

EVIDENCE-BASED PRACTICES IN YOUTH MENTAL HEALTH:
KNOWLEDGE, ATTITUDES AND ORGANIZATIONAL CHARACTERISTICS

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Abstract

Based off of the “Multi-level Conceptual Framework of Organizational Innovation Adoption,” this project investigated the extent to which knowledge of evidence-based practices (EBPs) and organizational characteristics significantly influenced EBP attitudes, while controlling for social desirability and organization membership. Participants were public sector practitioners from Hawaii’s Department of Education (n=108) and Child and Adolescent Mental Health Division (n=61). Stepwise multiple regression analyses were conducted with the total sample and separately for each of the organizations to determine which factors significantly predicted EBP attitudes. Findings for the total sample suggest that the model that best predicted EBP attitudes included the variables of social desirability and organization membership. Additionally, the models that best predicted EBP attitudes for each organization incorporated different predictor variables. Findings are discussed as they relate to the importance of including social desirability in future research and identifying the different factors that influence EBP attitudes across various organizations.

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List of Abbreviations

CAMHD.....	Child and Adolescent Mental Health Division
CFIR.....	Consolidated Framework for Implementation Research
DOE.....	Department of Education
EBPAS.....	Evidence-Based Practice Attitudes Scale
EBPs.....	Evidence-Based Practices
KEBSQ.....	Knowledge of Evidence-Based Services Questionnaire
MPAS.....	Modified Practice Attitudes Scale
MC Form C.....	Marlowe-Crowne Social Desirability Scale- Form C
MCSDS.....	Marlowe-Crowne Social Desirability Scale
MVA.....	Missing Values Analysis
MCAR.....	Missing Completely at Random
MTPS.....	Monthly Treatment Progress Summary
ORC.....	Organizational Readiness for Change
ORC-S.....	Organizational Readiness for Change- Treatment Staff Version
OSC.....	Organizational Social Context
PBQ.....	Practitioner Background Questionnaire

Evidence-Based Practice in Youth Mental Health: Knowledge, Attitudes and Organizational Characteristics

Much progress has been made in identifying youth mental health evidence-based practices (EBPs) over the past several decades (American Academy of Pediatrics, 2011; Chorpita, Daleiden, & Weisz, 2005; Lonigan, Elbert, & Johnson, 1998; National Institute of Mental Health, 2010; Silverman & Hinshaw, 2008; Society of Clinical Child and Adolescent Psychology & Association for Behavioral and Cognitive Therapies, 2010; Weisz, Hawley, & Doss, 2004). Building upon the work of earlier efforts focused on adult populations, youth-centered efforts first materialized when the Empirically Supported Psychosocial Interventions for Children Task Force formally identified empirically supported treatments for children and adolescents in 1998 (Lonigan et al.). Since then, numerous large-scale efforts have continued to systematically summarize the youth treatment outcome literature (e.g., Chorpita et al., 2005; Silverman & Hinshaw, 2008; Weisz et al., 2004).

Although continued development and refinement of EBPs are important, many have argued that the next big step in the broader mental health services movement should focus on the implementation of such practices in community settings (Damschroder et al., 2009; Fixsen, Naoom, Blasé, Friedman, & Wallace, 2005). Graham et al. (2006, p.17) define implementation research as the “scientific study of methods to promote the systematic uptake of clinical research findings and other evidence-based practices into routine practice and, hence, to improve the quality and effectiveness of health care.” However, as compared to research paradigms for developing and testing EBPs, the systematic and scientific study of EBP implementation remains fairly new and untested.

Along these lines, EBP implementation stakeholders have traditionally borrowed or adopted from change models for other types of initiatives or innovations (e.g., Ajzen's (1991) Theory of Planned Behavior, Fixsen et al.'s (2005) six stages of implementation process, and Roger's (2004) Innovation Diffusion Theory). Although seemingly useful, this approach has made for some frontline confusion, seeing as there are many types of models related to innovation implementation. In an effort to summarize commonalities across numerous dissemination and implementation paradigms, Damschroder et al. (2009) recently consolidated 19 such theories into the Consolidated Framework for Implementation Research (CFIR). Damschroder and colleagues (2009) posit that there are more commonalities than differences across their reviewed theories, and their consolidated framework suggests five core dissemination and implementation factors. These include: (a) intervention characteristics – core components (essential and indispensable elements) and adaptable periphery (adaptable elements, structures, and systems related to the intervention and organization), (b) outer setting – the economic, political, and social context within which an organization resides, (c) inner setting – features of structural, political, and cultural contexts through which the implementation process will proceed, (d) characteristics of individuals – cultural, organizational, professional, and individual mindsets, norms, interests, and affiliations, and (e) process – active steps aimed to achieve individual and organizational level use of the intervention as designed. These five core factors are composed of numerous sub-factors, each of which is thought to contribute to the overall larger core factor. For example, some of the elements of the larger factor of (d) individual characteristics are knowledge of

interventions, beliefs about interventions, self-efficacy, change process stage, and feelings of identification with an organization.

Most relevant for this paper, Damschroder et al.'s (2009) CFIR explicitly acknowledges the importance of organizational- and individual- level domains for implementation purposes. One individual level characteristic that has been heavily investigated within the youth dissemination and implementation movement is that of clinician attitudes towards EBPs. Research suggests that negative attitudes towards EBPs and manualized treatments tend to center on the inflexibility for adapting interventions and the inadequacy of fully addressing the complexity of every day treatment cases (Addis & Krasnow, 2000; Addis, Wade, & Haggis, 1999; Baumann, Kolko, Collins, & Herschell, 2006; Nelson & Steele, 2008; Nelson, Steele, & Mize, 2006; Walrath, Sheehan, Holden, Hernandez, & Blau, 2006). One example of a heavily studied measure of providers' attitudes towards EBPs is the Evidence-Based Practice Attitude Scale (EBPAS; Aarons, 2004; Aarons et al., 2010). In his original psychometric study, Aarons (2004) empirically demonstrated four scales for his instrument: EBP appeal, extent to which adoption is required by an organization, openness to trying an EBP, and unfavorable attitudes toward EBPs. The Modified Practice Attitude Scale (MPAS; Borntrager, Chorpita, Higa-McMillan, Weisz, & the Network on Youth Mental Health, 2009) is another therapist self-report measure of attitudes toward EBPs. Unlike Aarons' (2004) measure, however, the MPAS does not contain the word "manual" and is meant to query clinicians' EBP attitudes free from that construct.

Providers' knowledge of EBPs is another CFIR individual level characteristic that has received increased empirical attention over the past several years. Stumpf, Higa-

McMillan, and Chorpita (2009) recently developed the Knowledge of Evidence Based Services Questionnaire (KEBSQ). This instrument measures EBP awareness knowledge at the “practice element” level, a paradigm for distilling the youth treatment outcome literature (Chorpita et al., 2005; Chorpita & Daleiden, 2009a; Chorpita & Daleiden, 2009b). Practice elements are defined as discrete clinical techniques or strategies, such as “relaxation” or “self-monitoring,” that are usually used as part of a larger intervention plan (Chorpita et al., 2005). The KEBSQ uses a multiple true-false response format and asks therapists to correctly identify whether or not certain techniques are associated with larger EBP protocols for the four problem areas of anxiety, depression, inattention/hyperactivity, and disruptive behaviors.

There are only a few studies to date that have examined the relationship between knowledge of and attitudes towards youth mental health EBPs. Nakamura, Higa-McMillan, Okamura, and Shimabukuro (2011) recently surveyed 240 public sector youth therapists and found that knowledge and attitudes related to practitioners’ most advanced degree, practice setting, and licensure status. Their findings also suggested that practitioners’ lack of knowledge for identifying whether or not a technique was drawn from a larger EBP protocol was related to negative EBP attitudes. Similarly, yet in the opposite direction, Melas, Zampetakis, Dimopoulou, and Moustakis (2012) found that physicians’ knowledge of technological innovations supporting EBPs was related to their positive attitudes toward EBPs, as measured by Aarons (2004) EBPAS. Thus, although extremely tentative in nature, these studies suggest a meaningful link between provider’s knowledge of and attitudes toward EBPs.

In addition to the individual-level variables that have gained interest in recent research for youth mental health, CFIR-related organizational-level characteristics are becoming increasingly investigated. To date, several assessment tools have been developed and applied to assess practitioners' and program directors' perceptions of their organization's readiness for change regarding innovation adoption (e.g., Lehman, Greener, & Simpson's (2002) "Organizational Readiness for Change (ORC)" and Glisson et al.'s (2008) "Organizational Social Context (OSC)" questionnaire). In one recent study, Aarons et al. (2012) used the OSC with community clinicians and found that a negative organizational climate was related to an unwillingness to adopt EBPs (even when controlling for individual-level characteristics). The findings from this study also suggest that a proficient organizational culture (i.e., an environment in which employees are effective at their job), an engaged climate, and a less stressful work environment can lead to positive attitudes toward EBPs. In addition, Beidas et al. (2012) utilized the ORC to investigate the relationship between provider- and organizational-level characteristics associated with training and implementing EBPs among school mental health providers. Their findings, however, indicated that the provider- (e.g., attitudes) and organizational-level (e.g., organizational stress) variables did not predict school mental health provider EBP adoption post-training. Overall, although research in this area continues to grow, empirical study on organizational characteristics' influence on youth mental health EBP implementation is lacking.

Fortunately, there is an abundance of research in the broader health implementation literature (e.g., adult mental health, nursing, HIV prevention, etc.) that can be referenced for providing guidance with regard to identifying (a) the discrete

organizational characteristics that influence innovation or EBP implementation and (b) how these organizational characteristics are potentially related to other variables of interest in the EBP movement. In regards to the influential organizational characteristics, research suggests that common EBP implementation barriers include the following constructs: lack of time, lack of resources and facilities, lack of autonomy, misconceptions of EBPs, lack of administrative support, lack of mentorship, poor understanding of research, and lack of authority to change practices (Brown, Wickline, Ecoff, & Glaser, 2008; Bostrom, Kajermo, Nordstrom, & Wallin, 2008; Chau, Lopez, & Thompson, 2008; Egerod & Hansen, 2004; Frueh, Grubaugh, Cusack, & Elhai, 2008; Manuel, Hagedorn, & Finney, 2011). On the other hand, organization facilitators to the implementation of EBPs include learning and training opportunities, availability of resources, availability of time, mentorship, funding of research activities, staffing, cooperation and support from colleagues and managers, vision clarity, and support for change (Beidas et al., 2012; Brown et al., 2008; Chau et al., 2008; Cummings, Estabrooks, Midodzi, Walin, & Haydak, 2007; Egerod & Hansen, 2004; Estrada, 2009; Manuel et al., 2011; Pare, Sicotte, Poba-Nzaou, & Balouzakis, 2011).

Further, when examining the relationship between organizational characteristics and other influential factors, one study within the field of nursing found that EBP implementation was predicted by individuals' knowledge and skills, as well as an organization's commitment to change (e.g., staffing, timing, resources, autonomy, support, and mentorship) (Bee et al., 2005; Brown et al., 2008). In addition, another study completed with nurses and physicians working with veterans found that certain organizational characteristics (e.g., staff engagement) were associated with better

knowledge and attitudes, while stress was related to poorer attitudes and less implementation (Sinkowitz-Cochran et al., 2012). Thus, increasing our scientific understanding of which organizational characteristics influence EBP implementation in youth mental health seems a fruitful endeavor, with findings from related fields thus far suggesting the following: (a) that organizational barriers are associated with poorer attitudes, knowledge, and implementation, and (b) that organizational facilitators are associated with increased positive attitudes, knowledge, and implementation.

Although there is EBP implementation research on organizational characteristics in the broader health field, no such theory exists in this field that clearly outlines the interrelationships between various organizational- and individual-level factors. Looking to the broader dissemination and implementation literature, however, does provide some direction in this area. The “Multi-level Conceptual Framework of Organizational Innovation Adoption” model (Frambach & Schillewaert, 2002), which was originally developed in business research, outlines the hypothesized inter-relationships between numerous factors that are thought to lead to an individual’s acceptance of an innovation, including knowledge, attitudes, and organizational characteristics. This overall model is divided into two components, each with different end goals: (a) “Adoption Decision” (at the organizational level) and (b) “Individual Acceptance” (at the individual level). In the Adoption Decision phase (Figure 1), Frambach and Schillewaert (2002) posit that supplier marketing efforts, social networking, and environmental influences combine together to influence the perceived innovation’s characteristics. Furthermore, these perceived innovation characteristics, in addition to the other environmental influences

and adopter characteristics work in conjunction with each other to affect the adoption decision of an organization (whether an organization decides to adopt a new innovation).

The Individual Acceptance phase (Figure 2) is said to begin at the resolution of the Adoption Decision phase briefly described above. Frambach and Schillewaert (2002) assert that three factors influence an individual's attitudes toward a new innovation: (a) social usage of the innovation by other organizations; (b) organizational facilitators/internal marketing (i.e., organizational characteristics); and (c) an individual's dispositional innovativeness (i.e., the tendency of a person to accept an innovation; which is influenced by personal characteristics such as knowledge). In turn, attitudes are said to interact with the factors (a) and (c) above to determine whether or not an individual will accept that innovation. The Individual Acceptance component (Figure 2) of the overall model then, outlines the three implementation factors of key interest for this study: organizational characteristics (see component (b) above), an individual's knowledge (see component (c) above), and an individual's attitudes toward EBPs (which are believed to be influenced by (a), (b), and (c)). The Multi-level Conceptual Framework of Organizational Innovation Adoption model suggests that there are meaningful connections between these three factors: organizational facilitators/internal marketing and personal characteristics (e.g., knowledge) work to influence the attitudes of an individual toward an innovation.

Thus, based upon past research findings and the Multi-level Conceptual Framework of Organizational Innovation Adoption outlined above, the present investigation examined the extent to which EBP knowledge and various organizational characteristics significantly predicted EBP attitudes (after controlling for extraneous

variables, such as social desirability and organization membership, discussed further). There were two major hypotheses in the current study. First, I hypothesized that higher levels of EBP knowledge and organizational facilitators would predict practitioners' positive attitudes toward EBPs. Second, I hypothesized that less knowledge of EBPs and organizational barriers would predict practitioners' negative attitudes toward EBPs. Furthermore, given that research within the youth mental health EBP movement is scarce, especially when considering organizational characteristics as a factor, I performed additional sets of exploratory analyses with only the predictor variables that significantly correlated with the dependent variable of EBP attitudes (discussed in more detail in the Analytic Strategy).

Methods

Participants

Intensive In-Home Therapists contracted with the State of Hawaii Child and Adolescent Mental Health Division (CAMHD) and Behavioral Health Specialists from the State of Hawaii Department of Education (DOE) were surveyed for this study. These two types of practitioners were chosen as participants for this study because they provide the majority of direct services to youth in Hawaii's public mental health sector. CAMHD Intensive In-Home Therapists work to help families improve youths' functioning in their current living environment, with the aim of preventing the need to remove them from their homes (State of Hawaii Department of Education Office of Curriculum, Instruction and Student Support and Department of Health Child & Adolescent Mental Health Division, 2006). This service is designed to incorporate evidence-based interventions that involve both the family and the child. Initial authorization for this service was designed

to be a maximum of four weeks, with additional monthly authorizations occurring as needed and reviewed by treatment teams. Behavioral Health Specialists work face-to-face with students in the school setting to improve their individual educational functioning (State of Hawaii Department of Education Office of Curriculum, Instruction and Student Support and Department of Health Child & Adolescent Mental Health Division, 2006). This school-based service was designed to range from 6-24 sessions (or six months), with an occasional family therapy session.

A total of 257 practitioners (142 CAMHD and 115 DOE therapists) were approached to complete the survey battery. Response rates for CAMHD and DOE therapists were 43.0% and 94.8%, respectively, with a total response rate of 66.1% for all participants. A total of 170 practitioners (61 CAMHD and 109 DOE therapists) completed one or more the questionnaires from the survey battery. From this pool of 170 participants, three participants were removed for having more than 20% of their data missing (described in more detail in the “Analytic Strategy”), creating a final participant sample of 167. Participants ranged in age from 25 to 71 ($M = 40.2$, $SD = 10.0$), 67.1% were female ($n = 112$), and the primary ethnicities reported were: Asian ($n = 61$; 36.5%), White ($n = 57$; 34.1%), Hawaiian or Pacific Islander ($n = 32$; 19.2%), Latino or Hispanic ($n = 7$; 4.2%), Other ($n = 4$; 2.4%), Black ($n = 2$; 1.2%), and race unknown ($n = 1$; 0.6%). Four participants (2.4%) did not report a primary ethnicity.¹ Participants reported an average of 4.5 years ($SD = 4.1$) of clinical training and an average of 8.0 years ($SD = 6.6$) of full time clinical experience since earning their terminal degree. Approximately 35.9% ($n = 60$) of participants reported holding a state license to practice. Participants came

¹ Note that if participants marked two ethnicities as their primary ethnicity, it was indicated that they did not report a primary ethnicity.

from 11 different mental health agencies and across all four school districts in Oahu, Hawaii. Participants' primary clinical work settings were 63.1% ($n = 112$) school, 12.0% ($n = 20$) out of home, 10.8% ($n = 18$) in home, 7.8% ($n = 13$) other, and 5.4% ($n = 9$) out patient. On average, participants reported having an active caseload of 14.8 ($SD = 16.5$) clients and received approximately 3.9 ($SD = 2.6$) hours of supervision per month.

