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Abstract

This study evaluated the impact of Motivational Interviewing (MI) and Screening, Brief Intervention, and Referral to Treatment (SBIRT) workshops on post-training knowledge, skills, negative attitudes, and interest in implementing evidence-based practices (EBPs). Participants (N = 70) were primarily mental health counselor (41.4%), social workers (20.0%), substance abuse counselors (15.7%), school counselors (5.7%) and nursing professionals (4.3%) who selected the one or two day workshop for continuing education credit. Participants attended either a Basic MI training workshop (one day) or a Basic MI training plus an Advanced MI/SBIRT training workshop (two day) to assess if exposure to two EBPs would improve training outcomes. Participants in both the one day and two day workshops reported post-training increased perceived knowledge and skills, decreased negative attitudes toward EBPs, and increased interest in implementing EBPs from pre-training to post-training. There were no differences between participants in the Basic MI or MI plus Advanced MI/SBIRT training conditions. Implications for reducing the research-practice gap in EBPs are discussed.

Keywords: evidence-based practices, motivational interviewing (MI), SBIRT, training workshop, substance use, education

Standards for evidence-based practice suggest that health care professionals, including substance abuse treatment providers, are expected to provide treatment supported with scientific evidence of efficacy (Miller, Sorensen, Selzer, & Brigham, 2006). In addition to the need for accountability and the recognition of the importance of providing effective services (Haug, Shopshire, Tajima, Gruber, & Guydish, 2008), current standards of health care suggest the need for practitioner training in evidence-based practices (EBPs) for the treatment of substance use disorders. Research, however, indicates training programs may not adequately prepare practitioners to work with clients with substance use disorders (Carroll, 2000; Hagedorn Culbreth, & Cashwell, 2012). Further, although substance abuse counselors report being interested in EBPs (Campbell, Catlin, & Melchert, 2003), most addiction providers are not

prepared to provide EBPs when they enter the field (Weissman et al., 2006). Thus, professional training is needed to equip addiction providers with both knowledge and skills in EBPs to promote the use of EBPs in addiction counseling practice.

Evidence-Based Brief Interventions for Addiction

Both Motivational Interviewing (MI) and Screening, Brief Intervention, and Referral to Treatment (SBIRT) are evidence-based, brief interventions that are widely used in the field of addiction (DiClemente, Crouch, Norwood, Delahanty, & Welsh, 2015). MI is a client-centered, yet directive treatment approach that is designed to elicit positive behavioral change through exploring and resolving client ambivalence (Miller & Rollnick, 2013). A common adaptation of MI that has evidence of efficacy is including individualized feedback surrounding client substance use and associated risk of continued use. Similarly, SBIRT is a brief intervention that integrates screening and feedback into the delivery of early intervention and treatment services for individuals who use substances (Babor, McRee, Kassebaum, Grimaldi, Ahmed, & Bray (2007). SBIRT includes assessing clients for risky substance use behaviors using standardized screening tools, using MI strategies to provide feedback to clients about their risk, and providing treatment referrals as needed.

Results from two meta-analyses examining brief intervention outcomes indicate MI is effective in the treatment of excessive alcohol use (Vasilaki, Hosier, & Cox, 2006) and both MI and SBIRT are as effective as extended treatment conditions for alcohol use disorders (Moyer, Finney, Swearingen, & Vergun, 2002). Researchers have also found that MI is associated with reductions in use across a range of substances (Lenz, Rosenbaum, & Sheparis, 2016), even several months after the implementation of the intervention (Sayegh, Huey, Zara, & Jhaveri, 2017). Similarly, SBIRT is associated with significant reductions in heavy alcohol use and illicit drug use across a range of health care settings and among diverse patient populations (Madras et al., 2009).

