EFFECTS OF WORKSHOP TRAININGS ON PRACTICE ELEMENT UTILIZATION

AMONG THERAPISTS IN A YOUTH PUBLIC MENTAL HEALTH SYSTEM

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ABSTRACT

Despite significant advancements for properly defining and establishing evidence-based practices (EBPs) for specific disorders and populations, there continues to be a science-practice gap in community mental health settings. One strategy that has been examined to increase the rate of EBP utilization is adapting evidence-based training processes (and related factors influential to those processes) to better fit large community mental health systems. Of particular interest, recent research has suggested that a modular approach to treatment and training may be a useful method for striking a balance between the prescriptive nature of EBPs and the need for flexible implementation within community mental health. Thus, the present investigation had two overarching foci within the context of a large scale modular therapy training initiative on various practice elements: to examine the extent to which community therapists appropriately applied treatment techniques focused on at these trainings, and the extent to which community therapists failed to appropriately apply treatment techniques focused on at trainings.

Longitudinal, archival data from community mental health providers ($n = 47$) who participated in a series of state-sponsored anxiety and/or disruptive behavior workshops in modular approaches to EBPs for youth in Hawaii was examined. Utilizing two different methods of three-level mixed model approaches (i.e., cross-classified multilevel modeling and generalized linear mixed modeling [level-1: effects of time, level-2: client factors, and level-3: therapist factors]), average rates of change in therapists' EBP utilization were examined following their attendance at the specific types of workshops (e.g., therapists' use of trained anxiety techniques was examined following attendance at an anxiety workshop). Client and therapist characteristics, within which these treatment episodes are embedded, were also investigated within these analyses for their potential effects on utilization patterns. Results indicated that time, client age,

training attendance, and therapist specific technique knowledge were significant predictors of therapists' technique utilization rates. However, therapists' attitudes towards evidence-based practices was not a significant predictor. Youth community therapists within this sample self-reported increases for their appropriate utilization of the anxiety trained techniques following the anxiety training, yet decreased in their self-reported appropriate use of disruptive behavior techniques after the disruptive behavior training. These results potentially suggest that the effects of training on specific technique implementation are moderated by a variety of factors, including not only traditionally studied therapist and youth factors, but also the type of problem area addressed at the training. Study limitation and implications for EBP dissemination and implementation are further discussed.

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LIST OF ABBREVIATIONS AND SYMBOLS

ANX .... Core Practice Elements for Anxiety and Trauma

β .... Beta

CAMHMIS .... Child and Adolescent Mental Health Management Information System

CAMHD .... Child and Adolescent Mental Health Division

CCMM .... Cross-Classified Multilevel Modeling

DBD .... Core Practice Elements for Disruptive Behaviors

EBP .... Evidence-Based Practice

EBPAS .... Evidence-Based Practice Attitudes Scale

GLMM .... Generalized Linear Mixed Modeling

ICC .... Introduction to Hawaii's Public Sector Mental Health System

KEBSQ .... Knowledge of Evidence-Based Services Questionnaire

MAP .... Managing and Adapting Practice

MCAR .... Little's Missing Completely at Random

MPAS .... Modified Practice Attitude Scale

MTPS .... Monthly Treatment Progress Summary

MVA .... Missing Value Analysis

OR .... Odds Ratio

PE .... Practice Element

PWEBS .... PracticeWise Evidence-Base Search Engine

TBQ .... Therapist Background Questionnaire

Introduction

Background

Significant advancements have been made for identifying efficacious psychosocial interventions for youth mental health (Lonigan, Elbert, & Johnson, 1998; Silverman & Hinshaw, 2008; Society of Clinical Child and Adolescent Psychology and Association for Behavioral and Cognitive Therapies, 2010; Weisz, Hawley, & Doss, 2004). Within the last three decades, policymakers and governments throughout the world have supported the idea that health care practices should be based on evidence, which in turn has spawned the evidence-based practice (EBP) movement within the field of clinical psychology (Barlow, 2005; Insel, 2009; President's New Freedom Commission, 2004; Task Force on Promotion and Dissemination of Psychological Procedures, 1995). However, despite significant advancements for properly defining, testing, and identifying these types of practices for specific disorders and populations (Chambless & Hollon, 1998; Chorpita et al., 2002; Hoagwood, Burns, Kiser, Ringelsen, & Schoenwald, 2001; Lonigan et al., 1998; Task Force on Promotion and Dissemination of Psychological Procedures, 1995), there continues to be a science-practice gap in community mental health settings (Weersing, Weisz, & Donenberg, 2002). Compared to the relatively well-accepted paradigm for *identifying* EBPs (cf. Chorpita et al., 2002; Lonigan et al., 1998; Task Force on Promotion and Dissemination of Psychological Procedures, 1995), theories and practices related to EBP *dissemination and implementation* science are still developing.

Dissemination and implementation science incorporates both the calculated circulation of relevant materials and information to therapists (i.e., dissemination), as well as the adoption and integration of EBPs into existing initiatives (i.e., implementation; Beidas & Kendall, 2010). Due to the recognized gap between research and practice in public sector mental healthcare settings, a

variety of stakeholders have begun to recognize the need for large-scale quality improvement

initiatives (Flynn & Brown, 2011). Helping to aid in this initiative, numerous researchers have

advocated for increasing the rate of youth EBP adoption among community mental health

therapists (Beidas & Kendall, 2010; Kolko, Herschell, Costello, Kolko, 2009; Lim, Nakamura,

Higa-McMillan, Shimabukuro & Slavin, 2012). One area that has received attention for its

potential to aid EBP adoption efforts is furthering our scientific understanding of adapting

evidence-based training processes (and related factors influential to those processes) to better fit

large community mental health systems (Lim et al., 2012).

Dissemination and Implementation Training Processes

Currently, the most common approach for training therapists in mental health community

practices has been through workshops and self-guided treatment manuals (McHugh & Barlow,

2010). However, research has found little evidence to support that these traditional continuing

education training approaches produce improved skills or treatment competence (Carteine,

Ahern, & Locke, 2010; Joyce & Showers, 2002; Schoenwald, Kelleher, Weisz, & Research

Network on Youth Mental Health, 2008). Instead, research thus far has suggested that successful

education of therapists in EBP techniques requires a balance of both didactic training and

interactive and ongoing supports (McHugh & Barlow, 2010). For example, Crits-Christoph et al.

(1998) evaluated the effects of training on therapist's performance of delivering three

manualized treatments (e.g., cognitive therapy, supportive-expressive dynamic therapy, and

individual drug counseling) to cocaine-dependent patients. The study found that trainings in the

empirically-supported treatment of cognitive therapy emphasizing active learning strategies (e.g.,

role plays, supervisors listening to and rating therapist adherence and competence to therapy), in

addition to traditional didactic work led to increased transferring of knowledge, or

generalization, to other cases beyond their training cases. Furthermore, a recent review of 32 training studies by Beidas and Kendall (2010) indicated that the type of learning strategies delivered to therapists may play a particular role in therapists' behavioral change. The authors noted that passive learning strategies (e.g., didactic presentations, seminars) could be effective in changing therapists' attitudes and knowledge towards EBPs, however these strategies minimally impacted therapists' actual behavior. Moreover, their review suggested that active learning strategies (e.g., role-playing, modeling, practice) aid in effectively changing therapists' subsequent behaviors (Beidas & Kendall, 2010).

Despite findings in support of active training approaches for positively affecting therapists' behaviors, efforts for adhering to these training recommendations in large scale or public mental health settings have been met with a variety of barriers. Recent research suggests that there is a clear distinction between training-as-usual practices and empirically-based training recommendations (Beidas, Cross, & Dorsey, 2014; Lim et al., 2012). Training-as-usual typically has followed a rather detached pattern for continuing education, where therapists attend a brief didactic training session followed by little to no individual or organizational support (Fixsen, Naoom, Blasé, Friedman, & Wallace, 2005). Empirically-based training recommendations on the other hand indicate that therapists should be provided many hours of multi-modal learning strategies and continued support beyond initial didactic experiences (Beidas & Kendall, 2010; Herschell, Kolko, Baumann, & Davis, 2010; Rakovshik & McManus, 2010). Dissemination and implementation science may benefit from examining and adopting various EBP-related training practices that help balance the intensive nature of empirically-supported training recommendations against the scarcity of resources (e.g., lack of time and costs related to EBP

training, lack of agency support) that are all too common in large community mental-health settings.

Recognizing that EBP training may benefit from multifaceted and ongoing approaches to dissemination and implementation, researchers have begun to compare specific training methods in order to examine which practices are associated with competence and skill development. Multiple approaches have been researched, including web-based training strategies (Dimeff et al., 2009; Sholomskas, Syracuse-Siewert, Rounsaville, Ball, Nuro, & Carroll, 2005), on-going consultation (Beidas, Edmunds, Marcus, & Kendall, 2012; Herschell et al., 2010), train-the-trainer methodology (Nakamura et al., 2011), and modular approaches to treatment and training (Chorpita & Daleiden, 2009b; Lim et al., 2012; Southam-Gerow et al., 2014). Each approach seems to hold some promise for adapting empirically-based training recommendations into larger community mental health systems. Web-based training programs have the advantages of increased flexibility, accessibility, cost-efficiency, scalability, the possibility to use didactic and interactive learning strategies, and potentially allow for remote ongoing supervision/consultation (Barnett, 2011; Beidas et al., 2011; Berger, 2004; Kazdin & Blase, 2011; Weingardt, 2004). Research has also suggested that ongoing consultation in combination with training may enhance therapist adherence and skill to implementing complex, multistep treatment protocols (Beidas et al., 2012; Edmunds, Beidas, & Kendall, 2013; Edmunds et al., 2013; Nadeem, Gleacher, & Beidas, 2013). Train-the-trainer paradigms (i.e., master trainers teach supervisors EBPs, who then in turn teach their therapists; see Nakamura et al., 2011) also have some clear advantages such as reducing the time, resources, and staff necessary to effectively train therapists (Demchak, Kontos, & Neisworth,1992; Ducharme, Williams, Cummings, Murray, & Spencer, 2001; Hundert & Hopkins, 1992; Schlosser,Walker, & Sigafoos, 2006). Modular approaches to

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treatment and therapy involve the guided assembly of discrete components into coherent

treatment and training approaches, respectively, and also seem to hold promise. Concerning

modular therapy approaches (in combination with ongoing consultation and train-the-trainer

aspects) for example, Southam-Gerow et al. (2014) trained 1,770 therapists in Los Angeles

County on a wide array of treatment approaches for a variety of problems within only a span of

2.5 years as part of a larger quality improvement initiative for that area.

Modularized Approach to Treatment and Training

As briefly defined above, modular therapy involves the guided assembly of numerous

discrete techniques into an overall and coherent treatment approach. In addition to utilizing

treatment decision flow charts for informing these assembly decisions, modular therapy

inherently relies upon careful and empirical identification of treatment components that should

be considered for application in the first place (Chorpita & Daleiden, 2007; Chorpita, Daleiden,

& Weisz, 2005). Recent research by Chorpita and colleagues (Chorpita & Daleiden, 2007,

Chorpita & Daleiden, 2009a and Chorpita et al., 2005) have centered on identifying technique

commonalities (i.e., practice elements) across numerous brand-named evidence-based protocols,

frequently grouped by treatment target (e.g., anxiety, depression). A practice element (PE) has

been defined as a discrete clinical technique or strategy (e.g., "time out," "relaxation") used as a

component of a larger intervention plan (Chorpita et al., 2005, 2007; Chorpita & Daleiden,

2009a). When these discrete techniques, or PEs, are flexibly arranged and guided by a clinical

decision making algorithm, this treatment approach can be described as modular in nature

(Chorpita & Weisz, 2009). Recent empirical investigations of modular treatment approaches

suggest that this is a promising method for treatment delivery and useful for helping balance the

dialectic between the prescriptive and flexible nature of real-world implementation (Chorpita et al., 2005; Weisz et al., 2012).

Given the relatively promising design of modular treatment approaches, recent studies have begun to investigate the effectiveness of modularized treatment strategies within multiple community mental health systems. As briefly mentioned above, Southam-Gerow and colleagues (2014) recently investigated a large-scale quality improvement effort in Los Angeles County. More specifically, their work focused on the implementation of an evidence-informed mental health service for children and adolescents called Managing and Adapting Practice (MAP). MAP relies on modular therapy design and other concepts outlined below to help therapists manage and adapt treatment plans for youth in an evidence-informed way (Chorpita & Daleiden, 2009b; Southam-Gerow et al., 2014). Within their recent investigation, Southam-Gerow et al. (2014) examined the two different models for training therapists in MAP, a national training model and a MAP agency supervisor model (i.e., train-the-trainer) across 1,770 therapists within Los Angeles County. Within the national training model, a therapist completed a five-day (40 hour) direct services training as well as six-months of biweekly phone consultations (i.e., 12 calls) for a total of 52 hours of training and consultation from a national training expert. Within the MAP agency supervisor model, the therapists also participated in 52 hours of training and consultation, however, these services were provided by a local MAP agency supervisor (i.e., an individual who was previously credentialed as a MAP therapist and supervisor via a train-the-trainer model). Both training models incorporated the recommended best practices for training, by encompassing a variety of teaching approaches, relying on a multicomponent approach during the initial training week, and requiring therapists to participate in ongoing consultation while simultaneously using the MAP approach with their clients. Results of this investigation found

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both trainings led to therapists successfully achieving MAP credentialing at comparable rates. Additionally, both trainings led to therapists meeting proficient development within MAP, however therapists who completed credentialing through the national training model produced somewhat higher quality materials. Encouragingly, both of these training models were successful in producing MAP therapists in a timely fashion and with acceptable competency scores. Taken together, Southam-Gerow and colleagues' (2014) results suggests that a multicomponent approach to training in modular therapy may be an effective way to deliver services within a large community mental health system.

Recognizing the potential for modularized treatment approaches within community mental health systems, the state of Hawaii's Child and Adolescent Mental Health Division (CAMHD) has also investigated the effects of training community therapists within a similar, but less intensive, paradigm (Lim et al., 2012; Nakamura et al., 2011). Between May 2008 and July 2009, 397 therapists voluntarily progressed through three types of state-sponsored training workshops: (a) Introduction to Hawaii's Public Sector Mental Health System, (b) Core Practice Elements for Anxiety and Trauma, and (c) Core Practice Elements for Disruptive Behaviors (Nakamura et al., 2011). Each training workshop was co-led by two expert trainers from the CAMHD Practice Development Office and focused on training therapists on a handful of PEs derived from the evidence-base (e.g., exposure for anxiety, commands for disruptive behavior) as well as their modular assembly into a coherent treatment approach.

