacher coach came and sensitized us, I think we were prepared enough. We were sensitized, and we were prepared enough for these children and we also had time to discuss a little with our head teacher, to give us time to deliver the Pamoja Tunaweza lessons [i.e., PT groups]. At least we are given time, so that maybe, when we

were taking these lessons and we are supposed to be doing something else, we could be excused"… "Coaching helped me to carry out the solutions without any problem because I was prepared. I knew what I was going to do next." – Teacher Counselor

Once PT implementation began, coaching also improved counselor's self-time management, where counselors effectively organized and planned their work so that they could participate in all coaching and PT activities. This improved self-time management was noted as a benefit that increased coaching acceptability (28%), feasibility of participating in coaching (22%), and likelihood of implementing strategies selected during coaching (16%).

"It helped me plan my time because as a CHV I have a lot of things on my plate, and I just recently also started working with the hospital. When I'm at home, I have a family, at home, I have to attend to my family, also as a CHV you have to teach community members how to construct toilets, make visits to expectant mothers… the coach was able to let us know how to approach parents and have a discussion about which days would work best for them for the meetings, and also, knowing which days the meetings were held, I was able to plan my other duties to ensure I didn't miss the coaching meeting. With the coach's advice, I was able to find the time to have planned my time such that my family also didn't feel neglected and the coach's advice really helped." – CHV Counselor*

Incentives & Rewards. Counselors less commonly reported receiving incentives and rewards during PT implementation. Counselors explained that receiving non-monetary incentives from Ace Africa such as t-shirts, certificates and badges for PT participation was one of the things they liked about coaching (13%). Counselors also perceived gaining increased respect and

recognition in their community due to their increased knowledge and expertise about working with orphaned children as a non-monetary reward (25% among CHVs, 13% among teachers).

> *"We were given space and time and we would be appreciated at the Dispensary… at the end, the person in charge would come and congratulate us for coming and for the work we were doing/were planning to do. They would also encourage us. They would treat us in a very special way and I loved that."* – CHV Counselor*

> *"I enjoyed learning, and the t-shirt I'm putting on is also from ACE. So this also motivated me because the times when I walked around the [school] district, there are not many others like me. So I'm recognized and I'm proud of what I do for the children on behalf of Ace...It is like a token, like a sign of appreciation from ACE, but to me I see it like I was picked among all of the teaches in my school, and I am proud to be part of the Pamjoa Tunaweza program."* – Teacher Counselor

Counselors less frequently endorsed receiving monetary compensation (e.g., transportation costs, airtime to call coaches and supervisors) as a facilitator of implementation strategies selected during coaching (9%).

Perceptions of PT Effectiveness. As coaching and PT groups continued, counselors, leaders and/or staff perceived PT to be beneficial. Counselors reported discussing the positive effects of the PT program during coaching, which further enhanced counselors' engagement, investment in PT implementation, and overall acceptability of coaching (19%).

After coaching, we were assured of the better results. We could get the experience of how it was done in other schools. We were also told about the importance of Pamoja Tunaweza…how the children are performing in other schools, we are also told that they were doing better. So, I think it energizes, because it made us feel that it is also happening here."… "as counseling sessions are advancing from one session to another, you find that they [children] change in their behavior, in the way of thinking, in their actions, everything. That feeling that it's possible, so by the end of the eighth session, we could find that most of them [children] believe it is possible. We could also get from the other [non-PT] teachers that these children have even improved their behavior in class, even in general class work, they have found some more meaning in life…so this motivated us to keep going." – Teacher Counselor

IV. Relationships

Counselor Relations. In addition to improved relationships with children and guardians, counselors endorsed experiencing improved relationships with their coaches and fellow staff as a result of coaching. Building positive relationships with coaches increased counselors' satisfaction with coaching (22%). Using implementation strategies generated during coaching facilitated improved relationships between counselors and their fellow staff (e.g., fellow teachers, CHVs, school administrative staff), which also contributed to the acceptability of coaching (13%). Compared to CHVs, teachers more frequently endorsed improved relationships with the coach (25%) and fellow staff (19%) as a result of coaching.

"Coaching made us be in close contact with our coach and supervisor and we now have a positive relationship with our coach and our supervisor. When we see them, we don't see

them as enemies, we see them as friends." … "I think the relationship is just the main ways because from your fellow teachers, from your Head Teacher and from your coach, and from your supervisor, it will create a positive attitude between you. Good relationships with your fellow teachers will also make delegation more easy when that need arises." – Teacher Counselor

V. Leadership

Leader Behaviors. Counselors characterized various forms of support from leadership as facilitators of coaching and implementing strategies selected during coaching. Leader support in the form of resource provision (e.g., rooms, books) and giving permission/allowing time for counselors to attend coaching was most important to increase feasibility of coaching (53%) and counselors' ability to implement strategies selected during coaching (69%). Counselors also noted liking that coaching specifically targeted leader support for participating in both coaching and PT activities (41%). Teachers were more likely to endorse leader support as a driver of feasibility (94%) compared to CHVs.

"That one helped a lot because once my headteacher gave me a "go ahead" consent, then to me I would feel free and participate in the coaching." – Teacher Counselor

"The Head Teacher is willing to give me those resources when I want, any time I need of day. Those resources I mentioned, the keys to the classroom, the chalks, the books, she's never resistant. I can say she provided the space and then from the space she also ensured that we get sitting places like chairs, desks. Then beside that she also gave us time and permission even to attend the seminars that we had at first. After that she also allowed us to have our sessions at least once in a week so we can deliver our services to the orphans

in the Pamoja Tunaweza program,"... "Also, I may say being given the permission from the administration [school leaders] also made it possible for us to attend the coaching sessions. – Teacher Counselor

"Also the Village Elder of that area, because the school was in his geographical area, he was very supportive of our efforts... in every community project we undertake as CHV, we need to get the approval from CHEW, Village Elder, as stakeholders, because without getting their approval, you might get some resistance. When we got our training, they were also included, so having the CHEW and Village Elder on board was very helpful. CHEW even went to the Head teacher and let them know that we were qualified and they were supportive of our actions at the school." – CHV Counselor*

A less frequently reported but equally important leader behavior was persuasive and supportive communication by the leader that signaled their commitment towards coaching and the PT program. This could be communication in a one-on-one interaction between the leader and counselor, in a small group (e.g., staff meeting), or in a large public forum (e.g., Chief's Baraza). Leaders communication ranged from stating their support for PT, following up with the counselor on how coaching and PT groups were going, providing supportive reminders to the counselor, or directly engaging children and guardians and encouraging them to participate in PT. Counselors explained that this type of positive communication and attitude from their leaders encouraged and motivated them to continue engaging in coaching and PT activities. As a result, it facilitated acceptability of coaching (16%), feasibility of coaching (16%), and implementation of strategies selected during coaching (29%).

"Okay, first they [leaders] supported us morally, they supported us even in the staff meetings. We were handling the program and providing the session counseling to the orphans in the school, so just by appreciating us before other teachers that is one support. They also given us time to attend these coaching meetings. They allowed the coach and the supervisor to have meetings with us in the school. They have also provided us with resources where we have requested them, and also they have given us time to be with the learners, the pupils. So I think that that is a lot they have done for us. Before we started implementing the program in the school, we had the meetings where we talked about the new program in the school. They recognized us as the teacher counselors who have been identified to carry out the program and also told the other teachers to give us that support. So, I think just by doing that we feel appreciated...and we are now more energized to do the program, and the program has been recognized now by the administration [i.e., leadership] in the school, and that was needed for the program to continue in the school."

– Teacher Counselor

Another form of leader support was workload adjustment, where the leader took specific actions to adjust the workload or responsibilities of PT counselors to make it more feasible for counselors to participate in coaching activities (13%). Some examples of workload adjustment included reassigning a portion of the PT counselor's work to another non-PT teacher, adjusting the school meetings schedule, and allowing PT counselors to exchange lessons with a non-PT teacher so PT counselors could attend coaching.

VI. Staff Support

Staff Support. Over half the sample reported that support from non-PT staff members made it more possible for PT counselors to participate in coaching activities (53%). Some examples of staff support included providing assistance with procuring resources, offering to cover a PT counselor's responsibilities while they attended coaching, and helping PT counselors feel positively about their coaches. In addition to enhancing feasibility, counselors stated that support from their fellow staff also helped them implement strategies selected during coaching (41%), and increased overall acceptability of the coaching program (16%).

> *"The good interaction with our fellow teachers also helped us because they could sometimes step in, maybe because you were supposed to be in class and you are not and you are now attending the coaching sessions. So some of them could step in and go to class on our behalf. So that support also made the coaching to be possible. Let's say for example, I am having a lesson in class 4 and it is now my time to go there but I have the coaching team on the ground and I am supposed to go and attend the coaching. So I could talk to one teacher and tell him or her either to go and teach on my behalf that subject that I normally teach, or if it is not possible, the teacher to just go to the class and teach another subject that is very much familiar so that the learners could not be found in a disorganized manner, making noise in the compound…so they could go and engage the learners and keep them busy so that it could not look like there is a class which is not having a teacher."*
>
> – Teacher Counselor

Another form of staff support came from fellow PT counselors. This included feeling supported by counselors in the same sector (i.e., teacher counselors being supported by other

teacher counselors in the same school), and receiving support from counselors in the other sector (i.e., teacher counselors being supported by CHV counselors and vice versa). Collaboration and cooperation from PT counselors within the same sector most frequently facilitated implementation of strategies selected during coaching (47%); counselors also endorsed it as a factor that enhanced perceived acceptability (19%) and feasibility (13%) of coaching.

> *"You know, before going through something, you might be scared because you are none the wiser, however the coach's words were very helpful because they dispelled the fears we had. Another thing that I liked was being encouraged by my fellow colleague CHVs. We encouraged one another that we would do this work and each of us was aware of our duties and we did that… we assessed all the work that needed to be done according to the work plan and each of us was on board. We all said we will do this work and that encouraged me because I couldn't do it by myself."* – CHV Counselor*

CHVs in particular highlighted that coaching enabled them to ask for and receive <u>support from teacher counselors</u> at the school where they delivered PT groups. This included teacher counselors providing support for things CHVs needed to deliver PT successfully at the school, such as permission from Head Teachers and resources for PT groups. CHVs reported that support from teacher counselors was important to be able to carry out implementation strategies selected during coaching (56%) and also increased their satisfaction with coaching (38%).