The Research-Practice Gap in Evidence-Based Practice

Although the addiction literature supports the efficacy of EBPs, including MI and SBIRT, a significant gap remains between research and clinical practice in substance abuse treatment (Evans, Koch, Brady, Meszaros, & Sadler, 2013; Miller et al., 2006). One explanation for the research-practice gap is that there are significant barriers that reduce the integration of EBPs into clinical practice. Commonly identified barriers to practitioner implementation of EBPs include a lack of basic knowledge and skills (Haug et al., 2008), limited training opportunities (Weissman et al., 2006), and inadequate time to learn new therapies (Miller et al., 2006). Negative counselor attitudes toward EBPs also reduce the use of EBPs in addiction practice. For example, research indicates counselors who are in recovery and those who endorse the 12-step model are less interested in using EBPs than counselors who are not in recovery (McGovern, Fox, Xie, & Drake, 2004). Further, addiction counselors report concerns that EBPs may negatively impact the therapeutic process (Haug et al., 2008). Similarly, substance abuse treatment providers may be reluctant to use EBPs due to concerns regarding the applicability of research supporting EBPs, a desire for a greater emphasis on the therapeutic relationship, and the need for flexibility within treatment protocols (Nelson, Steele, & Miz, 2006). Therefore, lack of knowledge and skills, inadequate training opportunities, and negative attitudes toward EBPs are important barriers that need to be addressed to reduce the research-practice gap in addiction treatment.

Solutions to Address the Research-Practice Gap

Although practitioners who work with clients with substance use disorders report being interested in EBPs (Campbell et al., 2003; Haug et al., 2008), many are not trained in EBPs such as MI and SBIRT (Weissman et al., 2006). Because MI and SBIRT have gained momentum as EBPs within the addiction field, demands for professional training in MI (Schumacher, Madson, & Norquist, 2011) and SBIRT (DiClemente et al., 2015) have increased. Two common training strategies for bridging the EBP research-practice gap include self-study and didactic training workshops (Martino et al., 2011). Self-study typically includes reading treatment manuals, whereas workshops typically include didactic presentations, demonstrations, and interactive exercises delivered over a period of 1 - 3 days (Schwalbe, Oh, & Zweben, 2014).

Results from a recent meta-analysis indicate MI training workshops are more effective in developing MI skills than self-study programs and that post-workshop feedback and coaching can sustain acquired skills (Schwalbe et al., 2014). Similarly, results of several studies suggest that SBIRT training is effective in increasing both knowledge and skills

in SBIRT (Carlson et al., 2017; Schram et al., 2015; Stoner, Mikko, & Carpenter, 2014; Zatzick et al., 2014). Thus, providing training to substance abuse treatment providers through MI and SBIRT professional training workshops is one way to address the research-practice gap.

The Current Study

The purpose of this study is to examine the impact of MI and SBIRT training workshops on knowledge, skills, negative attitudes toward EBPs, and interest in implementing EBPs among substance abuse treatment providers. Because primary barriers to implementing EBPs include not having enough time to learn new therapies (Miller et al., 2006), we were interested in investigating if providing brief trainings in EBPs might serve as a first step in introducing providers to EBPs, with the long term goal of these providers seeking additional training. To achieve this aim, we compared outcomes among workshop training participants who attended either a one day Basic MI workshop or a two day Basic MI plus Advanced MI/SBIRT workshop to examine if participating in both the Basic MI and Advanced MI/SBIRT trainings was more effective in changing negative attitudes and interest in EBP implementation relative to participating in the Basic MI training only. We hypothesized that participants in both training conditions would report increases in knowledge and skills post-training. We also hypothesized that participants attending the two day workshop would report a greater reduction in negative attitudes toward EBPs and a greater interest in increasing implementation of EBPs compared to those in the one day workshop.

Method

Research Design

We used a quasi-experimental design comparing one day workshop participants (Basic MI; n = 31) to two day workshop participants (Basic MI and Advanced MI/SBIRT; n = 39). We assessed post-training increases in knowledge and skills and changes in negative attitudes from pre-training to post-training. We examined workshop type (MI or Advanced MI/SBIRT) as a moderator of training effects for negative attitudes toward EBPs and interest in implementing EBPs.