Several research studies have begun investigating the effects of these workshops on a variety of outcomes. For example, efforts for studying CAMHD's training endeavors have recently centered on investigating client and therapist characteristics related to EBP implementation (Higa-McMillan, Nakamura, Morris, Jackson, & Slavin, 2014; Lim et al., 2012;

Nakamura et al., 2011). Research by Higa-McMillan and colleagues (2014) suggests that particular client (e.g., age, gender) and therapist characteristics (e.g., theoretical orientation) predict the use of practices derived from the evidence-base and the use of practices with minimal evidence support. Higa-McMillan et al. (2014) found that the longer a client was in treatment, the greater the likelihood the client would receive a practice derived from the evidence base. However, males, older youths, and clients placed in out-of-home levels of care within Hawaii were more likely to receive practices with minimal evidence-based support. Furthermore, therapists who self-reported having a Psychology or Psychiatry specialty significantly used more practices derived from the evidence based than therapists who reported having a Social Work specialty. In addition, therapists who described their practices as oriented within a Behavioral or Cognitive-Behavioral approach used significantly more practices derived from the evidence based than those who identified with an Eclectic orientation (Higa-McMillan et al., 2014).

While therapist demographic and background characteristics seem to potentially play a role in EBP implementation, studies have also recognized the need to investigate other therapist-level characteristics that may influence EBP utilization, such as therapist knowledge of and attitudes towards EBPs. Several theoretical models have proposed that attitudes may be an antecedent to a therapist's decision of whether or not to try a new practice (Ajzen, 1988; Ajzen, 1991; Candel & Pennings, 1999; Frambach & Schillewaert, 2002; Rogers, 2003). As just one example, Rogers' (2003) Diffusion of Innovations theory suggests that attitudes and opinions toward innovation can impact the decision of whether or not to adopt it and may play an important role in the facilitation (or discouragement) of new innovations. In addition to therapists' attitudes affecting EBP dissemination efforts, several researchers have also suggested that knowledge is often one of the biggest barriers to EBP implementation (Dearing, 2009; Higa

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& Chorpita, 2007; Sanders, Prinz & Shapiro, 2009). In fact, some dissemination and implementation researchers have even begun to define the term dissemination as "the delivery of knowledge and the management of attitudes and intentions for providers" (Chorpita & Regan, 2009). Recognizing the potential influence on EBP dissemination and implementation, one recent study by Nakamura and colleagues (2011) within the CAMHD system investigated the relationship between therapists' youth EBP knowledge and attitudes *prior* to the CAMHD training campaign described above. Nakamura et al. (2011) found that therapists who indicated having an overly restrictive view of EBP techniques had less favorable attitudes towards EBPs.

Furthermore, expanding upon Nakamura et al.'s (2011) investigation, Lim and colleagues (2012) studied the relationship between knowledge and attitudes towards EBPs among 268 Hawaii system therapists as they longitudinally progressed through the training campaign. They found that trainings that centered on a variety of core PEs and their modular assembly increased therapists' general knowledge of those specific techniques over time. However, Lim et al. (2012) also found that as therapists progressed through trainings, their knowledge commission errors (i.e., incorrectly indicating that a PE is derived from the evidence-base when it is actually not, indicative of having an overly inclusive view of the evidence-base) significantly increased, suggesting a general trend for overly generalizing the EBP label to PEs outside of the scope of the trainings. In addition, Lim et al. (2012) found that regardless of the specific type of EBP training (i.e., introduction to the CAMHD system, or anxiety or disruptive behavior techniques) attended, therapists' attitudes toward EBPs generally improved as a result of attending these workshops. Taken together, their findings suggest that a targeted approach to training emphasizing technique modularity can result in increases in therapists' (a) knowledge, (b)

tendencies for overly applying the EBP label to a wide variety of PEs not actually derived from the evidence-base, and (c) positive attitudes toward EBPs.

Despite Lim et al.'s (2012) encouraging findings that supposed precursors of behavior change (e.g., knowledge and attitudes) evolved over time as a result of attending trainings, what remains to be investigated is the extent to which those therapists' practice behaviors advanced as well. That is, while acknowledging the importance of studying therapists' knowledge and attitudinal changes over time, a key area of concern for dissemination and implementation research is the extent to which trainings affect actual practice behaviors, and in turn youth outcomes. A potentially important contribution to the literature can be made by expanding upon Lim et al.'s (2012) efforts, and examining the extent to which a large-scale training effort centered on key PEs and their modular assembly resulted in actual changes in therapists' practice behaviors with youth.

Present Investigation

The major purpose of the present investigation was to build upon Lim et al.'s (2012) work by examining self-reported practice changes for the subset of therapists within their sample for which such ongoing patient practice records were available. The present study centered on two overarching questions, both within the context of examining therapist practice changes following their participation in workshops on anxiety and disruptive behavior techniques. First, to what extent did therapists correctly self-report applying training techniques to appropriately matched patients? More specifically, this first aim centered on investigating therapists' true-positive rates for technique application after each relevant training. A true-positive can be defined as the event in which a therapist utilized a practice element with a client presenting with a relevant treatment target. For example, within this study a true-positive event would occur if a

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therapist indicated using the practice element of exposure (a practice element that has been classified as being derived from evidence-based protocols primarily for anxious problems) with a client presenting with an anxiety problem. The second overarching question within this investigation was to what extent did therapists self-report failing to correctly apply training techniques to appropriately matched patients? This second foci area concerned false-negative rates. A false-negative can be defined as the event in which a therapist did not utilize a practice element with a client, even though the matched treatment target endorsed would suggest they should have. For example, a false-negative event would occur if the treatment target of Anxiety was indicated, however the therapist did not report using the practice element of exposure. Several hypotheses are offered in the paragraph below, and are labeled in the following manner: (a) 1 or 2 (1 = regarding true-positive rate, 2 = regarding false-negative rate), (b) a or b (a = regarding anxiety techniques, b = regarding disruptive behavior techniques), (c) i concerns the moderating effects of time, (d) ii concerns one or more moderator effects at the patient level, and (e) iii concerns one or more moderator effects at the therapist level.

Concerning my first overarching research question, I hypothesized that the extent to which therapists self-report correctly applying techniques to appropriately matched patients (true-positive rate; e.g., application of trained anxiety techniques to anxious patients) would increase over time (Hypothesis 1ai). Recognizing that there may be scenarios in which using a trained technique may not be clinally suggested during the first months of treatment, it was hypothesized that therapists' appropriate use of the trained techniques would increase as a youth's treatment episode continued over time. Additionally, I hypothesized that therapists' true-positive rates for the particular trained techniques would increase following workshop attendance. Building upon Hypothesis 1ai, I hypothesized that therapists' use of workshop-

targeted anxiety techniques would increase for their anxious patients after attending the anxiety workshop. Furthermore, given that the current investigation was an extension of Lim et al.'s (2012) research on longitudinal therapists' attitude and knowledge changes, I offered an additional hypothesis about therapists' practice changes being influenced by their EBP attitude and knowledge levels. I hypothesized that therapists' true positive rate for applying anxiety workshop-targeted techniques to anxious patients would be influenced by therapists' EBP knowledge and attitudes, such that higher levels of knowledge and attitudes would be associated with greater changes in true positive rate changes following workshop attendance (Hypothesis 1aiii). I also hypothesized that therapists' use of workshop-targeted disruptive behavior techniques would increase for their disruptive behavior patients over time (Hypothesis 1bi). Moreover, I hypothesize that therapists' true-positive rates of disruptive behavior techniques would increase for their disruptive behavior patients after attending the disruptive behavior workshop (Hypothesis 1bi). Additionally, given that the commands and attending disruptive behavior PEs have typically been associated with larger EBP approaches for youth 12 years or younger (Chorpita & Daleiden, 2009a), I further hypothesized potential moderator effects of Hypothesis 1bi. In particular, I hypothesized that therapists' use of the commands and attending disruptive behavior techniques would increase specifically for clients who are 12 years or younger (Hypothesis 1bii). I also hypothesized an additional moderator effect for the expected finding in Hypothesis 1bii, such that higher levels of therapists' knowledge and attitudes would influence greater changes in true positive rates for the application of workshop-targeted disruptive behavior techniques to disruptive patients following workshop attendance (Hypothesis 1biii).

Regarding my second overarching research question, I likewise hypothesized that the extent to which therapists self-reported failing to correctly apply techniques to appropriately matched patients (false-negative rate; e.g., failure to apply anxious techniques to anxious patients) would decrease over time (Hypothesis 2ai and Hypothesis 2bi). As noted above, there may be situations in which using a trained technique would not be clinally suggested during the first months of treatment, however, it was hypothesized that therapists' false-negative rates would decrease as a youth's treatment episode continued over time. Regarding therapists' anxiety training attendance, I hypothesized that therapists' false-negative rates of applying anxiety techniques to appropriately matched anxiety patients would decrease following training attendance. More explicitly, I hypothesized that therapists would be less likely to fail in correctly applying workshop-targeted anxiety techniques to their anxious patients following the anxiety workshop (Hypothesis 2ai). Similar to the moderator hypotheses above, I hypothesized that this reduction in false negatives would be greater for therapists with better EBP knowledge and attitudes (Hypothesis 2aiii). I also hypothesized that failure rates for correctly applying workshop-targeted disruptive behavior techniques for disruptive behavior patients would decrease following attendance at the disruptive behavior workshop (Hypothesis 2bi). Additionally, I hypothesized that therapists failure rates for correctly applying the commands and attending PEs would decrease specifically for clients 12 years of age or younger (Hypothesis 2bii). Finally, I hypothesized that the reduction in false negative rates for disruptive behavior techniques with disruptive youth expected in Hypothesis 2bi would be greater for therapists with higher EBP knowledge and attitudes (Hypothesis 2biii).

Methods

Participants

The present investigation included and joined archival data from two types of participant data sets, therapists and youth treated by those therapists. Concerning therapists, the inclusionary criteria were as follows. First, therapists had to have attended at least one of the anxiety or disruptive behavior state-wide trainings described above in Lim et al.'s (2012) original study. Second, I restricted my therapist participants to only CAMHD-contracted therapists from Lim et al.'s (2012) original sample (i.e., Department of Education therapists will be excluded), since therapist-report practice data as captured in the current methodology are available for only CAMHD therapists. This reduced Lim et al.'s (2012) original sample size from 268 to 47 therapists. Therapist-reported practice data was obtained through archival records of the Monthly Treatment Progress Summary (MTPS; Child and Adolescent Mental Health Division, 2003) form. Within CAMHD, therapists are required to submit the MTPS on a monthly basis for each youth they serve in order to receive financial reimbursement (Nakamura, Daleiden, & Mueller, 2007). The MTPS queries a variety of fields such as service format, service setting, treatment targets, clinical progress, and intervention practices used for each client, and is more fully described below in the Measures section. Third, given the central role of the MTPS for providing therapist practice data for the analyses outlined below, each CAMHD therapist participant must have had at least one youth with MTPS data within the period of July 1, 2006 (i.e., the date at which the MTPS completion rates approached near 100% owing to it being tied to billing at that time) and December 31, 2013 (the end of a calendar year, capturing several years' worth of data after the completion of all therapist training workshops). Concerning youth participant inclusionary criteria, clients must have had at least one MTPS form completed during their

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treatment episode (cf. Jackson, Keir, Ku, & Mueller, 2012; Orimoto, 2012). Further, given the purpose of this study is to understand therapists' response-to-training, within this investigation youth participant inclusionary criteria comprised of youth seen solely before or after a training. Additionally, MTPS practice data for only the first 180 days of services episodes was examined per client. This first-six-months-of-practice data interval is consistent with numerous longitudinal studies of youth treatment progress within usual care (e.g., Jackson, Keir, Ku, Mueller, 2011; Love et al., 2011; Love et al., 2010; Manteuffel et al., 2002; Mueller, Tolman, Higa-McMillan, & Daleiden, 2010; Weersing et al., 2006; Weersing & Weisz, 2002). Those youth whose first 180 days of their treatment episode occurred while their therapist attended one of the trainings were excluded from the present investigation (e.g., see Youths 3 and 5 in Figure 1, which graphically displays various youth inclusionary and exclusionary scenarios per the criteria above). Taken together, these requirements aimed to help ensure that appropriate response-to-training data is present and a sufficient sample size is met for the investigation.

For the CAMHD-only therapist sample ($n = 47$), 27 therapists only attended the disruptive behavior training, 11 attended only the anxiety training, and 9 therapists attended both the disruptive and the anxiety trainings. Of these 47 therapists 76.6% were female ($n = 36$), with ages ranging from 24 to 66 ($M = 41.2$, $SD = 11.2$). Primary ethnicities reported were: White ($n = 23$; 48.9%), Asian ($n = 7$; 14.9%), Hawaiian or Pacific Islander ($n = 3$; 6.4%), and Latino or Hispanic ($n = 3$; 6.4%). Eleven participants (23.4%) did not report a primary ethnicity. Therapists reported an average of 5.9 years (SD = 6.3) of clinical training and an average of 6.3 years (SD = 6.6) of full time clinical experience since earning their terminal degree. Approximately 25.5% (n = 12) of the participants reported holding a state license to practice. Participants reported having on average an active caseload of 7.3 cases (SD = 5.4). Additionally,

therapists reported primary orientations of: Family Systems ($n = 11$; 23.4%),

Cognitive/Cognitive Behavioral ($n = 8$; 17.0%), Behavioral ($n = 4$; 8.5%), Eclectic ($n = 3$; 6.4%),

Psychodynamic ($n = 2$; 4.3%), and Object Relations ($n = 1$; 2.1%). Eighteen participants (38.3%)

did not report a primary orientation.

For the 1,922 youth participants included within this study, 778 youth were treated for

anxiety-related treatment targets and 1,144 youth were treated for disruptive behavior related

treatment targets. Of the youth treated for anxiety, youths ages ranged from 3.1 to 18.6 ($M =$

12.1, $SD = 3.8$). Furthermore, these youth treated for anxiety were reported to be 57.8% ($n =$

450) male. Of the 1,144 youth treated for disruptive behavior, youths ages ranged from 3.1 to

18.6 ($M = 12.5$, $SD = 3.4$). However, for the disruptive behavior youth, 65.6% ($n = 750$) were

reported to be male. Consistent with the general CAMHD youth population, these youth were a

majority male, generally teenagers, and mainly treated for disruptive behavior concerns (Love,

Okado, Orimoto, & Mueller, 2014). In addition, 11 (1.4%) youth treated for anxiety were seen

by more than one therapist, while 77 (6.7%) youth treated for disruptive behavior were seen by

more than one therapist.