> *"When we needed resources to use for teaching, they [teacher counselors] prepared them in good time and they [teacher counselors] also ensured the children arrived in the classrooms on time."* – CHV Counselor*

VII. Coaching Characteristics

Coaching Structure & Format. In terms of the coaching intervention itself, CHVs liked that the coaching meetings were efficient (25%), and coaches managing the time well increased feasibility of being able to participate in coaching (38%). As one CHV explained:

> *"The coaching was short and clear. We met a time that was expected, and we didn't stay for a long time. We did what we needed to do in good order then we would depart at the expected times. Coaching didn't take a lot of time, we would complete coaching and still have enough time to deal with other duties/schedules"* – CHV Counselor*

Teacher counselors also noted liking the coaching materials (19%), including the workplans and detailed coaching guides (with target goals and menus of implementation strategies). Being able to refer to these coaching materials outside of coaching meetings also helped teacher counselors carry out the strategies they selected during coaching (19%).

Barriers to acceptability, feasibility, and implementation of coaching strategies

Overall, counselors endorsed significantly fewer barriers to acceptability, feasibility, and implementation of coaching strategies than facilitators of each. When interviewers asked counselors about what they did *not like* about coaching, 16% of teachers and 56% of CHVs did not provide a response, and others started answering the question with statements like:

> *"There is nothing I didn't like, in fact I really enjoyed it. I can't say I didn't like it, I just liked it so much."* – Teacher Counselor

A little over 30% of CHVs reported no barriers to feasibility of participating in coaching or implementing strategies selecting during coaching. Among counselors who responded to questions about barriers to acceptability, feasibility and implementation of coaching strategies, major themes appeared across three of the nine domains: Counselor Conflicts, Incentives & Rewards, and Miscellaneous Factors.

I. Counselor Conflicts

Competing Priorities & Insufficient Time. Counselors' competing priorities (e.g., teaching classes, conducting exams, developing lessons) was the number one factor that decreased coaching acceptability (25%) and feasibility (44%), and hindered completion of implementation strategies selected during coaching (28%). Comparing teacher and CHV counselor responses, competing priorities was consistently mentioned more frequently as a barrier by teachers; 50% of teacher counselors reported that it impacted their satisfaction with coaching, 69% reported that their regular workload and responsibilities reduced feasibility of participating in coaching, and 44% reported that competing demands also got in the way of implementing strategies selected during coaching. One teacher explained:

> *"We had less time...because you are supposed to plan for the lessons, at the same time we are supposed to handle the coaching meeting. It became difficult. We are supposed to fill the forms. We have less time to do it. It was a challenge because you are to handle the lessons from 8am to 3:10pm. Then from there you are supposed to now go to the meeting. And your brain is now tired. You want to rest. Same time you have to plan for the next day's lessons. So, it was difficult."* – Teacher Counselor

Related to competing priorities, only a few teacher counselors also spoke about having insufficient time for coaching meetings or to complete coaching activities (13%). This could be either due to the counselors' existing high workload or due to the coach coming late and less flexibility in the teacher's schedule to accommodate the full coaching hour.

> *"The work was tedious... when you look at the work plan it was very squeezy, spending one day per week in PT program and you were supposed to implement it and do some follow up. It was very tedious."* – Teacher Counselor

> *"Maybe it is class time and the coach has come late. Like one time she [coach] thought the class eight was ending at the twelve hour, only to come and see that at our school they break at one-forty, we eat for twenty minutes and then by two, we are back in class. So, you see, we only had twenty minutes for coaching…. it was not satisfactory. We needed more time with her."* – Teacher Counselor

Personal Factors. Besides work-related competing demands, personal commitments or events prevented some counselors from being able to fully participate in coaching activities (31%) or carry out implementation strategies selected during coaching (28%). These included attending funerals, having health problems, being on maternity leave or traveling to tend to family matters. For CHVs in particular, issues with their personal phones (e.g., phone not working, insufficient air time to call fellow CHV counselors or coaches) interfered with completing coaching activities.

II. Incentives & Rewards

Counselors received monetary incentives for completing research surveys for the BASIC study, and airtime to contact coaches and supervisors during PT implementation. However, no additional incentives were provided for completing coaching activities. CHVs reported that the lack of additional incentives or rewards for participating in coaching decreased their satisfaction (25%) and feasibility of engaging in coaching (25%).

> *"Coaching didn't have much negatives because of all the benefits I received personally, I took it as an extension of the training. I guess what was not pleasant was that in other meetings [i.e., research interviews with Ace staff] we are given transport [fare] in form of cash, but coaching doesn't have that. We initially thought we would also get transport [fare] but that wasn't the case… you see, I live far away and to come to coaching, it's a long distance to walk."* – CHV Counselor*

III. Miscellaneous Factors

Counselors indicated disruptions due to weather (e.g., heavy rains) and school closures during COVID-19 made it challenging to participate in coaching activities (19%) and complete the implementation strategies selected during coaching (22%). Counselors also noted that sometimes children were unavailable in school due to factors outside of their control (e.g., children were participating in games' tournaments at another school, children were sent away due to having unpaid school fees, or children were away during half-term holidays); teacher counselors more frequently endorsed this as a barrier to completing strategies selected during coaching (44%).

Recommendations to further improve acceptability, feasibility, and the overall coaching program

There was significant overlap in counselors' recommendations to improve coaching acceptability, feasibility, and the overall coaching program. Major themes appeared across four of the nine domains: Coaching Characteristics, Coach Behaviors & Role, Incentives & Rewards and Leadership.

I. Coaching Characteristics

Coaching Dose. One of the most frequently made suggestions was to increase the dose of coaching by increasing the number and/or duration of coaching meetings.

> *"What I can say in this question is time, time is too short. You may have a lot of questions you would like to ask but the time/duration is short, even though their explanation is satisfactory, if time could be increased by one day or two days – if we can meet twice, the first time would be dedicated to planning then the next meeting would be a review of the plans, even though we do review in the meeting. You know sometimes you might meet but are unaware of what information one might be able to contribute. If it is one hour, let it be increased to two hours. Or if it's not the very next day, let there be a dedicated time to just review the work plan… during the review, we might have more time to explore what we might have forgotten or just more options that can be available."* – CHV Counselor*

Coaching Structure & Format. Another commonly endorsed theme was to change the coaching meeting schedule. Both teacher and CHVs counselors requested that coaching take place at a different time of the day or the week such that it did not interfere with the counselor's work

and was therefore conducted at a more convenient time for the counselor. Teachers more frequently endorsed this as a change that would increase acceptability (56%) and feasibility (31%) of participating in coaching.

> *"...so to me I wish, it would be better if coaching was done over the weekends, but I did not take it negatively, I just understood…okay, I may say if it is done on that weekend, we can do much more better because now you're not interfering with the normal school program. Coaching could even be done during break times, like lunch time or even the evening. I think to me that could work much, more better."* – Teacher Counselor

One teacher counselor explained the potential benefits of increasing the coaching dose and changing the coaching schedule:

> *"I think if we had more time with the coaches...in that we are not meeting during the normal school, working days (that is Monday to Friday)...If we could plan our meetings maybe on the weekend or school holidays, we can have enough time to sit with them and discuss without necessarily interfering with the school schedule. If one day is not enough, maybe we can extend it to two days but at least there will be enough time. When they come to school, you have to look for time, and mostly they come when the Head Teacher has given out work to us even if we have reserved the time for coaching. So, if there's not enough time during the school days, we can have some good time with them on the weekends to discuss, make the work plans, discuss our challenges, the solutions to the challenges, and then be ready to implement the program."* – Teacher Counselor

CHVs also recommended training more coaches (25%), so that counselors could access more individuals that could provide implementation support and also receive coaching from a variety of coaches with different backgrounds and experiences. CHVs explained:

"... and also during the [coaching] meetings, if we could have more than one coach it can be very good ... like two coaches would be very good. If there are two coaches they can help each other out and it can also increase my confidence because there will be variation of ideas/experiences." – CHV Counselor*

A fourth frequently reported theme related to coaching characteristics was early and increased provision of coaching materials. This included making sure that coaches provided sufficient copies of the workplans and coaching guides to counselors at the end of the coaching meetings. It also included a request from counselors for resources such as notebooks and pens so that they could take notes during coaching and document follow-up questions for coaches in between meetings. CHVs more frequently endorsed this as a suggestion that would improve acceptability (31%), and feasibility (25%) of coaching. One CHV commented:

"I loved everything, but the [hand] writing, I was the only one filling out the work plan in all the sessions, and I got tired writing… so maybe having the work plan in soft copy on tablets would make work easier." – CHV Counselor*

"I think we should also be encouraged to have some notebooks so that you can also keep the purpose [i.e., details] of the plans, because we're just filling the plans and then they were taken away. So we should be encouraged to have the plans so that we can be referring to them during your free time." – Teacher Counselor

II. Coach Behaviors and Role

Planning & Communication. Both teachers (50%) and CHVs (44%) indicated that more planning and early communication from coaches about the best time to do coaching meetings was necessary to increase the feasibility of coaching. Counselors repeated this suggestion multiple times during the interview, and noted that it would increase satisfaction (13%) and improve the overall coaching program in the future (31%). In addition to collaboratively planning on the timing of coaching meetings, counselors also mentioned that receiving early communication about who their coaches are and an agenda prior to each coaching meeting would be helpful.