Participants

Participants included a convenience sample of 70 (62.9% female, 32.1% male) substance abuse treatment providers recruited from a series of three MI and Advanced MI/SBIRT training workshops offered at a public university in an urban area in the Northwest. Ages ranged from 21-65 (M = 42.99, SD = 11.79). The majority of the sample was White (87.0%), with 5.8% Hispanic, 4.3% Native American, and 2.9% other. The years of reported professional experience ranged from 1-31 (M = 6.28, SD = 7.26). The majority of the participants identified their professional identity as mental health counseling (41.4%), with 20.0% identifying as social work, 15.7% substance abuse counseling, 5.7% school counseling, 4.3% nursing, 1.4% corrections, and 11.5% other.

Procedure

We advertised the workshops via email through various state-wide listserve and email databases. Registrants were given the choice to enroll in either a 6 hour MI workshop (Friday) or a combined 12 hour Basic MI and Advanced MI/SBIRT workshop (Friday and Saturday). We offered three weekend workshops throughout the year. We recruited study participants from the pool of professionals enrolled in the training workshops. A member of the research team collected informed consent prior to the start of the training, collected pre-training and post-training surveys, and provided a unique personal identification number (PIN) to participants to maintain confidentiality. All participants completed the pre-training survey immediately prior to the Friday workshop and a post-training survey at the completion of either the Friday workshop (MI only) or Saturday workshop (MI and Advanced MI/SBIRT). Surveys took approximately 10-15 minutes to complete. No incentives were provided for study participation. All study procedures were approved by the University Institutional Review Board.

Training Workshops

A team of researchers planned the training workshops, including the content offered in MI and SBIRT. The workshop instructor was a member of the research team and faculty member at the university offering the training. The team selected the instructor due to her extensive experience providing professional trainings and coursework in MI and SBIRT. Both training workshops included didactic experiences, case studies, and practice applications. The MI training was based on Motivational Interviewing: Helping People Change (Miller & Rollnick, 2013) and material available on the Motivational Interviewing Network of Trainers website (www.motivationalinterviewing.org). The SBIRT training was based on materials from SAMHSA (www.samhsa.gov), the BNI ART Institute (https://www.bu.edu/bniart/), and the Learner's Guide to Adolescent Screening, Brief Intervention and Referral to Treatment (SBIRT) (NORC at the University of Chicago, 2016). The instructor designed the workshops to be consistent with didactic content and experiential exercises provided in these materials.

Basic MI Workshop. The instructor covered the following topics during the 6 hour Basic MI training (a) the history of MI and MI as an evidence based practice in treating behavioral health issues, (b) the transtheoretical model and stages of change, (c) the underlying "spirit" of MI, including autonomy, collaboration, evocation, acceptance and compassion, (d) MI principles of RULEs (e.g., resisting the righting reflex, understanding client's motivation, listening to your client and empowering your client, (e) OARS enhancement skills (e.g., open-ended questions, affirmations, reflections and summaries), (f) "traps" (e.g, question/answer trap, premature focus trap, confrontation trap, blaming trap, expert trap, and labeling trap, (g) eliciting change talk and listening for change talk, (h) recognizing and working with client resistance, and (i) recognizing and working with client ambivalence.

Advanced MI and SBIRT Workshop. The instructor covered the following topics during the 6 hour Advanced MI/SBIRT training (a) developing discrepancies between clients behavior and goals by exploring ambivalence and exploring motivation (Phase I) and strengthening commitment (Phase 2) utilizing MI, (b) elements of change talk (e.g., content, recognition, specific target behavior, and present tense language), (c) preparatory (DARN) and mobilizing language (c) (e.g, desire, ability, reason, need, commitment and taking steps), (d) directive MI skills including asking evocative questions, elaboration, using extremes, looking back, looking forward, exploring goals, assessing feedback, and the readiness ruler, (e) working with resistance (e.g., double-sided or amplified reflection, shifting focus, coming alongside, agreement with a twist, emphasizing personal control and choice, and paradox, and (f) collaborating with clients in creating a change plan (e.g., set goals, offer a menu of change options, arrive at a plan, elicit a commitment, lower barriers to action, and enlist social support). The instructor also covered (a) the history of SBIRT as an evidence-based practice in treating behavioral health, (b) basic concepts of MI used in SBIRT, (c) elements of brief intervention practice, (d) standardized screening tools for substance use, (e) referral to treatment.