Measures

Knowledge of evidence based services questionnaire (KEBSQ; Stumpf et al., 2009).
The KEBSQ is a 40-item measure used to assess knowledge of various practices derived and not

derived from the evidence-base for the youth problem areas of: Anxious/Avoidant (A),

Depressed/Withdrawn (D), Disruptive behavior (B), and Attention/Hyperactivity (H) (see

Appendix A). Participants circle all problem areas for which a certain type of PE is recognized as

derived from an evidence-based protocol. Each of the 40 items (representing one PE each) is

scored on a zero to four scale, with correctly endorsed and omitted responses per problem area

each receiving one point. As an example, item number one (see Appendix A) describes the treatment technique of exposure, which has been classified as being derived from evidence-based protocols (see Appendix B) for primarily Anxious/Avoidant problems (Chorpita & Daleiden, 2009a; Chorpita & Daleiden, 2009b). For item one, a respondent would receive 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 addition, respondents can also indicate whether a technique is not considered to be derived from the evidence-base for any of the four problem areas, which is indicated by circling the letter N (None) for an item. This response helps to differentiate between those respondents who refuse to answer the question and those reporting that a PE is not derived from any larger EBP approach. Total possible scores on the KEBSQ can range from zero to 160. The multiple true-false format utilized by the KEBSQ has been shown to be as reliable and valid as standard multiple choice type questionnaires (cf. Kreiter & Frisbie, 1989). The authors of the KEBSQ have demonstrated adequate test-retest reliability in graduate students and community therapists ($r = 0.56$) and the ability to discriminate between these two samples in their original study.

The KEBSQ also has a unique scoring key that can change over time in order to align with the latest findings from the youth mental health treatment outcome literature. The first scoring key designed by Stumpf et al. (2009) used literature summary findings from the CAMHD 2004 Biennial Report (Child and Adolescent Mental Health Division, 2004; a specialty distillation report on youth EBPs), which reflected the latest research up until that year. The KEBSQ scoring key for this study will reflect findings from the CAMHD 2007 Biennial Report (Chorpita & Daleiden, 2007) because trainings associated with this investigation (and the knowledge and attitude therapist-report questionnaires collected at those trainings) occurred

between 2008 and 2009 (i.e., one or two years after the CAMHD 2007 Biennial Report was circulated into Hawaii's system of care).

Although Stumpf et al.'s (2009) original study chunked scoring of the KEBSQ into 40 questions ranging from zero to four points each (i.e., as explained above, with the total score ranging from 0-160), it is important to remember that at its most molecular level, the KEBSQ's multiple true-false format yields a total of 160 separate binary decisions. As such, grouping of these 160 binary decisions can occur in a variety of chunks or categories (Izmirian, Nakamura, Hill, Higa-McMillan, & Slavin, under review; Nakamura et al., 2011; Lim et al., 2012; Okamura, Nakamura, Mueller, Hayashi, & Higa-McMillan, 2014). For this particular study, three different types of KEBSQ EBP knowledge scores were calculated. First, consistent with Stumpf et al.'s (2009) original scoring guidelines, a zero-to-four score was calculated for each of the survey's 40 items. However, rather than summing all 40 items for a grand total scale ranging from 0-160 (i.e., 40 items multiplied by 0-4 points per item), individual item scores were calculated and ranged from zero to four for a smaller subset of the KEBSQ's original 40 items. For instance, in the original scoring example on exposure presented above, the technique score for just the technique of exposure would be four points. This type of score will be referred to as (a) a "KEBSQ individual item score." The second and third types of KEBSQ EBP knowledge scores that were utilized in this study are (b) the "KEBSQ Anxiety (ANX) Target score" and the (c) "KEBSQ Disruptive Behavior Disorder (DBD) Target score" (cf. Lim et al., 2012). The KEBSQ ANX Target score was used to examine therapists' EBP anxiety knowledge of the five PEs (i.e., self-monitoring, psychoeducation for youth (for anxiety), exposure, relaxation, cognitive/coping) taught at the anxiety training workshops. This score was calculated by analyzing the extent to which therapists correctly circled A (for Anxious/Avoidant problems) for each of the five trained

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anxiety PEs (i.e., the total score for this indicator will range from zero to five). Similarly, the KEBSQ DBD Target score was used to examine therapists' EBP disruptive behavior knowledge of the seven PEs (i.e., psychoeducation for caregiver (for disruptive behaviors), commands, tangible rewards, response-cost, praise, monitoring, attending) taught at the disruptive behavior workshops. Calculated in a similar fashion to the KEBSQ ANX Target score, the KEBSQ DBD Target scores reflects the number of times a therapists correctly circled B (for Disruptive Behavior problems) for the seven trained DBD PEs (i.e., the total score for this indicator will range from zero to seven). Lastly, given that the present investigation aims to understand therapists' behavioral changes following their attendance at specific trainings, only therapists' post-training KEBSQ scores will be analyzed within the final models.

Modified practice attitude scale (MPAS; Borntrager et al., 2009). The MPAS (see Appendix C) is an eight item self-report measure of therapist attitudes toward EBPs. The MPAS, which is based off of Aarons' (2004) Evidence-Based Practice Attitude Scale (EBPAS)[1], was utilized as the main attitudinal measure in this study since therapist attitudes toward EBPs have been shown to differ based on whether or not the term "manual" is mentioned when assessing for attitudes (Borntrager et al., 2009). Participants are asked to circle the extent to which they agree or disagree with a particular statement on a five-point Likert-scale, with zero indicating 'not at all,' to four indicating 'to a very great extent.' MPAS total scores can range from zero to 32, with higher scores indicating more favorable attitudes toward EBPs. The MPAS has been found to have good internal consistency ($\alpha = 0.80$) and a moderate correlation to the EBPAS ($r = 0.36$, $p < .01$) in a sample of 59 community therapists. Borntrager et al. (2009) suggest that the MPAS, contrary to the EBPAS, assesses EBP attitudes without an emphasis on treatment manualization.

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[1] As part of the larger, longitudinal study therapists were given a battery of measures to complete before and after trainings. The measures included were the KEBSQ, EBPAS, MPAS, and a background history questionnaire.

Furthermore, similar to KEBSQ analyses, only MPAS post-training scores were included within analyses of this study, given that the main purpose of the present investigation is to better understand therapists' response to training. The present investigation found acceptable to good internal consistency ($\alpha = 0.74$; $\alpha = 0.80$) for the disruptive behavior post-training total MPAS scores and anxiety post-training total MPAS scores, respectively.

Monthly treatment and progress summary (MTPS; Child and Adolescent Mental Health Division, 2003). The MTPS is a monthly therapist report surveying service format, service setting, treatment targets, clinical progress, and intervention practices used for each client seen by the therapist. Beginning on July 1, 2006, all CAMHD contracted therapists were required to complete the MTPS for every client receiving treatment on a monthly basis through a HIPAA compliant server in order to receive reimbursement (Nakamura et al., 2007; Appendix D). CAMHD has previously provided statewide trainings on utilizing the MTPS and offered therapists online access to item definitions and rater instructions. For further information, both the current MTPS form and detailed codebook are available in Appendix E.

The present investigation paid particular attention to two sections of the MTPS, namely the Treatment Targets and Interventions Strategies sections. In the CAMHD system, treatment targets are used to identify specific areas of focus during the treatment month with a particular youth. For example, a therapist treating a client with an eating disorder may target eating/feeding behaviors during one month and target medical regiment adherence another month. During any reporting month, therapists are allowed to check up to 10 such targets (from a list of 53 predefined targets and two additional open-response fields) that were the clinical focus for that time period with a particular youth. Treatment targets have been used during service planning as a way to understand the common targets for change, both related to and distinct from diagnoses

(Daleiden & Chorpita, 2005). Treatment targets are notably relevant to community therapists given that they are proxy variables for clinical foci that help clarify subsequent change strategies and aid in matching youth interventions to specific targets (Daleiden et al., 2004; Daleiden & Chorpita, 2005). As an example, often times in community settings, relevant treatment targets and family goals do not directly align with youth's diagnoses (Daleiden & Chorpita, 2005) and treatment targets may allow therapists to better match specific treatment techniques with distinct treatment/family goals. For example, if a treatment technique for a child with a diagnosed anxiety disorder is to improve the target of academic achievement, then his or her therapist should utilize such technique, even if said element has not exhibited effectiveness in reducing anxiety symptoms (Daleiden & Chorpita, 2005). Concerning the intervention strategies section of the MTPS, a therapist can choose from 63 PEs and three additional write-in options. Example elements include those that were the area of focus during the aforementioned CAMHD trainings (e.g., exposure, cognitive), but also many others that span a wide array of problems, both derived and not derived from the evidence base.

Research has shown evidence for the reliability and validity of the treatment target and intervention strategies sections of the MTPS. In reference to the treatment targets section of the MTPS, research has demonstrated convergent and divergent validity with client diagnoses and therapists' target selections. More specifically, target selection has been found to be significantly related to the client diagnosis at intake ($p < .01$; Daleiden, Lee, & Tolman, 2004) and studies have shown that one-half to two-thirds of therapists' treatment target selections remained stable from intake to treatment follow-up (Nakamura, Daleiden, & Mueller, 2007). Lastly, Daleiden and colleagues' (2004) work also points to moderate stability of therapists' selection of treatment

targets at baseline as compared to one-month ($k = 0.66$) and three-months ($k = 0.52$) into treatment.

In regard to the intervention strategies section, Daleiden and colleagues (2004) indicated a moderate one-month ($k = 0.65$-0.67) and three-month ($k = 0.5$) stability for choosing the same PEs on the MTPS as compared to the beginning of the treatment episode. Furthermore, Orimoto and colleagues' (2012) exploratory factor analyses of the MTPS' PEs pointed to a three-factor structure, incorporating Behavioral Management (15 PEs), Cognitive/Coping (19 PEs), and Family Interventions (13 PEs) strategies. Each factor was noted to be strongly correlated ($r = 0.46$-0.52) with adequate or good internal reliability ($\alpha = 0.81$ for Behavioral Management; $\alpha = 0.82$ for Coping and Self-Control; $\alpha = 0.78$ for Family Interventions; Orimoto, Higa-McMillan, Mueller, & Daleiden, 2012). The MTPS PEs have also been shown to have adequate test-retest reliability, inter-rater reliability (Intraclass correlations [ICCs] = 0.6 or higher for some PEs), and convergent validity with coded audio-recordings of treatments sessions (Borntrager, Chorpita, Orimoto, Love, & Mueller, 2013; Daleiden et al., 2006). Lastly, it should be noted that for the most part there is a one-to-one correspondence with the names of the PEs taught at the trainings and the names of the PEs available on the MTPS intervention strategies, however a few PEs do not fully match. See Table 1 for clarification.

Therapist background questionnaire (TBQ, unpublished measure). The TBQ (see Appendix F) is an initial instrument designed to assess therapists' demographics, training, clinical experience, and theoretical orientation. The measure assesses the following: (a) Agency/Affiliation, (b) Age, (c) Gender, (d) Ethnicity/Race, (e) Ethnic Identity (if multiple ethnicities/races are endorsed, the one with which participant identifies with the most), (f) Degrees Earned, (g) Licensure, (h) Professional Specialty, (i) Position, (j) Level of Care, (k)

Years of Clinical Training and Full-time Clinical Experience, (l) Current Caseload, (m) Hours of Supervision per week, and (n) Theoretical Orientation.

Procedure

All training questionnaire data was collected as participants progressed through as many as three state-sponsored voluntary trainings: (a) Introduction to Hawaii's Public Sector Mental Health System (INTRO), (b) Core Practice Elements for Anxiety and Trauma (ANX), and (c) Core Practice Elements for Disruptive Behaviors (DBD). Each training was seen as a discrete component that was used as part of a larger training protocol (Lim et al., 2012). Participants were encouraged to complete the INTRO training before attending either the ANX or DBD (which could be taken in any order thereafter), however some therapists attended the INTRO training after attending an ANX or DBD training or did not attend an INTRO training at all, due to scheduling difficulties. Over the 15-month training period from May 2008 to July 2009, all three workshop types were limited to a maximum of 30 participants per workshop, and a total of 12 INTRO, six ANX, and five DBD trainings were provided by CAMHD expert trainers throughout the state system. Trainings were considered standard continuing education opportunities offered by the CAMHD expert trainers. These trainers consisted of two Ph.D.-level clinical psychologists and three master's level staff with degrees in psychology or related mental health service fields. All trainers were full time employees within CAMHD's Practice Development Office, an office that specializes in best practice initiatives for the CAMHD youth mental health system.

The INTRO training served as a broad system orientation to youth public mental health services within Hawaii. The training focused on issues such as how to navigate and work within Hawaii's system of care, the role of assessment and evaluation in youths' quality of care, best

practice efforts, and an introduction to the concepts of distillation (i.e., identification of technique commonalities across evidence-based protocols) and modularity (i.e., the thoughtful assembly of PEs into a larger treatment approach) (Chorpita et al., 2002). In contrast to the generalized INTRO training, the ANX and DBD trainings focused on core PEs (rather than standardized manuals) present across numerous evidence-based protocols, as well assembling these common elements within a modular approach to treatment. The five techniques focused on in the ANX training included self-monitoring, psychoeducation for youth (for anxiety), exposure, relaxation, and cognitive/coping. The seven techniques taught during the DBD trainings included psychoeducation for caregivers (for disruptive behaviors), commands, tangible rewards, response-cost, praise, monitoring, and attending. Expert trainers provided relevant materials and systematic guidelines for applying techniques, and used didactic methods, along with videos, modeling, and role-playing to provide therapists with the fundamental theories and rationale for technique usage. All workshop materials were adapted from various Practitioner Guide protocols (PracticeWise, 2008). In addition, each workshop was codified both in content and procedure to help ensure consistent, reliable training within and across workshops.

Administration of training questionnaires varied slightly across workshops. Before attending any of the three trainings, therapists were asked to complete a full battery of questionnaires, consisting of the EBPAS (Aarons, 2004), KEBSQ (Stumpf et al., 2009), MPAS (Borntrager et al., 2009), and the TBQ. Additionally, the EBPAS, MPAS and KEBSQ were also administered after each of the ANX and DBD workshops.

Analytic Strategy

      Cross-Classified Data Structures. In order to examine therapists' PE utilization patterns following workshop attendance, two separate types of multilevel modeling analyses were used (i.e., cross-classified multilevel modeling and generalized linear mixed modeling). It is important to note however that the particular data structure used within this study is an expansion of typical multilevel models, in that the present investigation sought to examine how therapist characteristics, client characteristics, and time may have influenced therapists' practice behaviors using a multilevel cross-classified framework (Heck, personal communication January 2016). Within typical multilevel modeling analyses data is typically hierarchical in nature, whereby variables are usually fully nested within each higher level. For example, if the present investigation's models entailed typical multilevel model analyses, time (level 1) would be fully nested within client (level 2), and client would be fully nested within a therapist (level 3). More explicitly stated, a client would have been seen by only one therapist throughout the entire investigation period. However, the present investigation's data structure was more complicated at the client level, and required more complicated methods to estimate the data (Heck & Reid, 2016). Our data and models explored therapists' practice behaviors by examining multiple therapist and client combinations over a seven-year period, thus representing a combination of nested and cross-classified relationships (Heck, Thomas, & Tabata, 2014; Heck & Reid, 2016). While data in typical multilevel models are completely hierarchical in nature, data within cross-classified structures are not necessarily nested within one and only one higher level unit. More specifically, lower level variables within the data may belong to pairs or combinations of higher level variables. As an example, within our study a client could have been seen by more than one therapist during our investigation period (i.e., July 1, 2006 to December 31st, 2015). The

illustration detailed in Figure 2 illustrates the partial nesting of clients within therapists of this cross-classified data structure. Figure 2 demonstrates the data structure of three clients within the data set, noting that each depiction illuminates that clients can belong to a range of therapist-client combinations.

