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Implementing Parent-Teen Motivational Interviewing + Behavior Therapy for ADHD in Community Mental Health

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Abstract

Despite the promise of psychosocial interventions for adolescent Attention Deficit Hyperactivity Disorder (ADHD), there are no studies that examine their implementation in community mental health contexts. In this study, we evaluate the implementation of community-based Supporting Teens' Autonomy Daily (STAND), a parent-teen Motivational Interviewing + Behavior Therapy intervention for adolescents with ADHD. Adolescents with ADHD (*N*=225), who were clients at four community mental health agencies, received treatment from 82 therapists. There was double randomization of adolescents and therapists to STAND or Usual Care (UC). Nearly all therapists randomized to STAND completed the training and regularly attended supervision, rating STAND as acceptable and lower burden than UC practices. In the STAND group, MI competence and implementation were lower than in university trials (benchmark range: 19.5% for reflection to question ratio to 83.1% for technical globals). MI integrity in the STAND group was significantly higher than UC across most MITI indices. Content fidelity was adequate in STAND's engagement

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Compliance with Ethical Standards

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Research Involving Human Subjects: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee (Florida International University IRB; #103225) and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent: Informed consent was obtained from all individual participants included in the study.

and skills phases (76.4%−85.0%), but not its planning phase (24.4%). Therapists commonly neglected weekly review of goals and home practice and deviated from manualized pace and sequencing of therapy tasks. Learning MI was more challenging for bilingual therapists and therapists with more years of experience. STAND was delivered with higher integrity in earlier sessions and office-based sessions. Discussion identifies future directions for exporting adolescent ADHD interventions to community settings. Patient outcome data for this trial is presented elsewhere.

Trial Registration: NCT02694939www.clinicaltrials.gov

Keywords

ADHD; Adolescence; Motivational Interviewing; Community-Based Research

Attention Deficit Hyperactivity Disorder (ADHD) is a chronic neurodevelopmental disorder with practice parameters that recommend ongoing medication and/or psychosocial treatment across the lifespan (American Academy of Pediatrics, 2019; Asherson, 2016). Though often overlooked, adolescence is a critical period for ADHD intervention given predictive relationships between adolescent functioning and adult outcome (Barkley, Murphy, & Fischer, 2008; Molina et al., 2012; Sibley, Pelham, et al., 2014). Psychosocial interventions for adolescents with ADHD (Chan, Fogler, & Hammerness, 2016; Sibley, Kuriyan, Evans, Waxmonksy, & Smith, 2014) teach compensatory skills that mitigate executive functioning deficits while training parents or other adults to apply contingency management to manage rewards processing deficits (Castellanos, Sonuga-Barke, Milham, & Tannock, 2006; Sonuga-Barke, 2005). Psychosocial treatment is a strong developmental fit for adolescence given that: (1) teens often dislike medication (Brinkman, Simon, & Epstein, 2017; Molina et al., 2009), (2) psychosocial treatments outperform medication in reducing adolescent impairments (Sibley, Kuriyan, et al., 2014), and (3) unlike *childhood* ADHD treatment (Swanson et al., 2017), *adolescent* treatment shows possible long-term effects (Sibley et al., 2018). Randomized trials report medium to large effects for adolescent psychosocial ADHD treatments (Chan et al., 2016).

Despite the efficacy of psychosocial treatment for adolescent ADHD, less than a third of teens with ADHD access therapy in their communities (Bussing, Zima, Mason, Porter, & Garvan, 2011). It can be difficult to retain adolescents with ADHD in family-based treatment due to high family conflict and motivation problems (Barkley, Edwards, Laneri, Fletcher, & Metevia, 2001; Barkley, 2018). These family and motivation engagement difficulties are compounded in community settings, where retention in services is lower than academic clinics (Southam-Gerow, Chorpita, Miller, & Gleacher, 2008; Southam-Gerow, Weisz, & Kendall, 2003) and directive skills-based therapy can be ill-received (Baker-Ericzén, Jenkins, & Haine-Schlagel, 2013). Adolescents are more likely than children to prematurely disengage from community treatment (Miller, Southam-Gerow, & Allin, 2008), as are youth with family problems (Farmer, Stangl, Burns, Costello, & Angold, 1999), multiple comorbidities (Dierker, Nargiso, Wiseman, & Hoff, 2001), socioeconomic disadvantage (Farmer et al., 1999), and racial/ethnic minority status (McMiller & Weisz, 1996). Thus, even when they initially engage in therapy, adolescents with ADHD characteristically possess many risk factors associated with premature termination (Edwards,

Barkley, Laneri, Fletcher, & Metevia, 2001; Wolraich et al., 2005)—particularly youths from disadvantaged and minority backgrounds.

In response to the barriers above, we developed Supporting Teens' Autonomy Daily (STAND; Sibley, 2016; Sibley et al., 2016), an engagement-focused psychosocial treatment for adolescents with ADHD and academic, family, and/or behavioral impairments. STAND is manualized and consists of 10 weekly 60-minute sessions attended by the adolescent and parent. Skill instruction is blended with Motivational Interviewing (MI; Miller & Rollnick, 2013) and guided parent-teen behavioral contracting (Patterson & Forgatch, 1987). Treatment targets family, behavioral, and academic impairment. In the engagement phase, MI is used to increase awareness of personal values and goals, identify strengths, and recognize ways to achieve goals by acting consistently with values. The skills phase is designed to teach parent-teen communication, parent behavioral strategies, and organization, time management and planning skills that help youth overcome executive function and motivation deficits at home and school. Treatment is modular to promote flexible delivery and tailoring to presenting problems and developmental level. Families and therapists collaboratively select goal-relevant skills. The skills phase is collaborative, introducing strategies using MI approaches that emphasize client autonomy in skill adoption. The skills phase includes parent-teen contracting with MI that builds commitment to daily skill practice. Planning sessions teach families to integrate skills into a daily routine, transfer new habits to school settings, and build a final parent-teen contract, with MI increasing commitment to long-term change.

Three published randomized trials of STAND in university settings indicate a range of effects on ADHD symptoms, organization skills, grade point average, parent strategy use, and parenting stress, with full or partial maintenance six months post-treatment (Sibley et al., 2013; Sibley et al., 2016; Sibley, Rodriguez, Coxe, Page, & Espinal, 2019). Additionally, trainee therapists implemented STAND with high fidelity and met MI benchmarks. They rated STAND to be highly acceptable and face valid, as did families (Sibley et al., 2013). No distal follow-up of STAND's long-term efficacy has been conducted.