Measures

Demographics. A brief demographic questionnaire designed for this study included basic participant characteristics (e.g., age, gender, race/ethnicity, age, profession).

Knowledge. We developed two surveys specifically for this study to assess perceived post-training increases in knowledge and abilities specific to the Basic MI Training (9-items) and Advanced MI/SBIRT Training (11-items). We developed these surveys to align with the specific content of this training. Items for the Basic MI Training included questions about general knowledge, ability to demonstrate specific MI skills, understanding of the "spirit" of MI, understanding "traps", and ability to work with client resistance and ambivalence. Items for the Advanced MI/SBIRT Training included questions regarding advanced MI skills such as developing discrepancies, recognizing mobilizing language, using directive MI skills, working with resistance, implementing a brief intervention, and referral to treatment when necessary. Items also included questions regarding SBIRT such as general knowledge of SBIRT and brief interventions, screening tools for substance use, formulation of a brief intervention, and referral to treatment. Responses were measured on a 5-point scale ranging from 1 (*Strongly Disagree)* to 5 (*Strongly Agree*). Cronbach's alpha for this sample was $\alpha = .87$ for the Basic MI Training survey and $\alpha = .92$ for the Advanced MI/SBIRT Training survey.

Negative Attitudes Toward EBPs. To measure negative attitudes toward EBPs, we created an 8-item questionnaire based on results of a qualitative study identifying negative attitudes that create barriers for practitioner use of EBPs (Nelson et al. 2006). Sample items include: "EBPs are too long to be effectively implemented in every day practice,"

"I trust my own experience more than research findings when comes to best interventions for my clients", "following EBPs does not allow for enough flexibly in working with clients," and "EBPs do not sufficiently emphasize the importance of the therapeutic relationship." Responses were measured on a 5-point scale ranging from 1 (*Strongly Disagree)* to 5 (*Strongly Agree*). We computed a total attitudes score by summing the 8 items. Cronbach's alphas for the current sample was $\alpha = .78$. Possible scores ranged from 8 to 40, with high scores representing negative attitudes.

Interest in Implementing EBPs. To assess interest in implementing EBPs, we asked participants to rate their agreement with the following statement "I am interested in implementing EBPs with my clients." The response scale was a 5-point scale ranging from 1 (*Strongly Disagree)* to 5 (*Strongly Agree*).

Power Analysis

We conducted an a priori power analysis using the G*Power 3.1.3 program (Faul, Erdfelder, Lang, & Buchner, 2007) for a GLM repeated-measures analysis (ANOVA) with two time points. Results of the power analysis indicated a sample size of 54 is needed for power of ≥ 0.95 to detect a medium effect size of .25 for the 2-way interaction effect of Time x Group with an alpha level of .05. Thus, our sample size of 70 is greater than the sample size needed to provide adequate power for our analyses.

Data Analysis

We conducted all analyses using SPSS version 24.0. Prior to analysis, we examined all variables for extreme cases and for normality at baseline and follow-up assessments. We confirmed that participants in the two conditions (Basic MI; Basic MI and Advanced MI/SBIRT) were equivalent with respect to demographics and baseline outcomes with *t*-tests for continuous variables and chi-square tests for categorical variables. To assess perception of knowledge gained post-training, we computed descriptive statistics for each condition (Basic MI; Basic and Advanced MI/SBIRT). To assess changes in negative attitudes toward EBPs and interest in implementing EBPs (pre-training; post-training) and the moderating effects of training condition (Basic MI; Basic MI and Advanced MI/SBIRT), we conducted two GLM repeated-measures analysis of variance (ANOVA) with fixed effects of Time and Condition. We calculated effect size using partial eta squared (η^2_p) for ANOVA analyses, with .01 considered small, .06 considered medium, and .14 considered large (Cohen, 1969; Richardson, 2011). We set the significance level at $p < .05$.