Educational degrees reported by participants were as follows: 38.9% ($n = 65$) Masters of Counseling, 23.4% ($n = 39$) Masters of Social Work, 19.2% ($n = 32$) masters in other degrees (e.g., Marriage and Family Therapy, Organizational Psychology, Health and Wellness), 4.8% ($n = 8$) Masters of Education, 4.2% ($n = 7$) Bachelors, 3.6% ($n = 6$) Doctorate in Psychology, 2.4% ($n = 4$) other degrees, 1.2% ($n = 2$) Registered Nurse, 0.6% ($n = 1$) doctoral students or interns, 0.6% ($n = 1$) Doctor of Philosophy, and 0.6% ($n = 1$) Doctor of Medicine, with one participant failing to report on this variable.²

Professional specialties for the participants were reported as 27.5% ($n = 46$) counseling (psychology), 26.9% ($n = 45$) marriage and family therapy, 21.0% ($n = 35$) social work, 12.0% ($n = 20$) counseling (education), 6.0% ($n = 10$) other, 5.4% ($n = 9$) clinical, 3.0% ($n = 5$) substance abuse counseling, 2.4% ($n = 4$) education or special education, 2.4% ($n = 4$) psychiatry, and 0.6% ($n = 1$) school psychology, with six participants choosing not to respond. The primary theoretical orientation reported by therapists were as follows: 45.5% ($n = 76$) cognitive-behavioral, 25.1% ($n = 42$) behavioral, 13.8% ($n = 23$) humanistic or client-centered, 12.6% ($n = 21$) systems or family-systems, 8.4% ($n = 14$) eclectic or integrative, 2.4% ($n = 4$) existential or gestalt, 2.4% ($n = 4$) other, and 1.8% ($n = 3$) psychoanalytic or psychodynamic.

Measures

² Note that if participants marked two degrees obtained, the highest degree was noted.

Evidence-Based Practice Attitude Scale (EBPAS; Aarons, 2004; Aarons et al., 2010). The EBPAS is a 15-item therapist-report measure on attitudes toward evidence-based practices. This measure utilizes a four-point Likert-scale that measures the amount with which participants agree with a statement, ranging from zero meaning “not at all” to four meaning “to a very great extent.” The total score ranges from zero to 60, with a higher score demonstrating more favorable attitudes toward EBPs. The EBPAS has four subscales: (a) Appeal – appeal of EBPs; (b) Requirements – whether or not EBPs are required by an organization; (c) Openness – the organization’s openness to try EBPs; and (d) Divergence – unfavorable attitudes toward EBPs (scored in reverse to be later added to the Total score). Aarons’ (2004) initial psychometric study of 322 clinicians found evidence for the measure’s factor structure and good internal consistency for these scales, with Cronbach alphas ranging from 0.77 for the Total to 0.90 for the Requirements subscale. More recently, Aarons et al. (2010) studied 1,089 mental health service providers from a nationwide sample. Their confirmatory factor analysis supported a second-order factor model, and reliability coefficients for the subscales ranged from 0.91 to 0.67 (Total scale = 0.74). For the purposes of this study, only the Divergence subscale was administered to the participants because it was determined by the author that only this subscale contained questions that addressed the construct of therapists’ attitudes toward EBPs (rather than constructs such as organizational characteristics that could influence a therapist’s attitudes toward EBPs). To decrease the number of separate measures administered, the items of the Divergence subscale were integrated into the MPAS measure (described in detail below). In the current study, the Cronbach alpha for

the Divergence subscale was acceptable at 0.70, which is similar to the values that the authors obtained.

Knowledge of Evidence Based Services Questionnaire (KEBSQ; Stumpf, Higa-McMillan, & Chorpita, 2009). The KEBSQ (see Appendix A) assesses general awareness knowledge for various evidence-based and non-evidence-based psychosocial techniques across the four major youth problem areas of: Anxious/Avoidant (A), Depressed/Withdrawn (D), Disruptive Behavior (B), and Attention/Hyperactivity (H). Participants are asked to circle each problem area for which a particular technique is considered evidence-based (for answer key see Appendix B). Each item is scored on a scale from zero to four, with correctly endorsed and omitted responses per problem area each receiving one point. For instance, item one describes the treatment technique of exposure, which is a technique drawn from evidence-based protocols for Anxious/Avoidant problems (Chorpita & Daleiden, 2009a). In this example, the participant would get one point for circling A, one point for not circling D, one point for not circling B, and one point for not circling H, for a total of four points. In order to distinguish a no-response (e.g., someone who refused to answer the question) from deliberately choosing to designate that a particular technique is not drawn from a larger evidence-based approach, respondents have the option of circling the letter N (None) for each item. There is a total of 40 items, with a Total score range of zero to 160. In a sample of graduate and community level clinicians, the KEBSQ has evidenced adequate test-retest reliability ($r = 0.56$) and the ability to discriminate between these two populations. These authors originally argued that each item (i.e., practice element) should be conceptualized as an orthogonal construct, and thus reliability tests for the measure's

factor structure were unwarranted. In the current study, the Cronbach alpha for the Total score was 0.51, indicating that viewing items as orthogonal constructs may be appropriate.

Recent investigations that employed this instrument suggest the utility of scoring this measure in multiple ways. For instance, Nakamura et al. (2011) recently examined the instrument's Commission Errors (defined as incorrectly indicating that a technique is drawn from an evidence-based protocol when it is actually not) and Omission Errors (defined as indicating that something is not derived from a larger evidence-based approach when it actually is), in addition to Total scores, in an investigation on the relationship between EBP knowledge and attitudes. The results of this study suggest that Omission Errors related to practitioners (a) having an overall less favorable attitude toward EBPs, (b) believing that EBPs are less appealing, and (c) thinking that research interventions are not clinically useful and are less important than clinical experience. Further, the KEBSQ has a unique and comprehensive way of assessing clinician knowledge because of the dynamic structure of its scoring key. For example, when the KEBSQ was originally created, Stumpf et al. (2009) used the 2004 version of the CAMHD Biennial Report (Chorpita & Daleiden, 2004) to inform the answer key. However, Nakamura et al. (2011) utilized the 2007 version of the CAMHD Biennial Report (Chorpita & Daleiden, 2007) for informing the scoring key in their investigation because data collection for their participants occurred in 2008 and early 2009. Similarly, the current study used the 2009 CAMHD Biennial report (Chorpita & Daleiden, 2009a) for informing the scoring key in order to reflect the latest EBP research findings that were made publicly available to the practitioners in Hawaii. Previous pre-training total mean

scores of the KEBSQ ranged from 93.9 to 96.0 ($SD = 8.0$ to 9.2) for community practitioners (Nakamura et al., 2011; Stumpf et al., 2009). The average KEBSQ Total scores for the present study ($M = 96.8$, $SD = 8.1$) were consistent with these previous findings.

Marlowe-Crowne Social Desirability Scale Form C (M-C Form C; Crowne & Marlowe, 1960; Reynolds, 1982). The original Marlowe-Crown Social Desirability Scale (MCSDS) is a true-false instrument designed to measure a respondent's level of social desirability. This construct was defined as the need to obtain approval by responding in a culturally appropriate and acceptable manner. The original version of this measure was created by looking at items on personality inventories. The items were included if they met the criteria of cultural approval, with little pathological and abnormal implications if participants responded in a socially desirable or undesirable manner. After an item analysis was performed with the results from 76 undergraduate students, there was a total of 33 items that discriminated between high and low total scores at the 0.05 alpha level, which make up the final version of this measure. The total range of scores is between 0 and 33 points, with higher scores indicating more social desirability. A sample of 39 subjects displayed an internal consistency coefficient of $\alpha = 0.88$ based on the Kuder-Richardson formula 20. A test-retest correlation of $r = 0.89$ was found with 31 of the 39 subjects one month later.

Several shortened versions of the MCSDS have been created and compared in the past. Specifically, Reynolds (1982) had 608 undergraduates fill out the MCSDS, in addition to other self-report measures. After performing a factor analysis (with a minimum loading factor of 0.4 being required by each item to be included in the different

forms), Reynolds created three forms: Form A (11 items), Form B (12 items), and Form C (13 items). To determine which short form of the MCSDS had the strongest psychometric properties, Reynolds compared the original scale with his three forms (i.e., Forms A, Form B, and Form C) and Strahan and Gerbasi's (1972) three forms (i.e., Form XX, 20 items; Form X1, 10 items; Form X2, 10 items) on various psychometric indices. Reliability estimates based off of Kuder-Richardson formula 20 calculations found that the alpha levels varied across the numerous forms: original measure ($\alpha = 0.82$), Form A ($\alpha = 0.74$), Form B ($\alpha = 0.75$), Form C ($\alpha = 0.76$), Form XX ($\alpha = 0.79$), Form X1 ($\alpha = 0.63$), and Form X2 ($\alpha = 0.66$). Thus, Form C and Form XX had the best reliabilities from the shortened versions of this measure. Concurrent validity was examined with correlations between the MCSDS and the shortened forms; the results are as follows: Form A ($r = 0.91$), Form B ($r = 0.92$), Form C ($r = 0.93$), Form XX ($r = 0.95$), Form X1 ($r = 0.85$), and Form X2 ($r = 0.88$). Once again, Form C and Form XX had the highest concurrent validity. Since the 13-item Form C and the 20-item Form XX both seem to have the strongest psychometric properties, the shorter of the two was chosen at this point. Thus, Reynold's (1982) Form C (see Appendix C) was chosen for this study. In the current study, the Cronbach alpha for the M-C Form C was acceptable, at 0.74. The administration of this measure was added to this study because several researchers posit that responses from providers may be skewed toward overstatement of use and familiarity with EBPs due to social desirability bias (Eliason, Arndt, & Schut, 2005; Hartzler, Baer, Dunn, Rosengren, & Wells, 2007; Manuel et al., 2011). Thus, this measure was administered to the participants in order to examine and control for the effects of social desirability on study predictor and dependent variables (see "Analytic Strategy" below).

Modified Practice Attitude Scale (MPAS; Borntrager et al., 2009). The MPAS is a therapist-report measure of clinician attitudes toward EBPs, which is based off of Aarons' (2004) EBPAS. Unlike the EBPAS, which utilizes the word "manual" in its question items, the MPAS purposefully excludes the term "manual" in order to assess attitudes without specific mention of the word "manual" (Borntrager et al., 2009). The eight items are on a four-point Likert-scale indicating the extent to which they agree or disagree with a particular statement, with zero meaning "not at all" and four meaning "to a very great extent." Total scores can range from zero to 32, with higher scores indicating more favorable EBP attitudes. Based off a sample of 59 youth community health clinicians, the MPAS has evidenced good internal consistency ($\alpha = 0.80$) and a moderate correlation to the EBPAS ($r = 0.36, p < .01$) (Borntrager et al., 2009). In the current study, the Cronbach alpha was acceptable, at 0.77. As mentioned earlier, to decrease the number of separate questionnaires administered to the participants, the four Divergence items from the EBPAS were added to the MPAS items to create one measure of attitudes (see Appendix D). It should be noted that these items were later scored as the MPAS Total Scale and the EBPAS Divergence subscale separately.

Organizational Readiness for Change – Treatment Staff Version (ORC-S; Lehman et al., 2002). The Organizational Readiness for Change (ORC) measure, developed by Lehman and colleagues (2002), was created for implementation efforts in the field of substance abuse. They surveyed 458 treatment staff and 135 program directors from 111 different treatment units. Twenty-two subscales were created for assessing an organization's motivation for change, adequacy of resources, staff attributes,

organizational climate, and training exposure and utilization. These factors were considered important characteristics in an organization's readiness for change.

The original ORC instrument was first developed as a therapist- and program director-report questionnaire for assessing the influence that organizational characteristics had on technology transfer and organizational change with respect to implementing evidence-based substance abuse treatment interventions. The original version of the ORC was developed for use primarily as program-level indicators and had 115 items on a 5-point Likert-scale, ranging from strongly disagree to strongly agree. The original four scales of the ORC were as follows: (a) Motivation for Change, (b) Adequacy of Resources, (c) Staff Attributes, and (d) Organizational Climate, with a total of 18 component subscales. The (a) Motivation for Change subscales are Program Needs for Improvement, Immediate Training Needs, and Pressures for Change; the (b) Adequacy of Resources subscales are Offices, Staffing, Training, Computer Access, and E-Communications; the (c) Staff Attributes subscales are Growth, Efficacy, Influence, and Adaptability; and the (d) Organizational Climate subscales are Mission, Cohesion, Autonomy, Communication, Stress, and Change. Each of these subscales contained approximately six items.

In their initial study, Lehman and colleagues (2002) surveyed over 500 members across more than 100 programs to evaluate the reliability and validity for both staff and director versions of the ORC (Lehman et al., 2002). Since this study will not utilize the director version of the ORC, only staff version reliability and validity psychometric properties are reported. At the staff level, 11 of the 18 subscales had acceptable coefficient alpha reliabilities of 0.7 or higher, with the other 7 subscales having

questionable reliabilities between 0.57-0.69. A principal component analysis examining the internal structure of the 18 subscales suggested that each were generally one-dimensional in nature. Inter-rater agreement values at the organizational level ranged from 0.82 to 0.90 across all 18 subscales (Castro, 2002).

Since the ORC's initial development, Lehman et al. (2002) have gone on to modify the questionnaire into a 129-item version (see Appendix F) that has been increasingly used in organizational research (Henggeler et al., 2008; Henggeler et al., 2007; Saldana, Chapman, Henggeler, & Rowland, 2007). Differences between these two versions include the following: (a) an increased total number of items; (b) an additional scale (Training Exposure and Utilization) comprised of four subscales (Training Satisfaction, Training Exposure, Training Utilization – Individual-Level, and Training Utilization – Program-Level); (c) a different average number of items per subscale (instead of six items per subscale, it is now five items per subscale); and (d) changes in a few subscale names (Program Needs for Improvement changed to Program Needs, Immediate Training Needs changed to Training Needs, Computer Access changed to Equipment, and E-Communications changed to Internet). Since the creation of the 129-item version, multiple investigative groups have used this version within a variety of contexts for studying a wide range of organizational-related phenomena such as attitudes towards EBPs to practitioner workshop attendance (Henggeler et al., 2008; Henggeler et al., 2007; Saldana et al., 2007). Despite such usage, however, psychometric support for the 129-item version is not as established as it is for the 115-item version and there are only a handful of new-version investigations that report such properties (e.g., Saldana et al., 2007).

Since being first developed, the ORC has been used over 600 times with varying organizations and fields of study outside of substance abuse (Simpson & Flynn, 2007). This instrument has also been used to (a) examine changes in organizational readiness over time in relation to interventions designed to raise motivation; (b) develop and test the effectiveness of transfer strategies that address different levels of readiness for change; (c) assess the differential effectiveness of various transfer strategies for innovations that vary in complexity, counseling demands, and organizational resource requirements; and (d) identify the reasons for partial adoption or failure to adopt (Lehman et al, 2002). Moreover, various studies have used the ORC to compare individual therapist perceptions of their organization's characteristics to individual level characteristics such as therapist attitudes and knowledge, therapist-client engagement, therapists' perceptions of program training needs, and patient comorbidity (Gotham, Claus, Selig, & Homer, 2010; Greener, Joe, Simpson, Rowan-Szal, & Lehman, 2007; Rowan-Szal, Greener, Joe, & Simpson, 2007; Schurer, Kohl, & Bellamy, 2010; Simpson, 2002; Simpson & Flynn, 2007; Simpson et al., 2009). Due to its widespread use in various fields and its past use with research on practitioners' knowledge and attitudes (which aligns with the current investigation), the ORC was determined to be an appropriate measure for this study.