> *"Collaboration. Collaboration. We should be more in touch before the meetings, prior to the meetings, we have to talk, we have to know, so that we can plan. So that if there are inconveniences, we know how to tackle and put them in good order. We should have phone calls with the coach, so that we know how to plan it and organize. I think it should not be "I'm coming at one." It should be "Please, can we find time to meet tomorrow". It should not just be that I'm there marking books and then I see visitors [i.e., coaches] on the bench. So we should be in touch early, that is planning."* – Teacher Counselor

> *"I think they can plan a week earlier. At least you call in advance, you tell us that on such and such day you're going to have a coaching, and then we discuss which appropriate time we can carry it out so we can come to consensus if it is at our first break or second break or even lunch time or even in the evening. We [i.e., the PT teachers] talk about it… you discuss, you come to consensus, you agree on now a specific time that will be convenient for both the parties [i.e., PT teachers and coaches]. I think planning is good, like being told a week in advance would help"*– Teacher Counselor

III. Incentives & Rewards

Counselors reported that receiving monetary incentives in the form of transportation costs (e.g., for counselor to get home if they stayed late to attend a coaching meeting), airtime (e.g., for counselor to call coaches, supervisors, guardians, and fellow staff during PT implementation), money for counselor's food, or money for pens and books for orphans would improve the coaching program in the future (19%). CHVs more frequently requested monetary incentives, noting that this would improve both the acceptability (38%) and feasibility (25%) of coaching.

> *"Like after coaching at least they could leave us with some airtime, like 500 shillings, so that, if there is a challenge we could easily call the coach about handling this. Also, you know we are people who have families and you might have a husband who isn't very understanding, so when you go for the coaching meeting you can come back and tell your husband, "When I went for this meeting with Ace Africa they gave me some airtime," so with the money [for airtime] you are able to buy sugar they can use for tea and that makes them happy."* – CHV Counselor*

IV. Leadership

Leader Behaviors. Requests for additional support from leadership were more frequently endorsed by teacher counselors. While teacher counselors had previously reported receiving leader support (e.g., resources, time to participate in coaching and PT activities), they also mentioned that additional resources from their leaders would increase acceptability (13%) and feasibility (25%) of coaching. Similarly, teacher counselors also reported that given their busy schedules, even more workload adjustment was needed to improve acceptability (13%) and feasibility (38%) of participating in coaching. A less commonly reported suggestion was for leaders such as the Head

Teacher and CHEW to attend some coaching meetings (13% teachers, 6% CHVs) so that they were more involved in PT implementation and better understood what counselors needed to implement PT successfully at their site. Few counselors (9%) also made suggestions for general increase in involvement of their leaders, for example:

> *"We should be involving the Head Teacher fully...so that we'll know how to arrange for the school programs putting in mind the Pamoja Tunaweza programs versus the school programs...this way there will be no colliding of activities."* – Teacher Counselor

Summary of Qualitative Results

Our qualitative results indicate high acceptability, feasibility and utility of coaching among teachers and CHVs. Both types of counselors endorsed many more facilitators than barriers to engaging in coaching. What counselors liked most about coaching was their coach's behaviors and role (e.g., coach's knowledge and expertise, providing moral support and encouragement, the coach's positive personal qualities), and perceived counselor-level benefits such as feeling more prepared to implement PT, and gaining more knowledge, self-efficacy and skills in working with orphans and guardians. For teachers, support from leaders and fellow non-PT staff were two of the most important factors that enhanced feasibility of participating in coaching. For CHVs, their own passion for helping orphans, efficiency of coaching meetings, and support from fellow CHV and teacher counselors at the implementing school site increased feasibility of engaging in coaching and implementing the additional strategies discussed during coaching. Both teachers and CHVs emphasized the importance and usefulness of setting goals in the workplan, and receiving implementation support from a coach who faced similar challenges in their own PT implementation.

Common barriers that reduced teachers' satisfaction with and perceived feasibility of coaching included competing priorities due to their high school workload and insufficient time for coaching. For CHVs, lack of incentives/rewards to participate in coaching and personal factors (e.g., health problems) were most commonly reported as barriers to acceptability and feasibility of coaching. Primary recommendations to improve coaching included having more frequent meetings, increasing number of coaches, and significantly earlier planning and communication by coaches about when to conduct coaching meetings. Teachers also recommended changing the time of coaching meetings to reduce interference with their school schedule, and indicated needing more leader support and workload adjustment to better integrate coaching activities into their schedule. CHVs emphasized needing monetary compensation to cover additional costs related to coaching (e.g., transportation fare to travel to the school for coaching) and ensuring availability of coaching materials for all CHV counselors. **Tables 20-23** provide a summary of the themes endorsed by three or more participants in our sample.

Table 20

Facilitators and Barriers to Acceptability of Coaching[a]

Code	Total Sample (*N* = 32)	Teachers (*n* = 16)	CHVs (*n* = 16)
I. What did you like about coaching?	***No. (%)***	***No. (%)***	***No. (%)***
1. Coach's personal qualities (e.g., humble, friendly, patient, respectful, collaborative, punctual)	20 (63%)	11 (69%)	9 (56%)
2. Counselor were prepared about PT expectations and were able to plan for PT delivery ahead of time	20 (63%)	8 (50%)	12 (75%)
3. Selecting goals and implementation strategies to develop tailored workplans; experienced coaches providing solutions to target implementation challenges	19 (59%)	11 (69%)	8 (50%)
4. Counselor gaining knowledge about orphans and their needs; counselor gaining skills to better engage orphans & guardians	19 (59%)	7 (44%)	12 (75%)
5. Coach's knowledge and expertise about orphans, their problems, and the PT program	18 (56%)	5 (31%)	13 (81%)
6. Increase in counselors' self-efficacy, motivation, and confidence in delivering PT and handling implementation challenges	17 (53%)	4 (25%)	13 (81%)
7. Coaches providing moral support and encouragement to the counselors	16 (50%)	6 (38%)	10 (63%)
8. Leader support (e.g., providing resources, giving time/permission for counselor to participate in coaching)	13 (41%)	7 (44%)	6 (38%)
9. Counselor gaining knowledge about the PT program	11 (34%)	2 (13%)	9 (56%)
10. Coaches being easily accessible by phone/WhatsApp to provide additional implementation support outside coaching meetings	9 (28%)	3 (19%)	6 (38%)
11. Counselors learned how to better manage their time and organize their work to participate in all PT and coaching activities	9 (28%)	4 (25%)	5 (31%)
12. Counselors formed strong, positive relationships with the coaches and supervisors	7 (22%)	4 (25%)	3 (19%)
13. Early planning & communication between coaches and counselors on when coaching meetings/activities will take place	6 (19%)	2 (13%)	4 (25%)
14. Counselors have increased respect, recognition and status in the community for their knowledge & expertise on working with orphans	6 (19%)	2 (13%)	4 (25%)
15. Counselors, leaders and/or staff perceive PT to be effective and beneficial for their communities	6 (19%)	3 (19%)	3 (19%)
16. Teacher counselors support CHV counselors during PT implementation (e.g., obtaining resources, getting children to attend PT groups)	6 (19%)	0 (0%)	6 (38%)
17. Collaboration and cooperation from fellow PT counselors to complete coaching activities	6 (19%)	1 (6%)	5 (31%)
18. Efficiency of coaching meetings	6 (19%)	2 (13%)	4 (25%)

Code	Total Sample (*N* = 32)	Teachers (*n* = 16)	CHVs (*n* = 16)
19. Counselors share their knowledge on background & needs of orphans with other teachers, school staff, CHVs, and/or other community members	5 (16%)	2 (13%)	3 (19%)
20. Persuasive, supportive and positive communication by the leader that conveys leader's strong commitment towards PT, coaching and orphans	5 (16%)	1 (6%)	4 (25%)
21. Support provided by other non-PT staff/counselor's own colleagues (e.g., covering a teacher's lesson, releasing students from class to attend PT groups)	5 (16%)	4 (25%)	1 (6%)
22. Regular visits and phone calls by the coach; regular reminders and follow-up about the workplan in between coaching meetings	4 (13%)	4 (25%)	0 (0%)
23. Counselor's determination/sense of responsibility/duty towards fulfilling their new role as a PT counselor	4 (13%)	0 (0%)	4 (25%)
24. Counselor's personal aspirations/passion for helping orphans and serving their community	4 (13%)	0 (0%)	4 (25%)
25. Counselors form good relationships with fellow PT staff, non-PT staff and leaders	4 (13%)	3 (19%)	1 (6%)
26. Counselors receive non-monetary incentives for participating in PT (e.g., t-shirts, certificates)	4 (13%)	2 (13%)	2 (13%)
27. Provision of coaching materials (e.g., workplans, coaching guides, writing materials)	3 (9%)	3 (19%)	0 (0%)
28. Counselors engaging in community sensitization & mobilization to encourage participation in PT	3 (9%)	0 (0%)	3 (19%)
29. Coaching meetings conducted at a time that was convenient for the counselor/did not interfere with counselor's other work	3 (9%)	2 (13%)	1 (6%)
II. What did you not like about coaching?	***No. (%)***	***No. (%)***	***No. (%)***
1. Competing priorities (e.g., scoring exams, leading other health programs); coaching interfered with counselor's regular workload and responsibilities	8 (25%)	8 (50%)	0 (0%)
2. Lack of incentives or rewards for participating in coaching	4 (13%)	0 (0%)	4 (25%)
3. Insufficient coaching time (e.g., due to frequent interruptions or coach coming late)	4 (13%)	4 (25%)	0 (0%)

[a] Reported by three or more participants in the full sample
PT: *Pamoja Tunaweza*

Table 21

Facilitators and Barriers to Feasibility of Coaching[a]