Further explained, at the client level, clients are cross-classified by the number of past therapists they may have seen. For longitudinal studies examining subjects within social contexts, Bates (2011) has stated that partial crossing of the subject and context factors are highly probable. Over the course of our study, specific clients may have been seen by multiple therapists at different time points (not simultaneously), however not all clients were necessarily seen by more than one therapist. Thus, our client and therapist factors are neither fully crossed nor strictly nested (Heck & Reid, 2016) in our data structures. Given that these cross-classification models of client and therapist combinations made the data set more complicated than typical multilevel modeling analyses or repeated measures studies, particular attention was paid to reduce the complexity of the analyses by not including random effects into the analyses.

As indicated above, while the structure of our data set was cross-classified in nature, the present investigation used two different types of multilevel modeling analyses (i.e., two different approaches for analyzing my cross-classified data set) to address the two different outcome variables being assessed (see Defining the Outcome Variables below). The first outcome variable was continuous in nature as well as cross-classified and thus required a cross-classified multilevel modeling examination of the data. The second outcome variable was also drawn from the cross-classified data set, but was dichotomous in nature, and thus required generalized linear mixed modeling analyses. Differences between the two types of multilevel models are detailed throughout the manuscript.

Defining the Predictor Variables. Within both multilevel models, time was defined as the Level 1 unit of analysis, youth were defined as the Level 2 unit of analysis, and therapists were defined as the Level 3 unit of analysis.

Two Level 1 predictors were included within this investigation, time (i.e., monthly MTPS per youth) and therapists' training attendance (the overarching main predictor variable for all analyses throughout the study). For therapists' training attendance, youth and their associated MTPS reports were dichotomously coded as occurring either before or after (i.e., 1 = yes, 0 = no) the two CAMHD trainings that taught modular therapy approaches: Core Practice Elements for Anxiety and Trauma (ANX), and Core Practice Elements for Disruptive Behaviors (DBD). As noted, one of the primary focuses of the present investigation was to understand the influence that therapists' training attendance has on their specific technique utilization. Thus the actual timing of the training and the "observed" changes following the training were considered a level 1 "time-varying" predictor (Heck, personal communication February 2017). Additionally, regarding the specification of predictors at Level 2 (youth) and 3 (therapist), care was taken to utilize only variables of key theoretical importance (Heck et al., 2012). That is, as recommended by Heck and colleagues (2012), analyses for cross-classified multilevel models and generalized linear mixed models were kept as simple as possible and attention was paid to reduce the number of random effects included within the model. Thus, the only client-related variable that was included at Level 2 analyses was client age for only those analyses involving the PEs of commands and attending (explained more below), given that research has suggested that the commands and attending PEs tend to be utilized mostly with youth 12 years old and younger (Chorpita & Daleiden, 2009a). At Level 3, a couple of therapist-related characteristics were included in order to evaluate the extent to which therapists PE utilization was influenced by

therapist variables. The effect of therapists' post-training EBP knowledge was examined given

that several theoretical models have suggested that therapists' EBP knowledge is one of the

largest barriers to EBP utilization (Dearing, 2009; Higa & Chorpita, 2007; Sanders, Prinz &

Shapiro, 2009). Therapists' EBP knowledge (post- relevant training) was examined using (a)

post KEBSQ individual item scores, (b) post KEBSQ ANX Target scores, and (c) post KEBSQ

DBD Target scores (operationally defined above in the Measures section and more fully

explained below in the Proposed Analyses section). Similarly, dissemination and implementation

theories have also proposed that attitudes potentially play a role in therapists' adoption decisions

to try a new practice or not (Candel & Pennings, 1999; Frambach & Schillewaert, 2002; Rogers,

2003), and the effects of therapists' attitudes on their reported practices was also examined. The

effects of therapists' attitudes on EBP utilization was examined primarily using the MPAS post-

relevant training total scale score.

     Defining the Outcome Variables. The present study's major aim was to explore

CAMHD therapists' self-reported technique utilization behaviors as they progressed through

workshops on modular therapy approaches. Given that this study was ultimately interested in the

utilization of the 12 aforementioned PEs under the appropriate clinical circumstances (i.e., not

indiscriminate usage, utilization of specific PEs only within the context of appropriate

counterpart targets being endorsed as well), the MTPS' Treatment Target section was examined

in tandem with the Intervention Strategies section. More specifically, appropriate usage of the

five workshop-targeted anxiety PEs was defined as endorsement of these PEs (drawn from the

Intervention Strategies section) when one or more of the treatment targets of anxiety, avoidance,

phobia/fears, or shyness (PracticeWise, 2008) were also checked (drawn from the Treatment

Targets section). Furthermore, appropriate usage of the seven workshop-targeted disruptive

behavior PEs was defined as endorsement of these PEs when one or more of the treatment targets

of aggression, anger, fire setting, oppositional/non-compliant behavior, runaway, sexual

misconduct, or willful misconduct/delinquency (PracticeWise, 2008) are checked. The crosswalk

between the MTPS Treatment Targets and Intervention Strategies sections for deciding

therapists' technique utilization was determined through a scoring guide from PracticeWise, LLC

(PracticeWise, LLC, 2013). PracticeWise, LLC is a specialty research and analytic organization

that provides therapists and other stakeholders with a wide variety of evidence-informed

resources leveraged from treatment protocols and the larger treatment outcome literature. As

previously noted, conceptualized this way (i.e., the presence or absence of a given PE [yes/no]

within the context of the presence or absence of one or more specific treatment targets [yes/no]),

I applied concepts derived from signal detection theory (Swets & Pickett, 1982) to each of my

study's two major foci (i.e., therapists' true-positive utilization rates and false-negative

utilization rates). For the purposes of this study, a true-positive broadly refers to a therapist self-

reporting usage of workshop-focused PE given the condition that one or more relevant treatment

targets have also been endorsed. For instance, a true-positive for the intervention strategy of

exposure would occur if it were endorsed as occurring in the same reporting month as the

treatment target of anxiety being addressed. A false-negative is represented when a therapist

reports not utilizing a workshop-focused PE within the context that one or more relevant

treatment targets were endorsed indicating that the PE actually should have been utilized.

Building upon the hypothetical true-positive scenario above, an example of a false-negative is

when a therapist does not endorse the usage of exposure for a client in the same reporting month

they addressed the target of anxiety. See Table 2 and Table 3 for a summary and examples of

these concepts.

The true-positive and false-negative rates were calculated in two ways: across MTPSs and within MTPSs. As the primary analytic strategy I calculated therapists' across MTPS true-positive and false-negative rates. The across MTPS analyses were used to acknowledge that there may be scenarios in which application of workshop-targeted techniques seem clinically contraindicated for every month of treatment (e.g., utilization of exposure during the first month of treatment for a patient who is not yet ready for such a practice). For this across MTPS method, PE utilization was analyzed per treatment episode, through dichotomously coding (i.e., 1 = yes, 0 = no) for the presence or absence of the five ANX and seven DBD workshop-focused PEs across all MTPSs comprising treatment episodes that fell entirely before or after a relevant training. This across MTPS method allowed for examination of the extent to which therapists used (i.e., true-positive rate) or failed to use (i.e., false-negative rate) techniques at least once throughout the course of a client's treatment episode. For example, suppose a therapist serviced one anxious client before (the entire service episode started and ended prior to workshop attendance; see Youth 1 in Figure 1) attending the ANX workshop. If that therapist used the ANX workshop-focused PEs of exposure, self-monitoring, and relaxation at least once per MTPS during the course of treatment with Youth 1, the across MTPS true-positive score would be three (out of a possible five ANX workshop-focused PEs) for that client's service episode. On the other hand, if the therapist did not use the ANX workshop-focused PEs of psychoeducation for Youth 1 (for anxiety) and cognitive/coping even once during the service episode, the across MTPS false-negative score would be two (out of a possible five ANX workshop-focused PEs). As seen in this example then, the maximum across MTPS ANX true-positive and false-negative scores could range from zero to five each, for each youth's service episode. Similarly, the maximum across MTPS DBD true-positive and false-negative scores could range from zero to seven each.

As a secondary way of examining therapists' true-positive or false-negative rates, PE utilization was analyzed per MTPS, through dichotomously coding for the endorsement presence or absence (i.e., 1 = yes, 0 = no) of each of the 12 PEs (e.g., exposure) taught at the modular workshops within each month. This within MTPS method allowed for examination of the number of months a therapist used (or failed to use) one or more training-relevant PEs both before and after a training. For an example of a within MTPS true-positive rate, a therapist may have appropriately used the PE of exposure for two out of six MTPSs (i.e., rate of 2/6) with one client seen completely before the anxiety training, then following the training, the therapist may have appropriately used exposure for four out of six MTPSs (i.e., rate of 4/6) with a completely new client. Thus, this therapist would have increased their appropriate use of the PE of exposure following the anxiety training. Within MTPS true-positive and false-negative scores were viewed as sensitive indices of change, as each MTPS (month of treatment) allowed for a new opportunity to utilize a workshop-targeted technique.

Data analyses restricted coding to focus on only the 12 PEs taught at the modular workshops (i.e., the five anxiety PEs [exposure, self-monitoring, psychoeducation for youth (for anxiety), relaxation, and cognitive/coping] and the seven disruptive behavior [psychoeducation for caregivers (for disruptive behaviors), commands, tangible rewards, response-cost, praise, monitoring, and attending] PEs). Lastly in order to better capture therapists' true-positive and false-negative rates of these 12 PEs, the data set was restricted to only include MTPSs that had one or more appropriate treatment targets (i.e., anxiety or disruptive behavior) checked, thereby helping to reduce error variance within the outcome variables (Cicero, personal communication November 2016). More specifically, prior to this restriction, the data set included MTPSs with and without relevant treatment targets. However, given that our major foci of the study were to

examine therapists' true-positive and false-negative rates for only anxiety- and disruptive behavior-based techniques, and in order for a therapist to receive a score for these rates the appropriate treatment target had to be checked (see Table 4), data was restricted to only include MTPSs with the appropriate treatment targets.

Data Preparation. The current study involved merging and analyzing data from two existing archival data sets. For both the primary analyses of CCMM and the secondary analyses of GLMM, analyses drew from the same core archival data sets previously mentioned and data was prepared for analyses as described below. Building upon the work from Lim et al. (2012), the first dataset contained all therapist-report questionnaire data (sans MTPS information) obtained throughout the CAMHD 2008-2009 training campaign mentioned above. This "therapist questionnaire" dataset has been double-data entered, resolved for discrepancies with a larger investigative team, and utilized in numerous other peer-reviewed, published research investigations. The second (i.e., MTPS) data set was electronically harvested from the Child and Adolescent Mental Health Management Information System (CAMHMIS). These two datasets were joined on therapists' identification numbers obtained at CAMHD trainings. All scores were examined for means, standard deviations, skewness and kurtosis, and were found to have normal distributions.

Missing Data. As previously stated, the current study merged two existing archival data sets. In regards to missing data analyses for the therapist questionnaire dataset, the present investigation drew from a subsample of participants that took part in a larger study examining similar constructs. As part of that larger study examining those constructs, a Missing Value Analysis (MVA module of SPSS 18.0; SPSS, 2009) was completed using Little's Missing Completely at Random (MCAR) test (Little & Rubin, 1987). This was done in two steps. First,

questionnaires were excluded for MVA if more than 20% of their overall items were missing. Within the larger study, Lim et al. (2012) found that 446 KEBSQ and 496 MPAS questionnaires had enough data to include within the previous investigation. Second, with those remaining questionnaire data, EBPAS, MPAS, and KEBSQ data were deemed MCAR and data was imputed accordingly through maximum likelihood estimation (see Lim et al., 2012 for further details). Furthermore, the MTPS dataset was also examined using MVA and no records were found to have less than 20% of their overall items missing. Specifically, the disruptive behavior MTPS data set had 0% to 0.10% missing data and the anxiety MTPS data set had 0% missing. This is consistent with the previous statement that MTPS completion rates have been noted as extremely high after July 1, 2006.

Power Analysis. A number of issues surround multilevel modeling power analyses. Heck and colleagues (2012) suggest that there are two considerations that inform estimates of power for multilevel analyses: sample size at each level and the intraclass correlations (ICCs) of within-unit differences between levels. Given that the number of groups may be limited within multilevel analyses, it is suggested that when determining the appropriate sample size, particular consideration should be taken with regard to maximizing the number of participants at the higher levels. In view of this, the present investigation within both the CCMM and GLMM analyses paid particular attention to the sample sizes of the Level 2 (e.g., youth) and Level 3 variables (e.g., therapists) (and not of Level 1, time within client). Previous research that incorporated multilevel modeling statistics to examine data within the same usual care system reported finding significant results when investigating samples ranging from 720 to 2,171 youth participants (Mueller et al., 2010, Orimoto, 2012). Therefore, it was anticipated that the present investigation's sample of 1,922 youth (i.e., 1,144 disruptive behavior youth and 778 anxious

youth) was large enough to detect significant effects of training on therapists' appropriate use of trained techniques. In regards to therapist sample size, there were a limited number of studies within this same usual care system that used three level multilevel modeling approaches. As one example, Orimoto (2012) examined the extent to which therapists' characteristics predicted youths' disruptive behavior progress ratings. In comparison to this study's sample (N = 47), however, her sample size was quite large (N = 225) and prior to analyses it was unknown if the current study's therapist sample size was large enough to detect significant effects. However, examining therapists' self-reported use of trained techniques across multiple time points within numerous clients allowed for a detailed inspection of therapists' patterns of technique utilization, thus expanding the ability to determine change (Willett, 1989).