Despite the emergence of STAND and similar approaches (Boyer, Geurts, Prins, & Van der Oord, 2015; Sprich, Safren, Finkelstein, Remmert, & Hammerness, 2016), psychosocial treatments for adolescent ADHD are unevaluated in community contexts. Community settings differ from academic clinics. Most agencies operate at a budget deficit with an oft-unlicensed master's level workforce (Schoenwald et al., 2008). Agencies offer low levels of professional development, experience high turnover, and lack quality assurance policies (Garland et al., 2013). They serve primarily low-income families with notable risk factors (Garland et al., 2013; Schoenwald et al., 2008). Services often are provided in homes and schools—outside the quiet therapy office (Garland et al., 2013). Though some EBPs struggle due to these health service systems challenges (e.g., Lyon & Budd, 2010), many community therapists regularly employ and are amenable to training in evidence-based practices (EBPs; Brookman-Frazee, Garland, Taylor, & Zoffness, 2009; Southam-Gerow et al., 2014; Weisz et al., 2009). However, they typically deliver EBPs at lower intensities, omitting key components such as therapy homework (Garland et al., 2010). Thus, it is unclear if STAND would successfully transport to community settings.

In some ways, STAND may be very suitable for community contexts. Its engagement-focused MI approach empowers parents and teens to take self-paced, manageable steps. Parent empowerment models are effective in community contexts (Rodriguez et al., 2011). MI in particular increases engagement in family treatment—especially when blended with other therapies (Ingoldsby, 2010). Community mental health practitioners can deliver MI with fidelity (Barwick, Bennett, Johnson, McGowan, & Moore, 2012; Martino et al., 2010; Schoener, Madeja, Henderson, Ondersma, & Janisse, 2006), including family applications (Smith, Stormshak, & Kavanagh, 2015). In addition, STAND is modular, which promotes flexibility. Modular therapy appears highly acceptable to community practitioners (Chorpita et al., 2017; Weisz et al. 2012), who commonly adjust the pace and sequencing of evidence-based practices (Lau et al., 2017).

In other ways, STAND implementation may be challenging to the community workforce. STAND is multimodal; therapists must juggle MI and skills content (Sibley, 2016). All the while, they must manage ADHD-specific challenges such as parent-teen conflict, motivation deficits, inconsistent family routines, intrusive parenting, regulating electronics, and skepticism about therapy (Sibley & LaCount, in press). The overworked and under-resourced community mental health workforce historically struggles with similar challenges (Garland et al., 2013).

In this study, we evaluate implementation of STAND in a community setting. We examined ratings and audio recordings collected from community therapists (N=82) enrolled in a randomized effectiveness trial (N=278) of STAND versus Usual Care (UC). Successful implementation requires consumer and therapist acceptability, therapist engagement in training and supervision, therapist competence and skill application, and treatment integrity (Hoagwood, Jensen, Petti, & Burns, 1996). We investigated how STAND performed on these community and therapeutic metrics. We hypothesized that community therapists would successfully engage in STAND training and supervision, demonstrate adequate MI knowledge and competence after training, and demonstrate superior MI integrity to UC (Smith et al., 2015). We also hypothesized that consistent with past research, STAND-trained therapists would demonstrate reduced, but adequate, fidelity to manualized content (Miller, Yahne, Moyers, Martinez, & Pirritano, 2004), and that resequencing, repeating content, and low intensity implementation would be common (Garland et al., 2010). Finally, we examined factors that predicted integrity and fidelity.

Methods

Study Design

Therapists (N=82) at four community agencies were randomly assigned to provide Usual Care (UC) to study cases or to receive training and supervision in STAND. Adolescent clients (N=278) were randomly assigned to STAND or UC (double randomization). Full study design and CONSORT diagram are available online. Herein we analyze therapy delivery data for 225 participants (80.9% of full sample) who received at least one session from a study therapist.

Participants

Adolescents.—The full sample consists of 278 adolescents (ages 11–17) in a large pan-Latinx and pan-Caribbean U.S. city. Participants were required to meet DSM-5 ADHD criteria (available online). Autism spectrum disorder and intellectual disability (IQ<70) were exclusionary. Table 1 presents demographic characteristics for participants who contributed data to this study (N=225). STAND and UC groups slightly differed on stimulant medication use and parent language (p<.10), which subsequently served as covariates in relevant analyses.

Therapists.—Therapists (N=82) were mental health professionals employed at four community agencies. Therapists self-identified as 19.8% non-Hispanic White, 14.8% Black or African-American, 64.2% Hispanic, and 1.2% Other. They were 86.6% female, with 61.0% offering treatment in both Spanish and English. 22.0% of therapists were licensed and 86.6% held a master's degree (7.3% held a doctorate and 6.1% were bachelor's level). On average, clinicians reported 5.24 years of experience delivering therapy (range: 1–31). Therapists in STAND (N=42) and UC (N=40) did not differ on any study or demographic variable (p>.10).

Procedures

Recruitment and Intake.—At agency intake, agency staff provided study information to parents of 6th–12th grade students with attention, organization, motivation, or behavior problems. Students with at least four symptoms of inattention or hyperactivity/impulsivity (H/I) according to a research phone screen attended a full diagnostic assessment to evaluate inclusion criteria.

Data Collection.—Participants were permitted to utilize naturalistic stimulant medication during the study; all medications were monitored and controlled for in analyses. Study interventions were provided by agency employees using typical billing procedures. Post-Treatment (PT) data collection occurred approximately 16 weeks after the participant's first session at the agency. Retention was 99.3% at PT (i.e., data provided by at least one informant).

Therapist Procedures.—Therapy was delivered across three years. Eighty-two therapists were randomized (study cases per therapist M= 2.74, range: 0–14). Therapists were asked to: (1) complete competency measures post-training (STAND only), (2) provide one session audio recording per study case, (3) complete a fidelity checklist for each session (STAND only), and (4) complete PT measures for each case. Therapists received $20 for each audio recording.

STAND Training & Supervision.—To promote external validity, we set the STAND training and supervision procedures to the default parameters of community mental health. This meant reducing weekly supervision from two hours of feedback, coaching, and treatment planning to 30 minutes of case discussion. We retained the three-day training model, but removed the competency requirement (Sibley et al., 2013). Every 12 months, a four-hour booster training was provided. STAND therapists were provided with a treatment

manual and workbook for each case. Supervision was provided at the agency by one of two licensed clinical psychologists from the research team with deep experience delivering and supervising STAND. Additional training and supervision details are available online.