However, given the lengthy nature of this measure and the lack of organizational studies specific to youth mental health EBPs, the broader health implementation literature (e.g., adult mental health, nursing, HIV prevention) was considered for more finely pinpointing the influence of discrete organizational characteristics on innovation implementation. To narrow down the factors that were investigated in this study, the

organizational characteristics (i.e., organizational facilitators and organizational barriers) from previous research (listed above) that overlapped with Lehman et al.'s (2002) "Organizational Readiness for Change" measure were chosen to be included in the study. Thus, the following subscales on the ORC were chosen: the subscales of Offices, Staffing, Training, Equipment, and Internet (from the larger scale of Resources); the subscale of Efficacy (from the larger scale of Staff Attributes); and the subscales of Mission, Cohesion, Autonomy, Communication, Stress, and Changes (from the larger scale of Organizational Climate). Hence, only the items that were part of these subscales were administered to the participants in this study (see Appendix E). In the current study, four subscales evidenced Cronbach alphas that fell into the good range (Cohesion, $\alpha = 0.89$; Mission, $\alpha = 0.82$; Communication, $\alpha = 0.81$; Stress, $\alpha = 0.81$); three subscales fell into the acceptable range (Offices, $\alpha = 0.79$; Staffing, $\alpha = 0.75$; Efficacy, $\alpha = 0.72$); one subscale fell into the questionable range (Training, $\alpha = 0.66$); three subscales fell into the poor range (Changes, $\alpha = 0.59$; Equipment, $\alpha = 0.53$; Autonomy, $\alpha = 0.52$); and one subscale fell into the unacceptable range (Internet, $\alpha = 0.41$). It is unclear why certain subscales had stronger reliabilities than others, but it may be that there is more variability in the latter subscales.

Given that the ORC was originally developed for EBP implementation efforts within the field of substance abuse, many investigations in related but different fields (e.g., mental health services) have made small wording changes to fit their field of study when using this measure (cf. Barwick, Peters, & Boydell, 2009; Hamilton, Cohen, & Young, 2009; Schurer et al., 2010; Simpson, 2009). Consistent with those studies, the current investigation also reworded one item in the ORC specific to substance-abuse to

relate this item to mental health services. In order to reduce potential subjectivity in this rewording process, the following algorithm for rewording substance abuse-specific questions was proposed: the words “drug treatment” or “drug-abuse treatment” would be replaced with “treatment.” Item 33 (from Appendix E) was changed as a result of this modification procedure.

The ORC Scoring Guide (see Appendix F) outlines the procedures for calculating all subscale scores. Some items require reverse scoring because of the reverse wording. Instead of taking the number (1-5) of these reversed scored items, their response is subtracted from six and added to the rest of the scores. Concerning missing data, Simpson et al. (2007, p. 116) advise that “only a limited number of missing responses are permissible,” but did not indicate an acceptable response rate for this instrument. As such, significant efforts were made to urge all participants to fill out all items in the measure. Missingness patterns and procedures for handling this concern are discussed below (see “Analytic Strategy”). To calculate subscale totals, all response values were added (including the reversed scored ones). This sum was then divided by the number of items in that scale or subscale to get an average, which is then multiplied by 10 (to rescale the final scores from 10 to 50). A score of 30 is interpreted as “neutral” (i.e., employees neither agreed nor disagreed with the set of items in a scale). Scores near 50 suggest strong agreement with a characteristic, while scores near 10 point to strong disagreement with a characteristic.

Although Lehman et al. (2002) utilized the 18 ORC subscales separately in their original investigation, other studies since then have mainly utilized the instrument’s four or five larger scales, depending on whether the 115- or 129-item version was used (Crits-

Christoph et al., 2010; Henggeler et al., 2007). This study will use the aforementioned subscales separately in the analyses because these were the constructs believed to be influential for adopting EBPs based off of the current literature.

Another difference between the use of the ORC within this study and its original psychometric investigation is in relation to its use as an individual- or organization-level measure. Lehman et al. (2002) utilized this measure on an organization-level to create a composite score for an organization based off of responses from individuals employed at that particular organization. However, this study analyzed the results from this measure on an individual-level, focusing on therapists' perceptions of their organizations (rather than trying to create a true organization score through averaging employee responses by organization) to compare it to other individual-level measures. Unlike most (but not all) previous work that has centered on organizations as units of analyses, this study did not do head-to-head organizational comparisons when comparing all constructs of interest. Instead, each participant was instructed to answer the ORC with reference to their direct supervisor and the organization that employs their supervisors (i.e., this was a specific school for Behavioral Health Specialists and a specific contracted mental health agency for the CAMHD Intensive In-Home Therapists). With this modification, this study aimed to utilize the measure on the individual-level for its intended analyses, while potentially diversifying its population to incorporate participants from various organizations. At the same time, however, organization membership was analyzed as a potentially confounding variable before these individual-level analyses were performed (see "Analytic Strategy" below).

Practitioner Background Questionnaire (PBQ). The PBQ (see Appendix G) assessed basic demographic information (age, gender, ethnicity/race, ethnic identity), training and experience information (degrees earned, state license, professional specialty, theoretical orientation, years of clinical training, years of clinical experience), and work setting information (agency name/type, position, clinical setting, current caseload, hours of supervision per week).

Procedures

As mentioned earlier, participant recruitment focused on sampling both CAMHD and DOE therapists. I worked closely with Dr. Nakamura and his colleagues on the Evidence-Based Services Committee for contacting (a) administrative leadership at various CAMHD-contracted provider agencies and (b) supervisors for the statewide School Based Behavioral Health Specialists in Hawaii (i.e., District or Complex Psychologists). After upper level administrative clearance was received for approaching CAMHD and DOE therapists through email or phone contact, I collected data at provider agencies in-person in their natural environments, during a time that was convenient to their staff and therapists (e.g., during supervision meetings). After briefly introducing the study background and the parameters of participation, I distributed the consent forms and the standardized battery of questionnaires that included the KEBSQ, M-C Form C, MPAS (which included the EBPAS Divergence Scale), ORC, and PBQ. If participants were unable to stay during the administration of the questionnaires, they were given a stamped envelope so that they could complete the survey battery at home and mail in their responses.

Questionnaires for all participants were pre-organized into sealable envelopes, with questionnaire order randomly varied across all packets to help control for potential participant fatigue effects while filling out questionnaires. Participants were also notified that they would receive a \$5 gift card to Jamba Juice or Starbucks as an incentive for their participation, which was also noted in the consent form. Survey administration began as soon as practitioners agreed to participate. Participants who decided to complete the questionnaires at home were reminded by email once every two weeks to complete their surveys. After the third reminder, attempts to contact them were terminated. It was made clear that participation was voluntary. CAMHD and DOE administration were contacted only after all procedures and consent forms were approved by the University of Hawaii at Manoa's Committee on Human Studies and the Hawaii Department of Education's research review board.

Analytic Strategy

Data Preparation

All survey data were entered twice into a database by two different research staff to decrease the potential for data entry errors. Data integrity (e.g., data missingness) was examined before the completion of any analyses. A power analysis determined if adequate power was available for the study's analyses.

Data integrity. Missing data was managed in a way to balance data integrity with maximizing participant responses and the overall sample size. First, if a measure was left unanswered for more than 20% of its component questions, the participant that completed that measure was excluded from the study completely (cf. Ebesutani, Bernstein, Nakamura, Chorpita, & Weisz, 2010). After these steps, the Missing Values Analysis on

Statistical Package for the Social Sciences (MVA; SPSS, 2006) was run to determine whether the missing data was considered Missing Completely at Random (MCAR) (Little & Rubin, 1987). An MCAR data pattern indicates that the distribution of missing data across its variables have no relation to each other (Allison, 2003). If the missing data are determined MCAR, the SPSS MVA module was used to impute missing values using the maximum likelihood method based on expectation-maximization algorithms (Little & Rubin, 1987). The steps for this overall strategy were applied to each measure separately, one at a time.

Following the MVA, minimum and maximum values (i.e., response range) for each item and subscale of every measure were calculated to observe any impossible values and eliminate potential data entry errors. Second, in order to obtain a preliminary and broad understanding of the data, means, standard deviations, skewness, and kurtosis were examined at all subscale and scale levels for each measure using functions in SPSS. Third, the Shapiro-Wilk's W statistic (Shapiro & Wilk, 1965) was utilized for testing distribution normality, with p values < 0.001 indicating non-normality (Tabachnick & Fidell, 2007). When distribution normality and outliers were considered a problematic issue within this data set, transformations were applied as appropriate for each measure. Fourth, regarding outlier identification, standardized scores were calculated for all relevant continuous data and responses in excess of 3.29 ($p < 0.001$, two-tailed test) were considered outliers and addressed as necessary (Tabachnick & Fidell, 2007).

Power analysis. According to Cohen (1992), Cohen d effect sizes for small, medium, and large effects for multiple regression analyses (the proposed analyses outlined below) are 0.02, 0.15, and 0.35, respectively. Corresponding sample sizes are

757, 107, and 50, respectively, for small, medium, and large effect sizes for eight independent variables (the maximum listed by Cohen) in a multiple regression analysis with an alpha level at 0.05 (Cohen, 1992). For this study, the effect size was based off of the small to medium effect sizes observed in Nakamura et al.'s (2011) study on the relationship between therapists' knowledge of and attitudes toward EBPs. Since this study was conducted with 15 independent variables and Cohen (1992)'s power primer stopped at eight independent variables, those values were used. For eight independent variables, the appropriate sample size was estimated as falling between 757 and 107. Thus, for 15 independent variables, the appropriate sample size would have to be in excess of 107 participants, which was achieved. However, a rule of thumb commonly applied to multiple regression analyses is that there should be at least 20 participants per independent variable (Im, 2012). Hence, with 15 independent variables, there should be at least 300 participants. Unfortunately, after attempting to contact all of the CAMHD and DOE practitioners, 170 participants were recruited and participated, potentially suggesting that this study may have been under-powered.

Proposed Statistical Analyses

Relationship between variables: correlations and ANOVA. Prior to running any advanced analyses, exploratory analyses were performed to investigate and preliminarily understand the relationships between the predictor (i.e., perceived organizational characteristics and EBP knowledge), confounding (i.e., social desirability and organization membership), and dependent (i.e., EBP attitudes) variables. Initially, bivariate correlations were performed between the following variables: (a) EBPAS Divergence score; (b) KEBSQ Total, Omission Error, and Commission Error scores; (c)

M-C Form C Total scores; (d) MPAS Total scores; and (e) ORC's subscale scores of Offices, Staffing, Training, Equipment, Internet, Efficacy, Mission, Cohesion, Autonomy, Communication, Stress, and Changes. These exploratory bivariate correlations provided a basic understanding of all pairwise and broader construct relationships, as well as determined whether the independent variables were significantly related to the dependent variables.

The bivariate correlation matrix described above analyzed the nature of the relationships between all continuous variables, but not between the categorical variable of organization membership (i.e., CAMHD and DOE) and dependent variable of EBP attitudes. To address this categorical variable, ANOVAs were conducted in order to examine potential organizational differences on all predictor, confounding, and dependent variables. Similar to the correlation matrix above, this analysis helped obtain a broader level understanding of the data before proceeding with more penetrating analyses. Both the correlations and the ANOVAs were examined and considered significant at the alpha level of 0.05 (i.e., $p < 0.05$).

Hypothesis I and II. As mentioned previously, I predicted that (Hypothesis I) more knowledge of EBPs and organizational facilitators would predict a practitioner's positive attitudes toward EBPs and (Hypothesis II) less knowledge of EBPs and organizational barriers would predict practitioners' negative attitudes toward EBPs. These two hypotheses can be tested with one set of multiple regression analyses. However, there were several potentially confounding factors (e.g., organization membership and social desirability) that were examined within the context of investigating such a relationship. Thus, to properly analyze hypothesis I and II, stepwise

multiple regression analyses were conducted with all variables in the study. First, the two potentially confounding variables (i.e., organizational membership and social desirability) were entered into the analyses to determine how much variance these factors accounted for in predicting EBP attitudes and to statistically control for these variables' effects on the predictor-dependent variable relationships. In regards to organization member, it was represented as a categorical variable and was dummy coded when entered into the multiple regression analyses, with one representing DOE membership and zero representing non-DOE membership (i.e., CAMHD membership). Examination of this potential confound illuminated whether perceived organizational characteristics (inputted later in the multiple regression analyses) accounted for variance in the dependent variable, above and beyond organization membership. The second confounding variable was social desirability. Entering this potential confound into the multiple regression analyses highlighted whether social desirability accounted for variance in the dependent variable. After the two potentially confounding variables were inputted in the multiple regression analyses, the key variables of interest (i.e., knowledge and perceived organizational characteristics) were added to the multiple regression analyses to determine the amount of variance these variables accounted for in EBP attitudes, above and beyond that of social desirability and organization membership. Please see Table 1 below for more information about the variables and scales entered into the multiple regression analyses.

Table 1

Multiple Regression Analysis to Test Hypothesis I and II

Step 1 in Stepwise Multiple Regression: Confounding Variables		Step 2 in Stepwise Multiple Regression: Variables of Interest		Dependent Variable
Variable 1	Variable 2	Variable 1	Variable 2	Variable 1
Social Desirability (i.e., MC Form C)	Organization Membership (i.e., DOE vs. CAMHD)	EBP Knowledge (i.e., KEBSQ) ¹	Organizational Characteristics (i.e., all ORC subscales) ²	EBP Attitudes (i.e., MPAS Total or EBPAS Divergence Scale)

Note. ¹KEBSQ was calculated as Total Score, Omission Errors, or Commission Errors. ²The ORC subscales that were included in the analyses were as follows: Offices, Staffing, Training, Equipment, Internet, Efficacy, Mission, Cohesion, Autonomy, Communication, Stress, and Changes.

Exploratory analyses. The last objective of the current study was to broadly examine the variables that significantly predicted positive attitudes toward EBPs (when solely inputting variables that significantly correlated with positive attitudes toward EBPs in the exploratory bivariate correlation matrices). Given this can be examined when combining participants from CAMHD and DOE or separating them, several exploratory analyses were run.

Exploratory analyses: not separated by organizations. A total of two strategies were utilized for the exploratory analyses in which the organizations were not separated. First, a two-step, stepwise multiple regression analysis was used. To determine the variables for entry into this stepwise multiple regression analysis, only predictor variables that significantly correlated with the dependent variable of EBP attitudes were entered into analyses. The confounding variables (i.e., organization membership and social desirability) that significantly correlated with EBP attitudes were entered simultaneously into the first step of the stepwise multiple regression analyses. Then, the key variables of

interest (i.e., knowledge and perceived organizational characteristics) that significantly correlated with the dependent variable of EBP attitudes were entered into the second step of the multiple regression analyses, to determine the amount of variance these variables accounted for in EBP attitudes, above and beyond that of the social desirability and organizational membership. Please see Table 2 for more information.

Table 2

Two-Step Multiple Regression Analysis to test Exploratory Analyses: Not separated by Organization Membership (with only the Variables that Significantly Correlated with the Dependent Variable entered into the analyses)

Step 1 in Stepwise Multiple Regression: Confounding Variables		Step 2 in Stepwise Multiple Regression: Variables of Interest		Dependent Variable
Variable 1	Variable 2	Variable 1	Variable 2	Variable 1
Social Desirability (i.e., only if MC Form C correlated)	Organization Membership (i.e., DOE vs. CAMHD)	EBP Knowledge (i.e., only correlated KEBSQ scores) ¹	Organizational Characteristics (i.e., only correlated ORC subscales) ²	EBP Attitudes (i.e., MPAS Total or EBPAS Divergence Scale)

Note. ¹KEBSQ was calculated as Total Score, Omission Errors, or Commission Errors. ²The ORC subscales that were included in the analyses were as follows: Offices, Staffing, Training, Equipment, Internet, Efficacy, Mission, Cohesion, Autonomy, Communication, Stress, and Changes. All of these variables were only entered if they correlated with the Dependent variable.

The second exploratory analysis with the combined organizations used a three-step, stepwise multiple regression analysis. Similar to the steps mentioned above, only predictor variables that significantly correlated with the dependent variable of EBP attitudes were entered into the analyses. In the first step of this multiple regression analysis, one of the confounding variables was entered into the stepwise multiple regression analysis. In the second step, the remaining confounding variable was entered into the stepwise multiple regression analysis, to determine whether the confounding variables accounted for significant variance above and beyond each other. Following

these steps, the key variables of interest (i.e., knowledge and perceived organizational characteristics) that significantly correlated with the dependent variable of EBP attitudes were added as the third step of the multiple regression analyses to determine the amount of variance these variables accounted for in EBP attitudes, above and beyond that of the confounding variables (i.e., social desirability and organizational membership) entered in the two previous separate steps. Please see Table 3 for more information.

Table 3

Three-Step Multiple Regression Analysis to test Exploratory Analyses: Not separated by Organization Membership (with only the Variables that Significantly Correlated with the Dependent Variable entered into the analyses)

Step 1 in Stepwise Multiple Regression: Confounding Variables	Step 2 in Stepwise Multiple Regression: Confounding Variables	Step 3 in Stepwise Multiple Regression: Variables of Interest		Dependent Variable
Variable 1	Variable 1	Variable 1	Variable 2	Variable 1
Social Desirability (i.e., only if MC Form C correlated)	Organization Membership (i.e., DOE vs. CAMHD)	EBP Knowledge (i.e., only correlated KEBSQ scores) ¹	Organizational Characteristics (i.e., only correlated ORC subscales) ²	EBP Attitudes (i.e., MPAS Total or EBPAS Divergence Scale)

Note. ¹KEBSQ was calculated as Total Score, Omission Errors, or Commission Errors. ²The ORC subscales that were included in the analyses were as follows: Offices, Staffing, Training, Equipment, Internet, Efficacy, Mission, Cohesion, Autonomy, Communication, Stress, and Changes. All of these variables were only entered if they correlated with the Dependent variable.