Results

Preliminary Analyses

We found no outliers and all variables were within the normal range for skew and kurtosis. We found no significant differences between participants in the Basic MI and Basic and Advanced MI/SBIRT conditions with respect to gender, $\chi^2(1) = 0.29$, $p = .59$, ethnicity, $\chi^2(3) = 2.72$, $p = .44$, age, $t(68) = -1.24$, $p = .22$, years in practice, $t(68) = -1.09$, $p = .28$, or highest degree attained, $\chi^2(3) = 1.97$, $p = .58$.

Post-Training Knowledge and Skills

Basic MI Workshop. Table 1 presents the percentage of participants reporting an increase in knowledge after the Basic MI training workshop and after the Advanced MI training workshop. As seen in Table 1, 80% or more of the participants in the Basic MI training workshop reported an increase in knowledge and skills. The one exception was understanding "traps" (e.g., question-answer trap, premature focus trap, confrontation trap, blaming trap, and labeling trap), with only 61.4 % indicating an increase in knowledge in this area.

Advanced MI/SBIRT Workshop. Table 2 presents the percentage of participants reporting an increase in knowledge and skills after the Advanced MI/SBIRT training workshop. As seen in Table 2, 90% or more of the participants in the Advanced MI/SBIRT training workshop reported an increase in knowledge and skills in MI and 80% or more reported an increase in knowledge and skills in SBIRT.

Negative Attitudes Toward EBPs

Means, standard deviations, and contrasts for negative attitudes toward EBPs at pre-training and post-training are presented in Table 3. Results of the GLM repeated-measures ANOVA indicated a main effect for Time but not for the Time x Group interaction effect for negative attitudes toward EBPs. Results indicate negative attitudes toward EBPs significantly improved from pre-training to post-training for workshop participants and there were no differences between participants in the Basic MI training workshop and the Basic MI and Advanced MI /SBIRT training conditions. The effect size for the main effect for Time was large ($\eta^2_p = .15$).

Interest in Implementing EBPs

Means, standard deviations, and contrasts for interest in implementing EBPs at pre-training and post-training are presented in Table 3. Results of the GLM repeated-measures ANOVA indicated a main effect for Time but not for the Time x Group interaction effect for interest in implementing EBPs. Results indicate interest in implementing EBPs significantly increased from pre-training to post-training for workshop participants and there were no differences between participants in the Basic MI training workshop and the Basic MI and Advanced MI /SBIRT training conditions. The effect size for the main effect for Time was large ($\eta^2_p = .13$).

Discussion

The purpose of this study was to examine the impact of MI and Advanced MI/SBIRT training workshops on substance abuse treatment providers' knowledge, skills, negative attitudes toward EBPs, and interest in implementing EBPs. We chose to provide brief trainings in MI and SBIRT as a first step toward introducing providers to EBPs. Overall, findings indicated participants attending the Basic MI workshop and the Basic MI and Advanced MI/SBIRT workshops reported increases in knowledge and skills, a reduction in negative attitudes toward EBPs, and an increase in interest in implementing EBPs. There were, however, no differences in changes in negative attitudes or interest in EBP implementation between those who attended the Basic MI training workshop and those who attended the Basic MI and Advanced MI/SBIRT training workshops.

Results from the current study indicated participants attending a Basic MI and Advanced MI/SBIRT workshops reported increases in post-training knowledge and skills. This finding is consistent with research suggesting that 1-2 day training workshops in MI results in immediate post-training gains in both knowledge and skills (Schwalbe et al., 2014). The one exception was specific to understanding therapist-client "traps" such as question-answer, premature focus, confrontation, blaming, and labeling traps. It is possible a smaller percentage of participants (61.4%) reported increases in knowledge in this area as these behaviors are consistent with more traditional approaches to substance abuse treatment that include confrontation and labeling (e.g., alcoholic) as part of the treatment process. This possibility is supported by research suggesting unlearning prior counseling approaches poses a barrier to learning MI (Schumacher, Madson, & Nilsen, 2014).