UC.—UC therapists were instructed to treat study cases using usual procedures in the agency and the treatments they believed would be most effective for the youth. They received weekly supervision for their study cases from agency supervisors according to typical agency practices. UC therapists were offered STAND training at the conclusion of the study.

Measures

Training and Supervision.—Attendance was recorded daily for training. Supervisors kept detailed supervision logs, providing information on whether supervision occurred, date of supervision sessions, and reasons supervision did not occur.

MI Knowledge and Competence.—The Motivational Interviewing Knowledge and Attitudes Test (MIKAT; Leffingwell, 2006) was adapted for the community mental health context (available online). This instrument was administered post-training. The MIKAT demonstrates strong psychometric properties across a range of contexts (Edwards, Stapleton, Williams, & Ball, 2015; Leffingwell, 2006; Simon & Ward, 2014). MIKAT total score was computed as the percentage of correct item responses. Therapists completed the Video Assessment of Simulated Encounters-Revised (VASE-R; Rosengren, Hartzler, Baer, Wells, & Dunn, 2008) immediately post-training in a group setting. The instrument possesses 18 video items that prompt participants to offer written therapeutic responses. The VASE-R was scored by two trained research coders. The VASE-R has excellent psychometric properties (Rosengren et al., 2008). In this study, 20% of tests were randomly selected for double coding and inter-rater reliability. Average Intraclass Correlation (ICC) was .98 indicating “almost perfect” inter-rater reliability (Landis & Koch, 1977). To assess competency, the VASE-R full score was computed for each therapist and compared to benchmarks (Rosengren et al., 2008).

MI Implementation.—The *Motivational Interviewing Treatment Integrity* (MITI) version 4.2 is a well-established coding system that measures MI treatment integrity. It possesses strong reliability and predictive validity (Moyers, Manuel, & Ernst, 2014; Moyers, Martin, Manuel, Hendrickson, & Miller, 2005). MITI yields global scores of MI implementation quality on four relational and technical dimensions (1–5 scale), MI-adherent and non-adherent clinician behavior counts (e.g., affirm, emphasize autonomy, confront), and technical skill indices (i.e., reflection to question ratio, % complex reflection). A twenty-minute interval of each audio tape was randomly selected and coded (n=158 with available tapes). Two coders who were masked to study group independently coded sessions. Twenty percent of coded sessions were selected for an inter-rater reliability probe. Average Intraclass Correlation (ICC) was .81, indicating “almost perfect” inter-rater reliability (Landis & Koch, 1977). An MI Implementation Index (0 to 6) was calculated with one point earned for each of four proficiency benchmarks (available online), one point for zero MI non-adherent behaviors, and one point for at least one MI-adherent behavior.

Fidelity Checklists.—Fidelity checklists used extensively in STAND trials (Sibley et al., 2016, 2019) were provided to each STAND therapist. Therapists were instructed to complete one checklist for each session delivered to study cases, endorsing completed therapeutic tasks. Trained research assistants listened to all submitted audio recordings in the STAND group (n=80) and completed fidelity checklists to assess validity of therapist report. Therapists completed a form for 83.3% of sessions that occurred prior to PT; 61.6% of audio-recorded therapist-endorsed tasks were corroborated by research assistants.

Agency Records.—Information on session dates, attendees, units billed, location, cancellations, and providing therapist were obtained directly from the agency's electronic medical record system for a 12-month period beginning at each participant's study intake date.

Therapist Acceptability.—We adapted a therapist attitude toward treatment scale used in past trials for adolescent ADHD treatment (Sibley et al., 2013). The therapist attitude toward treatment scale contains nine items that query therapist views about treatment such as effectiveness, confidence in approach, fit with counseling style, and likelihood of recommending to other therapists. Items are scored on a scale from 1 (strongly disagree) to 7 (strongly agree). Although the overall alpha for a nine-item composite was excellent (.93), the current study examined each item separately.

Therapy Bond.—The degree to which clients enjoyed working with the therapist was measured using the seven-item Therapist Bond Scale (TBS; Shirk & Saiz 1992). TBS items are rated by parents and teens on a 4-point Likert-type scale, ranging from 1 (not at all like you) to 4 (very much like you). TBS internal consistency and convergent validity are strong (Shirk & Saiz, 1992). In this study, alpha was .80 for the parent version and .79 for the adolescent version.

Analytic Plan

Detailed information about model specification is available online. Attendance at training, supervision sessions attended (%), and ratio of canceled to attended supervision sessions were examined descriptively. MI knowledge and competence scores were computed. Linear regressions examined predictors of knowledge and competence. Predictors were bilingual status, licensure status, and years of experience delivering therapy. Group differences in MITI indices were examined and Cohen's d effect sizes were computed. Therapist years of experience was included as a covariate in relevant models (details available online). A Bonferroni correction was applied to control for Type I error ($alpha$=.004). Group differences on MITI benchmarks were also examined with a Bonferroni correction applied ($alpha$=.013). Three regressions examined predictors of MI implementation index. They included three categories of predictors: (1) therapist characteristics (licensure, years of experience, bilingual status), (2) family characteristics (Oppositional Defiant Disorder (ODD), parent education level, adolescent age, parent language), and (3) service-delivery characteristics (parent present in session, setting of treatment, visit number). In step 1 of each model, group and therapist years of experience (covariate) were entered. At step 2,

relevant characteristics were entered (therapist, family, or service delivery). At step 3, interactions between group and predictors were examined.

For fidelity, we examined the percentage of therapeutic tasks completed by phase. We examined percentage of sessions in which goals and home practice were reviewed, percentage of therapeutic tasks that occurred in their recommended session, and percentage of tasks repeated. Three separate regressions assessed predictors of content fidelity using the same characteristics as in the MI implementation model. Number of sessions with a completed therapist log was a covariate. For acceptability items, linear regression examined group differences after controlling for two covariates with known group differences at the adolescent level: stimulant medication status and parent primary language. Cohen's *d* effect size was calculated using a pooled standard deviation. A Bonferroni correction was applied (*alpha*=.006). For therapy bond, linear regression was utilized to examine group differences after controlling for stimulant medication status and parent primary language. Cohen's *d* effect size was calculated with a pooled standard deviation.

Results

Extended results are available online.