Exploratory analyses: separated by organization. Although separating the analyses by organization greatly reduced sample sizes for the regression analyses, this strategy was pursued to examine the extent to which findings varied across organizations. Initially, the responses from the participants were separated by organization membership (i.e., DOE or CAMHD). Next, the same analyses as the first strategy of the “Exploratory

analyses: not separated by organization” section were conducted: (a) confounding variables that were significantly correlated with attitudes toward EBPs were entered into the initial step of the stepwise multiple regression analysis and (b) the variables of interest that were significantly correlated with EBP attitudes were entered into the second step of the stepwise multiple regression analysis, to determine the amount of variance that these variables accounted for in EBP attitudes, above and beyond that of the confounding variables. Please see Table 4 for more information.

Table 4

Two-step Multiple Regression Analysis to test Exploratory Analyses: Separately by Organization (with only the Variables that Significantly Correlated with the Dependent Variable entered into the analyses)

Step 1 in Stepwise Multiple Regression: Confounding Variables	Step 2 in Stepwise Multiple Regression: Variables of Interest		Dependent Variable
Variable 1	Variable 1	Variable 2	Variable 1
Social Desirability (i.e., only if MC Form C correlated)	EBP Knowledge (i.e., only correlated KEBSQ scores) ¹	Organizational Characteristics (i.e., only correlated ORC subscales) ²	EBP Attitudes (i.e., MPAS Total or EBPAS Divergence Scale)

Note. ¹KEBSQ was calculated as Total Score, Omission Errors, or Commission Errors. ²The ORC subscales that were included in the analyses were as follows: Offices, Staffing, Training, Equipment, Internet, Efficacy, Mission, Cohesion, Autonomy, Communication, Stress, and Changes. All of these variables were only entered if they correlated with the Dependent variable.

For all regression analyses, betas (β), standard errors (SE), squared multiple correlations (R^2), t -tests (t), and p -values (p) were examined. The betas provided by the output are the weights associated with the regression equations (Green & Salkind, 2005). Both the unstandardized and standardized weights were provided, but standard errors were provided only for the unstandardized beta values. Standard errors indicate how

much the means of a sample deviate from the mean of the population (Aron, Aron, & Coups, 2009). The squared multiple correlation indicates how well the linear combination of predictor variables in the regression analysis predicts the criterion variables (Green & Salkind, 2005). Since the sample R^2 is a biased estimate of the corresponding population values (it overestimates it), SPSS reports both the sample R^2 value and the adjusted R^2 (adjusted downward). t -tests and p -values were calculated to determine the statistical significance of the standardized beta weights (Green & Salkind, 2005) and a cut off of $p < 0.05$ was used to determine statistical significance.

Results

Data Preparation and Integrity

First, participants that left more than 20% of any measure's questions unanswered were excluded from the study completely. In this sample, only three participants were removed for this reason, leaving a total sample size of 167 participants. Following this removal, an MVA was run across all of the measures separately. Measures were considered MCAR if their significance values are above 0.05. The significance values for each of the measures were as follows: KEBSQ ($p = 1.00$), ORC ($p = 1.00$), MPAS ($p = 0.31$), EBPAS Divergence ($p = 0.12$), and MC Form C ($p = 0.083$). Thus, all missing data within each of the measures were considered MCAR and data were imputed accordingly with the MVA process.

An initial data integrity check involved examining subscale ranges, means, and standard deviations. Every measure's means and standard deviations were consistent with previous research. The KEBSQ³ items-level scores ranged from one to four and the total

³ For this study, the KEBSQ was graded with the 10% grading rule: if for any given problem area (anxiety, depression, disruptive behavior, or inattention/hyperactivity), a practice element occurred in 10% or more

scores ranged from 77 to 123 ($M = 96.81$, $SD = 8.14$). It should be noted that three versions of the KEBSQ were used to control for fatigue effects. The means and standard deviations of these three forms were all similar to each other and were consistent with previous research: (Form 1) $M = 96.4$, $SD = 8.1$; (Form 2) $M = 95.1$, $SD = 8.0$; and (Form 3) $M = 98.4$, $SD = 8.1$. The MC Form C item-level scores ranged from zero to one and the total scores ranged from 0 to 13 ($M = 7.84$, $SD = 2.91$). The MPAS item-level scores ranged between zero to four and the total scores ranged from 3 to 32 ($M = 21.98$, $SD = 5.01$). The EBPAS Divergence item-level scores ranged between zero to four and the total scores ranged from 0.75 to 4 ($M = 2.89$, $SD = 0.75$). The ORC subscale item-level scores ranged from one to five and total scores ranged from 10 to 50 ($M = 22$ to 42 ; $SD = 5$ to 10), depending on the subscale.

Following this, the distribution of the data was tested to determine normality using the Shapiro-Wilk's W statistic, skewness, and kurtosis. The Shapiro-Wilk's W statistic (Shapiro & Wilk, 1965) was considered non-normally distributed if the p values < 0.001 (Tabachnick & Fidell, 2007); the skewness was considered non-normally distributed if the statistic was not between -0.379 to 0.379 as calculated by $[2 \times \sqrt{(6/N)}]$ (Tabachnick & Fidell, 2007); and the kurtosis was considered non-normally distributed if the statistic was not between -0.748 to 0.748 as calculated by $[2 \times SE \text{ of Kurtosis}]$ (Tabachnick & Fidell, 2007). The Shapiro-Wilk's W statistic, skewness, and kurtosis for the KEBSQ were $p = 0.758$, 0.153 , and 0.215 , respectively, suggesting a normal distribution. The Shapiro-Wilk's W statistic, skewness, and kurtosis for the MC Form C

of EBP protocols (level 2 efficacy or higher) as specified in the 2009 Biennial Report, the element was deemed as being derived from an EBP protocol. The results of correlations (below) did not significantly differ depending on whether the KEBSQ was graded on a 0%, 10%, 20%, or 30% rule or whether the KEBSQ was graded based off of the 2007 or 2009 scoring guide.

were $p < 0.001$, -0.500 , and -0.140 , respectively, suggesting a non-normal distribution for two out of the three statistics. Visual inspection of the distribution indicates that there is a slight negative skew to the data. The Shapiro-Wilk's W statistic, skewness, and kurtosis for the MPAS were $p = 0.001$, -0.635 , and 0.769 , respectively, suggesting a non-normal distribution for two out of the three statistics. Visual inspection of the distribution indicates that there is a slight negative skew to the data. The Shapiro-Wilk's W statistic, skewness, and kurtosis for the MPAS were $p < 0.001$, -0.709 , and -0.091 , respectively, suggesting a non-normal distribution for two out of the three statistics. Due to the numerous subscales of the ORC, these normality statistics will be analyzed separately. The following subscales of the ORC had a Shapiro Wilk's W statistics that had a $p < 0.001$, which indicated a non-normal distribution: Offices, Training, Internet, Efficacy, Mission, and Autonomy. The following subscales of the ORC had a skewness statistics that suggested a non-normal distribution: Offices (-0.395), Training (-0.732), Internet (-0.466), Efficacy (-0.386), Mission (-0.626), Cohesion (-0.530), Autonomy (-0.603), and Communication (-0.410). Only the subscale of Mission had a kurtosis statistic that indicated a non-normal distribution (1.127). Visual inspection of the above ORC subscales suggests that all of these subscales were negatively skewed.

Finally, outliers were additionally examined across all of the subscales in this data set. Statistical outliers, as indicated by a standardized score beyond 3.29 , were identified in four of the constructs: ORC Equipment (1 outlier), ORC Internet (1 outlier), ORC Mission (1 outlier), and MPAS Total (1 outlier). After performing square root, log, and inverse transformations on all of the non-normally distributed subscales (both with and without the outliers), it was determined that all of the subscales were still non-normally

distributed. Thus, since transformations remove numerical values from the subscales and decrease the interpretability of the subscales, it was determined that it would be best to use the original values of these subscales so that more in depth interpretation of the subscales scores could be made. Moreover, non-transformed results would aid comparative interpretation across other studies that investigated organizational characteristics, knowledge and attitude. The outliers were not removed from the dataset because removal of the outliers did not influence normality significantly and the values of all participants were deemed important.

Proposed Analyses

Relationship between variables: correlations and ANOVA. The initial bivariate correlations ran between all of the continuous variables (EBPAS Divergence subscale score; KEBSQ Total, Omission Error, and Commission Error scores; M-C Form C Total score; MPAS Total score; and ORC's subscale scores of Offices, Staffing, Training, Equipment, Internet, Efficacy, Mission, Cohesion, Autonomy, Communication, Stress, and Changes) are displayed in Tables 5-13. Due to the exploratory nature of these correlations, the alpha level was set at 0.05. There are several significant correlations between the variables in this study. The results suggest that the strongest positive correlation was between organizational efficacy and social desirability, while the strongest negative correlation was between positive EBPs attitudes and organizational stress.

Table 5

Correlations between EBP Knowledge (KEBSQ) & EBP Attitudes (MPAS Total & EBPAS Divergence)

	KEBSQ Total	Omission Errors	Commission Errors
MPAS Total	-0.010	-0.027	0.054
EBPAS Divergence	0.089	0.023	-0.064

Note. * $p < 0.05$; ** $p < 0.01$.

Table 6

Correlations between EBP Knowledge (KEBSQ) & Perceived Organizational Characteristics (ORC)

	KEBSQ Total	KEBSQ Omission	KEBSQ Commission
Changes	-0.022	-0.069	0.097
Stress	0.114	-0.096	0.040
Communication	-0.054	0.002	0.036
Autonomy	-0.024	0.071	-0.068
Cohesion	-0.051	-0.030	0.065
Mission	-0.139	-0.042	0.123
Efficacy	0.055	-0.182*	0.173*
Internet	0.125	-0.201**	0.149
Equipment	0.105	-0.107	0.048
Training	-0.042	-0.013	0.042
Staffing	-0.083	0.044	0.002
Offices	-0.033	-0.062	0.084

Note. * $p < 0.05$; ** $p < 0.01$.

Table 7

Correlations between EBP Attitudes (MPAS Total and EBPAS Divergence) & Perceived Organizational Characteristics (ORC)

	MPAS Total	EBPAS Divergence
Changes	0.172*	-0.110
Stress	-0.311**	-0.088
Communication	0.216**	-0.101
Autonomy	0.119	-0.003
Cohesion	0.087	-0.154*
Mission	0.204**	-0.024
Efficacy	0.101	-0.149
Internet	0.014	-0.080
Equipment	0.055	-0.073
Training	0.065	0.035
Staffing	0.228**	-0.071
Offices	0.194*	0.061

Note. * $p < 0.05$; ** $p < 0.01$.

Table 8

Correlations between Social Desirability (MC Form C) & EBP Knowledge (KEBSQ)

	MC Form C
KEBSQ Total	-0.131
KEBSQ Omission	-0.132
KEBSQ Commission	0.213**

Note. * $p < 0.05$; ** $p < 0.01$.

Table 9

Correlations between Social Desirability (MC Form C) & EBP Attitudes (MPAS Total and EBPAS Divergence)

	MC Form C
MPAS Total	0.191*
EBPAS Total	0.068

Note. * $p < 0.05$; ** $p < 0.01$.

Table 10

Correlations between Social Desirability (MC Form C) & Perceived Organizational Characteristics (ORC)

	MC Form C
Changes	0.249**
Stress	-0.230**
Communication	0.207**
Autonomy	0.182*
Cohesion	0.146
Mission	0.217**
Efficacy	0.398**
Internet	0.003
Equipment	0.103
Training	0.108
Staffing	0.283**
Offices	0.155*

Note. * $p < 0.05$; ** $p < 0.01$.

Table 11

Correlations between Different Scoring Methods for EBP Knowledge (KEBSQ)

	KEBSQ Total	KEBSQ Omission	KEBSQ Commission
KEBSQ Total	--		
KEBSQ Omission	-0.397**	--	
KEBSQ Commission	-0.109	-0.864**	--

Note. * $p < 0.05$; ** $p < 0.01$.

Table 12

Correlations between EBP Attitude Measures (MPAS Total & EBPAS Divergence)

	MPAS Total	EBPAS Divergence
MPAS Total	--	
EBPAS Divergence	0.565**	--

Note. * $p < 0.05$; ** $p < 0.01$.

Table 13

Correlations between Subscales of Perceived Organizational Characteristics (ORC)

	1	2	3	4	5	6	7	8	9	10	11	12
1	--											
2	-.42**	--										
3	.66**	-.57**	--									
4	.46**	-.39**	.53**	--								
5	.55**	-.46**	.73**	.47**	--							
6	.55**	-.51**	.74**	.51**	.68**	--						
7	.46**	-.26**	.46**	.39**	.32**	.43**	--					
8	.26**	-.22**	.35**	.26**	.23**	.32**	.28**	--				
9	.14	-.19*	.23**	.15*	.23**	.22**	.22**	.38**	--			
10	.50**	-.29**	.41**	.34**	.37**	.48**	.23**	.23**	.13	--		
11	.58**	-.64**	.62**	.50**	.57**	.59**	.49**	.28**	.17*	.37**	--	
12	.51**	-.41**	.50**	.35**	.42**	.46**	.45**	.31**	.18*	.44**	.57**	--

Note. * $p < 0.05$; ** $p < 0.01$. The subscales are numerically in the following order: (1) Changes, (2) Stress, (3) Communication, (4) Autonomy, (5) Cohesion, (6) Mission, (7) Efficacy, (8) Internet, (9) Equipment, (10) Training, (11) Staffing, and (12) Offices. Due to limited space, correlated were rounded to the hundredths place.

A one-way analysis of variance was conducted to evaluate the relationship between organization membership and EBP Attitudes (i.e., MPAS Total and EBPAS Divergence scores). The independent variable of organization membership included two levels (i.e., DOE and CAMHD membership)⁴. EBPAS Divergence scores did not vary significantly between DOE and CAMHD providers. However, MPAS Total scores did, $F(1, 165) = 13.74, p < 0.001$, such that CAMHD practitioners ($M=23.85, SD = 4.33$) evidenced significantly higher scores than those from the DOE ($M=20.95, SD = 5.07$). The effect size, as assessed by η^2 , was moderate, with the organization membership accounting for 7.70% of the variance of the dependent variable.

⁴ All other ways that the organizations could be compared (i.e., DOE school districts vs. CAMHD contracted agencies, DOE Total vs. CAMHD contracted agencies, and DOE school districts vs. CAMHD Total) did not result in significant ANOVA results on the dependent variables of MPAS Total and EBPAS Divergence scores.

Hypothesis I and II. Before running the multiple regression analyses, assumptions were analyzed. Standardized residual plot inspections suggested relative linearity and homoscedasticity, and histogram and normality curves suggested relative normality of standardized residuals, with a mean of the error variance being approximately 0 ($SD = 1$).

In regards to hypothesis I and II, it was predicted that (I) more knowledge of EBPs and organizational facilitators would predict a practitioner's positive attitudes toward EBPs, while (II) less knowledge of EBPs and organizational barriers would predict practitioners' negative attitudes toward EBPs. To test both of these hypotheses, one stepwise multiple regression analysis was conducted to see the positive and negative predictive relationships between the constructs. The first step of the multiple regression analysis included social desirability (i.e., MC Form C) and organization membership (i.e., DOE vs. CAMHD membership), while the second step of the multiple regression analysis included knowledge (i.e., KEBSQ Total, Omission Errors, or Commission Errors) and perceived organizational characteristics (i.e., ORC Offices, Staffing, Training, Equipment, Internet, Efficacy, Mission, Cohesion, Autonomy, Communication, Stress, and Changes). The regression equation with the confounding variables of social desirability and organization membership was significant, $R^2 = 0.11$, adjusted $R^2 = 0.10$, $F(2, 164) = 9.91$, $p < 0.001$. Next, the multiple regression analysis was conducted with all of the predictors (social desirability, organization membership, EBP knowledge, and perceived organizational characteristics). The linear combination of these predictors was significantly related to EBP attitudes, $R^2 = 0.20$, adjusted $R^2 = 0.12$, $F(13, 151) = 2.56$, $p = 0.002$. However, the predictor variables of knowledge (i.e., KEBSQ) and perceived

organizational characteristic (i.e., ORC subscales) did not predict significantly over and above the social desirability and organization membership, R^2 change = 0.10, $F(13, 151) = 1.38$, $p = 0.17$. Table 14 displays this multiple regression analysis with the coefficients, standard errors, significance levels, and R^2 's for each of the predictors across step one and step two of the multiple regression analyses.