Results also supported our hypothesis that participants would report a decrease in negative attitudes toward EBPs and increased interest in implementing EBPs. These findings are particularly important because negative attitudes toward EBPs are associated with the research-practice gap, as well as low levels of implementation of EBPs (Nelson et al., 2006; Schumacher et al., 2014). It is also interesting to note that pre-training levels of interest in implementing EBPs were high, suggesting that this group of practitioners were motivated to learn MI and SBIRT. This finding is not surprising, however, as participants sought out these trainings that were specific to MI and SBIRT, two prominent EBPs in the field of addiction practice. Pre-training negative attitudes toward EBPs for the sample, however, were in the mid-range (M = 18.17, SD = 4.28), suggesting that although participants were interested in implementing EBPs, not all participants came to the workshops with positive attitudes toward EBPs.

We also hypothesized that we would find greater decrease in negative attitudes and increased interest in EBPs among participants who participated in both the Basic MI and Advanced MI/SBIRT workshops. Contrary to our hypothesis, we did not find evidence for moderating effects of workshop condition. Results suggests that the one day Basic MI workshop was as effective in decreasing negative attitudes toward EBPs and interest in implementing EBPs in ones' practice as the two day Basic MI plus Advanced MI/SBIRT workshop. Research indicates that among EBPs, addiction counselors are most ready to adopt MI (McGovern et al., 2004). Because MI combines both person-centered and directive approaches, MI has the capacity to appeal to counselors from a broad range of theoretical orientations. Thus,

it is possible that the choice of MI for the initial training was sufficient to decrease negative attitudes and increase interest in EBP implementation due to the MI approach. This is an important finding as a lack of time to learn new therapies (Campbell et al., 2003; Miller et al., 2006) and limited availability of training opportunities (Weissman et al., 2006) are primary barriers to EBP implementation. Thus, offering a brief, one day training may be one way to reduce negative attitudes and increase interest in EBP implementation, potentially encouraging participants to seek out future EBP trainings.

Limitations and Directions for Future Research

Although this study contributes to the literature on the impact of EBP trainings for addiction practitioners, certain limitations should be considered. First, the sample was small and predominantly Caucasian, limiting the generalizability of the results. Future research with larger and more diverse samples is needed. Additionally, information was obtained through self-report questionnaires and the psychometric properties of the knowledge and skills questionnaires are limited to face validity of the items. It is not clear that reported increases in knowledge and skills or interest in using EBPs are representative of actual knowledge and skill acquisition or use of EBPs in clinical practice. Future research using a longitudinal design and observational data would strengthen the findings of this study. A final limitation of this study is the quasi-experimental design. Although we were not able to randomly assign participants to either the Basic MI or Basic and Advanced MI/SBIRT conditions, our analyses suggest that there were no differences between participants in the two groups. Future research utilizing a randomized controlled design, however, would add to the results of this study.

Implications for Training

Findings from the current study suggest that brief MI and SBIRT training workshops can increases knowledge and skills, as well as have a positive impact on negative attitudes toward EBPs and interest in implementing EBPs. Treatment centers and agency directors can facilitate integration of EBPs into practice by supporting brief trainings that can be followed by feedback and coaching. Addiction treatment providers can seek out MI and SBIRT training workshops to gain valuable knowledge and skills that they can use with their clients. Additionally, educators trained in MI and SBIRT can offer brief training workshops with follow-up consultation for substance abuse treatment providers in their communities. It may be important to spend additional time on therapist-client "traps" when working with practitioners who use more traditional approaches to substance abuse treatment or other approaches that may not be consistent with the MI approach. Because providers in a variety of disciplines typically need continuing education for renewal of certification and licensure, these trainings offer an opportunity to bridge the research-practice gap and increase the use of EBPs by providers working with clients with substance use disorders.

Conclusion

The aim of this study was to examine the impact of Basic MI and Advanced MI /SBIRT training workshops on knowledge, skills, and negative attitudes toward EBPs. Findings indicate participants attending the Basic MI training workshop and the Basic MI and Advanced MI/SBIRT training workshops reported an increase in knowledge and skills, as well as a decrease in negative attitudes toward EBPs and increase in interest in EBP implementation. This study adds to the literature by identifying ways to reduce barriers to implementation to positively impact the research-practice gap for EBP in the field of addiction.