Training and Supervision

See Table 2 for competence scores, knowledge scores, and therapist training and supervision attendance data. The knowledge [$F(3,38)=4.61$, $p=.008$, $R^2=.27$] and competence [$F(3,38)=4.09$, $p=.013$, $R^2=.24$] models were significant. Bilingual therapists had significantly lower knowledge ($b=-.089$, $SE=.03$, $p=.008$). Fewer years of experience was associated with higher competence ($b=-.99$, $SE=.30$, $p=.002$).

Content Fidelity

See Table 2 for content fidelity scores. The therapist characteristics model was non-significant [$F(4, 91)=.85$, $p=.497$, $R^2=.04$]. The family characteristics model was significant [$F(4, 91)=2.84$, $p=.028$, $R^2=.11$], but no predictors were significant (ODD: $b=-.059$, $SE=.04$, $p=.180$; age: $b=-.026$, $SE=.01$, $p=.070$; parent education: $b=.077$, $SE=.04$, $p=.086$). The service delivery characteristics model was significant [$F(3, 92)=10.12$, $p<.001$, $R^2=.25$]. Greater proportion of office-based sessions associated with higher fidelity ($b=.186$, $SE=.05$, $p<.001$). Proportion of sessions attended by the parent was non-significant ($b=.153$, $SE=.11$, $p=.147$).

MI Implementation

MI implementation scores are presented in Table 3. For technical globals ($b=1.45$, $SE=.35$, $p<.001$), STAND audio recordings met higher MI benchmarks (22.1% *fair,* 61.0% *good*) than UC recordings (33.8% *fair,* 23.0% *good*). The groups did not differ for relational globals (STAND: 26.0% *fair,* 35.1% *good*; UC: 29.7% *fair,* 16.2% *good*; $b=.57$, $SE=.32$, $p=.072$), reflection to question ratio (STAND: 11.7% *fair,* 7.8% *good;* UC: 9.5% *fair,* 12.2% *good;* $b=-.33$, $SE=.41$, $p=.419$), or percentage of complex reflections (STAND: 10.4% *fair,* 40.3% *good*; UC: 4.1% *fair,* 33.8% *good;* $b=.25$, $SE=.33$, $p=.457$).

Predictors of MI Implementation were as follows. The therapist characteristics model was significant at Step 1 [$F(1, 149)=12.06$, $p=.001$, $R^2=.08$], as was Step 2 incremental change [$F\Delta(3, 146)=2.74$, $p=.045$, $R^2\Delta=.05$], but not Step 3 [$F\Delta(3, 143)=1.14$, $p=.335$, $R^2\Delta=.02$]. At Step 2, group predicted MI Implementation ($b=.76$, $SE=.26$, $p=.004$). The family characteristics model was significant at Step 1 [$F(2, 147)=9.87$, $p<.001$, $R^2=.12$]. Incremental change at Step 2 [$F\Delta(3, 144)=1.62$, $p=.188$, $R^2\Delta=.03$] and Step 3 [$F\Delta(3, 141)=1.14$, $p=.336$, $R^2\Delta=.02$] were not. At Step 1, group predicted the MI implementation index ($b=.68$, $SE=.25$, $p=.006$). The service delivery characteristics model was significant at Step 1 [$F(2, 148)=9.90$, $p<.001$, $R^2=.12$], as was incremental change at Step 2 [$F\Delta(3, 145)=3.82$, $p=.011$, $R^2\Delta=.07$], but not Step 3 [$F\Delta(3, 142)=1.47$, $p=.225$, $R^2\Delta=.03$]. Group ($b=.62$, $SE=.28$, $p=.028$) and visit number ($b=-.77$, $SE=.04$, $p=.050$) significantly predicted MI Implementation at Step 2.

Therapist Acceptability & Bond

All means were above the neutral point of the scale for both groups, indicating positive treatment attitudes (available online). Compared to UC, STAND therapists rated approaches they used as less demanding ($p=.006$, $d=.40$) and were more likely than UC to recommend these approaches to others ($p<.001$, $d=.86$). All therapy bond mean scores (1 to 4 scale) were above the scale's neutral point, indicating positive bond with therapists in both groups. After entering covariates, there were no significant between group differences in parent-rated [STAND $M=3.45$, $SD=.47$, UC $M=3.45$, $SD=.45$; $F(1, 185)=.01$, $p=.918$, $d=.00$] or teen-rated bond with the therapist [STAND $M=2.78$, $SD=.65$, UC $M=2.92$, $SD=.61$; $F(1, 191)=2.01$, $p=.158$, $d=-.22$].

Discussion

In this study community therapists successfully engaged in training, regularly attended supervision, and rated STAND as acceptable and lower burden than UC practices. However, using a typical community training and supervision model, MI competence was met by only 45.3% of therapists post-training and MI implementation was lower intensity than in university settings (but better than UC). STAND content fidelity was acceptable in the engagement and skills phases, but not the planning phase. Therapists often deviated from manualized pace and sequencing of therapy tasks. Learning MI was more challenging for bilingual and highly experienced therapists. STAND fidelity was higher in earlier and office-based sessions.

Consistent with past research, community therapists were willing to attend training and supervision for an MI intervention (Barwick et al., 2012). After doing so, their MI skills exceeded the UC group; however, this dose of training and supervision was insufficient to produce widespread MI proficiency and fidelity to skills-based content. University trials of STAND possessed competency requirements and provided approximately two hours of weekly audio tape feedback, MI coaching, and treatment planning for skills-based components (Sibley et al., 2013, 2016, 2019). When resources are sufficient then high fidelity is obtainable through this model. Unfortunately, community settings do not typically have the resources to require demonstration of competency prior to practice implementation,

nor do they provide tape review and coaching as a form of supervision (Accurso et al., 2011; Garland et al.,2013). We made the decision to test a lower and more realistic burden training and supervision model to increase the external and construct validity of this trial. This choice likely contributed to reduced MI integrity and content fidelity. Our future work aims to develop effective, low-burden feedback and supervision models based on online training modules and artificial intelligence approaches. This approach displays feasibility and can be used by providers at reasonable costs (Imel et al., 2019).