Table 14

Summary of Stepwise Multiple Regression Investigating Social Desirability, Organization Membership, Knowledge, and Perceived Organizational Characteristics as Predictors of Attitudes toward EBPs (N=167)

Variable	R^2	ΔR^2	B	SE B	β
Step 1	0.11**	0.11**			
Social Desirability			0.30	0.13	0.18*
Organization Membership			-2.79	0.77	-0.27**
Step 2	0.20**	0.10			
Social Desirability			0.24	0.14	0.14
Organization Membership			-2.70	0.92	-0.26**
Knowledge Total			0.06	0.05	0.09
Offices			0.05	0.05	0.09
Staffing			-0.03	0.09	-0.04
Training			-0.03	0.06	-0.05
Equipment			0.09	0.08	0.10
Internet			-0.05	0.07	-0.06
Efficacy			-0.08	0.10	-0.08
Mission			0.05	0.09	0.07
Cohesion			-0.15	0.07	-0.24*
Autonomy			0.03	0.08	0.03
Communication			0.11	0.09	0.16
Stress			-0.13	0.06	-0.23*
Changes			0.00	0.09	0.00

Note. * $p < 0.05$; ** $p < 0.01$.

Based on these results, knowledge of EBPs (i.e., KEBSQ) and perceived organizational characteristics (i.e., ORC subscales) appear to offer little additional predictive power beyond that contributed by social desirability and organization membership. Thus, given these results, hypothesis I and II did not receive support since it was not shown that knowledge and organizational barriers or facilitators predicted EBP attitudes. Further, since step one of the multiple regression analysis was significant, it suggests that social desirability, $t(164) = 2.39, p = 0.018$, and organization membership, $t(164) = -3.62, p < 0.001$, significantly contributed to the prediction equation for EBP attitudes. More specifically, these results indicate that individuals who respond in a culturally appropriate and acceptable manner and practitioners from CAMHD are more likely to have positive attitudes toward EBPs (i.e., MPAS Total Scores).

Exploratory analyses: combined organizations. The initial exploratory analysis with all of the participants (not separated by organization membership) used another two-step, stepwise multiple regression analysis. However, only the predictor variables that significantly correlated with EBP attitudes (i.e., MPAS Total Score⁵) were entered into the analyses. These values were as follows: Social Desirability ($r = -0.19, p < 0.05$), Organization Membership ($r = -0.28, p < 0.01$), ORC Changes ($r = 0.17, p < 0.05$), ORC Stress ($r = -0.31, p < 0.01$), ORC Communication ($r = 0.22, p < 0.01$), ORC Mission ($r = 0.20, p < 0.01$), ORC Staffing ($r = 0.23, p < 0.01$), and ORC Offices ($r = 0.19, p < 0.05$). To ensure that the confounding variables were controlled for, the first step of the multiple regression analysis included social desirability (i.e., MC Form C) and organization membership (i.e., DOE vs. CAMHD membership), while the second step of the multiple

⁵ Only the MPAS Total Score was analyzed because the only factor that significantly correlated with EBPAS Divergence Score was ORC Changes. Thus, it seemed unnecessary to run a multiple regression analysis with only one predictor variable.

regression analysis included the perceived organizational characteristics (ORC Changes, Stress, Communication, Mission, Staffing, and Offices) indicated immediately above.

The regression equation with the confounding variables of social desirability and organization membership was significant, $R^2 = 0.11$, adjusted $R^2 = 0.10$, $F(2, 164) = 9.91$, $p < 0.001$. Next, the multiple regression analysis was conducted with all of the predictors that significantly correlated with the dependent variable of MPAS total (i.e., social desirability, organization membership, and the perceived organizational characteristics listed above). The linear combination of these predictors was significantly related to EBP attitudes, $R^2 = 0.17$, adjusted $R^2 = 0.13$, $F(8, 158) = 3.96$, $p < 0.001$. However, the perceived organizational characteristics did not significantly predict MPAS Total scores, over and above social desirability (i.e., MC Form C) and organization membership, R^2 change = 0.06, $F(6, 158) = 1.87$, $p = 0.09$. Table 15 displays this multiple regression analysis with the coefficients, standard errors, significance levels, and R^2 's for each of the predictors across step one and step two of the analyses.

Table 15

Summary of the Two-Step Stepwise Multiple Regression Investigating Social Desirability, Organization Membership, Knowledge, and Perceived Organizational Characteristics as Predictors of Attitudes toward EBPs (MPAS Total) with only the variables that significantly correlated with EBP Attitudes (N=167)

	Variable	R ²	ΔR ²	B	SE B	β
Step 1		0.11**	0.11**			
	Social Desirability			0.30	0.13	0.18*
	Organization Membership			-2.79	0.77	-0.27**
Step 2		0.17**	0.06			
	Social Desirability			0.23	0.13	0.13
	Organization Membership			-2.48	0.81	-0.24**
	Offices			0.04	0.05	0.07
	Staffing			-0.06	0.08	-0.09
	Mission			-0.02	0.08	-0.03
	Communication			0.04	0.08	0.06
	Stress			-0.14	0.06	-0.25*
	Changes			-0.02	0.09	-0.03

Note. * $p < 0.05$; ** $p < 0.01$.

Based on these results, the perceived organizational characteristics (i.e., ORC Offices, Staffing, Mission, Communication, Stress, and Changes) appear to offer little additional predictive power beyond that contributed by social desirability (i.e., MC Form C) and organization membership. Thus, given these results, the better model that predicts EBP attitudes seems to be the one that includes only the variables of social desirability and organization membership. Results from Table 15 suggest that social desirability, $t(164) = 2.39$, $p = 0.018$, and organization membership, $t(164) = -3.62$, $p < 0.001$, significantly contributed to the prediction equation for MPAS Total scores. More specifically, and similar to the results above, these findings indicate that individuals who

behave in more socially desirable ways and practitioners from CAMHD are more likely to have higher MPAS Total scores.

The second exploratory analysis with all of the participants (not separated by organization membership) was a three-step, stepwise multiple regression analysis. Again, only the confounding and predictor variables that significantly correlated with EBP attitudes (i.e., MPAS Total Score⁶) were entered into the analyses. The predictor variables that significantly correlated with EBP attitudes were the same as the variables stated above. To ensure that the confounding variables are controlled for individually, the first step of the multiple regression analysis included social desirability (i.e., MC Form C), the second step of the analysis included organization membership (i.e., DOE vs. CAMHD membership), and the third step of the analysis included the perceived organizational characteristics (i.e., ORC Changes, Stress, Communication, Mission, Staffing, and Offices). The regression equation with the confounding variables of social desirability was significant in predicting MPAS Total Scores, $R^2 = 0.04$, adjusted $R^2 = 0.03$, $F(1, 165) = 6.280$, $p = 0.013$. Next, the multiple regression analysis was conducted with both of the confounding variables (i.e., social desirability and organization membership). The linear combination of these predictors was significant in predicting MPAS Total Scores, $R^2 = 0.11$, adjusted $R^2 = 0.10$, $F(2, 164) = 9.91$, $p < 0.001$. The predictor variable of organization membership did significantly predict MPAS Total scores, over and above social desirability (i.e., MC Form C), R^2 change = 0.07, $F(1, 164) = 13.09$, $p < 0.001$. Finally, the multiple regression analysis was conducted with all of the predictors (social desirability, organization membership, and perceived organizational

⁶ Only the MPAS Total Score was analyzed because the only factor that significantly correlated with EBPAS Divergence Score was ORC Changes. Thus, it seemed unnecessary to run a multiple regression analysis with only one predictor variable.

characteristics of Changes, Stress, Communication, Mission, Staffing, and Offices). The linear combination of these predictors was significantly related to EBP attitudes, $R^2 = 0.17$, adjusted $R^2 = 0.13$, $F(8, 158) = 3.96$, $p < 0.0001$. However, the predictor variables of perceived organizational characteristic did not predict significantly over and above social desirability and organization membership, R^2 change = 0.06, $F(6, 158) = 1.87$, $p = 0.09$. Table 16 displays this multiple regression analysis with the coefficients, standard errors, significance levels, and R^2 's for each of the predictors across step one, two, and three of the analyses.

Table 16

Summary of the Three-Step Stepwise Multiple Regression Investigating Social Desirability, Organization Membership, Knowledge, and Perceived Organizational Characteristics as Predictors of Attitudes toward EBPs (MPAS Total) with only the variables that significantly correlated with EBP Attitudes (N=167)

	Variable	R^2	ΔR^2	B	SE B	β
Step 1		0.04*	0.04*			
	Social Desirability			0.33	0.13	0.19*
Step 2		0.11**	0.07**			
	Social Desirability			0.30	0.13	0.18*
	Organization Membership			-2.79	0.77	-0.27**
Step 3		0.17**	0.06			
	Social Desirability			0.23	0.13	0.13
	Organization Membership			-2.48	0.81	-0.24**
	Offices			0.04	0.05	0.07
	Staffing			-0.06	0.08	-0.09
	Mission			-0.02	0.08	-0.03
	Communication			0.04	0.08	0.06
	Stress			-0.14	0.06	-0.25*
	Changes			-0.02	0.09	-0.03

Note. * $p < 0.05$; ** $p < 0.01$.

Based on these results, the perceived organizational characteristics (i.e., ORC Changes, Stress, Communication, Mission, Staffing, and Offices) appear to offer little additional predictive power beyond that contributed by social desirability (i.e., MC Form C) and organization membership (i.e., DOE or CAMHD membership). Thus, given these results, the better model that predicts EBP attitudes seems to be one that includes both the confounding variables of social desirability and organization membership.⁷ Results from Table 16 suggest that social desirability, $t(164) = 2.39, p = 0.018$, and organization membership, $t(164) = -3.62, p < 0.0001$, significantly contributed to the prediction equation for MPAS Total scores. More specifically, these results indicate that individuals exhibit more socially desirable behaviors and practitioners from CAMHD are more likely to have positive attitudes toward EBPs (i.e., higher MPAS Total scores).

Exploratory analyses: separated by organization. Although separating the analyses by organization greatly reduced the power size, this analytic strategy was also pursued to fully explore the data. Following the same procedures as the previous section, I conducted multiple regression analyses with only the variables that significantly correlated with EBP attitudes. When only looking at the responses of the DOE participants ($n = 108$), the following variables were significantly correlated with EBP attitudes (i.e., EBPAS Divergence Score⁸): ORC Efficacy ($r = -0.22, p < 0.05$), ORC Cohesion ($r = -0.21, p < 0.05$), and ORC Communication ($r = -0.21, p < 0.05$). Since the confounding variable of social desirability was not found to have a significant correlation with EBPAS Divergence scores, and the confounding variable of organization

⁷ When the confounding variables were entered in reverse order, with organization membership entered first into the multiple regression analysis and social desirability entered second, the numerical values of the results differed, but the interpretation remained the same.

⁸ Only the EBPAS Divergence Score was analyzed because predictor variables were significantly correlated only with the EBPAS Divergence Score and not the MPAS Total Score.

membership was not an issue in this analysis since all participants were from the same organization, a one-step multiple regression analysis was conducted. The regression equation with the perceived organizational characteristics of ORC Efficacy, Cohesion and Communication predicting EBPAS Divergence scores was significant, $R^2 = 0.07$, adjusted $R^2 = 0.05$, $F(3, 104) = 2.762$, $p = 0.05$. However, none of the individual predictor variables significantly contributed to the prediction of EBPAS Divergence scores independently. Table 17 displays this multiple regression analysis with the coefficients, standard errors, significance levels, and R^2 's for each of the predictors in the analyses. More specifically, these results indicate that DOE individuals experiencing more efficacy, cohesion, and communication in their organizations are more likely to have positive EBP attitudes (i.e., EBPAS Divergence Scores).

Table 17

Summary of Multiple Regression Investigating the Perceived Organizational Characteristics of Efficacy, Cohesion, and Communication as Predictors of Attitudes toward EBPs (EBPAS Divergence) for DOE participants (N=108)

Variable	R^2	ΔR^2	B	SE B	β
Step 1	0.07*	0.07*			
Efficacy			-0.03	0.02	-0.16
Cohesion			-0.01	0.01	-0.11
Communication			-0.01	0.02	-0.07

Note. * $p < 0.05$; ** $p < 0.01$.

When only looking at the responses of the CAMHD participants ($n = 59$), the following variables were significantly correlated with EBP attitudes (i.e., MPAS Total)⁹: Social Desirability ($r = 0.28$, $p < 0.05$), Knowledge Omission Errors ($r = -0.32$, $p < 0.05$),

⁹ Only the MPAS Total Score was analyzed because predictor variables were only significantly correlated with the MPAS Total Score and not the EBPAS Divergence Score.

Knowledge Commission Errors ($r = 0.28, p < 0.05$), ORC Offices ($r = 0.27, p < 0.05$), ORC Staffing ($r = -0.28, p < 0.05$), ORC Training ($r = 0.27, p < 0.05$), ORC Autonomy ($r = 0.31, p < 0.05$), ORC Communication ($r = 0.31, p < 0.05$), and ORC Stress ($r = -0.46, p < 0.01$).

Since both Knowledge Omission and Knowledge Commission errors resulted in significant correlations with MPAS Total Scores for CAMHD participants, these analyses were run separately for each method that knowledge errors could be scored (i.e., KEBSQ omission errors and KEBSQ commission errors).

With regards to the two-step multiple regression analysis with knowledge omission errors (indicating that a therapeutic technique is not derived from a larger evidence-based approach when it actually is), the confounding variable of social desirability (i.e., MC Form C) was entered first into the multiple regression analysis, while the second step of the analysis included knowledge omission errors and the perceived organizational characteristics (i.e., ORC Offices, Staffing, Training, Autonomy, Communication, and Stress). The regression equation with the confounding variable of social desirability was significant in predicting MPAS Total Scores, $R^2 = 0.08$, adjusted $R^2 = 0.07$, $F(1, 57) = 5.02$, $p = 0.03$. Next, the multiple regression analysis was conducted with the confounding variable of social desirability and the predictor variables of knowledge omission errors and the perceived organizational characteristics listed above. The linear combination of these predictors was significantly related to MPAS Total scores, $R^2 = 0.33$, adjusted $R^2 = 0.22$, $F(8, 50) = 3.08$, $p = 0.007$. The predictor variables of knowledge omission errors and the perceived organizational characteristics did significantly predict MPAS Total scores, over and above social desirability, R^2 change = 0.25, $F(7, 50) = 2.66$, $p = 0.02$. Table 18 displays this multiple

regression analysis with the coefficients, standard errors, significance levels, and R^2 's for the first and second step of the multiple regression analysis.

Table 18

Summary of Multiple Regression Investigating Social Desirability, Knowledge Omission Errors, and Perceived Organizational Characteristics as Predictors of Attitudes toward EBP's (MPAS Total) for CAMHD Participants (N=59)

Variable	R^2	ΔR^2	B	SE B	β
Step 1	0.08*	0.08*			
Social Desirability			0.45	0.20	0.28*
Step 2	0.33**	0.25*			
Social Desirability			0.20	0.21	0.13
Knowledge Omission Errors			-0.07	0.03	-0.27*
Offices			-0.01	0.08	-0.03
Staffing			-0.04	0.11	-0.06
Training			0.01	0.09	0.02
Autonomy			0.14	0.14	0.20
Communication			-0.05	0.12	-0.09
Stress			-0.21	0.08	-0.42**

Note. * $p < 0.05$; ** $p < 0.01$.

Based on these results, the knowledge omission errors and the perceived organizational characteristics (i.e., ORC Offices, Staffing, Training, Autonomy, Communication, and Stress) appear to offer additional predictive power beyond that contributed by social desirability. Thus, given these results, the model that seems to better predict MPAS Total scores includes the variables of social desirability, knowledge omission errors, and various organizational characteristics. Results from Table 18 suggest that knowledge omission errors, $t(50) = -2.07$, $p = 0.044$, and organizational stress, $t(50) = -2.76$, $p = 0.008$, significantly contributed to the prediction equation for MPAS Total

scores. More specifically, these results indicate that CAMHD individuals experiencing more organizational stress and viewing the evidence-base in an overly restrictive manner (i.e., committing more omission errors) are less likely to have positive EBP attitudes.

With regards to the two-step multiple regression analysis with knowledge commission errors (indicating that a therapeutic technique is drawn from an evidence-based protocol when it is actually not), the confounding variable of social desirability (i.e., MC Form C) was entered first into the multiple regression analysis, while the second step of the analysis included knowledge commission errors and the perceived organizational characteristics (i.e., ORC Offices, Staffing, Training, Autonomy, Communication, and Stress). The regression equation with the confounding variable of social desirability was significant, $R^2 = 0.08$, adjusted $R^2 = 0.07$, $F(1, 57) = 5.02$, $p = 0.03$. Next, the multiple regression analysis was conducted with the variables of social desirability, knowledge commission errors and the perceived organizational characteristics listed above. The linear combination of these predictors was significantly related to MPAS Total scores, $R^2 = 0.32$, adjusted $R^2 = 0.21$, $F(8, 50) = 2.87$, $p = 0.01$. The predictor variables of knowledge (i.e., KEBSQ) commission errors and the perceived organizational characteristics (i.e., ORC Offices, Staffing, Training, Autonomy, Communication, and Stress) did significantly predict MPAS Total scores over and above social desirability, R^2 change = 0.23, $F(7, 50) = 2.44$, $p = 0.031$. Based on these results, knowledge commission errors and the perceived organizational characteristics (listed above) appear to offer additional predictive power beyond that contributed by social desirability. Table 19 displays this multiple regression analysis with the coefficients,

standard errors, significance levels, and R^2 's for the first and second step of the multiple regression analysis.