Code	Total Sample (*N* = 32)	Teachers (*n* = 16)	CHVs (*n* = 16)
I. What made it possible or feasible for you to participate in coaching activities?	***No. (%)***	***No. (%)***	***No. (%)***
1. Leader support (e.g., providing resources, giving time/permission for counselor to participate in coaching)	17 (53%)	15 (94%)	2 (13%)
2. Support provided by other non-PT staff/counselor's own colleagues (e.g., covering a teacher's lesson)	17 (53%)	12 (75%)	5 (31%)
3. Counselor's personal aspirations/passion for helping orphans and serving their community	12 (38%)	6 (38%)	6 (38%)
4. Early planning & communication between coaches and counselors on when coaching meetings/activities will take place	10 (31%)	5 (31%)	5 (31%)
5. Coaching meetings conducted at a time that was convenient for the counselor/did not interfere with counselor's other work	10 (31%)	8 (50%)	2 (13%)
6. Selecting goals and implementation strategies to develop tailored workplans; experienced coaches providing solutions to target implementation challenges	9 (28%)	3 (19%)	6 (38%)
7. Counselor's positive attitude towards the coach, supervisor, and/or the PT program	8 (25%)	3 (19%)	5 (31%)
8. Counselors learned how to better manage their time and organize their work to participate in all PT and coaching activities	7 (22%)	3 (19%)	4 (25%)
9. Counselor gaining knowledge about orphans and their needs; counselor gaining skills to better engage orphans & guardians	7 (22%)	3 (19%)	4 (25%)
10. Coach's personal qualities (e.g., humble, friendly, patient, respectful, collaborative, punctual)	6 (19%)	2 (13%)	4 (25%)
11. Counselor's determination/sense of responsibility/duty towards fulfilling their new role as a PT counselor	6 (19%)	4 (25%)	2 (13%)
12. Counselor were prepared about PT expectations and were able to plan for PT delivery ahead of time	6 (19%)	0 (0%)	6 (38%)
13. Efficiency of coaching meetings	6 (19%)	0 (0%)	6 (38%)
14. Coach's knowledge and expertise about orphans, their problems, and the PT program	5 (16%)	1 (6%)	4 (25%)
15. Support from counselor's family members (e.g., spouse) to participate in coaching	5 (16%)	0 (0%)	5 (31%)
16. Persuasive, supportive and positive communication by the leader that conveys leader's strong commitment towards PT, coaching and orphans	5 (16%)	3 (19%)	2 (13%)
17. Leader adjusts the workload of PT counselors for them to participate in coaching activities (e.g., rescheduling staff meeting, re-assigning counselor's work to another staff member)	4 (13%)	2 (13%)	2 (13%)

18. Collaboration and cooperation from fellow PT counselors to complete coaching activities	4 (13%)	2 (13%)	2 (13%)
19. Provision of coaching materials (e.g., workplans, coaching guides, writing materials)	3 (9%)	2 (13%)	1 (6%)
Code	**Total Sample (*N* = 32)**	**Teachers (*n* = 16)**	**CHVs (*n* = 16)**
II. What made it challenging or less possible for you to participate in coaching activities?	***No. (%)***	***No. (%)***	***No. (%)***
1. Competing priorities (e.g., scoring exams, leading other health programs); coaching interfered with counselor's regular workload and responsibilities	14 (44%)	11 (69%)	3 (19%)
2. Personal commitments/factors that prevented counselor from participating in coaching activities (e.g., health problems, attending funeral, issues with phone)	10 (31%)	6 (38%)	4 (25%)
3. Unfavorable weather conditions (e.g., heavy rains)	6 (19%)	5 (31%)	1 (6%)
4. Insufficient coaching time (e.g., due to frequent interruptions or coach coming late)	5 (16%)	5 (31%)	0 (0%)
5. Lack of incentives or rewards for participating in coaching	4 (13%)	0 (0%)	4 (25%)
6. Insufficient coaching materials (e.g., workplans, coaching guides, writing materials)	3 (9%)	0 (0%)	3 (19%)
7. Lack of early planning & communication between coaches and counselors on when coaching meetings/activities will take place	3 (9%)	1 (6%)	2 (13%)

[a] Reported by three or more participants in the full sample
PT: *Pamoja Tunaweza*

Table 22

Facilitators and Barriers to Implementing Strategies Selected During Coaching[a]

Code	Total Sample (*N* = 32)	Teachers (*n* = 16)	CHVs (*n* = 16)
I. What helped you to carry out the solutions you had planned?[b]	***No. (%)***	***No. (%)***	***No. (%)***
1. Leader support (e.g., providing resources, giving time/permission for counselor to participate in coaching)	22 (69%)	12 (75%)	10 (63%)
2. Selecting goals and implementation strategies to develop tailored workplans; experienced coaches providing solutions to target implementation challenges	15 (47%)	6 (38%)	9 (56%)
3. Collaboration and cooperation from fellow PT counselors to complete coaching activities	15 (47%)	6 (38%)	9 (56%)
4. Support provided by other non-PT staff/counselor's own colleagues (e.g., covering a teacher's lesson)	13 (41%)	10 (63%)	3 (19%)
5. Counselor were prepared about PT expectations and were able to plan for PT delivery ahead of time	10 (31%)	4 (25%)	6 (38%)
6. Persuasive, supportive and positive communication by the leader that conveys leader's strong commitment towards PT, coaching and orphans	9 (28%)	4 (25%)	5 (31%)
7. Teacher counselors support CHV counselors during PT implementation (e.g., obtaining resources, getting children to attend PT groups)	9 (28%)	0 (0%)	9 (56%)
8. Counselors, leaders and/or staff perceive PT to be effective and beneficial for their communities	7 (22%)	4 (25%)	3 (19%)
9. Coach's knowledge and expertise about orphans, their problems, and the PT program	6 (19%)	3 (19%)	3 (19%)
10. Coaches providing moral support and encouragement to the counselors	6 (19%)	4 (25%)	2 (13%)
11. Cooperation from orphans & guardians for counselors to implement strategies selected during coaching	6 (19%)	3 (19%)	3 (19%)
12. Counselors learned how to better manage their time and organize their work to participate in all PT and coaching activities	5 (16%)	2 (13%)	3 (19%)
13. Counselor's personal aspirations/passion for helping orphans and serving their community	4 (13%)	2 (13%)	2 (13%)
14. Counselor gaining knowledge about orphans and their needs; counselor gaining skills to better engage orphans & guardians	4 (13%)	2 (13%)	2 (13%)
15. CHV counselors support teacher counselors during PT implementation (e.g., engaging guardians to ensure attendance)	4 (13%)	4 (25%)	0 (0%)
16. Provision of coaching materials (e.g., workplans, coaching guides, writing materials)	3 (9%)	3 (19%)	0 (0%)
17. Coaches being easily accessible by phone/WhatsApp to provide additional implementation support outside coaching meetings	3 (9%)	1 (6%)	2 (13%)
18. Regular visits and phone calls by the coach; regular reminders and follow-up about the workplan in between coaching meetings	3 (9%)	2 (13%)	1 (6%)

Code	Total Sample (N = 32)	Teachers (n = 16)	CHVs (n = 16)
19. Counselor's determination/sense of responsibility/duty towards fulfilling their new role as a PT counselor	3 (9%)	2 (13%)	1 (6%)
20. Counselor received monetary compensation to cover additional costs (e.g., transport fare, airtime)	3 (9%)	1 (6%)	2 (13%)
21. Support from counselor's family members (e.g., spouse) to participate in coaching	3 (9%)	0 (0%)	3 (19%)
II. What got in the way of carrying out all the solutions you had planned?[b]	***No. (%)***	***No. (%)***	***No. (%)***
1. Competing priorities (e.g., scoring exams, leading other health programs); coaching interfered with counselor's regular workload and responsibilities	9 (28%)	7 (44%)	2 (13%)
2. Personal commitments/factors that prevented counselor from participating in coaching activities (e.g., health problems, attending funeral, issues with phone)	9 (28%)	3 (19%)	6 (38%)
3. Children unavailable in schools (e.g., due to games tournaments, being sent away due to unpaid school fees)	9 (28%)	7 (44%)	2 (13%)
4. Discontinuation of coaching and PT activities due to COVID-19	7 (22%)	4 (25%)	3 (19%)
5. Coaching meetings taking place on a holiday when counselors are not readily available/not in school	4 (13%)	2 (13%)	2 (13%)
6. Unfavorable weather conditions (e.g., heavy rains)	4 (13%)	3 (19%)	1 (6%)

[a] Reported by three or more participants in the full sample
[b] "Solutions" refers to discrete implementation strategies selected during coaching
PT: *Pamoja Tunaweza*

Table 23

Recommendations to Improve Acceptability, Feasibility, and Overall Coaching Program[a]

Code	Total Sample (*N* = 32)	Teachers (*n* = 16)	CHVs (*n* = 16)
I. What would make coaching more acceptable or satisfactory to you?	***No. (%)***	***No. (%)***	***No. (%)***
1. Increase dose of coaching (i.e., number and/or duration of coaching meetings)	14 (44%)	10 (63%)	4 (25%)
2. Change coaching meeting times (e.g., do coaching meetings during lunch time, games time, evenings or weekends when counselor has more time)	12 (38%)	9 (56%)	3 (19%)
3. Provision of sufficient coaching materials (e.g., workplans, coaching guides, writing materials) during and after coaching meetings	6 (19%)	1 (6%)	5 (31%)
4. Provide monetary compensation to cover additional costs (e.g., transport fare, airtime)	6 (19%)	0 (0%)	6 (38%)
5. Coach's personal qualities (e.g., being more humble, friendly, patient, respectful, collaborative, punctual)	5 (16%)	1 (6%)	4 (25%)
6. Increased and early planning & communication between coaches and counselors on when coaching meetings/activities will take place	4 (13%)	3 (19%)	1 (6%)
7. More leader support (e.g., providing resources, giving time/permission for counselor to participate in coaching)	3 (9%)	2 (13%)	1 (6%)
8. More workload adjustment by leaders for PT counselors to participate in coaching activities (e.g., rescheduling staff meeting, re-assigning counselor's work to another staff member)	3 (9%)	2 (13%)	1 (6%)
9. More collaboration and cooperation from fellow PT counselors to complete coaching activities	3 (9%)	0 (0%)	3 (19%)
II. What would make it more possible or feasible for you to attend coaching meetings and participate in coaching activities?			
1. Increased and early planning & communication between coaches and counselors on when coaching meetings/activities will take place	15 (47%)	8 (50%)	7 (44%)
2. Change coaching meeting times (e.g., do coaching meetings during lunch time, games time, evenings or weekends when counselor has more time)	8 (25%)	5 (31%)	3 (19%)
3. Provide monetary compensation to cover additional costs (e.g., transport fare, airtime)	7 (22%)	3 (19%)	4 (25%)
4. More workload adjustment by leaders for PT counselors to participate in coaching activities (e.g., rescheduling staff meeting, re-assigning counselor's work to another staff member)	6 (19%)	6 (38%)	0 (0%)
5. More leader support (e.g., providing resources, giving time/permission for counselor to participate in coaching)	5 (16%)	4 (25%)	1 (6%)
6. Increase dose of coaching (i.e., number and/or duration of coaching meetings)	5 (16%)	2 (13%)	3 (19%)