Bilingual therapists performed more poorly on the MIKAT. It is possible that cultural identity influenced therapist acceptance of MI tenets (Saifan, Brookman-Frazee, Barnett, Gonzalez, & Lau, 2018). Meanwhile, more experienced therapists received lower scores on the VASE-R. Newer community therapists possess documented advantages, such as engaging families at higher rates (Garland, Haine-Schlagel, Accurso, Baker-Ericzén, & Brookman-Frazee, 2012). Therapists with a longer history in community mental health may also have higher levels of burnout (Kim et al., 2018), reducing engagement in implementation initiatives. Newer therapists also may have recently completed training programs with instruction in MI. Attention to less responsive subgroups could enhance training and implementation initiatives.

STAND training and supervision had greatest impact on efforts to promote client change language and client-therapist collaboration (see Table 3). To preserve external validity, STAND implementation was not mandatory or directly incentivized. Thus, community therapists were likely self-motivated to use MI skills with study cases. However, they failed to meet reflection to question ratio and complex reflection benchmarks, struggled to emphasize client autonomy, and rarely provided affirmations. Offering affirmations to teens with ADHD and their parents may be unnatural for therapists given high levels of failure experienced by these youth (Wolraich et al., 2005). Similarly, emphasizing client autonomy may be challenging when youth characteristically struggle to function independently (Sibley, Campez, et al., 2016). Thus, it appears that MI implementation was low intensity in the sample, as is common when evidence-based practices are administered in community settings (Garland et al., 2010).

Content fidelity was lower in the community versus university setting (Sibley et al., 2016, 2019). Furthermore, office-delivered STAND showed higher fidelity than home and school-based attempts. An open trial of STAND delivered through video-conferencing also showed deflated fidelity (Sibley, Comer, & Gonzalez, 2017). Thus, a controlled office setting may promote STAND fidelity. On the other hand, limiting STAND to office settings would likely reduce family engagement. Fidelity also dropped dramatically in the planning phase. One effect of slowing treatment pace and resequencing could be that therapists did not advance to planning tasks within the typical duration of STAND (i.e., 10–12 weeks). It is also possible that population-specific treatment barriers were heaviest in the planning phase (i.e., addressing inconsistent family routines, regulating teen electronics, and enacting multifaceted behavioral contracts; Sibley & LaCount, in press). When struggling with planning, therapists may fail to implement prescribed content or utilize MI. Deeper analysis of planning phase process issues is warranted. Later sessions of STAND may be more challenging to implement.

Parent-teen ADHD treatment models are criticized for having poor consumer palatability (Barkley, 2018). However, STAND's engagement-focused model continues to be highly acceptable to therapists and families (Sibley et al., 2013, 2016, 2019). This study extends this finding to community mental health contexts. In fact, therapists not only rated STAND as less burdensome than UC; they were also more likely to recommend STAND to coworkers. Although further refinement of STAND in community mental health is needed, this study indicates that parent-teen models can be palatable and engaging in both academic and community settings.

Therapist participation in the study was voluntary; in both groups, we may have oversampled therapists with openness to evidence-based interventions. STAND therapists may have been more likely to recommend the approach because of greater attention from the research team. Fidelity raters could not corroborate a third of therapist-reported tasks. Thus, fidelity may be overestimated. On the other hand, some uncorroborated fidelity items may have been delivered, but at intensities that were unconvincing to raters. Future work with intricate coding systems (i.e., non-binary tools) could clarify this question. We did not administer the MIKAT and VASE-R pre-training and cannot be sure that MI competence was influenced by training. However, STAND vs. UC differences on the MITI suggest a training and supervision effect on MI skills. Recordings were only available for 70.2% of cases that received therapy. Some families discontinued treatment prior to recording, some therapists objected to recording, and other tapes were inaudible. An inevitable limitation of community contexts is lower control and data collection rates than university trials. We did not collect fidelity ratings after week 13 of therapy; thus, it is unclear if therapists administered STAND modules past STAND's standard dose.

This study is the first attempt to deliver an evidence-based psychosocial treatment for adolescent ADHD in community mental health. STAND's engagement-focused approach aligns with known challenges of community settings. In this study, its promise was bolstered by good family and therapist acceptability, therapist engagement in training and supervision, and adequate integrity and fidelity for certain therapeutic elements (i.e., global MI technical and relational indices, therapist collaboration with families, and engagement and skills phases modules). Other aspects require continued attention: the planning phase, home practice review, reinforcing therapy goals, boosting MI integrity, improving delivery outside of agency walls, and enhancing learning for a broader range of therapists. Refinement of STAND for community settings should prioritize deployment and integrate stakeholder feedback (Weisz et al., 2013). An important next step may be developing a low-burden and context-realistic training and supervision model that enhances therapist competence and treatment integrity.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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References

American Academy of Pediatrics. (2019). Clinical Practice Guidelines for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents. Pediatrics, 144, 1–25.

Accurso EC, Taylor RM, & Garland AF (2011). Evidence-based practices addressed in community-based children's mental health clinical supervision. Training and Education in Professional Psychology, 5, 88. [PubMed: 24761163]

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (DSM-5®). American Psychiatric Pub.

Baker-Ericzén MJ, Jenkins MM, & Haine-Schlagel R (2013). Therapist, parent, and youth perspectives of treatment barriers to family-focused community outpatient mental health services. Journal of Child and Family Studies, 22, 854–868. [PubMed: 24019737]

Barkley RA, Edwards G, Laneri M, Fletcher K, & Metevia L (2001). The efficacy of problem-solving communication training alone, behavior management training alone, and their combination for parent–adolescent conflict in teenagers with ADHD and ODD. Journal of consulting and clinical psychology, 69, 926. [PubMed: 11777120]

Barkley RA, Fischer M, Smallish L, & Fletcher K (2006). Young adult outcome of hyperactive children: adaptive functioning in major life activities. Journal of the American Academy of Child & Adolescent Psychiatry, 45, 192–202. [PubMed: 16429090]

Barkley RA, Murphy KR & Fischer M (2008). ADHD in Adults: What the Science Says. New York: Guilford.

Barkley RA (2018). Adverse Events Associated with Behavior Management Training for Families Experiencing Parent–ADHD Teen Conflict. The ADHD Report, 26, 1–5.

Barwick MA, Bennett LM, Johnson SN, McGowan J, & Moore JE (2012). Training health and mental health professionals in motivational interviewing: A systematic review. Children and Youth Services Review, 34, 1786–1795.