Cross-classified multilevel modeling ICCs. ICC's were conducted for the cross-classified multilevel modeling analyses (CCMM; i.e., the analyses used to examine therapists' utilization rates across MTPSs) in order to estimate the variance between all dependent variables, accounted for at each level of the data structure. The ICCs were used to indicate if a significant proportion of variability was observed for the outcome variables (defined below) at each level, accounted for by time, client and therapist characteristics (Hox, 2002). As previously noted, given that the current data structures are cross-classified in nature, the total variance for each model had to be separated into random components (Heck & Reid, 2016). For this study, the variance was partitioned by therapists and clients. More specifically, the ICCs were calculated separately for the variance associated between therapists and the variance associated between clients. Below are the equations used to calculate the CCMM ICCs for the current study (Heck et al., 2014):

Correlation for therapists:

$\rho_{\text{therapists}} = \sigma^2_{\text{therapist}} / (\sigma^2_{\text{time}} + \sigma^2_{\text{client}} + \sigma^2_{\text{therapist}})$

Correlation for clients:

$\rho_{\text{therapists}} = \sigma^2_{\text{client}} / (\sigma^2_{\text{time}} + \sigma^2_{\text{client}} + \sigma^2_{\text{therapist}})$

Correlation for time:

$\rho_{\text{therapists}} = \sigma^2_{\text{time}} / (\sigma^2_{\text{time}} + \sigma^2_{\text{client}} + \sigma^2_{\text{therapist}})$

Correlation between outcomes of clients who saw multiple therapists:

$\rho_{\text{therapists}} = (\sigma^2_{\text{therapist}} + \sigma^2_{\text{client}}) / (\sigma^2_{\text{time}} + \sigma^2_{\text{client}} + \sigma^2_{\text{therapist}})$

Generalized linear mixed modeling ICCs. For the generalized linear mixed modeling analyses (GLMM; i.e., the analyses used to examine therapists' utilization rates within MTPSs) ICCs could not be directly calculated. According to Heck and colleagues (2012), in models with dichotomous outcomes it may not be of interest to examine a model with no predictors at the first level due to there being no separate variance term at Level (i.e., it is fixed to a scale factor of 1). Given this information and that the present investigation will be running ICC's for the CCMM analyses, variance was determined for the GLMM by examining if there was sufficient variability in the intercepts present at Level 2 and Level 3 of the CCMM ICCs (Heck et al., 2012).

Determining Model Fit

Cross-classified multilevel model fit. The shapes of the within-subject growth trends were examined for the CCMM outcome variables (i.e., Across MTPS variables) to determine the overall shape of the trend (e.g., linear, quadratic, negative exponent, log, natural log). Adjustments would have been made if the growth trend for time was found to different than

linear (e.g., quadratic; Heck et al., 2014). Furthermore, given the specific way that time was coded (i.e., 0, 1, 2, 3, 4, 5) and in order to simplify the CCMM analyses a scaled identity covariance structure was assumed as the best fitting model for CCMM analyses (Heck, personal communication January 2016). A scaled identity covariance structure is a simplified within-subject error structure that assumes constant variance across occasions (Heck et al., 2014).

Generalized linear mixed model fit. For the generalized linear mixed modeling analyses examining the distribution of responses is rather complicated given the dichotomous nature of the outcome variable. One of the major issues with dichotomous outcome mixed modeling is that the assumption of a normal distribution is likely to be violated (Heck et al., 2012). More specifically, within analyses with dichotomous outcomes, the predicted value can only have one of two values (e.g., 1 or 0), and therefore the residuals cannot be normally distributed and no data transformations can change them to be (Hox, Moerbeek, Van de Schoot, 2010). Thus as suggested by Heck and colleagues (2012), for the generalized linear mixed modeling analyses of this study a binomial probability distribution was assumed. Binomial probability distributions can be represented as "an experiment with a fixed number of independent trials, each of which can have only two possible outcomes, where because each trial is independent, the probabilities remain constant," (Heck et al, 2012, p. 14). Furthermore, given that the GLMM analyses assumed a binomial probability distribution and our outcome variable (i.e., within MTPS technique utilization) was defined as a nominal variable, the present investigation used a logit link function to predict the likelihood of the outcome occurring (Heck et al., 2012).

For the generalized linear mixed modeling analyses the same covariance structure (i.e., scaled identity) that was utilized in the CCMM analyses was used given that comparisons between successive models are more questionable for multilevel estimation procedures with

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dichotomous outcomes (Heck et al., 2012). Hox and colleagues (2010) indicated that model comparisons for multilevel analyses with dichotomous outcomes is difficult because the analyses are developed using quasilikelihood estimations and rescaling of variances which create approximate estimations only.

Multilevel Modeling Analyses

Cross-classified multilevel modeling (CCMM) analyses. To examine our principal question, therapists' PE utilization rates across MTPSs, the present investigation utilized a three-level cross-classified multilevel model (CCMM). Within this model, time (i.e., monthly MTPS per youth and training attendance) was defined as the Level 1 unit of analysis, youth were defined as the Level 2 unit of analysis, and therapists were defined as the Level 3 unit of analysis. Four models were created to examine the across MTPS outcome variables (i.e., the total number of trained target techniques therapists appropriately used (or failed to use) throughout a single treatment episode [e.g., DBD across MTPS score ranges from 0 -7]) : (a) No predictors model, (b) Level 1 model (i.e., time), (c) Level 2 model (i.e., client characteristics), and (d) Level 3 model (i.e., therapist characteristics). As previously noted, time and therapists' training attendance were included as level 1 predictors. Furthermore, given that research has suggested that the DBD PEs of commands and attending tend to be utilized differently than anxiety PEs, the only model that included level 2 predictors was the DBD across MTPS model (i.e., client age was only added to the DBD across MTPS analyses). Lastly, my Level 3 predictor variables for across MTPS analyses were (i) therapist's post-training KEBSQ ANX target score/ KEBSQ DBD target score and (ii) therapist's post-training MPAS score. See Tables 5 (analysis 6 and analysis 14), 6 (analysis 20 and analysis 28), 7 (analysis 31 and analysis 32), 8 (analysis 35 and analysis 36), 9 (analysis 42 and analysis 50), and 10 (analysis 58 and analysis 66).

Below is the generic equation that represents the CCMM model for the current study (Heck et al., 2014):

Level 1: Outcome$_{ijk}$ = $\boldsymbol{\pi}_{0jk}$ + $\boldsymbol{\pi}_{1jk}$(time) + $\boldsymbol{\pi}_{2jk}$(training attendance) + e_{ijk}

Level 2: $\boldsymbol{\pi}_{0jk}$ = β_{00k} + β_{01k}(client age) $_{0j}$

$\quad\quad$ $\boldsymbol{\pi}_{1jk}$ = β_{10k}

$\quad\quad$ $\boldsymbol{\pi}_{2jk}$ = β_{20k}

Level 3: β_{00k} = γ_{100} + γ_{001} (post-training knowledge) + γ_{002}(post-training attitudes)

$\quad\quad$ β_{10k} = γ_{100}

$\quad\quad$ β_{01k} = γ_{010}

$\quad\quad$ β_{02k} = γ_{020}

Generalized linear mixed modeling (GLMM) analyses. Secondly, given the dichotomous nature of the outcome variable the present investigation utilized a three-level generalized linear mixed model (GLMM) to examine therapists' PE utilization rates within MTPSs. Within this model, time (i.e., monthly MTPS per youth and training attendance) was defined as the Level 1 unit of analysis, youth were defined as the Level 2 unit of analysis, and therapists were defined as the Level 3 unit of analysis. Within the GLMM analyses three models were created to examine the within MTPS outcome variables (i.e., the number of months a therapist appropriately used (or failed to use) a trained technique): (a) Level 1 models (i.e., time), (b) Level 2 models (i.e., client characteristics), and (c) Level 3 models (i.e., therapist characteristics). The level 1 predictor variables included within this model were time and

therapists' training attendance. The predictor that was included within level 2 was (i) client age, only during the outcome analyses for the individual DBD PEs of commands and attending. Furthermore, similarly to my CCMM model my level 3 predictor variables were (i) therapist's post-training KEBSQ individual item score and (ii) therapist's post-training MPAS score. See Table 5 through Table 10 for further clarification.

Below is the generic equation that represents the GLMM model for the current study (Heck et al., 2012):

Level 1: $\text{Outcome}_{ijk} = \log[\pi_{ijk}/(1-\pi_{ijk})] = \beta_{0ij} + \beta_{1ij}(\text{time}) + \beta_{2ij}(\text{training attendance})$

Level 2: $\beta_{0ij} = \gamma_{00j} + \gamma_{01j}(\text{Client Age})$

$\beta_{1ij} = \gamma_{10j}$

$\beta_{2ij} = \gamma_{20j}$

Level 3: $\gamma_{00j} = \gamma_{000} + \gamma_{001}(\text{post-training knowledge}) + \gamma_{002}(\text{post-training attitudes})$

$\gamma_{10j} = \gamma_{100}$

$\gamma_{20j} = \gamma_{200}$

Results

Descriptive Statistics

Practice element true-positive and false-negative utilization frequencies are listed in Table 11 and Table 12, respectively. For the twelve-studied PEs, true-positive utilization frequencies ranged from 3.9% for Exposure up to 74.1% for Cognitive/Coping. Furthermore, for the twelve PEs, false-negative utilization frequencies ranged from 25.9% for Cognitive/Coping

and 96.1% for Exposure. As one can see, the following frequencies are complete inverses of each other. This stems from the data being restricted to only include those cases in which the treatment target of DBD or ANX is checked on the MTPS. For this reason, only one or the other of the analyses for therapists' true-positive or false-negative within MTPS rates needed to be analyzed to understand both types of results for GLMM analyses. Stated more explicitly, given that true-positive rates are the exact inverse of false-negative rates or vice versa, GLMM analyses were run using only one of the utilization rates. For example, only therapists' within MTPS false-negative rates were explicitly run for the Cognitive/Coping PE, however given the inverse relationship, therapists' within MTPS true-positive rates were still able to be interpreted using the false-negative rate results.

Furthermore, means and standard deviations for the therapist measures of the KEBSQ and MPAS are presented in Table 13.

Cross-Classified Multilevel Modeling (CCMM) Results

No predictors model. As previously noted, a typical first step for multilevel modeling analyses is to understand the proportion of variance associated with each level of analyses (i.e., calculating the ICC). The current study used the recommended alpha "cutoff" of 0.05 as a rough estimate of the ICC ratio, given that a low ICC would indicate that there is little advantage to analyzing the data using multi-level analyses (Heck et al., 2014). The current study ran individual ICCs for each across MTPS outcome variables separated by treatment targets (i.e., ANX or DBD) and utilization constructs (i.e., true-positive rate or false-negative rate).

Anxiety (ANX) ICCs. ICC calculations for therapists' ANX across MTPS true-positive variable rates indicated that time accounted for approximately 35.80% of the variability, clients accounted for 35.07% of the variability, and therapists accounted for approximately 29.12% of

the variability. Additionally, taken together, the ICC for between client outcomes seen by multiple therapists accounted for 64.19% of the variance in ANX across MTPS true-positive rates. Furthermore, ICC calculations for ANX across MTPS false-negative variable rates indicated that time accounted for about 43.00% of the variability, clients accounted for 41.70% of the variability, and therapists accounted for 15.30% of the variability of this outcome variable. These ICCs indicate that there is an advantage to conducting further multilevel analyses for both constructs.

Disruptive behavior (DBD) ICCs. Additionally, ICC estimations for therapists DBD across MTPS true-positive rates reported that time accounted for 25.68% of the variability, clients accounted for 39.42% of the variability, and therapists accounted for 34.40% of the variability. Furthermore, the ICC for between client outcomes seen by multiple therapists accounted for 74.31% of the variance in DBD across MTPS true-positive rates. ICC calculations for DBD across MTPS false-negative rates reported similar findings to the DBD across MTPS true-positive rates, indicating that time accounted for 41.90% of the variability, clients accounted for 43.10% of the variability, and therapists accounted for 15.00% of the variability. Therefore multilevel analyses can be used to examine the data.

Level 1 model. First, the overall shape of the growth trend was examined for each treatment target across MTPS outcome variable and was determined to have a linear growth curve. The next procedures within the CCMM analyses were to add the effects of time and therapists' training attendance as covariates to the ANX and DBD models in order to better explain the variance within the intercepts. As illustrated in Tables 14 to 17, CCMM results for both therapists' true-positive rates and therapists' false-negative rates somewhat supported hypothesis 1ai and hypothesis 1bi. Results indicated that overall therapists' true-positive rates

increased over time (hypothesis 1ai) and therapists' false-negative rates decreased over time (hypothesis 1bi) for the DBD treatment target, however time was not a significant predictor of therapists' utilization for the ANX treatment target. Additional results indicated that therapists' utilization rates following the ANX training performed as predicted, with therapists' true-positive rates of the ANX PEs increasing following the ANX training and therapists' false-negative rates of the ANX PEs decreasing following the ANX training. However, therapists' utilization rates following the DBD training resulted in somewhat mixed findings. As seen in Table 16 and Table 17, therapists' true-positive utilization rates actually decreased following attending the DBD training, while therapists' false-negative utilization rates actually increased following DBD training attendance.

Anxiety time and training model. Within this model, time and therapists' training attendance were added as fixed effects to the analyses. As indicated in Table 14, results of the time and training model for the across MTPS ANX true-positive rate demonstrated that the intercept, or therapists' initial rate of utilizing the anxiety PEs, was 1.70 ($p < 0.001$). Results further indicated that time was not a significant predictor of therapists' across MTPS ANX true-positive rate ($\beta = .03$, $p > 0.10$). However, after attending the ANX training workshop, therapists' true-positive rates of utilizing the ANX PEs increased by 0.21 ($p < 0.001$). When investigating the covariance parameter of this model, there was significant variability in the intercept (Wald $Z = 25.33$, $p < 0.001$), leading to rejecting the null hypothesis that there is no variation among therapists' initial ANX technique utilization rates.

On the other hand, results displayed in Table 15 for the time and training model for the across MTPS ANX false-negative rate indicated that the intercept was 3.30 ($p < 0.001$). Time again was not a significant predictor of therapists' MTPS ANX false-negative rate ($\beta = -0.03$, $p >$

0.10). However, upon attending the ANX training workshop, therapists' false-negative utilization rates for the ANX PEs decreased by -0.21 ($p < 0.001$). Within this analysis there also was significant variability in the intercept (Wald $Z = 25.33$, $p < 0.001$), thus the null hypothesis that there was no variation among therapists initial ANX technique utilization was rejected.

 Disruptive behavior time and training model. Similar to the ANX treatment target time and training model, within the DBD time and training model, time and therapists' training attendance were added as fixed effects to the analyses. As indicated in Table 16, results of the time and training model for the across MTPS DBD true-positive rate demonstrated predicted results when examining changes over time, however results indicated slightly contrary findings when examining therapists' training attendance. Results demonstrated that the intercept, or therapists' initial rate of correctly utilizing the DBD PEs, was 1.62 ($p < 0.001$) and this rate increased by .05 ($p < 0.001$) over the course of the study. Additionally, after attending the DBD training workshop, therapists' true-positive rates of utilizing the DBD PEs actually decreased by -0.74 ($p < 0.001$). Furthermore, the covariance parameter of this model suggested that there was significant variability in the intercept (Wald $Z = 41.62$, $p < 0.001$), leading to rejecting the null hypothesis that there is no variation among therapists' initial DBD technique utilization rates.

 In addition, Table 17 illustrates the time and training model for the across MTPS DBD false-negative rates. These results indicate that therapists' initial false-negative rate of utilizing the DBD PEs was 5.38 ($p < 0.001$) and this rate decreased by -0.05 ($p < 0.001$) over the course of the study. However, slightly differently than predicted, results indicated that after attending the DBD training workshop therapists' false-negative rates of utilizing the DBD PEs increased by 0.74 ($p < 0.001$). This model also suggested that there was also significant variability in the intercept (Wald $Z = 41.62$, $p < 0.001$), thus the null hypothesis was rejected.