Table 19

Summary of Multiple Regression Investigating Social Desirability, Knowledge Commission Errors, and Perceived Organizational Characteristics as Predictors of Attitudes toward EBPs (MPAS Total) for CAMHD Participants (N=59)

Variable	R^2	ΔR^2	B	SE B	β
Step 1	0.08*	0.08*			
Social Desirability			0.45	0.20	0.28*
Step 2	0.32**	0.23*			
Social Desirability			0.22	0.21	0.14
Knowledge Commission Errors			0.07	0.04	0.23
Offices			-0.02	0.08	-0.03
Staffing			-0.04	0.11	-0.06
Training			0.01	0.09	0.02
Autonomy			0.13	0.14	0.18
Communication			-0.04	0.12	-0.07
Stress			-0.21	0.08	-0.42**

Note. * $p < 0.05$; ** $p < 0.01$.

Thus, given these results, the model that seems to better predict MPAS Total scores includes the variables of social desirability, knowledge commission errors, and various organizational characteristics (i.e., ORC Offices, Staffing, Training, Autonomy, Communication, and Stress). However, results from Table 19 also suggest that only organizational stress, $t(50) = -2.74$, $p = 0.008$, significantly contributes to the prediction of MPAS Total scores. More specifically, these results indicated that CAMHD practitioners with less organizational stress have more positive attitudes toward EBPs (i.e., MPAS Total Scores).

Discussion

General Summary

This is the first study to date to examine the extent to which youth mental health EBP knowledge and various perceived organizational characteristics significantly predicted EBP attitudes, after controlling for social desirability and organization membership. The study's two *a priori* hypotheses were not supported, and after controlling for social desirability and organization membership, EBP knowledge (or lack of knowledge) and organizational facilitators (or barriers) did not predict EBP attitudes. Given these somewhat surprising findings, several follow-up analyses were pursued in order to more fully explore the data. First, regression tests were conducted with only those predictor variables that significantly correlated with EBP attitudes for the entire sample of providers. Second, analyses with selective predictor variables were rerun with two constituent samples based on DOE or CAMHD membership. Despite including only those predictor variables that significantly correlated with attitudes, the first set of exploratory regression analyses again failed to demonstrate the predictive utility of EBP knowledge or perceived organizational characteristics, above and beyond social desirability and organizational membership. Interestingly, however, when conducted separately for DOE/CAMHD provider subgroups, EBP knowledge and perceived organizational characteristics did emerge as significant predictors for EBP attitudes. For the DOE sample, significant predictors of EBP provider attitudes were feeling effective and supported in their organization. For CAMHD providers, however, significant predictor variables included practitioners' tendencies towards providing an overly exclusive view of the evidence-based (knowledge omission errors) and perceived organizational stress.

Taken as a whole, study findings tend not to support Frambach and Schillewaert's (2002) Multi-level Conceptual Framework of Organizational Innovation Adoption as applied to youth mental health. At most, findings from this study suggest that this theory may hold under certain conditions or among certain types of participants. That is, repeatedly demonstrated within this study, EBP knowledge and perceived organizational characteristics failed to predict EBP attitudes, above and beyond social desirability and organization membership. These findings do not fit with the broader innovation literature, which suggests meaningful relationships between attitudes and both knowledge and organizational characteristics. As discussed in the introduction, several previous studies (Melas et al., 2012; Nakamura et al., 2011) found that more knowledge was related to positive attitudes or lack of knowledge was related to negative attitudes. Moreover, past research has also shown that organizational characteristics were related to positive or negative attitudes (Bee et al., 2005; Brown et al., 2008; Sinkowitz-Cochran et al., 2012). However, at least some amount of caution should be used when placing findings from this study within the broader literature in this area, such that this is the first study to examine social desirability along with youth mental health EBP attitudes. As demonstrated in this study, there is a strong relationship between social desirability and EBP attitudes. Along these lines, caution should be used when interpreting findings from previous studies that did not control for or include social desirability in their projects. When studies do not control for social desirability, there is a possibility that they have committed a Type I error: claiming that there is a significant relationship between variables when there may not be (i.e., over-reporting their significance).

When analyses were performed separately for DOE and CAMHD providers, a limited number of organizational and knowledge factors emerged as significant predictors of EBP attitudes, suggesting limited support for Frambach and Schillewaert's (2002) Multi-level Conceptual Framework of Organizational Innovation Adoption. The finding that efficacy, cohesion, and communication significantly predicted EBP attitudes among DOE providers fits with previous literature in the broader area of health innovation adoption (Beidas et al., 2012; Brown et al., 2008; Chau et al., 2008; Cummings et al., 2007; Egerod & Hansen, 2004; Estrada, 2009; Manuel et al., 2011; Pare et al., 2011). Efficacy refers to practitioners' confidence for doing clinical/counseling work; cohesion is indicative of staff being quick to help each other and staff feeling supported by each other; and communication means that information about events and news in an organization is quickly transferred between colleagues. At the same time, the finding that offices, staffing, training, equipment, internet, mission, autonomy, stress, and changes did not significantly relate to EBP attitudes does not fit with findings from previous research (Brown et al., 2008; Bostrom et al., 2008; Chau et al., 2008; Egerod & Hansen, 2004; Frueh et al., 2008; Manuel et al., 2011). Taken together, these findings could suggest that within a school-based behavioral health paradigm, certain parts of larger predictive models for attitudes hold fast, while others do not.

Concerning exploratory analyses with only CAMHD practitioners, results slightly varied along the lines of whether or not knowledge omission or commission errors were utilized as predictors. Again, an omission error refers to practitioners failing to indicate that a technique is drawn from a larger EBP protocol, when in fact it was. Omission errors are interpreted as the degree to which practitioners have an overly restrictive or

skeptical view of the larger evidence-base. Among CAMHD providers, both omission and perceived organizational stress scores significantly predicted EBP attitudes, above and beyond social desirability. That is, lower levels of practitioner skepticism towards EBPs and lower organizational stress predicted better EBP attitudes, after controlling for social desirability effects. These results align with Nakamura et al.'s (2011) findings, which also pointed to significant omission-attitude relationships. In addition, these findings build upon Nakamura et al.'s (2011) findings, given those investigators did not control for social desirability or examine organizational characteristics. Complimentary to the construct of a knowledge omission score is a knowledge commission score, which refers to reporting that a technique is drawn from a larger EBP protocol, when in fact it is not (suggestive of an overly optimistic view of the evidence-base). Findings for commission analyses indicated that only organizational stress negatively predicted EBP attitudes; as organizational stress decreases, people are more likely to have positive attitudes toward EBPs. It should be noted, however, that commission errors approached statistical significance with regard to predicting EBP attitudes (in the expected direction). Similar to the omission-attitude finding above, these results also align with Nakamura et al.'s (2011) findings, while building upon them by also examining social desirability and organizational characteristics.

Taken together, findings that both collapsed and separated DOE and CAMHD samples strongly suggest that organizational membership seems to be an important factor for consideration when studying EBP attitudes among youth mental health providers. In order to preliminarily investigate potential between-sample differences, DOE and CAMHD groups were compared on all major variables of interest. CAMHD providers

were found to have more positive EBP attitudes than those from the DOE. Although it is not clear why CAMHD therapists may have more positive EBP attitudes than their DOE counterparts, a few speculative hypotheses are offered. First, although both organizations endorse EBP utilization, EBP implementation efforts have been woven into CAMHD infrastructure in several ways. For example, within the CAMHD system, there is an emphasis on referring youth to brand-named EBP programs within CAMHD (e.g., Multisystemic Therapy, Henggeler & Borduin, 1990; Functional Family Therapy, Alexander & Parsons, 1973; Multidimensional Treatment Foster Care, Chamberlain & Reid, 1998). Moreover, CAMHD practitioners are required to use the Monthly Treatment Progress Summary (MTPS; CAMHD, 2003). The MTPS is a locally constructed clinical report that was designed to measure service format, service setting, treatment targets, clinical progress, and intervention practices on a monthly basis at the individual client level. Among its multiple uses, one major way in which the MTPS is utilized is through CAMHD provider feedback initiatives (i.e., “data parties;” Higa-McMillan, Powell, Daleiden, & Mueller, 2011). At a provider agency level, data parties give therapists feedback on the extent to which the practices they utilize align or do not align with the larger treatment outcome literature, with an emphasis on increasing their use of practices derived from the evidence-base when there is a lack of youth treatment progress. On the other hand, DOE therapists are not required to fill out standardized practice report forms and are not given routinized feedback on the extent to which their practices align with EBPs. Lastly, CAMHD’s mission is to focus on improving a child’s mental health condition, whereas DOE therapists are focused on educational goals and how these may be influenced by their mental health issues.

In regards to other between-sample differences, the DOE and CAMHD did not score significantly different on social desirability or knowledge commission scores. However, they did score significantly different on all other constructs. The DOE practitioners provided significantly higher scores for Total EBP Knowledge Scores, Offices, Staffing, Mission, Cohesion, Communication, and Changes. These findings suggest that DOE practitioners are more aware of the practice elements that are derived from a larger evidence-based protocol and have positive perceptions of their organization's characteristics. The CAMHD practitioners provided significantly higher scores on Knowledge Omission, Equipment, and Stress. This data suggests that CAMHD practitioners are more skeptical of which practice elements are derived from evidence-based protocols and have a more negative perception of their organization's environment. These differences may again be because of the aforementioned differences in the structure of these two organizations. For example, CAMHD has "data parties" that may put more pressure on their practitioners to change their techniques, making them more skeptical of therapeutic practices that are not effective with their treatment clients. On the other hand, DOE practitioners may not feel as pressured to change their practices, making them view their organizations more positively. However, given qualitative data was not collected in this study, it is unclear as to why these specific differences have emerged.

Limitations

Although the results of the present study are promising with regard to continued exploration of the relationship between social desirability, providers' EBP knowledge, perceived organizational characteristics, and EBP attitudes, a few caveats are in order. First, hypotheses for this study were based off of Frambach and Schillewaert's (2002)

Multi-level Conceptual Framework of Organizational Innovation Adoption model, which was developed for the field of business. At the time this study was conceptualized and completed, no youth mental health EBP theory clearly outlined the causal relationships between knowledge, organizational characteristics, and attitudes. Thus, like many other youth EBP dissemination and implementation researchers, theories from the broader empirical literature were borrowed. Therefore, it is entirely possible that the variables essential for explaining the relationships between these investigated constructs were missing from this model, making the study of relationships between these variables difficult. Indeed, even if the current study strictly adhered to Frambach and Schillewaert's (2002) business model, it should have included the construct of 'social usage' (defined as the number of similar or competing organizations that use the same new innovation). However, this construct was not analyzed in the current study because the youth mental health EBP field has yet to develop a questionnaire or method to measure this construct.

A second study limitation concerns participation response rates. The overall CAMHD therapist participation rate was 43.0%, while the DOE therapist participation rate was 94.8%. Therefore, it is possible that there was a selection bias in regards to the CAMHD therapists. Although the study description was brief and did not mention EBPs (i.e., only stated that this study was examining knowledge, organizational characteristics and attitudes in intervention techniques), the practitioners who chose to participate in this study may have already had a positive attitude toward research and may have been more inclined to have positive attitudes toward EBPs. Therefore, it remains unknown the extent

to which the present findings may be applied to the larger CAMHD population (or intensive mental health therapists in general).

Another limitation is that several of the Cronbach alphas for the organizational characteristic subscales were low. This may indicate that those particular constructs were not captured well, which may have influenced the results of the multiple regression analyses. For instance, due to the low reliability levels of these constructs, the variance within EBP attitudes accounted for by these constructs could have been lower than the findings suggest. Moreover, the scales with low Cronbach alphas may have increased or decreased the collinearity with the other variables in the multiple regression analysis, which could have influenced our results (e.g., different models could have better predicted EBP attitudes, the effects of other variables could have been diminished, or the effects of other variables could have been increased). Lastly, the ORC was used as an individual-level measure, even though it was intended to be used as an aggregate group average to represent an organization. The individualized scoring used in this study could have contributed to the low Cronbach alpha levels of the subscales and could have slightly changed the results of the analyses. However, conducting the analyses on an organizational-level, instead of the individual-level in which it was conducted, would have more negative consequences: (a) more measures would have been used in a method they were not intended for (i.e., four individual-level measures would have been used as organizational-level measure, instead of the one organizational-level measure that was currently used at an individual-level measure); (b) it would have been difficult to obtain adequate power, given at least 107 organizations would need to be recruited based on the number of independent variables in this study; and (c) organizations would be difficult (if

not impossible) to compare given the drastic difference in organizational membership size (which ranged anywhere from 2 to 50).

Implications and Future Studies

There are several implications of these results. First, these results suggest that social desirability is an important factor for study when investigating provider EBP attitudes, especially within the larger context of predicting behaviors related to attitudes. Routine assessment of social desirability in EBP dissemination and implementation studies may be of benefit for several reasons. By assessing for this construct, researchers may be able to determine the extent to which practitioners act in a socially desirable manner, which in turn, may influence how truthful they answer the survey battery. Furthermore, statistically controlling for social desirability when predicting attitudes and behaviors may be especially useful in determining the true effect of other constructs. Moreover, this finding indicates that caution should be used when interpreting findings from previous studies that did not control for or include social desirability in their projects. As mentioned above, when studies do not statistically control for social desirability, there is a possibility that they have committed a Type I error. Thus, as a follow up, researchers should look to the descriptive statistics (i.e., central tendencies and variances) of the measures included in previous studies to examine variance within scale score data. Extreme values for central tendencies and low variances potentially indicate that participants answered the questionnaires in a socially desirable manner and in a manner similar to other participants, respectively. Hence, future research should include the construct of social desirability in their investigations to clarify the relationships between the remaining variables of interest.

Forthcoming research should expand upon this study by investigating other factors that may influence practitioners' attitudes toward EBPs. The current study only focused on social desirability, organizational membership, knowledge of EBPs, and organizational characteristics. However, as the field of implementation science keeps growing, hypothesized factors that either facilitate or impede EBP adoption continue to emerge and must be investigated. Further, continued study of EBP attitudes seems a worthwhile endeavor because past research has found that attitudes can influence whether or not a practitioner adopts an EBP (e.g., Ajzen, 1991). Moreover, next steps to the current study may be to include a mixed-methods approach to data collection on EBPs in which quantitative data, such as the results from this study, are combined with qualitative data (e.g., why do you like using EBPs? Why don't you like using EBPs? What are your organizational requirements? What causes organizational stress for you?). This qualitative data will help researchers obtain a clearer picture of the obstacles that are impeding the therapists in our communities from implementing EBPs. Thus overall, it is hoped that research in this area will continue to mature in order to more carefully identify how therapists can be more positively influenced to adopt and implement youth EBPs.

One way to positively influence the adoption of youth EBPs would be to focus on the factors that influence their positive attitudes toward EBPs. More specifically, research in the area of EBP implementation within the DOE may wish to focus on studying the factors of efficacy, cohesion, and communication, since these three factors were influential in predicting EBP attitudes in this organization. Researchers should attempt to manipulate these variables at different levels so that they can see the extent to which these variables influence EBP attitudes, individually and in combination. By increasing

the EBP attitudes of DOE practitioners, it will be more likely that these therapists will adopt EBPs in the school setting.

On the other hand, research in the area of EBP implementation within CAMHD may wish to focus on the factors that the current study found to predict positive EBPs attitudes. First, it will be important to make practitioners less skeptical about which techniques are derived from evidence-based protocols. This may be accomplished through more trainings and more access to research articles that can increase practitioners' knowledge of EBPs. The second major point of these results is that organizational stress was negatively related to EBP attitudes; the less organizational stress practitioners feel the more positive attitudes they have toward EBPs. This can be an important factor that supervisors can keep in mind when they are trying to increase the use of EBPs in their organization. This may also suggest that practitioners do not necessarily view EBPs negatively; they may just feel too stressed to make an effort to use them. Thus, future research may wish to experiment with these variables to determine the optimal dosage of stress and knowledge needed to obtain positive EBP attitudes among practitioners. For example, determining (a) the maximum number of clients that maintains a low level of stress and (b) the minimum number of trainings needed per year to increase a practitioner's knowledge of EBPs would be beneficial to supervisors. This type of information may help supervisors change policies and requirements in their agencies that may influence their practitioner's attitudes toward EBPs, which in turn may effect whether or not an EBP is implemented successfully.