Bearman SK, Weisz JR, Chorpita BF, Hoagwood K, Ward A... & Research Network on Youth Mental Health. (2013). More practice, less preach? The role of supervision processes and therapist characteristics in EBP implementation. Administration and Policy in Mental Health and Mental Health Services Research, 40, 518–529. [PubMed: 23525895]

Boyer BE, Geurts HM, Prins PJ, & Van der Oord S (2015). Two novel CBTs for adolescents with ADHD: the value of planning skills. European child & adolescent psychiatry, 24, 1075–1090. [PubMed: 25549767]

Brinkman WB, Simon JO, & Epstein JN (2018). Reasons Why Children and Adolescents With Attention-Deficit/Hyperactivity Disorder Stop and Restart Taking Medicine. Academic pediatrics, 18, 273–280. [PubMed: 28919571]

Brookman-Frazee L, Garland AF, Taylor R, & Zoffness R (2009). Therapists' attitudes towards psychotherapeutic strategies in community-based psychotherapy with children with disruptive behavior problems. Administration and Policy in Mental Health and Mental Health Services Research, 36, 1–12. [PubMed: 19016320]

Bussing R, Zima BT, Mason DM, Porter PC, & Garvan CW (2011). Receiving treatment for attention-deficit hyperactivity disorder: do the perspectives of adolescents matter?. Journal of Adolescent Health, 49, 7–14.

Burton RF (2005). Multiple-choice and true/false tests: myths and misapprehensions. Assessment & Evaluation in Higher Education, 30, 65–72.

Castellanos FX, Sonuga-Barke EJ, Milham MP, & Tannock R (2006). Characterizing cognition in ADHD: beyond executive dysfunction. Trends in cognitive sciences, 10, 117 [PubMed: 16460990]

Chan E, Fogler JM, & Hammerness PG (2016). Treatment of attention deficit/hyperactivity disorder in adolescents: A systematic review. Jama, 315, 1997–2008. [PubMed: 27163988]

Chorpita BF, Daleiden EL, Park AL, Ward AM, Levy MC, et al., (2017). Child STEPs in California: A cluster randomized effectiveness trial comparing modular treatment with community implemented treatment for youth with anxiety, depression, conduct problems, or traumatic stress. Journal of consulting and clinical psychology, 85, 13. [PubMed: 27548030]

Dierker L, Nargiso J, Wiseman R, & Hoff D (2001). Factors predicting attrition within a community initiated system of care. Journal of child and family studies, 10, 367–383.

Edwards G, Barkley R, Laneri M, Fletcher K, & Metevia L (2001). Parent–adolescent conflict in teenagers with ADHD and ODD. Journal of Abnormal Child Psychology, 29,

Edwards EJ, Stapleton P, Williams K, & Ball L (2015). Building skills, knowledge and confidence in eating and exercise behavior change: Brief motivational interviewing training for healthcare providers. Patient Education and Counseling, 98, 674–676. [PubMed: 25727283]

Epstein JN, Kelleher KJ, Baum R, Brinkman WB, Peugh J, et al. (2014). Variability in ADHD care in community-based pediatrics. Pediatrics, 134, 1136. [PubMed: 25367532]

Farmer EM, Stangl DK, Burns BJ, Costello EJ, & Angold A (1999). Use, persistence, and intensity: Patterns of care for children's mental health across one year. Community mental health journal, 35, 31–46. [PubMed: 10094508]

Garland AF, Brookman-Frazee L, Hurlburt MS, Accurso EC, Zoffness RJ, Haine-Schlagel R, & Ganger W (2010). Mental health care for children with disruptive behavior problems: A view inside therapists' offices. Psychiatric Services, 61, 788–795. [PubMed: 20675837]

Garland AF, Haine-Schlagel R, Accurso EC, Baker-Ericzén MJ, & Brookman-Frazee L (2012). Exploring the effect of therapists' treatment practices on client attendance in community-based care for children. Psychological Services, 9, 74. [PubMed: 22449089]

Garland AF, Haine-Schlagel R, Brookman-Frazee L, Baker-Ericzen M, Trask E, & Fawley-King K (2013). Improving community-based mental health care for children: Translating knowledge into action. Administration and Policy in Mental Health and Mental Health Services Research, 40, 6–22. [PubMed: 23212902]

Hoagwood K, Jensen PS, Petti T, & Burns BJ (1996). Outcomes of mental health care for children and adolescents: I. A comprehensive conceptual model. Journal of the American Academy of Child & Adolescent Psychiatry, 35, 1055–1063. [PubMed: 8755803]

Ingoldsby EM (2010). Review of interventions to improve family engagement and retention in parent and child mental health programs. Journal of child and family studies, 19, 629–645 [PubMed: 20823946]

Kim JJ, Brookman-Frazee L, Gellatly R, Stadnick N, Barnett ML, & Lau AS (2018). Predictors of burnout among community therapists in the sustainment phase of a system-driven implementation of multiple evidence-based practices in children's mental health. Professional Psychology: Research and Practice, 49, 132.

Landis JR, & Koch GG (1977). The measurement of observer agreement for categorical data. Biometrics, 159–174. [PubMed: 843571]

Lau A, Barnett M, Stadnick N, Saifan D, Regan J, Wiltsey Stirman S et al., (2017). Therapist report of adaptations to delivery of evidence-based practices within a system-driven reform of publicly funded children's mental health services. Journal of consulting and clinical psychology, 85, 664. [PubMed: 28471210]

Leffingwell TR (2006). Motivational Interviewing Knowledge and Attitudes Test (MIKAT) for evaluation of training outcomes. MINUET, 13, 10–11.

Lyon AR, & Budd KS (2010). A community mental health implementation of parent–child interaction therapy (PCIT). Journal of child and family studies, 19, 654–668. [PubMed: 20877583]

Martino S, Ball SA, Nich C, Canning-Ball M, Rounsaville BJ, & Carroll KM. (2011). Teaching community program clinicians motivational interviewing using expert and train-the-trainer strategies. Addiction, 106, 428–441. [PubMed: 20925684]

McMiller WP, & Weisz JR (1996). Help-seeking preceding mental health clinic intake among African-American, Latino, and Caucasian youths. Journal of the American Academy of Child & Adolescent Psychiatry, 35, 1086–1094. [PubMed: 8755806]

Miller LM, Southam-Gerow MA, & Allin RB (2008). Who stays in treatment? Child and family predictors of youth client retention in a public mental health agency. Child & youth care forum, 37, 153–170. [PubMed: 19774098]

Miller WR, & Rollnick S (2013). Motivational interviewing: Helping people change. Guilford Press.