7. Provision of sufficient coaching materials (e.g., workplans, coaching guides, writing materials) during and after coaching meetings	4 (13%)	0 (0%)	4 (25%)
8. Counselors to better manage their time and organize their work to participate in all PT and coaching activities	4 (13%)	4 (25%)	0 (0%)
9. Persuasive, supportive and positive communication by the leader that conveys leader's strong commitment towards PT, coaching and orphans	3 (9%)	3 (19%)	0 (0%)
10. Increased communication between leader and counselor; increased leader involvement in PT	3 (9%)	3 (19%)	0 (0%)

Code	**Total Sample (*N* = 32)**	**Teachers (*n* = 16)**	**CHVs (*n* = 16)**
III. How can the coaching program be improved in the future?	***No. (%)***	***No. (%)***	***No. (%)***
1. Increased and early planning & communication between coaches and counselors on when coaching meetings/activities will take place	10 (31%)	6 (38%)	4 (25%)
2. Increase dose of coaching (i.e., number and/or duration of coaching meetings)	10 (31%)	5 (31%)	5 (31%)
3. Provide monetary compensation to cover additional costs (e.g., transport fare, airtime)	6 (19%)	2 (13%)	4 (25%)
4. Provision of sufficient coaching materials (e.g., workplans, coaching guides, writing materials) during and after coaching meetings	5 (16%)	1 (6%)	4 (25%)
5. Increase number of coaches (e.g., for more frequent access to coaches and working with coaches from diverse backgrounds)	5 (16%)	0 (0%)	5 (31%)
6. Change coaching meeting times (e.g., do coaching meetings during lunch time, games time, evenings or weekends when counselor has more time)	4 (13%)	4 (25%)	0 (0%)
7. Non-monetary incentives for leaders (Head Teachers/CHEWs), PT participants (e.g., food, clothing for orphans/guardians), community members, or the school/health facility (e.g., building toilets)	4 (13%)	3 (19%)	1 (6%)
8. Leaders (e.g., HT, Deputy HT, Senior Teacher, CHEW) to attend some coaching meetings	3 (9%)	2 (13%)	1 (6%)
9. Expand coaching program to other counties and/or throughout Kenya	3 (9%)	1 (6%)	2 (13%)

[a] Reported by three or more participants in the full sample
PT: *Pamoja Tunaweza*

Integrating Quantitative & Qualitative Results

Table 24 provides a summary of integrated results from the quantitative and qualitative data by counselor type and time point. Following convention for merging results in mixed methods studies (Bryman, 2006; Guest & Fleming, 2014), we indicate whether our findings are convergent (i.e., leading to the same conclusion) or divergent (where combination of results provides different, and at times contradictory, findings) (Östlund, Kidd, Wengström, & Rowa-Dewar, 2011). Looking at these results together, we observe convergence between quantitative and qualitative data on teacher perceptions of acceptability and feasibility of PT at post-training. However, results indicate divergence between our quantitative and qualitative findings on all other study outcomes and time points for both teachers and CHVs.

Table 24

Summary of Integrated Results from Quantitative & Qualitative Data

Construct	**Teachers**		**CHVs**	
	Post-Training	*Post-Implementation*	*Post-Training*	*Post-Implementation*
Acceptability of PT	Convergent*	Divergent	Divergent	Divergent
Feasibility of PT	Convergent*	Divergent	Divergent	Divergent*
Appropriateness of PT	Divergent	Divergent	Divergent	Divergent*
Self-Efficacy	Divergent	n/a	Divergent*	n/a
Behavioral Intentions	Divergent	n/a	Divergent	n/a
Organizational Readiness	Divergent	n/a	Divergent	n/a
Implementation Climate	n/a	Divergent	n/a	Divergent
Implementation Leadership	n/a	Divergent	n/a	Divergent

PT: *Pamoja Tunaweza*

n/a: Not collected at that time point

*Indicates significant differences in the quantitative data between coaching conditions after Benjamini-Hochberg correction

Discussion

This study aimed to contribute to the limited knowledge on the delivery of facilitation or "implementation coaching" in supporting a task-shifted mental health treatment in two child-relevant sectors in Kenya. We employed a mixed methods quasi-experimental design to determine the impact and perceived value of implementation coaching. In our quantitative analyses, we assessed the impact of coaching on implementation factors related to the clinical intervention, *Pamoja Tunaweza* (PT). Teachers who received coaching in Sequences 2-4 of the SW-CRT reported *higher* perceived acceptability and feasibility of implementing PT at the post-training time point, compared to teachers who did not receive coaching in Sequence 1; however, these differences were not observed at the post-implementation time point. On the other hand, CHVs who received coaching were more likely to report *lower* perceived PT feasibility and appropriateness (at post-implementation), and *lower* self-efficacy to implement PT (at post-training), compared to CHVs who did not receive coaching. Coaching condition did not predict differences in other study outcomes such as behavioral intentions, organizational readiness, implementation climate or implementation leadership among either teachers or CHVs. Through the qualitative component of this study, we sought to understand lay counselor perspectives on the multifaceted coaching strategy itself. Coaching was perceived as highly acceptable, feasible and useful by newly trained teacher and CHV lay counselors that delivered *Pamoja Tunaweza*. Coaching was a flexible implementation strategy that could be tailored to meet the needs of counselors in each sector (i.e., education vs. health). Counselors in both sectors universally endorsed that working with an experienced coach and developing tailored workplans for different stages of PT implementation was very helpful.

The present study extends the existing evidence base on facilitation/coaching as an implementation strategy by focusing on more proximal implementation outcomes and determinants that are known to impact implementation success, but have not been widely assessed in prior mental health-related facilitation research. This study also adds to the sparse implementation literature on supporting mental health treatment delivery in LMIC; implementation support for lay counselor-delivered mental health interventions has typically been limited to training, supervision, and fidelity monitoring (Barnett, Gonzalez, Miranda, Chavira, & Lau, 2017). Expanding the evidence-base on implementation support is a priority for reducing the large mental health treatment gap in LMIC (Betancourt & Chambers, 2016; Eaton et al., 2011). To our knowledge, this is the first Kenyan-led implementation coaching program to support a child mental health treatment, making this the first study to explore and test its impact in a low-resource context.

This study highlights the importance of using mixed methods in implementation research (Palinkas, Aarons, et al., 2011; Palinkas, Horwitz, Chamberlain, Hurlburt, & Landsverk, 2011a). Looking at the quantitative results alone, one might conclude that coaching did not have a significant impact on early implementation outcomes and determinants that influence implementation success. However, the qualitative results tell a different story. In the following sections, we first discuss possible explanations for convergence and divergence of our findings (**Table 24**). This includes a discussion on potential ceiling effects, confounds in our data, challenges of disentangling effects of the PT intervention, supervision, and coaching, and measurement-related issues. Next, we highlight unique themes from the qualitative data within the context of the broader facilitation literature, with future research directions for LMIC. Finally, we end with a commentary on practice implications of this study for low-resource contexts.

"Mixing" Quantitative & Qualitative Data

Looking at our quantitative and qualitative results together **(Table 24**), we observe convergence in our findings on teacher perceptions of acceptability and feasibility of PT at post-training, but not at the post-implementation time point. Teachers needed more workload adjustment and leader support, given less time and flexibility in their schedules to accommodate new activities. Early coaching meetings focused on increasing leader and staff support by giving teachers time to attend the 6-day PT training and covering their school responsibilities while they were away. Attending the PT training placed a big demand on teachers' time, and coaching targeted this barrier early, which could have led to higher perceptions of PT feasibility and overall satisfaction among coached teachers at the end of training. Once implementation began, regardless of coaching condition, all sites adopted PT and successfully implemented two sequential PT groups. Moreover, at the end of Sequence 1, counselors conveyed their perceptions on "feasibility," stating that if something were important, it would be feasible (Ace Africa, personal communication, October 15, 2018). It could be that coaching no longer impacted perceptions of PT feasibility once all counselors had successfully implemented PT, explaining the lack of significant differences at the post-implementation time point. Overall, given the *minimal* increase in mean scores at post-training and post-implementation, these results are unlikely to reflect meaningful differences in perceived acceptability and feasibility among coached teachers.

The majority of quantitative findings indicate no significant impact of coaching on study outcomes. On the other hand, in the qualitative data, counselors provided unprompted responses about coaching's positive impact on counselor self-efficacy and motivation, counselor readiness to implement PT, counselor perceptions of feasibility and appropriateness of PT (i.e., a sense of responsibility to deliver PT and perceived fit with one's role), and aspects of organizational

readiness, implementation climate, and implementation leadership (**Tables 20-22**). One possible explanation for the lack of significant differences in the quantitative outcomes may be due to a ceiling effect (Wang, Zhang, McArdle, & Salthouse, 2008). Given the high means across both coaching conditions (**Table 6**), it is possible that there may have been little room for improvement among counselors who received coaching compared to those that did not. This implementation study builds on a decade long partnership with Ace Africa to develop and test a clinical intervention that is fully Kenyan-led and designed to maximize its acceptability, feasibility, and appropriateness within the target community (Dorsey, Gray, et al., 2020; Dorsey, Lucid, et al., 2020). Previously published data from Sequence 1 alone demonstrated that lay counselors in both sectors perceived PT to be a highly acceptable, feasible, and appropriate (Dorsey et al., 2019). As such, a ceiling effect seems likely in the present study. While effect sizes based on raw means data suggest medium effects for a handful of significant outcomes (Fritz, Morris, & Richler, 2012; **Table 18**), we remain skeptical of these effects, as the large confidence intervals on the effect sizes indicate low precision of these estimates.