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Table 1

Participants Reporting an Increase in MI Knowledge and Skills Post-MI Training

Item	Percent (*n*)
Increased my knowledge of evidence-based practices.	90.0 (63)
Understand the history and evidence-base of MI.	90.0 (63)
Identify and demonstrate foundations of MI (readiness to change, stages of change, thoughts/feelings about change, recognizing change talk, and attending to change talk).	90.0 (63)
Understand the underlying "spirit" of MI (autonomy, collaboration, evocation, acceptance, and compassion).	97.1 (68)
Understand the MI principles of RULEs (resisting the righting reflex, understanding client's motivation, listening to your client, and empowering your client).	82.9 (58)
Understand the "traps" we enter into with our clients (question-answer trap, premature focus trap, confrontation trap, blaming trap, and labeling trap).	61.4 (43)
Demonstrate the unique skills of MI (eliciting change talk and listening for change talk).	87.1 (61)
Recognize and work with client resistance.	85.7 (60)
Recognize and work with client ambivalence.	88.6 (62)

Note. $N = 70$.

Table 2

Participants Reporting an Increase in MI and SBIRT Knowledge and Skills Post-SBIRT Training

Advanced MI Knowledge and Skills	
Item	Percent (*n*)
Understand and demonstrate developing discrepancies between clients behavior and goals (exploring ambivalence and motivation, as well as by strengthening commitment) utilizing MI skills.	94.9 (37)
Recognize and label elements of change talk (content, recognition, specific target behavior, and present tense language).	97.4 (38)
Recognize and rate preparatory (DARN) and mobilizing language (desire, ability, reason, need for commitment, and taking steps).	97.4 (38)
Understanding and ability to use directive MI skills (asking evocative questions, elaboration, using extremes, looking back, looking forward, exploring goals, assessing feedback, and readiness ruler).	94.9 (37)
Understanding and ability to work with resistance (reflection, shifting focus, coming alongside, and agreement with a twist, emphasize personal control and choice, paradox).	92.3 (36)
Understanding of and ability to collaborate with client in creating a change plan (set goals, offer a menu of change options, arrive at a plan, elicit a commitment, lower barriers to action, and enlist social support).	97.4 (38)
SBIRT Knowledge and Skills	
Item	Percent (*n*)
Understanding of SBIRT and SBIRT as an evidence based practice in treating behavioral health.	92.3 (36)
Understanding of elements of brief intervention practice: Screening, Brief Intervention, and Referral to Treatment.	94.9 (37)
Understanding and ability to practice standardized screening tools for substance use in adolescents and adults.	92.3 (36)
Understanding and ability to demonstrate elements of brief intervention, including motivational enhancement, stages of change, formula of a brief intervention (engagement, pros and cons, feedback, readiness to change, negotiate	84.6 (33)
Understanding and ability to refer clients to outside treatment when necessary.	82.1 (32)

Note. $N = 39$.

Table 3

Means, Standard Deviations, and Contrast for Negative Attitudes Toward EBPs and Interest in Implementing EBPs

	Condition		Time			Time x Group		
	Basic MI (n = 31)	Basic MI and Advanced MI/SBIRT (n = 39)						
Outcomes	*M* (*SD*)	*M* (*SD*)	WL	*F*(2,68)	η^2_p	WL	*F*(2,68)	η^2_p
Negative Attitudes Toward EBPs			.85	11.68***	.15	1.00	0.10	.00
Pre-Training	18.97 (3.75)	17.56 (4.62)						
Post-Training	17.48 (4.03)	16.34 (3.98)						
Interest in Implementing EBPs			.87	10.02**	.13	1.00	0.02	.00
Pre-Training	4.16 (0.86)	4.26 (0.68)						
Post-Training	4.39 (0.62)	4.46 (0.68)						

Note. WL = Wilks' Lambda; η^2_p = partial eta squared; ** $p < .01$, *** $p < .001$.