Molina B, Hinshaw S, Swanson J, Arnold L, Vitiello B, et al. (2009). The MTA at 8 years: Prospective follow-up of children treated for combined-type ADHD in a multisite study. Journal of the American Academy of Child & Adolescent Psychiatry, 48, 484–500. [PubMed: 19318991]

Molina B, Pelham W Cheong J, Marshal M, Gnagy E, & Curran P. (2012). Childhood ADHD and growth in adolescent alcohol use: The roles of functional impairment, ADHD symptom persistence, and parental knowledge. Journal of Abnormal Psychology. 121,

Moyers TB, Manuel JK, & Ernst D (2014). Motivational Interviewing Treatment Integrity Coding Manual 4.1. Unpublished Manual.

Moyers T Martin T, Manuel J, Hendrickson S, & Miller W. (2005). Assessing competence in the use of motivational interviewing. Journal of substance abuse treatment, 28, 19–26. [PubMed: 15723728]

Rodriguez J, Olin SS, Hoagwood KE, Shen S, Burton G, Radigan M, & Jensen PS (2011). The development and evaluation of a parent empowerment program for family peer advocates. Journal of Child and Family Studies, 20, 397–405. [PubMed: 25382959]

O'Connell AA (2006). Logistic regression models for ordinal response variables. Sage.

Rosengren DB, Hartzler B, Baer JS, Wells EA, & Dunn C (2008). The video assessment of simulated encounters-revised (VASE-R): Reliability and validity of a revised measure of motivational interviewing skills. Drug and alcohol dependence, 97, 130–138. [PubMed: 18499356]

Saifan D, Brookman-Frazee L, Barnett M, Gonzalez JC, & Lau AS (2018). Ethnic minority community therapists' acculturation and reported adaptations to children's evidence-based practices. Cultural Diversity and Ethnic Minority Psychology, 24, 530. [PubMed: 29963881]

Schoener EP, Madeja CL, Henderson MJ, Ondersma SJ, & Janisse JJ (2006). Effects of motivational interviewing training on mental health therapist behavior. Drug and alcohol dependence, 82, 269–275. [PubMed: 16289396]

Schoenwald SK, Chapman J Kelleher K, Hoagwood KE, Landsverk J, Stevens J, et al. (2008). A survey of the infrastructure for children's mental health services: Implications for the implementation of empirically supported treatments (ESTs). Administration and Policy in Mental Health and Mental Health Services Research, 35, 84–97. [PubMed: 18000750]

Schwalbe CS, Oh HY, & Zweben A (2014). Sustaining motivational interviewing: A meta-analysis of training studies. Addiction, 109, 1287–1294. [PubMed: 24661345]

Shirk S & Saiz C (1992). Clinical, empirical, and developmental perspectives on the therapeutic relationship in child psychotherapy. Development & Psychopathology, 4, 713.

Sibley MH, & Kuriyan AB (2016). DSM-5 changes enhance parent identification of symptoms in adolescents with ADHD. Psychiatry research, 242, 180–185. [PubMed: 27288736]

Sibley MH, Pelham WE, Molina BSG, Gnagy EM, Waschbusch DA, Garefino A, et al., (2012). Diagnosing ADHD in Adolescence. Journal of Consulting and Clinical Psychology, 80, 139–150. [PubMed: 22148878]

Sibley MH, Campez M, Perez A, Morrow AS, Merrill B Altszuler A.et al. (2016). Parent management of organization, time management, and planning deficits among adolescents with ADHD. Journal of psychopathology and behavioral assessment, 38, 216–228. [PubMed: 28553010]

Sibley MH, Kuriyan AB, Evans SW, Waxmonsky JG, & Smith BH (2014). Pharmacological and psychosocial treatments for ADHD in adolescents: An updated systematic review of the literature. Clinical Psychology Review,34, 218–232. [PubMed: 24632046]

Sibley MH, Pelham WE, Molina BSG, Coxe S,...Lahey (2014). The Role of Early Childhood ADHD and Subsequent CD in the Initiation and Escalation of Adolescent Cigarette, Alcohol, and Marijuana Use. Journal of Abnormal Psychology, 123, 362–374. [PubMed: 24886010]

Sibley MH & LaCount PA (in press). Enhancing engagement and motivation with adolescents and parents: The Supporting Teens' Autonomy Daily (STAND) Model. In Allen Hawes, Essau (Eds.) Family-Based Intervention for Child and Adolescent Mental Health: A Core Competencies Approach. Cambridge: Cambridge University Press.

Sibley MH, Rodriguez LM, Coxe SJ, Page T, & Espinal K (2019). Parent-Teen Group versus Dyadic Treatment for Adolescent ADHD: What Works for Whom? Journal of Clinical Child and Adolescent Psychology.

Sibley MH, Graziano PA, Kuriyan AB, Coxe S, Pelham WE, Rodriguez LM et al., (2016). Parent-Teen Behavior Therapy + Motivational Interviewing for Adolescents with ADHD. Journal of Consulting & Clinical Psychology, 84, 699–712. [PubMed: 27077693]

Sibley MH, Comer J, & Gonzalez J (2017). Delivering Parent-Teen Therapy for ADHD through Videoconferencing: A Preliminary Investigation. Journal of Psychopathology & Behavioral Assessment, 39, 477–485.

Simon P, & Ward NL (2014). An evaluation of training for lay providers in the use of motivational interviewing to promote academic achievement among urban youth. Advances in school mental health promotion, 7, 255–270. [PubMed: 26356248]

Smith JD, Stormshak EA, & Kavanagh K (2015). Results of a pragmatic effectiveness–implementation hybrid trial of the Family Check-Up in community mental health agencies. Administration and Policy in Mental Health and Mental Health Services Research, 42, 265–278. [PubMed: 24927926]

Sonuga-Barke EJ (2003). The dual pathway model of AD/HD: an elaboration of neurodevelopmental characteristics. Neuroscience & Biobehavioral Reviews, 27, 593–604. [PubMed: 14624804]

Southam-Gerow MA, Chorpita BF, Miller LM, & Gleacher AA (2008). Are children with anxiety disorders privately referred to a university clinic like those referred from the public mental health system?. Administration and Policy in Mental Health and Mental Health Services Research, 35, 168–180. [PubMed: 18046640]

Southam-Gerow MA, Weisz JR, & Kendall PC (2003). Youth with anxiety disorders in research and service clinics: Examining client differences and similarities. Journal of Clinical Child and Adolescent Psychology, 32, 375–385. [PubMed: 12881026]