A second explanation for differences in quantitative and qualitative findings may lie within the possible confounds in our data. Being the first set of implementing sites, Sequence 1 sites may have benefited from the early enthusiasm and excitement of launching *Pamoja Tunaweza* across schools and communities in Bungoma. Contrary to what we expected, all sites successfully implemented PT in Sequence 1. Additionally, while schools were randomly assigned to sequences of the SW-CRT, some of the highest academically performing schools in the county were randomized to Sequence 1 (KCSE, 2020), potentially adding bias to our study outcomes. Other site-level covariates that may be related to our study outcomes include school setting (urban vs. rural) and size, where smaller, rural schools may have benefited more from coaching due to having

fewer material and staff resources. Finally, while Sequence 1 sites did not receive coaching, they did receive clinical supervision. Given that all Sequence 1 sites successfully implemented PT, it is likely that Sequence 1 counselors received some implementation support from Ace Africa supervisors who had extensive prior experience implementing PT in Bungoma. While coaching offered a structured approach to providing implementation support, it is possible that this addition to supervision was not enough to produce a significant difference in study outcomes. Taken together, provision of implementation support via supervision in Sequence 1 and site-level factors that influenced PT implementation may have contributed to uncontrolled bias in our data. In the current study, we did not have the sample size to control for site-level covariates. Once all sequences have completed PT, a next step would be to re-run our GEE models while controlling for site-level covariates that may be confounding these results.

The challenge of disentangling the effects of the PT intervention, supervision, and coaching in our qualitative data may also be leading to discrepant quantitative and qualitative findings. Despite our interviewers' best efforts, counselors were not always able to differentiate between their experiences with the PT intervention, supervision, and coaching. Moreover, there was a tremendous amount of overlap between perceived clinical vs. implementation support roles. During interviews, counselors spoke of supervisors and coaches providing *both* clinical and implementation support, making it challenging to distinguish between the benefits of supervision vs. implementation coaching. This potential greyness that is caused by the ties between a clinical and implementation intervention has been recognized in the literature (Eldh et al., 2017). This may have contributed to why we see such strong qualitative evidence for the benefits of coaching, but no significant differences on the majority of our quantitative outcomes. This does not indicate that

coaching did not have any positive impact, but rather that we are limited in our ability to tease apart how much of this positive impact was uniquely due to coaching.

One curious and unexpected finding concerned *lower* perceived feasibility, appropriateness, and self-efficacy to implement PT among coached CHVs. This finding from the quantitative data contradicted our hypotheses and results from the qualitative data. However, this finding should be interpreted with the caveat that the decrease in CHV-reported mean scores may not have been meaningful. For example, feasibility scores were measured on a scale of 1-5 where 4 was "agree" and 5 was "strongly agree," and mean feasibility scores were 4.67 (no coaching condition) versus 4.31 (coaching condition) (*SD* = 0.40 for both conditions) (**Table 6**). In the qualitative interviews, CHVs indicated that coaching improved feasibility to implement PT by helping CHVs develop tailored workplans to target barriers, preparing CHVs about PT expectations, and facilitating necessary supports from leaders and other staff for CHVs to deliver PT groups in schools. A similar pattern was observed for appropriateness and self-efficacy. One possible explanation for these contradictory findings is that despite liking coaching, the added time and burden of coaching made CHVs feel that PT was less feasible. The goal of coaching was to anticipate barriers and address them in advance, but by doing so, it is possible that CHVs took on more work with PT delivery. For example, CHVs were critically involved in implementing strategies to address barriers related to PT attendance. It could be that a formalized workplan that outlined these strategies increased CHVs' perceived expectations to implement all the selected strategies, which made PT delivery feel less feasible. Another possible explanation for these divergent findings is the lack of any counselor-level covariates in our models that might be contributing to the variance in study outcomes for CHVs. For example, we might expect that counselors with fewer years of experience working with orphans/guardians would have lower self-

efficacy around leading an intervention for this population, which may impact the relationship between coaching and self-efficacy. On the other hand, older counselors with more years of experience working as a CHV may be more resistant to taking on a new role and be more likely to perceive PT as less appropriate. Given the high means among CHVs in both conditions, along with a strong signal in the qualitative data on the perceived benefits of coaching among CHVs, it seems less likely that coaching had a *negative* impact on feasibility, appropriateness, or self-efficacy to implement PT. In addition to including site-level covariates, the GEE models should be expanded to include relevant counselor-level covariates once data from all sequences is available. *Member checking* (QualRIS, 2019) with our Ace Africa partners can also help understand these contradictory findings for CHVs in this study. Ultimately, given the resource-constrained environments in LMIC, member checking should also involve a discussion around whether both coaching and supervision are needed in this context, or if supervision alone is sufficient to support PT implementation in schools.

Another possible explanation for divergent findings between our quantitative and qualitative data may be surrounding the measurement of our implementation constructs. Given the lack of validated implementation research measures in non-western settings (Haroz et al., 2019), all our study measures required adaptation. While our measures had acceptable internal consistency, full exploratory and confirmatory factor analyses are needed to validate them in the current Kenyan context. For example, we used an adapted version of the Jacobs, Weiner and Bunger (2014) Implementation Climate Scale that assessed the degree to which PT implementation was expected, rewarded and supported at each site. In the qualitative data, teachers and CHVs explained that being selected as a PT counselor was perceived as a high honor (reward); being chosen to play this role in a context with few professional development opportunities conferred a

strong *internal* sense of duty towards fulfilling the responsibilities of this new role. The construct of implementation climate may operate differently in this context, where staff perceive this additional role as a reward, and have strong internal values around doing what is expected of them when they are assigned work by their leaders. If being asked to do something by one's leader confers the same level of expectation across all individuals, would our current measure capture differences in expectations to implement PT? Theoretically, it is not clear if constructs like implementation climate play the same role in implementation delivery in this context as they do in western settings. Future validation studies and qualitative work to understand the meaning of implementation climate in non-western settings need to be conducted to help answer these empirical questions.

Unique Themes from Qualitative Data

The qualitative data in this study adds support for how facilitation plays a role in successful implementation as outlined in the i-PARIHS framework (Harvey & Kitson, 2016). Our findings indicated that coaching likely activated implementation by assessing and responding to barriers and facilitators related to the *clinical innovation* (*Pamoja Tunaweza*), *recipients*[2] (children, guardians, teachers and CHVs), and the *inner local* and *organizational contexts* (staff teams at each site, leadership support, schools) (**Figure 15**). Counselors provided

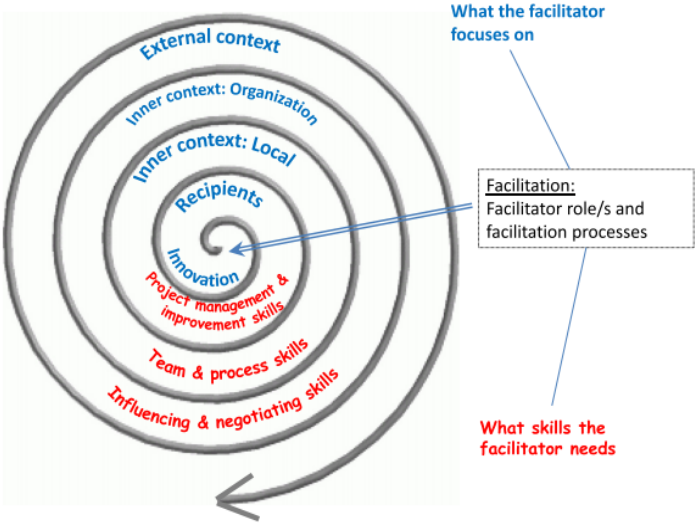


Figure 15 *i-PARIHS Determinant Framework*

[2] *Recipient* construct in the i-PARIHS framework includes "*people who are affected by and influence the implementation at both the individual and collective team level"* (Harvey & Kitson, 2016); this can include clients, clinical staff, managers and leaders.

multiple examples of how coaching increased their understanding of the mental health needs of orphaned children, and PT's ability to meet those needs (*clinical innovation*). Highlighting PT's potential effectiveness and importance to counselors and their leaders emerged as a major benefit of coaching during early sensitization meetings. Relatedly, coaching appeared to improve counselor readiness to implement PT (*recipients)*. Counselors frequently associated feeling prepared and organized to implement PT with activities undertaken during coaching. While we expected to hear counselors express dissatisfaction about the added burden of attending coaching, the tone of the qualitative interviews on how counselors viewed coaching was overwhelmingly positive. Counselors emphasized that instead of reducing coaching to ease their workload, they would like an *increase* in the dose of coaching so that they have sufficient time to create comprehensive implementation workplans and develop strategies for anticipated barriers. Studies have suggested that perceptions about the utility or relevance of training/consultation for a new program play a key role in providers' cost-benefit decisions about their participation (Lyon et al., 2013; Nelson, Steele, & Mize, 2006). A U.S. study with school-based counselors providing mental health services found that if counselors perceived the new program to be worth their time, they were willing to invest the time despite competing priorities (Lyon et al., 2013). Similar counselor perceptions of the utility of PT and coaching may be driving recommendations to increase the dose of coaching in the present study. Many counselors also suggested adding more coaching meetings prior to starting PT groups, along with even more advanced planning for coaching and PT activities. These lay counselor perspectives are aligned with a call in the implementation science literature to spend more time in the preparation phase for mental health implementations (Moullin, Dickson, Stadnick, Rabin, & Aarons, 2019).

Interestingly, coaching also appeared to have some unintended benefits that merit attention. Counselors described that coaching had a significant spillover effect on other *recipients* in this context; in addition to enhancing counselor knowledge and skills around working with orphans, coaching encouraged counselors to share their newly gained knowledge with other non-PT staff, leaders, and members of the larger community (e.g., families, support staff, Village Chiefs, other influential community members). Counselors described this spillover effect as having created a more supportive and nurturing environment for orphans in the schools and surrounding communities, thereby reducing stigma around orphans' mental health problems. Stigma about accessing care is a known barrier to treatment use in LMIC (Patel et al., 2011). Findings from the LMIC literature indicate that efforts to reduce stigma and its harmful effects require a multi-level approach that focuses not only on the intra/interpersonal-level, but also on community- and organizational-level influences to reduce stigma (Rao et al., 2019). Implementation coaching may be a mechanism through which newly implementing sites can target stigma reduction at their community- and organizational-levels.