Level 2 model. Within the across MTPS DBD model, time, training attendance, and client age were added as fixed effects. Results of this time, training attendance, and client age only model indicated that client age had significant effects on therapists' across MTPS true-positive and false-negative utilization rates. Client age had a significant negative relationship on therapists' across MTPS DBD true-positive utilization rates and a positive relationship on therapists' across MTPS DBD false-negative utilization rates. More specifically, results indicated that therapists' were more likely to appropriately apply the DBD trained PEs with younger clients. Or said a different way, therapists' were more likely to fail to appropriately use the trained DBD techniques with an older client. Table 16 and Table 17 illustrate CCMM true-positive and false-negative utilization rates respectively.

Anxiety client age model. As stated earlier, the current model included the client characteristic of client age as a predictor within only the across MTPS DBD utilization rates. Thus no analyses with client characteristics are reported for across MTPS ANX utilization rates.

Disruptive behavior client age model. Table 16 represents the results of this model for across MTPS DBD true-positive rates, indicating that time, training attendance, and client age changed the intercept to be 1.91 ($p < 0.001$). Thus noting that the average rate of therapists appropriately utilizing the DBD PEs was 1.91 over time, with clients that were the average age in the sample. Furthermore, results indicated that therapists' true-positive rate increased by 0.05 ($p < 0.001$) over the course of the study and decreased by -0.76 ($p < 0.001$) following attending the DBD training workshop. Furthermore, client's age was a significant predictor of therapists' across MTPS DBD true-positive rate ($\beta = -0.02$, $p < 0.001$). Thus similar to our hypotheses, results suggested that therapists were more likely to appropriately use the DBD PEs with younger clients.

Results of therapists' across MTPS DBD false-negative rates demonstrate that the intercept for the time, training attendance, and client age model was 5.09 ($p < 0.001$), indicating that therapists' average rate of failing to appropriately utilize the DBD PEs was 5.09 over time, with clients that were the average age in the sample. Results in Table 17 also reveal that therapists' false-negative rate decreased by -0.05 ($p < 0.001$) over the course of the study and increased by 0.76 ($p < 0.001$) following attending the DBD training workshop. In addition, results further showed that client age was a significant predictor of therapists' across MTPS DBD false-negative rates ($\beta = 0.02$, $p < 0.001$), suggesting that therapists were more likely to fail to appropriately use the DBD PEs with older clients.

Level 3 model. The next step with the CCMM analyses was to create a model that included the between-therapist fixed predictors. In general, these models included time, training attendance, client characteristics (i.e., client age for only the disruptive behavior utilization rates), and therapist characteristics with strong theoretical interest as fixed effects. The therapist characteristics that were included within this model were therapists' post-training KEBSQ ANX target score (or KEBSQ DBD target score) and post-training MPAS total score. Final across MTPS model results displayed in Tables 14 through 17 generally supported the predicted hypotheses (Hypotheses 1aiii, 1biii, 2aiii, 2biii). Overall, when examining the across MTPS final model results, time had a significant effect in the predicted direction for the DBD treatment target, however time was not significant for the ANX treatment target. For both the DBD across MTPS models, therapists' true-positive utilization rates increased over time and therapists' false-negative utilization rates decreased over time. In addition, therapists' utilization rates following the ANX training performed as predicted, with therapists' true-positive rates of the ANX PEs increasing following the ANX training and therapists' false-negative rates of the ANX PEs

decreasing following the ANX training. However, therapists' utilization rates following the DBD training resulted in findings contradictory to my hypotheses. As seen in Tables 16 and Table 17, therapists' true-positive utilization rates decreased following attending the DBD training, while their false-negative utilization rates increased after the DBD training attendance. Furthermore, when all predictors were entered within this model, clients' age continued to have a significant negative relationship on therapists' DBD across MTPS true-positive rates and a significant positive relationship on therapists' DBD across MTPS false-negative utilization rates, which were in line with what was predicted. Therapists' relevant post-training KEBSQ target scores (e.g., post-training KEBSQ ANX target score) resulted in somewhat mixed results for the ANX and DBD models. Therapists' post-training KEBSQ ANX target score resulted in increased true-positive utilization rates and decreased false-negative utilization rates. However, therapists' post-training KEBSQ DBD target scores were non-significant in predicting therapists' utilization rates. Lastly, therapists' post-training attitudinal scores displayed contrary to predicted results. Therapists' post-training MPAS total scores resulted in decreased true-positive utilization rates for both the ANX and DBD analyses. In addition, therapists' post-training MPAS total scores resulted in increased false-negative utilization rates for both the ANX and DBD analyses. Thus, contrary to predicted, therapists with better attitudes towards EBPs actually decreased their correct utilization of the trained techniques. More specific interpretations of ANX and DBD across MTPS true-positive and false-negative utilization rate final models are detailed below.

  Anxiety final model. Results of this final model for therapists' across MTPS ANX utilization rates are presented in Table 14 and Table 15. CCMM analyses of therapists' across MTPS ANX true-positive rates within this model indicated that the average rate of therapists appropriately utilizing the anxiety PEs was 3.87 ($p < 0.001$). However, therapists' true-positive

rates of utilizing the ANX PEs did not increase significantly over time ($\beta = 0.02$, $p > 0.10$). After attending the ANX training workshop, therapists' true-positive rates of utilizing the ANX PEs increased by 0.24 ($p < 0.001$). As displayed in Table 14, therapists with higher post-training KEBSQ ANX target scores increased their true-positive utilization rates of the ANX PEs by 1.10E-04 ($p < 0.001$). However, interesting to note, results indicated that therapists' true-positive utilization rates decreased by -0.09 ($p < 0.001$) for those therapists with more favorable attitudes towards EBPs after the anxiety training (i.e., higher post-training MPAS total scores).

On the other hand, CCMM results of therapists' across MTPS ANX false-negative rates demonstrated that the average rate of therapists failing to appropriately utilize the anxiety PEs was 1.14 ($p < 0.001$). In addition, therapists' across MTPS ANX false-negative rates did change significantly over time ($\beta = -0.02$, $p > 0.10$). Furthermore, after attending the ANX training, therapists' false-negative rates decreased by -0.23 ($p < 0.001$). As displayed in Table 15, therapists with higher post-training KEBSQ ANX target scores decreased their false-negative utilization rates of the ANX PEs by -1.10E-04 ($p < 0.001$). However, therapists' false-negative utilization rates increased by 0.009 ($p < 0.001$) for those therapists with more favorable attitudes towards EBPs after the anxiety training (i.e., higher post-training MPAS total scores).

Disruptive behavior final model. Somewhat similar results were reflected within the final models for across MTPS DBD results. However, slightly different results seem to appear when examining therapists' training attendance as a predictor of therapists across MTPS DBD true-positive rates. CCMM analyses of therapists' across MTPS DBD true-positive rates indicated that the average rate of therapists appropriately utilizing the DBD PEs was 2.53 ($p < 0.001$). Moreover, therapists' true-positive rates of utilizing the DBD PEs increased over time at a rate of 0.05 ($p < 0.001$). Additionally, and similarly to level 2 analyses, client age was added within this

model and results indicated that therapists' across MTPS DBD true-positive utilization rates decreased by -0.02 ($p < 0.05$) as clients age increased. Furthermore, therapists' across MTPS DBD true-positive rates actually decreased by -0.76 ($p < 0.001$) following attending the disruptive behavior training workshop. Therapists' KEBSQ DBD target scores was not a significant predictor of therapists' true-positive utilization rates of the DBD PEs ($\beta = 0.01$, $p > 0.10$). Results also indicated that therapists' across MTPS DBD true-positive utilization rates decreased by -0.03 ($p < 0.05$) for those therapists with more favorable attitudes towards EBPs after the disruptive behavior training (i.e., higher post-training MPAS total scores).

Table 17 represents therapists' across MTPS DBD false-negative rates, noting that therapists' average rate of failing to appropriately apply the DBD PEs was 4.47 ($p < 0.001$). Additionally, therapists' false-negative utilization rates decreased over time at a rate of -0.05 ($p < 0.001$). Results indicated that therapists' across MTPS DBD false-negative utilization rates increased by 0.02 ($p < 0.05$) as clients age increased. Furthermore, results indicated that therapists' post-training KEBSQ DBD target score was not a significant predictor for therapists' across MTPS DBD false-negative utilization rates ($\beta = -0.01$, $p > 0.10$). However, and interesting to note, therapists' across MTPS DBD false-negative utilization rates increased by 0.03 ($p < 0.001$) for those therapists with more favorable attitudes towards EBPs after the training (i.e., higher post-training MPAS total scores).

Generalized Linear Mixed Modeling (GLMM) Results

Level 1 model. Given that sufficient variability was found at level 2 and level 3 of the CCMM ICCs, the first model of development for GLMM was a time and training model. Within this model, only the intercept, time within clients, and therapists' training attendance were included as a fixed effects. As previously noted, to reduce the complexity of the analyses the

covariance structure of scaled identity was used within the GLMM analyses. Additionally, since analyses were restricted to only MTPSs with the appropriate treatment target checked (i.e., anxiety or disruptive behavior), results of individual PE construct outcomes (i.e., therapists' true-positive rates or false-negative rates) displayed exact inverse relationships to each other. More specifically, when restricted by treatment target, the results of therapists' true positive and false negative rates are exact opposite outcomes.

GLMM results are presented in Tables 18 to 41. Results for therapists' within MTPS utilization of the DBD PEs over time indicated relatively consistent results with therapists' across MTPS utilization of the DBD PEs. More specifically, therapists' true-positive rates increased over time for four out of the seven DBD PEs within MTPSs (i.e., psychoeducation for caregivers, tangible rewards, praise, and monitoring). And due to the inverse relationship mentioned above, therapists' false-negative rates decreased over time for the same four out of the seven DBD PEs within MTPSs. Furthermore, when examining therapists' within MTPS utilization rates of the ANX PEs over time, a similar picture to the CCMM results is displayed, with none of the ANX PEs indicating a significant change over time. Furthermore, it can be noted that within the GLMM analyses, the time-related outcome was treated as a categorical (rather than continuous) variable in order to examine the different effects for the different intervals of time.

When examining results for therapists' utilization rates following attending a workshop training, mixed results were found. Results indicated that four out of five ANX PEs did not demonstrate significant changes in therapists' utilization rates (i.e., exposure, relaxation, cognitive/coping, and self-monitoring) following attending the ANX training. Moreover, following the DBD training, therapists true-positive utilization rates increased for three out of the

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seven DBD PEs (i.e., commands, attending, and response-cost), decreased for two out of the seven DBD PEs (i.e., tangible rewards and praise), and were non-significant for the additional two DBD PEs (i.e., psychoeducation for caregivers and monitoring). In order to clarify within MTPS results, examples of interpreting the results within each treatment target (i.e., ANX or DBD) are presented below.

   Anxiety time and training model. Results of the time and training only model of the relaxation PE true-positive rate (Table 20) indicated that the start of a treatment episode status intercept model was -1.45 ($p < 0.001$, OR=4.28), which due to the coding of the time variable (i.e., 0, 1, 2, 3, 4, 5) can be interpreted as the percentage of therapists at the start of a treatment episode who appropriately utilized the relaxation PE when the anxiety treatment target was indicated. This suggests that therapists were 4.28 times less likely to appropriately use relaxation at the beginning of a treatment episode when the treatment target of anxiety was indicated. Furthermore, as shown in Table 20, there was no significant change in log odd units regarding therapists' probability of appropriately using relaxation over time. Specifically, at time 1 (log odds = -0.37, p > 0.10), time 2 (log odds = -0.46, p > 0.10), time 3 (log odds = -0.31, p > 0.10), time 4 (log odds = -0.10, p > 0.10), or time 5 (log odds = -0.28, p > 0.10) there were no significant changes in therapists' utilization of relaxation. Thus, therapists' true-positive rates of using relaxation did not significantly change over time. Additionally, these results indicate that therapists' false-negative rates of the relaxation PE did not significantly change over time (see Table 21). Results also indicated no significant changes in therapists' within MTPS true-positive utilization rates (log odds = 0.06, p > 0.10) or false-negative utilization rates (log odds = -0.06, p > 0.10) for relaxation following attending the ANX training workshop.

Disruptive behavior time and training model. Results of the time and training only

model for the monitoring PE true-positive rate indicated that the start of a treatment episode

status intercept model was -2.12 (*p* < 0.001, OR=0.12), suggesting that therapists were 0.12

times less likely to appropriately use the monitoring PE at the beginning of a treatment episode

than fail to appropriately use the PE of monitoring. Additionally, therapists were significantly

higher in probability to appropriately use the PE of monitoring over time. Specifically, therapists

were significantly higher in probability to appropriately use monitoring at time 1 (log odds =

0.55, p < 0.001), time 2 (log odds = 0.84, p < 0.001), time 3 (log odds = 0.92, p < 0.001), time 4

(log odds = 0.81, p < 0.001), and time 5 (log odds = 0.63, p < 0.01) relative to their status at time

zero (see Table 38). Thus, these results suggest that therapists' true-positive rate of using

monitoring is likely to increase throughout the first six months of a client's treatment episode. In

addition, these results indicate that therapists' false-negative rate of using monitoring is likely to

decrease throughout the first six months of a client's treatment episode (see Table 39). In other

words, over time therapists' are more likely to appropriately use the monitoring PE when the

treatment target of DBD is endorsed. However, results revealed no significant changes in

therapists' within MTPS true-positive utilization rates (log odds = 0.09, p > 0.10) or false-

negative utilization rates (log odds = -0.09, p > 0.10) for monitoring following attending the

DBD training workshop.

Level 2 model. As previously stated, in order to keep the GLMM analyses as simple as

possible to reduce the the number of random effects included within the model, the only client-

related variable that was included within GLMM level 2 analyses was client age for the DBD

PEs of commands and attending. Within this level 2 model of GLMM, the intercept, time,

training attendance, and client age were included as fixed effects to investigate the true-positive and false-negative rates of commands and attending.

Results of the GLMM level 2 analyses moderately converge with the CCMM level 2 analyses. Findings indicated that therapists' within MTPS utilization rates for the PE of commands did not significantly change with client's age. However, therapists' within MTPS true-positive rates for attending increased for younger clients, and complimentary to these results, therapists' within MTPS false-negative rates for attending decreased for younger clients. As an example, interpretation of therapists' within MTPS utilization rate of the PE of attending is detailed below.

Anxiety client age model. As noted earlier, this model only included the client characteristic of client age as a predictor within two of the seven DBD PEs and was not included in any ANX PE analyses. Thus no analyses with client characteristics are reported for within MTPS ANX utilization rates.

Disruptive behavior client age model. As represented in Table 40, results indicate that therapists' true-positive rates for using the PE of attending decrease as the client gets older (log odds = -0.10, $p < 0.001$). Results further suggest that therapists' false-negative rates of the attending PE increase as the client gets older (log odds = 0.10, $p < 0.001$). More specifically, therapists are more likely to appropriately use the attending PE with younger clients.