Southam-Gerow MA, Daleiden EL, Chorpita BF, Bae C, Mitchell C, Faye M, et al. (2014). MAPping Los Angeles County: Taking an evidence-informed model of mental health care to scale. Journal of Clinical Child & Adolescent Psychology, 43, 190–200. [PubMed: 24079613]

Sprich SE, Safren SA, Finkelstein D, Remmert JE, & Hammerness P (2016). A randomized controlled trial of cognitive behavioral therapy for ADHD in medication-treated adolescents. Journal of Child Psychology and Psychiatry, 57, 1218–1226. [PubMed: 26990084]

Swanson JM, Arnold LE, Molina BS, Sibley MH, Hechtman LT, Hinshaw SP, et al. (2017). Young adult outcomes in the follow-up of the multimodal treatment study of attention-deficit/hyperactivity disorder: symptom persistence, source discrepancy, and height suppression. Journal of Child Psychology and Psychiatry, 58, 663–678. [PubMed: 28295312]

Weisz JR, Chorpita BF, Palinkas LA, Schoenwald SK, Miranda J, Bearman SK, ... & Research Network on Youth Mental Health. (2012). Testing standard and modular designs for psychotherapy treating depression, anxiety, and conduct problems in youth: A randomized effectiveness trial. Archives of General Psychiatry, 69, 274–282. [PubMed: 22065252]

Weisz JR, Southam-Gerow MA, Gordis EB, Connor-Smith JK, Chu BC, Langer DA, ... & Weiss B. (2009). Cognitive–behavioral therapy versus usual clinical care for youth depression: An initial test of transportability to community clinics and clinicians. Journal of Consulting and Clinical Psychology, 77, 383. [PubMed: 19485581]

Weisz JR, Ugueto AM, Cheron DM, & Herren J (2013). Evidence-based youth psychotherapy in the mental health ecosystem. Journal of Clinical Child & Adolescent Psychology, 42, 274–286. [PubMed: 23402704]

Wolraich ML, Wibbelsman CJ, Brown TE, Evans SW, Gotlieb EM, Knight JR et al. (2005). Attention-Deficit/Hyperactivity Disorder among adolescents: A review of the diagnosis, treatment, and clinical implications. Pediatrics, 115, 1734–1746. [PubMed: 15930238]

Table 1.

Baseline Characteristics of Adolescent Subsample

	STAND (*N*=114)	UC (*N*=111)
Diagnostic Variables		
WASI estimated Full-Scale IQ *M*(*SD*)	94.42(13.85)	96.48(12.56)
ADHD Subtype		
ADHD-Predominantly Inattentive (%)	48.2	56.8
ADHD-Combined (%)	51.8	43.2
ODD/CD (%)	52.6	48.6
Current ADHD Medication (%) *	31.6	23.4
Demographic Variables		
Age *M*(*SD*)	13.96(1.49)	14.11(1.49)
Male (%)	70.2	68.5
Race/Ethnicity (%)		
White Non-Hispanic	4.4	2.7
Black Non-Hispanic	17.5	9.9
Hispanic Any Race	77.2	86.5
Other	0.9	0.9
Single Parent (%)	32.5	35.1
Parent Language: Spanish (%) *	36.8	49.5
Billing Source (%)		
Medicaid	57.0	55.0
State/County Subsidy	12.2	14.4
Sliding Scale	29.8	28.8
Pro Bono	0.0	1.8
Private Insurance	0.9	0.0
Parent Education Level		
High School Grad, GED, or less (%)	22.8	25.5
Part College or Specialized Training (%)	31.6	29.1
College or University Grad (%)	35.1	35.5
Graduate Professional Training (%)	10.5	10.0

* *Note.* Indicates a meaningful group differences (p<.10).

Table 2.

STAND Therapist Knowledge, Competence, and Fidelity

Metric	Score
Attendance at Training (%)	95.5
Attendance at Supervision (%)	86.5
Canceled to Attended Supervision Sessions	1:4.17
MIKAT score (*M*)	79.3
Post-Training VASE-R Proficiency Level (%)	
None	54.7
Beginner	28.6
Expert	16.7
Delivery of Tasks (%)	
Engagement Activities	76.4
Skills Activities	85.0
Planning Activities	24.4
Weekly Goal Review	51.7
Home Practice Review	59.2
Tasks Occurring in Recommended Session (%	
Engagement Phase	69.6
Skills Phase	66.5
Planning Phase	22.0
Repeated Tasks (%)	
Engagement Phase	0.0
Skills Phase	9.8
Planning Phase	0.0

Note. Attendance at supervision represents attendance for weeks that the therapist was actively treating a study case. For all fidelity indices, denominator represents applicable sessions only.

Table 3.

Group Differences in MITI 4.2 Therapist Global Scores and Behavior Counts

	STAND *M*(SD)	**UC *M*(SD)**	***p***	***d***
Global Scores				
Cultivating Change Talk	2.91 (.96)	2.18 (.92)	<**.001**	.78
Softening Sustain Talk	3.78 (.50)	3.47 (.65)	**.003**	.54
Partnership	3.23 (.74)	2.72 (.91)	**.003**	.62
Empathy	3.52 (.87)	3.22 (.95)	.145	.34
Behavior Counts				
Giving Information	6.06 (3.48)	4.69 (3.24)	<**.001**	.41
Persuade	2.88 (3.49)	4.26 (4.56)	<**.001**	−.34
Persuade with Permission	.91 (3.96)	.27 (1.45)	<**.001**	.21
Question	18.77 (10.30)	24.43 (17.57)	<**.001**	−.33
Simple Reflection	8.36 (7.74)	10.23 (10.18)	<**.001**	−.21
Complex Reflection	4.66 (3.03)	4.93 (4.56)	.027	−.07
Affirmation	1.40 (1.45)	1.31 (1.70)	.508	.06
Seeking Collaboration	2.73 (2.67)	.99 (1.61)	<**.001**	.79
Emphasize Autonomy	.17 (.50)	.16 (.50)	.888	.02
Confront	.71 (1.75)	1.05 (2.13)	.149	−.17

Note. Statistical significance with years of therapy experience as a covariate. Bonferroni correction applied to control for Type I error; *alpha*=.004. *M*=mean; *SD*=standard deviation; *d*=Cohen's standardized effect size using pooled standard deviation. All global are on a 1–5 scale with 5 indicating outstanding performance. Significant p-values indicated in bold text.