Another unintended benefit of coaching was an improvement in counselors' relationships. Counselors frequently reported experiencing improved relationships with their fellow PT counselors, non-PT colleagues, leaders, administrative and support staff, coaches and Ace Africa supervisors as a result of coaching (*inner context*). The positive relationship between counselors and coaches was particularly important in increasing counselors' morale in the face of challenges; such relationships between lay counselors and supervisors have similarly operated as protective factors to increase counselor self-efficacy and motivation in other LMIC studies (Wall, Kaiser, Friis-Healy, Ayuku, & Puffer, 2020). For teachers, gaining support from non-PT school staff and leadership was essential to integrating PT into the school and teacher counselor's schedule, which

has also been observed in other school-based mental health implementations (Forman & Barakat, 2011). As coaching facilitated closer relationships between teacher counselors and their school staff, teachers were more likely to ask them for additional support during PT implementation, thereby enhancing feasibility of PT delivery. Similarly, a wonderful synergy was observed between the two sectors during exchanges of support between CHVs and the school staff to support PT implementation in both sectors. This sense of harmony and mutual support between different *recipients* within the *inner context* in moving towards a common goal highlights the communal values that impact individual and group behaviors in non-western settings. In collectivist cultures that are relationally-oriented, an implementation strategy that can enhance relationships may hold promise for successfully targeting implementation challenges. Taken together, these unintended benefits of coaching of improved relationships and reduced stigma went beyond coaching's primary aim of providing implementation support. More detailed examination of how a coaching strategy can be leveraged to enhance these benefits will be an important direction for future research on coaching in non-western, low-resource contexts.

The qualitative arm of this study also makes a unique contribution to the evidence base by identifying specific components of the multifaceted coaching strategy that were most useful in supporting lay counselor delivery of a mental health intervention. Task-shifting has become the de facto model to target the shortage of mental health professionals in LMIC and reduce the mental health treatment gap (Healy, Kaiser, & Puffer, 2018; Hoeft, Fortney, Patel, & Unützer, 2018; WHO, 2008b). If lay counselors are going to be the majority of frontline mental health providers in LMIC, understanding their perspectives on the acceptability, feasibility and utility of implementation strategies to address implementation challenges is critical for scale-up and sustainment of mental health treatments. As such, this study addresses a specific need in the field

for more qualitative research to examine lay counselor perspectives in LMIC (Pedersen et al., 2019). In the parent grant, we conducted qualitative interviews to identify actionable implementation policies and practices (**IPPs**) that supported PT implementation at Sequence 1 sites that did not receive coaching. Comparing results from these Sequence 1 counselor interviews to those from Sequence 2-3 counselor interviews (present study), coaching benefits described by coached counselors mapped on closely to the necessary IPPs identified by non-coached counselors. These actionable IPPs included early sensitization to PT, workload adjustment, resource provision, leadership engagement, support and persuasive communication, rewards & incentives, and community outreach (Martin et al., 2019).

During qualitative interviews in the present study, counselors provided spontaneous responses indicating that coaching strategically targeted these IPPs, which contributed to their perceived acceptability and utility of coaching. While all Sequence 1 sites successfully implemented PT, the qualitative IPP data from Sequence 1 indicated a higher level of stress experienced by counselors who did not receive coaching. For example, multiple counselors reported being unsatisfied with the lack of resource planning needed for PT implementation, and that the process of procuring resources in time to begin PT was stressful. In the present study, counselors described how coaching specifically targeted resource provision during the pre-implementation phase, which contributed to the utility of coaching and enhanced feasibility of PT. Similarly, Sequence 1 CHV counselors who rated high acceptability, feasibility and appropriateness of PT (Dorsey et al., 2019) also mentioned feeling they were not sufficiently sensitized and prepared for the PT program, and that they experienced challenges juggling the new PT workload with their existing workload and family commitments. In the present study, CHV counselors described how coaching targeted both self-time management and workload adjustment,

which significantly eased CHVs' stress around taking on additional PT responsibilities without neglecting their existing commitments. Therefore, the qualitative data provided a strong signal on the utility of coaching in addressing issues that had been raised by Sequence 1 counselors who had successfully implemented PT, but had experienced additional stress and challenges towards meeting implementation goals.

These data suggest that perhaps adoption is not a metric that paints the full picture; the level of stress experienced during implementation is also important. While sites in all sequences of BASIC have adopted PT so far, comparing qualitative data from non-coached and coached counselors indicates that coaching addressed implementation barriers that counselors may have overcome, but had caused stress during implementation. This is relevant when considering what is being asked of lay counselors in LMIC – learning treatments without prior background or training, delivering treatments in the absence of a comprehensive mental health care system, identifying and addressing implementation barriers, working in resource-constrained settings with minimal government funding dedicated to mental health – all while managing their existing workload and often performing additional counselor duties without additional compensation (Joshi et al., 2014; Mendenhall et al., 2014; Singla et al., 2017; Van De Water, Rossouw, Yadin, & Seedat, 2017). Role identity theory would posit that the integration of a new counseling role within their existing roles may lead to some positive role shifts (e.g., increased respect and status in the community) as well as tensions between roles (Siebert & Siebert, 2007). A recent study of a lay-counselor delivered family-based mental health intervention in Kenya found that the initial high motivation and self-efficacy among lay counselors diminished as challenges persisted over time, and over half of counselors experienced stress and burnout (Wall et al., 2020). Other studies have also found that lay counselors may experience increased stress in the context of taking on these

new roles in their communities (Mlotshwa, Harris, Schneider, & Moshabela, 2015). Stress and burnout are therefore two major areas of concern for lay counselors (Collins & Long, 2003; Hamdan-Mansour, Al-Gamal, Puskar, Yacoub, & Marini, 2011; Johnson et al., 2018), which can lead to low retention (Strachan et al., 2015). Therefore, implementation strategies that can reduce lay counselor-level stress and burnout warrant consideration. While we have not yet seen differences in PT adoption between coached and uncoached sites, it is possible that differences may emerge over time (e.g., sustainment of delivery). Future research should test empirical questions around whether coaching can help reduce lay counselor stress and burnout, which may increase counselor retention and sustainment practices over time.

Study Implications for Low-Resource Contexts

Overall, our qualitative data suggest that counselors liked and benefitted from coaching. However, the overlap between the effects of the PT intervention, supervision and coaching makes it difficult to determine the measurable and isolated impact of coaching alone. We would argue that fully differentiating between the effects of clinical vs. implementation support is a research problem, not a practice-related problem. Lay counselors are most concerned about delivering effective programs that are a good fit for their context and receiving adequate support to implement them. From the counselor's perspective, being unable to differentiate between clinical and implementation support may even be desirable, as they experience supervision and coaching as one comprehensive, cohesive form of support to deliver PT in their setting. The more practice-relevant question here is whether coaching is truly needed to support PT implementation. In resource-constrained settings, the bar for the impact of an implementation strategy like facilitation might need to be *higher* to justify investing such limited resources towards it. Perhaps merging

supervision and coaching may present a more efficient and less complex pathway towards scaling up implementation support in this low-resource context. Our next steps will involve reviewing our findings with our Kenyan stakeholders to determine if coaching should be continued, and how supervision and coaching may be adapted for optimal use of resources in the future.

Strengths & Limitations

This study provided a unique opportunity to contribute findings to the implementation science literature in LMIC and had a number of strengths. First, the use of qualitative methods within a mixed methods design was instrumental to expanding quantitative results and providing a more comprehensive picture of lay counselor perspectives on coaching. Second, the use of rapid assessment methods decreased time and resources needed during qualitative data collection and analyses. As a result, we were also able to provide our partners at Ace Africa with feedback on the most important recommendations to inform coaching in real-time. These rapid methods are replicable in other low-resource contexts. The realistic study conditions, including lay counselor delivery in school-based settings and implementation of a Kenyan-led coaching strategy without additional resources, are particular strengths. Since this study built off the BASIC parent grant, it benefited from having one of the largest sample sizes of lay counselors for a global child mental health study to date. Finally, there was substantial variation across participant responses during qualitative interviews, suggesting that our sampling strategy successfully captured maximum variation across counselor type, urban/rural settings, and school/community size.

The present study also has several limitations. First, given the timing of this study and COVID-related data collected delays, we were only able to include data from Sequences 1-4, limiting inclusion of the full sample. We also did not have access to site-level covariates that may

impact the relationship between coaching condition and our study outcomes. Second, due to COVID-related delays, the qualitative component of this study includes only perspectives of lay counselors who received coaching. The inclusion of coach and leader perspectives would have likely enriched the study findings and not including these additional perspectives may have resulted in missed themes. Third, due to COVID-19, all project activities stopped from March – December 2020. As a result, counselors had experienced a significant gap in PT and coaching activities at the time of qualitative interviews, and recall bias may have impacted our results. Fourth, the relatively small number of sites precluded the use of multilevel models that would better account for clustering of counselors within sites. Due to the limited number of counselors at each site, we were unable to aggregate individual responses within the organization to come up with scores that reflected the shared perceptions of organizational members as a group. Instead, our results are limited to capturing individual perceptions of organizational constructs such as *organizational readiness*, *implementation climate* and *implementation leadership*. Another limitation is that the adapted implementation measures for this study have not yet been fully validated in the current context. Validation studies will be conducted with the full BASIC sample once sites in all sequences have completed delivery of *Pamoja Tunaweza*. Finally, findings from this study may not generalize to different regions or schools in Kenya (e.g., secondary schools), given our desire to place this study specifically within Bungoma's community health program.