Level 3 model. The third model within the GLMM analyses examined the between-therapist predictors to better understand the variance within the null model. This model incorporated both the level 1 (i.e., time, training attendance) variables, level 2 variable (i.e., client age) when applicable, as well as the level 3 variables of therapist characteristics (i.e., post-training KEBSQ item level score, and post-training MPAS total score) as fixed effects.

As noted, within this model multiple therapist characteristics were added in order to better understand their utilization of the trained techniques. Therapists' post-training knowledge and post-training attitudinal scores did not result in significant changes in therapists' utilization of any of the ANX PEs. Similar results were also found for therapists' utilization rates of the DBD PEs, however, therapists' post-training knowledge scores had a significant relationship for one of out the seven DBD PEs (i.e., response-cost). Additionally, therapists' post-training attitudinal scores resulted in increased true-positive utilization rates for two out of the seven DBD PEs (i.e., tangible rewards and commands). All final GLMM model results are listed in Tables 18 through 41, however the final model results for the ANX PE of exposure and the DBD PE of commands are explained below as examples.

Anxiety final model. Results of the final model GLMM analyses for the PE of exposure did not demonstrate significant results for any of the predictor variables. As a specific example, therapists' true-positive or false-negative rates for the PE of exposure did not change significantly over the first six months of treatment and did not significantly change following attending an ANX training (see Tables 18 to 19). In addition, therapists' post-training knowledge of the specific PE of exposure and their post-training attitudes towards EBPs did not significantly change their utilization of the exposure technique.

Disruptive behavior final model. On the other hand, final model GLMM analyses for the PE of commands indicated significant results for the predictor variables of time, training attendance, and post-training attitudes towards EBPs. While client age and therapists' post-training knowledge of the PE of commands did not result in significant changes to therapists' utilization rates. Results indicated that therapists' true-positive rates of commands increased at time 1 (log odds = 0.36, $p < 0.05$) and time 2 (log odds = 0.56, $p < 0.01$), but were non-

significant at later times in clients' treatment episodes (see Table 30). Thus, suggesting that therapists' true-positive rate for commands is likely to be higher towards the beginning of a client's treatment episode. Results for the effects of therapists' attitudes on therapists' true-positive rates of commands indicate a significant positive relationship (log odds = 0.13, $p <$ 0.05). Thus, suggesting that the more positive attitudes towards EBPs a therapist had following the DBD training, the more likely they were to appropriately use the commands PE when a DBD target was indicated. Additionally, results illustrate a rather complicated finding for therapists' utilization rates following attending the DBD training. Results note that following attending the DBD training, therapists' true-positive rate actually decreased significantly (log odds = -3.09, $p < 0.001$). Suggesting that following the DBD training, therapists are less likely to appropriately use the DBD PE of commands even though a DBD treatment target is indicated.

Discussion

The major purpose of this study was to understand the effects of trainings on therapists' self-reported behavioral changes with regard to EBP implementation under appropriate circumstances. More specifically, the current investigation aimed to examine therapists' practice changes following attending modularized workshop trainings that focused on specific anxiety or disruptive behavior techniques. Furthermore, this study ultimately aspired to answer two overarching questions: to what extent did therapists correctly self-report applying training techniques to appropriately matched patients (i.e., true-positive rate), and to what extent did therapists self-report failing to correctly apply training techniques to appropriately matched patients (i.e., false-negative rate). The present investigation was one of the first studies to examine therapists' behavioral changes using a modularized approach to treatment, and thus used relatively new and complicated analyses.

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In order to thoroughly examine the data, therapists' true-positive and false-negative rates were calculated in two ways (i.e., across MTPS and within MTPS), using two different forms of multilevel modeling analyses. For our primary analyses, the outcome variable of across MTPS utilization rates, technique utilization was analyzed per treatment episode, through dichotomously coding (i.e., 1 = yes, 0 = no) for the presence or absence of the five ANX and seven DBD workshop-focused PEs across all MTPSs associated with the first six months of treatment for that episode. In order to acknowledge that there may be situations in which applying certain workshop techniques does not seem clinically sound to use within every month of treatment, this outcome variable allowed us look at the total number of trained techniques a therapist used throughout a treatment episode. Furthermore, given that the data was structured in such a way that clients could have been seen by more than one therapists within the study period and the across MTPS outcome variable was continuous in nature, cross-classification multilevel modeling was used to examine therapists' technique utilization across MTPSs. As secondary analyses, therapists' true-positive and false-negative utilization rates were also examined within MTPSs. For this particular outcome variable, PE utilization was analyzed through dichotomously coding for the endorsement presence or absence (i.e., 1 = yes, 0 = no) of each of the 12 techniques taught at the modular workshops within each month. For these sets of analyses, data was analyzed using generalized linear mixed modeling. Within the context of considering therapists' true-positive and false-negative utilization rates within MTPSs, it should be noted that care should be taken when considering the generalized linear mixed modeling results. This caution is warranted given that therapists' false-negative utilization rates do no represent a true replication of therapists' true-positive utilization rates, since false-negative rates are the inverse of true-positive rates for within MTPS analyses. However, the results and discussion of

therapists' within MTPS true-positive and false-negative utilization rates are presented within the context of this thesis paper.

Time and Training Related Hypotheses (Hypothesis 1ai, Hypothesis 1bi, Hypothesis 2ai, and Hypothesis 2bi)

The time-related hypotheses for therapists' utilization rates was supported for the disruptive behavior across MTPS analyses (Hypothesis 1bi and Hypothesis 2bi). For the disruptive behavior across MTPS analyses, results indicated that therapists' true-positive utilizations rates increased over time and their false-negative utilization rates decreased over time. However, the time-related hypotheses for therapists' utilization of the anxiety techniques was not fully supported for the across MTPS analyses (Hypothesis 1ai and Hypothesis 2ai). Results of the anxiety across MTPS analyses indicated that therapists' true-positive and false-negative utilization rates of the anxiety techniques did not significantly change over time alone.

Furthermore, when examining therapists' true positive and false-negative rates over time within MTPSs a similar mixed picture is presented. Therapists' utilization rates for the disruptive behavior PEs within MTPSs is consistent with results found for the disruptive behavior PE across MTPS utilization rates. Therapists' true-positive rates increased over time for four out of the seven DBD PEs and therapists' false-negative rates decreased over time for four out of the seven DBD PEs. However, similarly to the across MTPS results, therapists' true-positive and false-negative rates for the anxiety within MTPS variables were all non-significant.

These findings suggest that the particular treatment target being addressed may moderate therapists' specific practices over time. Specifically, these results note that therapists were more likely to use the disruptive behavior techniques over time. These findings may further line up with therapists' experience with particular treatment targets influencing their use of particular

practice techniques. The CAMHD therapist population sees a larger proportion of disruptive behavior youth than anxious youth, and thus may feel more experienced to use the disruptive behavior techniques over time. These results may align with previous findings that therapists are more comfortable using externalizing techniques with clients rather than internalizing techniques (Milette-Winfree, Mueller, Hee, & Runland, 2014).

Furthermore, the second time-related hypotheses, and central interest of the study, focused on therapists' response to training. Results of the across MTPS and within MTPS ANX and DBD PE analyses somewhat support the hypotheses that therapists' true-positive rates would increase following the trainings and therapists' false-negative rates would decrease following the trainings. Specifically, when examining therapists' across MTPS true-positive rates for the ANX PEs, analyses indicated that following the ANX training therapists were more likely to appropriately use anxiety PEs. However, paradoxical to the aforementioned hypothesis, therapists' across MTPS true-positive rates for the DBD PEs actually indicated that therapists were less likely to appropriately use the disruptive behavior PEs following the disruptive behavior training.

When examining therapists' response to training results using the within MTPS outcome variables, some caution should be used when interpreting therapists' utilization rates given the somewhat mixed findings. Therapists' true-positive rates for the ANX within MTPS variables indicated that only one out of the five trained PEs increased following the training. Furthermore, for therapists' within MTPS utilization rates for the DBD PEs, results displayed rather mixed findings. Three out of the seven disruptive behavior PEs increased true-positive utilization rates within MTPS, two decreased true-positive utilization rates within MTPS, and two PEs had non-significant changes following the disruptive behavior training. Ultimately, these results

potentially suggest differences in training responses due to the treatment target being addressed

(e.g., externalizing versus internalizing PEs). Furthermore, one potential interpretation for these

mixed findings for therapists' within MTPS utilization rates for the DBD PEs could potentially

be due to these scores regressing to the mean. Given the mixed findings across the seven DBD

techniques/analyses, readers should be mindful of this potential issue. Additionally, another

potential explanation for these different findings could be in part due to therapists' experience

with the specific treatment targets. More specifically, the CAMHD population is composed of a

majority of youth with externalizing problem areas. Thus, while therapists had the opportunity to

attend both the anxiety and disruptive behavior trainings, therapists may have been impacted

relatively differently from each training due to their experience. More specifically, one potential

interpretation for these mixed results could be that trainings clarified the definitions and

appropriate use of the anxiety and disruptive behavior PEs. Furthermore, given that therapists

within the CAMHD population typically see less youth with anxiety treatment targets (Mueller et

al., 2010), therapists may have felt as though they had more clarity on when to use the anxiety

PEs and thus following the training began to use them more. For the DBD training, definitions of

the PEs may have been further clarified at the training as well, however, given their prior

experience with externalizing treatment targets, this clarification may have reduced therapists'

aptitude to self-reporting use of a PE. For example, the DBD training may have clarified to

therapists the MTPS definition of "praise." Through this clarification, therapists who may have

been indicating that they were using praise prior to the training restricted their indication post-

training in order to reflect their correct use (or non-use) of the trained technique.

Client Characteristics Hypotheses (Hypothesis 1bii and Hypothesis 2bii)

Our client-level hypothesis, that therapists' use of the DBD PEs across MTPS would increase for younger clients was also supported for therapists' true-positive and false-negative utilization rates (Hypothesis 1bii and Hypothesis 2bii). Results are somewhat further supported when examining therapists' true-positive and false-negative rates within MTPS for the PEs of commands and attending. Therapists' utilization rates within MTPS for commands did not significantly change with client's age. However, therapists' true-positive rates within MTPS for attending actually increased for younger clients. In general, these results seem to be in line with the research that suggests that the commands and attending PEs tend to be utilized mostly with youth 12 years old and younger (Chorpita & Daleiden, 2009a).

Therapist Characteristics Hypotheses (Hypothesis 1aiii, Hypothesis 1biii, Hypothesis 2aiii, and Hypothesis 2biii)

Multiple therapist-level hypotheses were examined within the present investigation (Hypothesis 1aii, Hypothesis 1biii, Hypothesis 2aiii, and Hypothesis 2biii). Results of analyses examining therapists' post-training knowledge influencing their PE utilization demonstrate some support for the suggested hypotheses. Specifically, the more knowledge the therapists had of the ANX trained techniques after the training, the more likely they were to appropriately use a majority of the ANX trained techniques when examining the variables across MTPSs. However, therapists' knowledge of the DBD techniques was not a significant predictor in their appropriate utilization of the DBD techniques. In addition, similar to the previously cautioned findings, results displayed slightly different results when comparing the across MTPS and within MTPS results. When examining the influences of therapists' post-training knowledge on their within MTPS utilization rates, both the ANX and DBD PEs indicated few significant changes in

therapists' true-positive or false-negative utilization rates. While on the other hand, therapists' post-training attitudinal results suggest potentially contradictory findings to our hypotheses. Specifically, therapists' who have higher positive attitudes towards EBPs may actually decrease their across MTPS utilization rates of the appropriate ANX and/or DBD PEs. Moreover, limited significant results were found when examining attitudinal effects on therapists' within MTPS utilization rates. Though contradictory to the predicted hypotheses, such limited significant attitudinal results are in line with some of the recent literature suggesting that attitudes may not be a reliable predictor of therapists' behaviors (Bearman et al., 2013; Higa-McMillan et al., 2014, Lewis & Simons, 2011). These results potentially suggest that therapists' knowledge following a training may be positively associated with therapists' technique utilization depending on the treatment target addressed, however therapists' attitudes may need further clarification as a predictor.

Overall, these results suggest several components may be influential to therapists' PE utilization following attending a training. While these results should be interpreted with caution, the findings potentially demonstrate that time, client characteristics, and therapist characteristics may influence therapists' PE utilization. Specifically, training attendance may have clarified the definition and increased knowledge of the specific trained techniques for each therapist. However, depending on the treatment target addressed, this increase in clarity and knowledge may have influenced therapists' utilization rates in a multitude of ways. Particularly, given that the CAMHD therapist population may be more experienced with disruptive behavior youth, it may be that therapists were influenced differently depending on the interaction between their experience and their knowledge. For example, therapists may have been less familiar with ANX PEs and thus following the training may have gained knowledge that helped them incorporate

more of these practices with their anxious client population. While, on the other hand, given that

therapists may have greater experience with DBD clients, the DBD training may have helped

them clarify their appropriate utilization behaviors. Specifically, findings associated with

disruptive behavior training attendance may have run contrary to our hypothesis because

following that training, therapists may have received clarification on the exact components

underlying any number of DBD PEs they reported using in the past. That is, following a DBD

training therapists may have noted using DBD PEs less often given their newly acquired

clarification of what exactly comprises the workshop-focused PEs.

Limitations

There are several limitations within this study that warrant discussion. First, the current

study excluded therapists' false-positive rates (i.e., a therapist indicates using a PE without also

endorsing the appropriate treatment target for that specific PE) and the true-negative rates (i.e., a

therapist has correctly abstained from using a PE without also endorsing the appropriate

treatment target for that specific PE). While one could argue that examining at all four constructs

of signal detection theory would have better illuminated therapists' behavioral practices,

investigating community mental health therapists' false-positive and true-negative rates created

multiple impediments for the scope of this project. Given that certain PEs are considered to be

derived from the evidence-bases for multiple problem areas, analyzing a CAMHD therapists'

false-positive and true-negative rates may have proven to be very difficult with the MTPS

structure of endorsing all PEs for all problem areas and the highly comorbid nature of CAMHD

youth. For example, the relaxation PE is considered to be derived from the evidence-bases for

both the anxiety and depression problem areas. Therefore, if a youth did not have anxiety

endorsed on the MTPS, but did have depression endorsed, and their therapist indicated that they

used relaxation for this youth, one might argue that this would be considered a false-positive for anxiety. Yet, given that relaxation is considered a technique derived from the evidence-base for depression, it may be that the therapist utilized relaxation appropriately for the problem area of depression. Thus, it could potentially be unfitting to indicate a false-positive event for anxiety in this circumstance. Furthermore, since the central interest of the present investigation focused on therapists' response to training, incorporating therapists' true-negative rate within this investigation was not a principal goal. Thus, given the complexity of the false-positive rate within a comorbid youth population and the study's goals, this investigation utilized only the outlined two of four signal detection theory constructs (i.e., true-positive and false-negative rates). However given the potential illumination that investigating all four signal detection theories may give to understanding therapists' behavioral practices, future research may benefit from incorporating therapists' false-positive and true-negative rates within analyses.