Thus, despite these limitations and indications for future research, the present study is the first systematic investigation of the relationships between youth EBP

knowledge and organizational characteristics on EBP attitudes, while controlling for social desirability and organizational membership. Findings suggest the importance of assessing for social desirability when investigating EBP attitudes. Moreover, results from this study indicate that different types of organizational characteristics and EBP knowledge may predict EBP attitudes among various organizations. Given the importance of youth EBP dissemination and implementation efforts, advancing empirical inquiry into the constructs studied in this investigation continue to be a worthwhile endeavor.

Figure 1. *Frambach and Schillewaert's Conceptual Framework of Organizational Innovation Adoption: Organizational Adoption Decision*

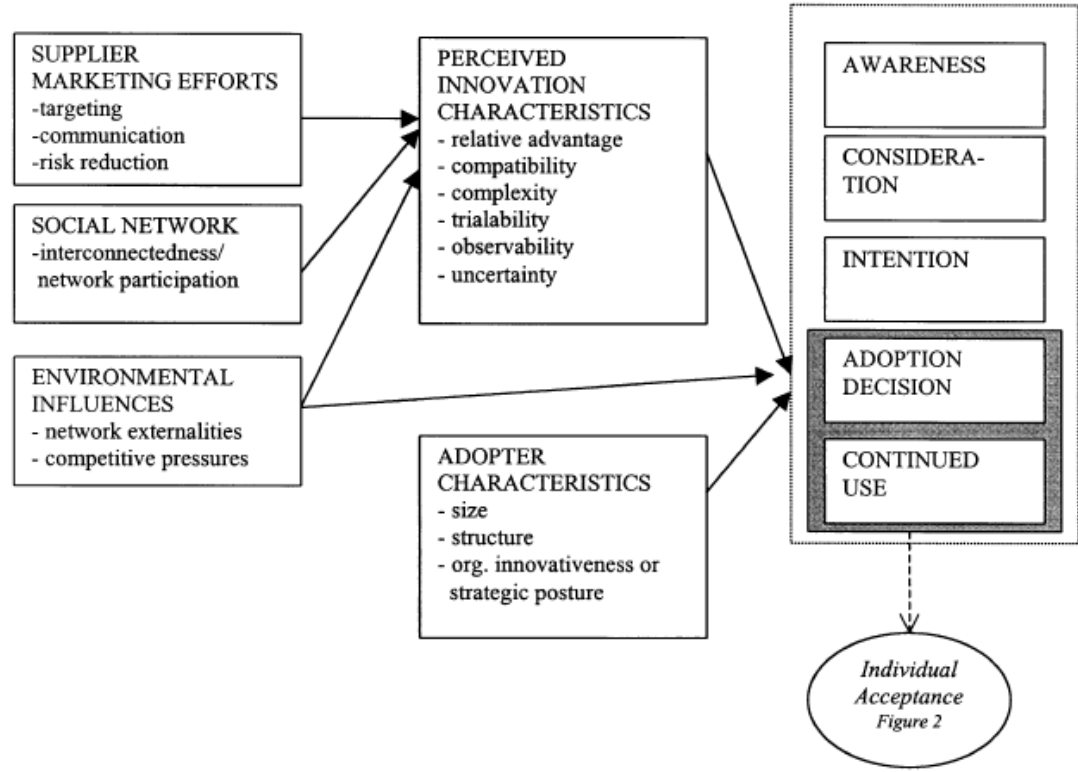
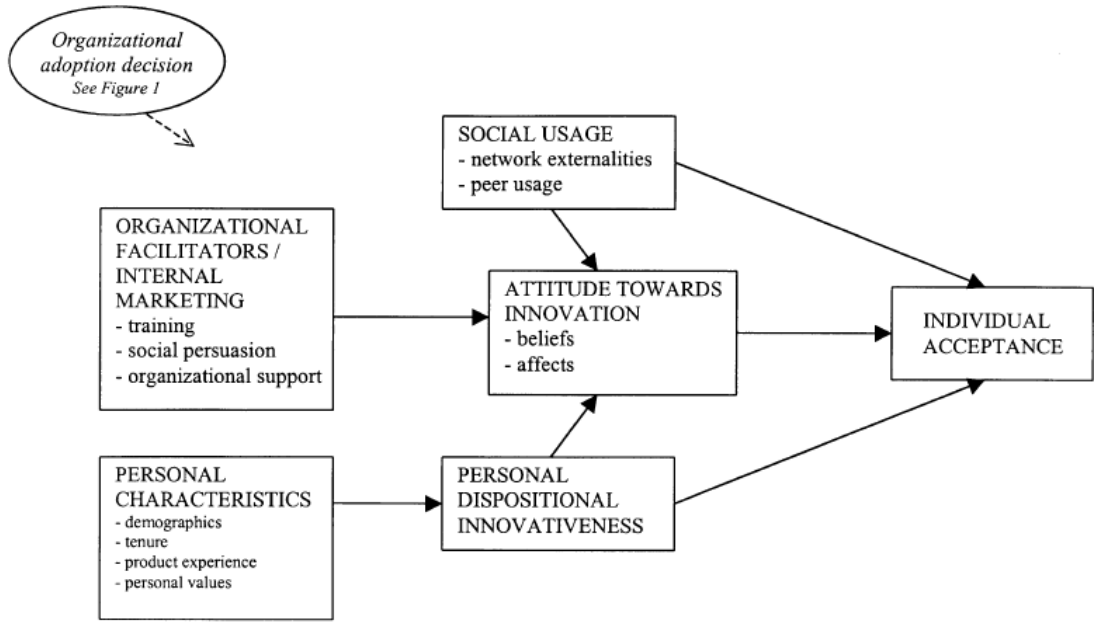


Figure 2. *Frambach and Schillewaert's Conceptual Framework of Organizational Innovation Adoption: Individual Acceptance*



Appendix A: Knowledge of Evidence Based Services Questionnaire

Knowledge of Evidence Based Services Questionnaire

The items below describe a variety of techniques used in child and adolescent therapy. We are interested in therapists' knowledge of evidence based practices in the treatment of youth psychopathology. Please indicate whether the following strategies are included in treatment protocols that have been empirically supported for anxious/avoidant, depressed/withdrawn, disruptive behavior, and hyperactivity/inattention problems. **Please note that your responses should not reflect what you believe to be basic good practice or generally helpful, but rather what has specifically been demonstrated in the research literature.**

Please identify evidence based techniques by circling the appropriate letter: **A** for *Anxious/Avoidant*, **D** for *Depressed/Withdrawn*, **B** for *Disruptive Behavior*, and **H** for *Hyperactivity/Inattention*. Please circle as many as you feel are appropriate. If you believe that the technique is not used in evidence based treatment for any of the problem areas, circle **N** for *None*.

A	D	B	H	N
<i>Anxious/ Avoidant</i>	<i>Depressed/ Withdrawn</i>	<i>Disruptive Behavior</i>	<i>Attention/ Hyperactivity</i>	<i>None</i>

	A	D	B	H	N
Example: Inducing a trance-like state through the power of suggestion.	A	D	B	H	N
1. Introducing the child to a stimulus, either directly or through imagined experience, with the aim of decreasing the child's fear of the object or situation.	A	D	B	H	N
2. Modeling a desired behavior to promote the child's imitation and subsequent performance of that behavior.	A	D	B	H	N
3. Teaching the child calming techniques, such as muscle relaxation, breathing exercises, meditation, and similar activities, with the goal of reducing physiological arousal.	A	D	B	H	N
4. Therapist administration of rewards and/or praise to reinforce the child's behavior.	A	D	B	H	N
5. Teaching the child to measure his/her thoughts, emotions, and/or behavior repeatedly.	A	D	B	H	N
6. Teaching the child about how problems develop and the rationale for treatment.	A	D	B	H	N
7. Encouraging the child to participate in pleasurable activities on a regular basis.	A	D	B	H	N
8. Practicing specific activities with the intention of building skills.	A	D	B	H	N
9. Encouraging the child to reward him/herself for performing a desired behavior.	A	D	B	H	N
10. Training the parent(s) to give directions and commands effectively.	A	D	B	H	N
11. Teaching the parent(s) about how problems develop and the rationale for treatment.	A	D	B	H	N
12. Implementing a system in which points or tokens are removed as a consequence for negative behaviors.	A	D	B	H	N
13. Teaching the parent(s) to provide tangible rewards as reinforcement for desired behaviors.	A	D	B	H	N
14. Training the parent(s) to provide social rewards, such as praise, encouragement, and affection, to promote desired behaviors.	A	D	B	H	N

15. Teaching the parent(s) to monitor the child's thoughts, behavior, and/or emotions.	A	D	B	H	N
16. Teaching the parent(s) to play with their child in a specific manner to facilitate improved verbal and nonverbal interactions.	A	D	B	H	N
17. Identifying triggers for problem behaviors with the goal of altering or eliminating those triggers to decrease the behaviors.	A	D	B	H	N
18. Teaching the child social skills with the goal of improving interpersonal functioning.	A	D	B	H	N
19. Utilizing strategies to engage families and foster positive interest in treatment participation.	A	D	B	H	N
20. Managing crisis situations through immediate problem solving and follow-up planning.	A	D	B	H	N
21. Providing play therapy as a primary therapeutic strategy.	A	D	B	H	N
22. Demonstrating warmth, empathy, and positive regard through supportive listening and reflective discussion.	A	D	B	H	N
23. Teaching the parent(s) coping strategies to deal with stressful situations.	A	D	B	H	N
24. Aiding the child in processing emotions with the goal of providing new and incompatible information about former memories.	A	D	B	H	N
25. Providing the child with a mentor to function as a positive role model.	A	D	B	H	N
26. Providing family therapy with the goal of improving interpersonal relationships and interactions between members.	A	D	B	H	N
27. Implementing strategies designed to build rapport between the therapist and child.	A	D	B	H	N
28. Providing the child with educational support or tutoring to address specific academic problems, such as homework or study skills.	A	D	B	H	N
29. Strengthening skills already developed and anticipating future challenges to minimize the chance that therapeutic gains will be lost.	A	D	B	H	N
30. Matching the child with a peer to facilitate reciprocal learning or skills practice.	A	D	B	H	N
31. Using strategies designed to evaluate the accuracy and/or alter the interpretations of the child's thoughts.	A	D	B	H	N
32. Teaching the parent(s) to allow the child to experience natural negative consequences of unwanted behaviors.	A	D	B	H	N
33. Teaching the child to develop insight and greater self-understanding.	A	D	B	H	N
34. Teaching the child assertiveness skills and rehearsing assertive interactions.	A	D	B	H	N
35. Teaching the child to solve problems by outlining steps, such as identifying the problem, generating multiple solutions, and selecting the best alternative.	A	D	B	H	N
36. Using time out as a consequence for engaging in an undesirable behavior.	A	D	B	H	N
37. Teaching the parent(s) to selectively ignore mildly inappropriate behaviors and attend to alternative behaviors.	A	D	B	H	N
38. Teaching specific strategies, such as active listening or "I" statements, to improve parent and child communication.	A	D	B	H	N
39. Teaching the parent(s) to keep the child within their sight for the purpose of assuring safe and appropriate behavior.	A	D	B	H	N
40. Providing therapy in a residential setting that involves making the environment itself part of the intervention.	A	D	B	H	N

Appendix B: *KEBSQ Practice Elements and Scoring Key for 2004, 2007, and 2009*

Item	Practice Element	2004 Key 10%	2007 Key 10%	2009 Key 10%
1	Exposure	A	A	A
2	Modeling	A, D, B, H	A, D, B, H	A, D, B, H
3	Relaxation	A, D, B, H	A, D, B, H	A, D, B, H
4	Therapist praise/rewards	A, D	A, D, B, H	A, D, B, H
5	Self-monitoring	A, D	A, D, B	A, D, B
6	Psychoeducational-Child	A, D	A, D, B	A, D, B
7	Activity Scheduling	D	D	D
8	Talent or Skill Building	D, B, <u>H</u>	D, B	D, B
9	Self-reward/self-praise	A, D, <u>B</u> , H	A, D, H	A, D, H
10	Commands	B, H	B, H	B, H
11	Psychoeducational-Parent	A, D, B, H	D, B, H	A, D, B, H
12	Response cost	B, H	B, H	B, H
13	Tangible rewards	A, B, H	A, D , B, H	A, D, B, H
14	Praise	B, H	B, H	B, H
15	Monitoring	B, H	B, H	B, H
16	Attending	B, H	B	B
17	Stimulus Control or Antecedent Management	B, H	D , B, H	D, B, H
18	Social skills training	D, B	D, B, H	A, D, B, H
19	Family engagement	<u>D, H</u>	N	N
20	Crisis management	D	N	D
21	Play therapy	N	N	N
22	Supportive listening	N	N	N
23	Parent coping	B	B	D, B, H
24	Emotional processing	N	N	N
25	Mentoring	N	N	N
26	Family therapy	N	B	B
27	Relationship/rapport building	A	A, D, B	A, D, B
28	Educational support	N	B	B, H
29	Maintenance/relapse prevention	A, D, <u>H</u>	A, D, B	A, D, B
30	Peer pairing	D	N	B
31	Cognitive	A, D, B	A, D, B	A, D, B
32	Natural and logical consequences	B	B	B
33	Insight building	N	H	D
34	Assertiveness training	N	D	A, D
35	Problem solving	A, D, B, H	A, D, B, H	A, D, B, H
36	Time out	B, H	B, H	B, H
37	Differential reinforcement	B, H	B, H	B, H
38	Communication skills	D, B	D, B	D, B, H
39	Line of sight supervision	N	N	N
40	Milieu therapy	N	N	N

Appendix C: *Marlowe-Crowne Social Desirability Scale Form C***MCSDC**

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally. It's best to go with your first judgment and not spend too long mulling over any one question.

- T F 1. It is sometimes hard for me to go on with my work if I am not encouraged.
- T F 2. I sometimes feel resentful when I don't get my way.
- T F 3. On a few occasions, I have given up doing something because I thought too little of my ability.
- T F 4. There have been times when I felt like rebelling against people in authority even though I knew they were right.
- T F 5. No matter who I'm talking to, I'm always a good listener.
- T F 6. There have been occasions when I took advantage of someone.
- T F 7. I'm always willing to admit it when I make a mistake.
- T F 8. I sometimes try to get even rather than forgive and forget.
- T F 9. I am always courteous, even to people who are disagreeable.
- T F 10. I have never been irked when people expressed ideas very different from my own.
- T F 11. There have been times when I was quite jealous of the good fortune of others.
- T F 12. I am sometimes irritated by people who ask favors of me.
- T F 13. I have never deliberately said something that hurt someone's feelings.

Appendix D: *Modified Practice Attitudes Scale***MPAS**

The following questions ask about your feelings about using new types of therapy, interventions, or treatments. Evidence-based treatment refers to any intervention that has specific guidelines and/or components that are outlined in a manual and/or that are to be followed in a structured/predetermined way.

Please indicate the extent to which you agree with each item by **circling** the appropriate number.