Conclusion

Successful implementation of mental health services is one of the greatest challenges facing global health. The purpose of this study was to generate knowledge around methods of providing implementation support to counselors and sites in LMIC, with the potential for scale up and sustainment. The lack of research in this area is a substantial barrier to bridging the mental health treatment gap and improving population health and wellbeing. To our knowledge, this is the first global study to assess the impact of an implementation coaching strategy to successfully deliver a child mental health intervention, in a context of nearly non-existent funding for mental health. Our findings highlighted the importance of using mixed methods in implementation research. While the majority of our quantitative analyses did not indicate significant differences on implementation outcomes and determinants between coaching conditions, the qualitative data provided in-depth perspectives on the benefits of coaching for lay counselors. However, given the overlap between the effects of supervision and coaching, these benefits cannot be attributed to coaching alone. While counselors found coaching to be highly acceptable, feasible and useful, the added time, burden and cost of coaching necessitates careful consideration around if and how coaching should be continued. One notable feature of this coaching strategy was that it was fully situated within the local Kenyan context, and leveraged local resources and expertise in order to be sustainable. Findings from this study can inform the application of similar implementation support strategies in other low-resource settings, and help deliver on the promise of task-shifting to provide accessible mental health services in LMIC.

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Appendix A: Quantitative Study Measures

Note: All measures below are taken from the teacher surveys. CHVs answered the same questions with minor changes in wording to fit their context.

ACCEPTABILITY

1) Pamoja Tunaweza/TF-CBT met my approval.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

2) Pamoja Tunaweza/TF-CBT was appealing.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

3) I liked Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

4) I welcomed the use of Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

FEASIBILITY

1) Pamoja Tunaweza/TF-CBT is easy to use in this school.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

2) Pamoja Tunaweza/TF-CBT seems possible in this school.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

3) Pamoja Tunaweza/TF-CBT seems doable in this school.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

4) Pamoja Tunaweza/TF-CBT seems implementable in this school.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

APPROPRIATNESS

1) I believe that I should be providing Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't know	Prefer Not to Say
Not at all		Moderately		Extremely		

2) I believe that teachers should be providing Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't know	Prefer Not to Say
Not at all		Moderately		Extremely		

3) I believe that schools should be responsible for providing psycho-social education (including psycho-social counseling, psycho-social support or mental health treatment) for orphaned children.

1	2	3	4	5	Don't know	Prefer Not to Say
Not at all		Moderately		Extremely		

4) From my perspective, providing Pamoja Tunaweza/TF-CBT is something I feel I should be doing as part of my role as a teacher.

1	2	3	4	5	Don't know	Prefer Not to Say
Not at all		Moderately		Extremely		

5) From my perspective, attending supervision for Pamoja Tunaweza/TF-CBT is something I feel I should be doing as part of my role as a teacher.

1	2	3	4	5	Don't know	Prefer Not to Say
Not at all		Moderately		Extremely		

6) Pamoja Tunaweza/TF-CBT fits with our school's approach to helping orphaned children.

1	2	3	4	5	Don't know	Prefer Not to Say
Not at all		Moderately		Extremely		

7) Providing Pamoja Tunaweza/TF-CBT <u>fits</u> with the goals of my school.

1	2	3	4	5	Don't know	Prefer Not to Say
Not at all		Moderately		Extremely		

8) Providing Pamoja Tunaweza/TF-CBT is <u>useful</u> for my school.

1	2	3	4	5	Don't know	Prefer Not to Say
Not at all		Moderately		Extremely		

BEHAVIORAL INTENTIONS

1) <u>I intend to</u> provide Pamoja Tunaweza /TF-CBT to orphaned children in my school in the next month.

1	2	3	4	Don't know	Prefer Not to Say
Not at all	A Little Bit	Moderately	A Lot		

2) <u>I intend to</u> attend supervision for Pamoja Tunaweza /TF-CBT in the next month.

1	2	3	4	Don't know	Prefer Not to Say
Not at all	A Little Bit	Moderately	A Lot		

3) <u>Providing</u> Pamoja Tunaweza /TF-CBT will be a high priority for me in the next month.

1	2	3	4	Don't know	Prefer Not to Say
Not at all	A Little Bit	Moderately	A Lot		

If you answered <u>3 or lower to Question 3</u>, in the space below please tell us why Pamoja Tunaweza /TF-CBT might not be a high priority.

_____

_____

_____

_____

4) <u>I intend to</u> encourage others to become counselors for Pamoja Tunaweza / TF-CBT.

1	2	3	4	Don't know	Prefer Not to Say
Not at all	A Little Bit	Moderately	A Lot		

SELF-EFFICACY

1) <u>I am confident</u> that I could deliver two consecutive groups of Pamoja Tunaweza/TF-CBT (one this term, one next term) in my school.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

2) <u>I have control over</u> delivering two consecutive groups of Pamoja Tunaweza/TF-CBT in my school.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

3) For me, attending weekly supervision for Pamoja Tunaweza/TF-CBT is…

1	2	3	4	5	Don't Know	Prefer Not to Say
Very Difficult	Difficult	Neither Easy nor Difficult	Easy	Very Easy		

4) For me, completing group report forms after Pamoja Tunaweza/TF-CBT groups each week is…

1	2	3	4	5	Don't Know	Prefer Not to Say
Very Difficult	Difficult	Neither Easy nor Difficult	Easy	Very Easy		

5) <u>I am confident</u> that I can deliver two consecutive groups of Pamoja Tunaweza/TF-CBT in my school, even when children are not motivated.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

6) <u>I am confident</u> that I can deliver two consecutive groups of Pamoja Tunaweza/TF-CBT in my school, even when there is little time.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

ORGANIZATIONAL READINESS FOR CHANGE

1) People you work with are committed to implementing Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

2) People you work with are determined to implement Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

3) People you work with are motivated to implement Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

4) People you work with will do whatever it takes to implement Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

5) People you work with want to implement Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

6) People you work with can manage the competing interests of stakeholders involved in implementing Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

7) People you work with feel confident that the school can support people as they adjust to implementing Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

8) People you work with feel confident that they can coordinate the tasks so that implementation of Pamoja Tunaweza/TF-CBT goes smoothly.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

9) People you work with feel confident that they can keep track of progress in implementing Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

10) People you work with feel confident that they can manage the challenges that might arise in implementing Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

IMPLEMENTATION CLIMATE

1) I am expected to use Pamoja Tunaweza/TF-CBT with children at my school.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

2) I am expected to help my school meet its goals regarding the implementation of Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

3) I get the support I need to use Pamoja Tunaweza/TF-CBT with children.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

Please tell us about the kinds of support you were thinking about when you answered the last question.

_____

_____

_____

4) I receive recognition when I use Pamoja Tunaweza/TF-CBT with children. (An example of recognition would be receiving praise from colleagues at your school for using Pamoja Tunaweza.)

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

5) I receive appreciation when I use Pamoja Tunaweza/TF-CBT with children. (Some examples of appreciation include any form of acknowledgement from your school for your work with children, an incentive/reward, or being recommended for other trainings.)

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

6) Teacher <u>counselors</u> are expected to use Pamoja Tunaweza/TF-CBT with children in their school.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

7) Teacher <u>counselors</u> are expected to help their school attain its goals for implementing Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

8) Teacher <u>counselors</u> get the support they need to use Pamoja Tunaweza/TF-CBT with children.

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

9) Teacher <u>counselors</u> receive recognition for using Pamoja Tunaweza/TF-CBT with children. (An example of recognition would be receiving praise from colleagues at your school for using Pamoja Tunaweza.)

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

10) Teacher <u>counselors</u> receive appreciation for using Pamoja Tunaweza/TF-CBT with children. (Some examples of appreciation include any form of acknowledgement from your school for work with children, an incentive/reward, or being recommended for other trainings.)

1	2	3	4	5	Don't Know	Prefer Not to Say
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree		

When you answered these questions, who are the people who expected, supported, and rewarded the use of Pamoja Tunaweza/TF CBT? Please list their roles, <u>not</u> their names (e.g. Head Teacher, Deputy Head Teacher, any other individuals).

IMPLEMENTATION LEADERSHIP

1) [*Say leader name*] has developed a plan to facilitate implementation of Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't	Prefer Not to
Not at all	Slight Extent	Moderate Extent	Great Extent	Very Great Extent	Know	Say

2) [*Say leader name*] has removed obstacles to the implementation of Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't	Prefer Not to
Not at all	Slight Extent	Moderate Extent	Great Extent	Very Great Extent	Know	Say

3) [*Say leader name*] has established clear quality standards for the implementation of Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't	Prefer Not to
Not at all	Slight Extent	Moderate Extent	Great Extent	Very Great Extent	Know	Say

4) [*Say leader name*] is knowledgeable about Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't	Prefer Not to
Not at all	Slight Extent	Moderate Extent	Great Extent	Very Great Extent	Know	Say

5) [*Say leader name*] is able to answer my questions about Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't	Prefer Not to
Not at all	Slight Extent	Moderate Extent	Great Extent	Very Great Extent	Know	Say

6) [*Say leader name*] perseveres through the ups and downs of implementing Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't	Prefer Not to
Not at all	Slight Extent	Moderate Extent	Great Extent	Very Great Extent	Know	Say

7) [*Say leader name*] knows what he or she is talking about when it comes to Pamoja Tunaweza/TF-CBT

1	2	3	4	5	Don't	Prefer Not to
Not at all	Slight Extent	Moderate Extent	Great Extent	Very Great Extent	Know	Say

8) [*Say leader name*] recognizes and appreciates teacher counselor efforts toward successful implementation of Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't	Prefer Not to
Not at all	Slight Extent	Moderate Extent	Great Extent	Very Great Extent	Know	Say

9) [*Say leader name*] supports teacher counselor efforts to learn more about Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't	Prefer Not to
Not at all	Slight Extent	Moderate Extent	Great Extent	Very Great Extent	Know	Say

10) [*Say leader name*] supports teacher counselor efforts to use Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't	Prefer Not to
Not at all	Slight Extent	Moderate Extent	Great Extent	Very Great Extent	Know	Say

11) [*Say leader name*] carries on through the challenges of implementing Pamoja Tunaweza/TF-CBT.

1	2	3	4	5	Don't	Prefer Not to
Not at all	Slight Extent	Moderate Extent	Great Extent	Very Great Extent	Know	Say

12) [*Say leader name*] effectively addresses critical issues regarding implementation of Pamoja Tunaweza/TF-CBT?

1	2	3	4	5	Don't	Prefer Not to
Not at all	Slight Extent	Moderate Extent	Great Extent	Very Great Extent	Know	Say