	0	1	2	3	4
	<i>Not at All</i>	<i>To a Slight Extent</i>	<i>To a Moderate Extent</i>	<i>To a Great Extent</i>	<i>To a Very Great Extent</i>
1. I am willing to use new and different types of treatments if they have evidence of being effective.	0	1	2	3	4
2. A problem with evidence-based treatments is that you need to learn a different program for each diagnosis or problem area.	0	1	2	3	4
3. I know better than academic researchers how to care for my clients.	0	1	2	3	4
4. I like using evidence-based treatments because of the structure they provide.	0	1	2	3	4
5. Research based treatments/interventions are not clinically useful.	0	1	2	3	4
6. Evidence-based treatments allow clinicians to respond to important events in therapy as they come up.	0	1	2	3	4
7. I dislike evidence-based treatments because they are too inflexible.	0	1	2	3	4
8. I would not use manualized therapy/interventions.	0	1	2	3	4
9. Clinical experience and judgment are more important than using evidence-based treatments.	0	1	2	3	4
10. Evidence-based treatments do not allow me to tailor my therapy to each client's individual needs.	0	1	2	3	4
11. Evidence-based treatments are not designed to handle clients with more than one diagnosis or other challenges that are common in real world therapy.	0	1	2	3	4
12. Clinical experience is more important than using manualized therapy/interventions.	0	1	2	3	4

Appendix E: *Organizational Readiness for Change – Treatment Staff Version***ORC***PLEASE CIRCLE YOUR ANSWER TO EACH ITEM.***How strongly do you agree or disagree with each of the following statements?**

	1	2	3	4	5
	<i>Disagree Strongly</i>	<i>Disagree</i>	<i>Uncertain</i>	<i>Agree</i>	<i>Agree Strongly</i>
1. Your offices and equipment are adequate.	1	2	3	4	5
2. You have the skills needed to conduct effective group counseling.	1	2	3	4	5
3. Some staff get confused about the main goals for this program.	1	2	3	4	5
4. Staff here all get along very well.	1	2	3	4	5
5. Program staff understand how this program fits as part of the treatment system in your community.	1	2	3	4	5
6. Treatment planning decisions for clients here often have to be revised by a counselor supervisor.	1	2	3	4	5
7. Staff training and continuing education are priorities at this program.	1	2	3	4	5
8. Facilities here are adequate for conducting group counseling.	1	2	3	4	5
9. You used the Internet (World Wide Web) to communicate with other treatment professionals (e.g., list serves, bulletin boards, chat rooms) in the past month.	1	2	3	4	5
10. Management here fully trusts your professional judgment.	1	2	3	4	5
11. There is too much friction among staff members.	1	2	3	4	5
12. Ideas and suggestions from staff get fair consideration by program management.	1	2	3	4	5
13. You have easy access for using the Internet at work.	1	2	3	4	5

14. The staff here always works together as a team.	1	2	3	4	5
15. Client assessments here are usually conducted using a computer.	1	2	3	4	5
16. Your duties are clearly related to the goals of this program.	1	2	3	4	5
17. You learned new skills or techniques at a professional conference in the past year.	1	2	3	4	5
18. You consistently plan ahead and carry out your plans.	1	2	3	4	5
19. You are under too many pressures to do your job effectively.	1	2	3	4	5
20. Counselors here are given broad authority in treating their own clients.	1	2	3	4	5
21. Staff here are always quick to help one another when needed.	1	2	3	4	5
22. Computer problems are usually repaired promptly at this program.	1	2	3	4	5
23. Novel treatment ideas by staff are discouraged.	1	2	3	4	5
24. There are enough counselors here to meet current client needs.	1	2	3	4	5
25. The budget here allows staff to attend professional conferences each year.	1	2	3	4	5
26. Mutual trust and cooperation among staff in this program are strong.	1	2	3	4	5
27. Most client records here are computerized.	1	2	3	4	5
28. This program operates with clear goals and objectives.	1	2	3	4	5
29. Staff members often show signs of stress and strain.	1	2	3	4	5

30. You usually accomplish whatever you set your mind on.	1	2	3	4	5
31. It is easy to change procedures here to meet new conditions.	1	2	3	4	5
32. Counselors here often try out different techniques to improve their effectiveness.	1	2	3	4	5
33. You used the Internet (World Wide Web) to access treatment information in the past month.	1	2	3	4	5
34. The formal and informal communication channels here work very well.	1	2	3	4	5
35. Offices here allow the privacy needed for individual counseling.	1	2	3	4	5
36. Staff members are given too many rules here.	1	2	3	4	5
37. Program staff are always kept well informed.	1	2	3	4	5
38. The heavy workload here reduces program effectiveness.	1	2	3	4	5
39. More open discussions about program issues are needed.	1	2	3	4	5
40. This program holds regular in-service training.	1	2	3	4	5
41. You frequently hear good staff ideas for improving treatment.	1	2	3	4	5
42. You are effective and confident in doing your job.	1	2	3	4	5
43. You have a computer to use in your personal office space at work.	1	2	3	4	5
44. Some staff here do not do their fair share of work.	1	2	3	4	5
45. A larger support staff is needed to help meet program needs.	1	2	3	4	5

46. The general attitude here is to use new and changing technology.	1	2	3	4	5
47. Staff members always feel free to ask questions and express concerns in this program.	1	2	3	4	5
48. You have the skills needed to conduct effective individual counseling.	1	2	3	4	5
49. Staff frustration is common here.	1	2	3	4	5
50. Management here has a clear plan for this program.	1	2	3	4	5
51. You have convenient access to e-mail at work.	1	2	3	4	5
52. You are encouraged here to try new and different techniques.	1	2	3	4	5
53. Computer equipment at this program is mostly old and outdated.	1	2	3	4	5
54. This program provides a comfortable reception/waiting area for clients.	1	2	3	4	5
55. Staff here feel comfortable using computers.	1	2	3	4	5
56. Frequent staff turnover is a problem for this program.	1	2	3	4	5
57. Counselors here are able to spend enough time with clients.	1	2	3	4	5
58. Support staff here have the skills they need to do their jobs.	1	2	3	4	5
59. Clinical staff here are well-trained.	1	2	3	4	5
60. More computers are needed in this program for staff to use.	1	2	3	4	5

Organizational Readiness for Change (TCU ORC) Treatment Staff Version (TCU ORC-S) *Scales and Item Scoring Guide*

Scoring Instructions. Numbers for each item indicate its location in the administration version, in which response categories are 1=Strongly Disagree to 5=Strongly Agree; ® designates items with reflected scoring. Scores for each scale are obtained by summing responses to its set of items (after reversing scores on reflected items by subtracting the item response from “6”), dividing the sum by number of items included (yielding an average) and multiplying by 10 in order to rescale final scores so they range from 10 to 50 (e.g., an average response of 2.6 for a scale becomes a score of “26”).

Note. Special items (Numbers 24, 30, 41, 67, 73, 77, 82, 86, 98, 101, 114, 117) are not listed because they do not currently load on any single scale. Some capture special information, however, and others are being tested for future additions to scales.

MOTIVATION FOR CHANGE (Needs/Pressure)

Program Needs

Your program needs additional guidance in –

1. assessing client needs.
2. matching needs with services.
3. increasing program participation by clients.
4. measuring client performance.
5. developing more effective group sessions.
6. raising overall quality of counseling.
7. using client assessments to guide clinical and program decisions.
8. using client assessments to document program effectiveness.

Training Needs

You need more training for –

9. assessing client problems and needs.
10. increasing client participation in treatment.
11. monitoring client progress.
12. improving rapport with clients.
13. improving client thinking and problem solving skills.
14. improving behavioral management of clients.
15. improving cognitive focus of clients during group counseling.
16. using computerized client assessments.

Pressures for Change

Current pressures to make program changes come from –

17. clients in the program.
18. program staff members.
19. program supervisors or managers.
20. agency board members.
21. community action groups.
22. funding and oversight agencies.
23. accreditation or licensing authorities.

RESOURCES

Offices

- 25. Your offices and equipment are adequate.
- 34. Facilities here are adequate for conducting group counseling.
- 74. Offices here allow the privacy needed for individual counseling.
- 108. This program provides a comfortable reception/waiting area for clients.

Staffing

- 58. There are enough counselors here to meet current client needs.
- 92. A larger support staff is needed to help meet program needs. ®
- 110. Frequent staff turnover is a problem for this program. ®
- 111. Counselors here are able to spend enough time with clients.
- 112. Support staff here have the skills they need to do their jobs.
- 113. Clinical staff here are well-trained.

Training

- 33. Staff training and continuing education are priorities at this program.
- 48. You learned new skills or techniques at a professional conference in the past year.
- 59. The budget here allows staff to attend professional conferences each year.
- 85. This program holds regular inservice training.

Equipment

- 46. Client assessments here are usually conducted using a computer.
- 56. Computer problems are usually repaired promptly at this program.
- 62. Most client records here are computerized.
- 90. You have a computer to use in your personal office space at work.
- 107. Computer equipment at this program is mostly old and outdated. ®
- 109. Staff here feel comfortable using computers.
- 115. More computers are needed in this program for staff to use. ®

Internet

- 37. You used the Internet (World Wide Web) to communicate with other treatment professionals (e.g., list serves, bulletin boards, chat rooms) in the past month.
- 44. You have easy access for using the Internet at work.
- 71. You used the Internet (World Wide Web) to access drug treatment information in the past month.
- 102. You have convenient access to e-mail at work.

STAFF ATTRIBUTES**Growth**

- 52. This program encourages and supports professional growth.
- 54. You read about new techniques and treatment information each month.
- 60. You have enough opportunities to keep your counseling skills up-to-date.
- 81. You regularly read professional journal articles or books on drug abuse treatment.
- 94. You do a good job of regularly updating and improving your skills.

Efficacy

- 26. You have the skills needed to conduct effective group counseling.
- 49. You consistently plan ahead and carry out your plans.
- 68. You usually accomplish whatever you set your mind on.
- 89. You are effective and confident in doing your job.
- 96. You have the skills needed to conduct effective individual counseling.

Influence

- 35. You frequently share your knowledge of new counseling ideas with other staff.
- 43. Staff generally regard you as a valuable source of information.
- 83. Other staff often ask your advice about program procedures.
- 88. Other staff often ask for your opinions about counseling and treatment issues.
- 100. You often influence the decisions of other staff here.
- 106. You are viewed as a leader by other staff here.

Orientation (scale not computed)

- 29. Psychodynamic theory is commonly used in your counseling here.
- 39. Pharmacotherapy and medications are important parts of this program.
- 53. Behavior modification (contingency management) is used with many of your clients here.
- 78. 12-step theory (AA/NA) is followed by many of the counselors here.
- 105. Cognitive theory (RET, RBT, Gorski) guides much of your counseling here.

Adaptability

- 63. You are willing to try new ideas even if some staff members are reluctant.
- 64. Learning and using new procedures are easy for you.
- 75. You are sometimes too cautious or slow to make changes. ®
- 104. You are able to adapt quickly when you have to shift focus.

ORGANIZATIONAL CLIMATE

Mission

- 27. Some staff get confused about the main goals for this program. ®
- 31. Program staff understand how this program fits as part of the treatment system in your community.
- 47. Your duties are clearly related to the goals of this program.
- 65. This program operates with clear goals and objectives.
- 99. Management here has a clear plan for this program.

Cohesion

- 28. Staff here all get along very well.
- 40. There is too much friction among staff members. ®
- 45. The staff here always work together as a team.
- 55. Staff here are always quick to help one another when needed.
- 61. Mutual trust and cooperation among staff in this program are strong.
- 91. Some staff here do not do their fair share of work. ®

Autonomy

- 32. Treatment planning decisions for clients here often have to be revised by a counselor supervisor. ®
- 38. Management here fully trusts your professional judgment.
- 51. Counselors here are given broad authority in treating their own clients.
- 70. Counselors here often try out different techniques to improve their effectiveness.
- 76. Staff members are given too many rules here. ®

Communication

- 42. Ideas and suggestions from staff get fair consideration by program management.
- 72. The formal and informal communication channels here work very well.
- 79. Program staff are always kept well informed.
- 84. More open discussions about program issues are needed here. ®
- 95. Staff members always feel free to ask questions and express concerns in this program.

Stress

- 50. You are under too many pressures to do your job effectively.
- 66. Staff members often show signs of stress and strain.
- 80. The heavy workload here reduces program effectiveness.
- 97. Staff frustration is common here.

Change

- 57. Novel treatment ideas by staff are discouraged. ®
- 69. It is easy to change procedures here to meet new conditions.
- 87. You frequently hear good staff ideas for improving treatment.
- 93. The general attitude here is to use new and changing technology.
- 103. You are encouraged here to try new and different techniques.

TRAINING EXPOSURE AND UTILIZATION

Training Satisfaction

36. You were satisfied with the training offered at workshops available to you last year.
 116. You were satisfied with the training opportunities available to you last year.

Training Exposure

(response categories: 1="None"; 2="1"; 3="2"; 4="3"; 5="4 or More")

118. In the last year, how often did you attend training workshops held within 50 miles of your agency?
 119. In the last year, how often did you attend training workshops held more than 50 miles from your agency?
 120. How many workshops do you expect to attend in the next 12 months?
 121. In the last year, how many times did outside trainers come to your agency to give workshops?
 122. In the last year, how many times did your agency offer special, in-house training?

Training Utilization – Individual-level

(response categories: 1="Never"; 2="Rarely"; 3="Sometimes"; 4="A Lot"; 5="Almost Always")

123. When you attend workshops, how often do you try out the new interventions or techniques learned?
 124. Are your clients interested or responsive to new ideas or counseling materials when you try them?
 125. In recent years, how often have you adopted (for regular use) new counseling interventions or techniques from a workshop?
 126. When you have adopted new ideas into your counseling, how often have you encouraged other staff to try using them?

Training Utilization – Program-level

(response categories: 1="Never"; 2="Rarely"; 3="Sometimes"; 4="A Lot"; 5="Almost Always")

127. How often do new interventions or techniques that the staff from your program learn at workshops get adopted for general use?
 128. How often do new ideas learned from workshops get discussed or presented at your staff meetings?
 129. How often does the management at your program recommend or support new ideas or techniques for use by all counselors?

Appendix G: *Practitioner Background Questionnaire*

PRACTITIONER BACKGROUND QUESTIONNAIRE				
1. Today's Date: / /	2. Age:	3. Gender: Male Female	4. Agency/Organization/School Name:	5. Work Zip Code:
6. Race (Check ALL that apply): <input type="checkbox"/> Alaska Native or American Indian <input type="checkbox"/> Asian <input type="checkbox"/> Black or African American <input type="checkbox"/> Hispanic or Latino <input type="checkbox"/> Native Hawaiian or Pacific Islander <input type="checkbox"/> White or Caucasian <input type="checkbox"/> Other: _____ <input type="checkbox"/> Race Unknown			7. Racial Identity (Check the ONE that you identify with the MOST): <input type="checkbox"/> Alaska Native or American Indian <input type="checkbox"/> Asian <input type="checkbox"/> Black or African American <input type="checkbox"/> Hispanic or Latino <input type="checkbox"/> Native Hawaiian or Pacific Islander <input type="checkbox"/> White or Caucasian <input type="checkbox"/> Other: _____ <input type="checkbox"/> Race Unknown	
8. Highest Degree Earned (Check ONLY one): <input type="checkbox"/> HS Diploma or GED <input type="checkbox"/> A.A./Voc./Non-Degree Cert. (e.g., CSAC) <input type="checkbox"/> B.A./B.S. <input type="checkbox"/> M.Ed. <input type="checkbox"/> MSW, LCSW, etc. <input type="checkbox"/> M.A./M.S. Counseling <input type="checkbox"/> M.A./M.S. Other (specify: _____) <input type="checkbox"/> R.N., L.P.N., etc. <input type="checkbox"/> Doctoral Student/Intern <input type="checkbox"/> Psy.D. <input type="checkbox"/> Ph.D. <input type="checkbox"/> M.D. <input type="checkbox"/> Other (specify: _____)	9. Date of most advanced degree: (Mo/Yr) ___/___	10. Are you State Licensed? Yes No	11. Type of Licensure: _____	
12. Professional Specialty: (Check ONLY one - if you have multiple, check the one you identify with most) <input type="checkbox"/> Clinical Psychology <input type="checkbox"/> Counseling (Education) <input type="checkbox"/> Counseling (Psychology) <input type="checkbox"/> Education/Special Education <input type="checkbox"/> Marriage & Family Therapy <input type="checkbox"/> Psychiatry <input type="checkbox"/> School Psychology <input type="checkbox"/> Social Work <input type="checkbox"/> Substance Abuse Counseling <input type="checkbox"/> Other (specify: _____)			13. Primary Clinical Setting (where you provide services; select ONLY one): (If you work in multiple settings, select the setting where you spend most time) <input type="checkbox"/> Out-of-Home (e.g., Hospital, Residential, Group Home, Therapeutic Foster Care) <input type="checkbox"/> In-Home (e.g., IHH/13010) <input type="checkbox"/> Out-Patient Clinic (e.g., agency clinic, private practice) <input type="checkbox"/> School-Based <input type="checkbox"/> Other Setting (please specify): _____	
14. Professional Activities (Please provide percentages; Must sum to 100%): <input type="checkbox"/> Assessment & Treatment Planning <input type="checkbox"/> Therapy <input type="checkbox"/> Supervision of Others <input type="checkbox"/> Clinical Training <input type="checkbox"/> Administrative Work (includes paperwork, billing, managing others, etc.) <input type="checkbox"/> Other (specify: _____)			15. Theoretical Orientations (Check ALL that you use): <input type="checkbox"/> Behavioral <input type="checkbox"/> Cognitive or Cognitive-Behavioral <input type="checkbox"/> Eclectic or Integrative <input type="checkbox"/> Existential or Gestalt <input type="checkbox"/> Humanistic or Client Centered <input type="checkbox"/> Psychoanalytic or Psychodynamic or Object Relations <input type="checkbox"/> Systems or Family-Systems <input type="checkbox"/> Other (specify: _____)	
16. PRIMARY Theoretical Orientation (Check ONE you identify with the MOST): <input type="checkbox"/> Behavioral <input type="checkbox"/> Cognitive or Cognitive-Behavioral <input type="checkbox"/> Eclectic or Integrative <input type="checkbox"/> Existential or Gestalt <input type="checkbox"/> Humanistic or Client Centered <input type="checkbox"/> Psychoanalytic or Psychodynamic or Object Relations <input type="checkbox"/> Systems or Family-Systems <input type="checkbox"/> Other (specify: _____)			17. Years of FORMAL clinical training (beyond undergraduate degree, does NOT include workshops or CEUs) _____	
18. Years full time clinical experience (since earning terminal degree) _____				
19a. Does your profession/license/agency require continuing education? YES NO				
19b. If yes, how many hours or units of continuing education are required each year? _____				
20. What is the average number of continuing education workshops/trainings/conferences you attend each year: _____				
21. How many active cases do you typically carry at one time?				
22. About how many hours of supervision do you receive each month? _____				

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