Further limitations for this investigation relate to instrumentation. First, this investigation utilized therapist self-report measures. Although some studies have suggested that therapists often self-report accurate descriptions of their behaviors within treatment sessions, other investigations have indicated therapists' may over-report their in-session technique utilization (Bearman et al., 2013; Borntrager et al., 2013; Nakamura et al., 2014; Ward et al., 2013). Secondly, the measurements used within this investigation to examine therapists' knowledge and attitudes towards EBPs used different definitions and levels of measuring for each construct. Specifically, knowledge was measured by exploring therapists' awareness of the discrete trained techniques for the specific problem areas (e.g., therapists' KEBSQ item level score for the trained technique of exposure). While therapists' attitudes towards EBPs were investigated using the more broad scale of therapists' total mean score on the MPAS, an aggregate of all items

asking about general attitudes towards EBPs (and not specific practices). In an ideal measurement design, this investigation would have utilized measures that assess therapists' knowledge and attitudes towards EBPs using specific metrics that align with the appropriate trained techniques (e.g., I like using commands for disruptive behavior problems). Furthermore, although this was a longitudinal study investigating therapists' behavior changes, therapists' attitudes and knowledge measures were collected at two specific time points (i.e., pre-training and post-training). More specifically, while therapist self-reported practice data (i.e., MTPS data) was collected for multiple years before and after the training, their knowledge and attitudes measures were only captured during the training time period (i.e., 2008-2009). So although the present investigation was able to investigate the impact that therapists' post-training knowledge and attitudes had on their behaviors, the investigation was not necessarily able to investigate therapists' attitudinal and knowledge of the trained techniques at the specific time of the technique utilization. However, given that this study utilized measures from a large-scale modular therapy training initiative, this strategy was not feasible for this investigation. Lastly, another limitation related to instrumentation is the current investigation's criterion variable definition. Although the current investigation examined therapists' utilization of the 12 specific trained techniques (i.e., seven DBD techniques and five ANX techniques) using their self-reported MTPS data, therapists' exact behavioral intention was unable to be captured. More specifically, therapists were not asked to indicate which PE was used for a particular treatment target on the MTPS, thus making it difficult to parse out therapists' decision making when utilizing a PE that is considered to be derived from the evidence-bases for more than one treatment target. As an example, a therapist could have endorsed using the PE of relaxation on an MTPS, which also had both the treatment targets of anxiety and depression endorsed. Given this information, while our

study suggests therapists reported utilization of the trained techniques, results should be interpreted with caution. The current investigation cannot suggest knowing a therapists' exact decision-making process when endorsing a particular PE relative to a specific treatment target. Future investigations may consider using more specific measurement strategies to ameliorate instrumentation limitations for both attitudes towards and knowledge of EBPs.

Despite these potential limitations, the current investigation continues to aid the field in the development of dissemination and implementation research. These results support the potential for modular therapy training influencing therapists' utilization of specific therapeutic practice elements in a positive way. Future research may wish to continue to better understand the relationship between modular training programs and therapist behavior changes. Specifically, training research may aspire to examine the components of modular training that lead to specific therapist behavior changes and those that lead to continued change over time. Furthermore, research examining therapists' behavior changes in response to workshops on specific treatment targets may also be warranted, given the differential influences of an anxiety training versus a disruptive behavior training on therapists' technique utilization. Lastly, future research may aim to examine the extent to which therapists' training attendance influenced youth treatment outcomes.

Table 1.

Practice Element Name Correspondence between the Mental Health Treatment Summary Plan (MTPS) and the Anxiety/Disruptive Behavior Trainings

MTPS Practice Element Name	Training Practice Element Name
Internalizing	
Cognitive	Cognitive/Coping
Exposure	Exposure
Psychoeducation, Child	Psychoeducation for youth (for anxiety)
Relaxation	Relaxation
Self-Monitoring	Self-Monitoring
Externalizing	
Attending	Attending
Commands	Commands
Parent/Teacher-Monitoring	Monitoring
Parent/Teacher-Praise	Praise
Psychoeducation, Parent	Psychoeducation for caregivers (for disruptive behaviors)
Response Cost	Response-Cost
Tangible Rewards	Tangible Rewards

Table 2.

Outcome Variable Definitions and Examples

Outcome Variable	Definition	Example
True-Positive	A therapist utilized a practice element with a matched treatment target	The treatment target of Anxiety was indicated and the therapist used the exposure practice element
False-Negative	A therapist did not utilize a practice element, while the endorsement of a treatment target suggests that they should have done so	The treatment target of Anxiety was indicated BUT the therapist did NOT use the exposure practice element

Table 3.

Outcome Variable Construct Definitions and Examples

Outcome Variable Construct	True-positive	True-Positive Example	False-Negative	False-Negative Example
Per MTPS (within the month)	Did a therapist use the practice element appropriately that month?	For the month of April, the therapist used exposure for their client who had the treatment target of Anxiety checked.	Did a therapist fail to appropriately use the practice element that month?	For the month of April, the therapist did not use exposure for their client who had the treatment target of Anxiety checked.
Across all MTPS (within the treatment episode)	Did a therapist fail to use the practice element appropriately at all during the course of a client's treatment episode?	For their client who had the treatment target of Anxiety checked, the therapist used exposure (at least once) throughout the client's treatment episode.	Did a therapist fail to appropriately use the practice element at all during the course of a client's treatment episode?	For their client who had the treatment target of Anxiety checked, the therapist did not use exposure (even once) throughout the client's treatment episode.

Table 4.

Outcome Variable Restrictions

		Is the practice element indicated being used on the MTPS?	
		Yes	No
Is the Treatment Target (i.e., Anxiety or Disruptive Behavior) indicated on the MTPS?	Yes	**True-Positive**	**False-Negative**
	No	False-Positive	True-Negative

Note. MTPS = Monthly Treatment Progress Summary form.

Table 5.

Level 1 True-Positive Analyses for Hypotheses 1ai and 1bi

Analysis	Hypothesis	Youth Problem	Level 1	Level 2	Level 3	Within[1] or across[2] MTPS	Technique Emphasized	Full Variable
1	1ai	ANX	Time, Training	None	None	Within	Exposure	Within Monthly Treatment Progress Summary (MTPS) true-positive score for exposure
2	1ai	ANX	Time, Training	None	None	Within	Self-monitoring	Within MTPS true-positive score for self-monitoring
3	1ai	ANX	Time, Training	None	None	Within	Psychoeducation, Child	Within MTPS true-positive score for psychoeducation, child
4	1ai	ANX	Time, Training	None	None	Within	Relaxation	Within MTPS true-positive score for relaxation
5	1ai	ANX	Time, Training	None	None	Within	Cognitive	Within MTPS true-positive score for cognitive
6	1ai	ANX	Time, Training	None	None	Across	All ANX workshop PEs	Across MTPS ANX true-positive score
7	1bi	DBD	Time, Training	None	None	Within	Psychoeducation, Parent	Within MTPS true-positive score for psychoeducation, parent
8	1bi	DBD	Time, Training	None	None	Within	Commands	Within MTPS true-positive score for commands
9	1bi	DBD	Time, Training	None	None	Within	Tangible Rewards	Within MTPS true-positive score for tangible rewards
10	1bi	DBD	Time, Training	None	None	Within	Response Cost	Within MTPS true-positive score for response cost
11	1bi	DBD	Time, Training	None	None	Within	Parent/Teacher Praise	Within MTPS true-positive score for parent/teacher praise
12	1bi	DBD	Time, Training	None	None	Within	Parent/Teacher Monitoring	Within MTPS true-positive score for parent/teacher monitoring
13	1bi	DBD	Time, Training	None	None	Within	Attending	Within MTPS true-positive score for attending
14	1bi	DBD	Time, Training	None	None	Across	All DBD workshop PEs	Across MTPS DBD true-positive score

Note. Within this table ANX represents the problem area of anxiety and DBD represents the problem area of disruptive behaviors.

[1] Within MTPS reflects generalized linear mixed modeling analyses. [2] Across MTPS reflects cross-classified multilevel modeling analyses.

Table 6.

Level 1 False-Negative Analyses for Hypotheses 2ai and 2bi

Analysis	Hypothesis	Youth Problem	Level 1	Level 2	Level 3	Within[1] or across[2] MTPS	Technique Emphasized	Full Variable
15	2ai	ANX	Time, Training	None	None	Within	Exposure	Within Monthly Treatment Progress Summary (MTPS) false-negative score for exposure
16	2ai	ANX	Time, Training	None	None	Within	Self-monitoring	Within MTPS false-negative score for self-monitoring
17	2ai	ANX	Time, Training	None	None	Within	Psychoeducation, Child	Within MTPS false-negative score for psychoeducation, child
18	2ai	ANX	Time, Training	None	None	Within	Relaxation	Within MTPS false-negative score for relaxation
19	2ai	ANX	Time, Training	None	None	Within	Cognitive	Within MTPS false-negative score for cognitive
20	2ai	ANX	Time, Training	None	None	Across	All ANX workshop PEs	Across MTPS ANX false-negative score
21	2bi	DBD	Time, Training	None	None	Within	Psychoeducation, Parent	Within MTPS false-negative score for psychoeducation, parent
22	2bi	DBD	Time, Training	None	None	Within	Commands	Within MTPS false-negative score for commands
23	2bi	DBD	Time, Training	None	None	Within	Tangible Rewards	Within MTPS false-negative score for tangible rewards
24	2bi	DBD	Time, Training	None	None	Within	Response Cost	Within MTPS false-negative score for response cost
25	2bi	DBD	Time, Training	None	None	Within	Parent/Teacher Praise	Within MTPS false-negative score for parent/teacher praise
26	2bi	DBD	Time, Training	None	None	Within	Parent/Teacher Monitoring	Within MTPS false-negative score for parent/teacher monitoring
27	2bi	DBD	Time, Training	None	None	Within	Attending	Within MTPS false-negative score for attending
28	2bi	DBD	Time, Training	None	None	Across	All DBD workshop PEs	Across MTPS DBD false-negative score

Note. Within this table ANX represents the problem area of anxiety and DBD represents the problem area of disruptive behaviors.
[1]Within MTPS reflects generalized linear mixed modeling analyses. [2] Across MTPS reflects cross-classified multilevel modeling analyses.

Table 7.

Level 2 True-Positive Analyses for Hypothesis 1bii

Analysis	Hypothesis	Youth Problem	Level 1	Level 2	Level 3	Within[1] or across[2] MTPS	Technique Emphasized	Full Variable
29	1bii	DBD	Time, Training	Client age	None	Within	Commands	Within Monthly Treatment Progress Summary (MTPS) true-positive score for commands
30	1bii	DBD	Time, Training	Client age	None	Within	Attending	Within MTPS true-positive score for attending
31	1bii	DBD	Time, Training	Client age	None	Across	Commands	Across Monthly Treatment Progress Summary (MTPS) true-positive score for commands
32	1bii	DBD	Time, Training	Client age	None	Across	Attending	Across MTPS true-positive score for attending

Note. Within this table ANX represents the problem area of anxiety and DBD represents the problem area of disruptive behaviors.
[1]Within MTPS reflects generalized linear mixed modeling analyses. [2] Across MTPS reflects cross-classified multilevel modeling analyses.

Table 8.

Level 2 False-Negative Analyses for Hypothesis 2bii

Analysis	Hypothesis	Youth Problem	Level 1	Level 2	Level 3	Within[1] or across[2] MTPS	Technique Emphasized	Full Variable
33	2bii	DBD	Time, Training	Client age	None	Within	Commands	Within Monthly Treatment Progress Summary (MTPS) false-negative score for commands
34	2bii	DBD	Time, Training	Client age	None	Within	Attending	Within MTPS false-negative score for attending
35	2bii	DBD	Time, Training	Client age	None	Across	Commands	Across Monthly Treatment Progress Summary (MTPS) false-negative score for commands
36	2bii	DBD	Time, Training	Client age	None	Across	Attending	Across MTPS false-negative score for attending

Note. Within this table ANX represents the problem area of anxiety and DBD represents the problem area of disruptive behaviors.
[1]Within MTPS reflects generalized linear mixed modeling analyses. [2] Across MTPS reflects cross-classified multilevel modeling analyses.

Table 9.

Level 3 True-Positive Analyses for Hypotheses 1aiii and 1biii

Analysis	Hypothesis	Youth Problem	Level 1	Level 2	Level 3	Within[1] or across[2] MTPS	Technique Emphasized	Full Variable
37	1aiii	ANX	Time, Training	None	Knowledge & Attitudes	Within	Exposure	Within Monthly Treatment Progress Summary (MTPS) true-positive score for exposure
38	1aiii	ANX	Time, Training	None	Knowledge & Attitudes	Within	Self-monitoring	Within MTPS true-positive score for self-monitoring
39	1aiii	ANX	Time, Training	None	Knowledge & Attitudes	Within	Psychoeducation, Child	Within MTPS true-positive score for psychoeducation, child
40	1aiii	ANX	Time, Training	None	Knowledge & Attitudes	Within	Relaxation	Within MTPS true-positive score for relaxation
41	1aiii	ANX	Time, Training	None	Knowledge & Attitudes	Within	Cognitive	Within MTPS true-positive score for cognitive
42	1aiii	ANX	Time, Training	None	Knowledge & Attitudes	Across	All ANX workshop PEs	Across MTPS ANX true-positive scor
43	1biii	DBD	Time, Training	None	Knowledge & Attitudes	Within	Psychoeducation, Parent	Within MTPS true-positive score for psychoeducation, parent
44	1biii	DBD	Time, Training	None	Knowledge & Attitudes	Within	Commands	Within MTPS true-positive score for commands
45	1biii	DBD	Time, Training	None	Knowledge & Attitudes	Within	Tangible Rewards	Within MTPS true-positive score for tangible rewards
46	1biii	DBD	Time, Training	None	Knowledge & Attitudes	Within	Response Cost	Within MTPS true-positive score for response cost
47	1biii	DBD	Time, Training	None	Knowledge & Attitudes	Within	Parent/Teacher Praise	Within MTPS true-positive score for parent/teacher praise

Table 9 (Continued).

Level 3 True-Positive Analyses for Hypotheses 1aiii and 1biii

48	1biii	DBD	Time, Training	None	Knowledge & Attitudes	Within	Parent/Teacher Monitoring	Within MTPS true-positive score for parent/teacher monitoring
49	1biii	DBD	Time, Training	None	Knowledge & Attitudes	Within	Attending	Within MTPS true-positive score for attending
50	1biii	DBD	Time, Training	None	Knowledge & Attitudes	Across	All DBD workshop PEs	Across MTPS DBD true-positive scor
51	1biii	DBD	Time, Training	Client age	Knowledge & Attitudes	Within	Commands	Within MTPS true-positive score for commands
52	1biii	DBD	Time, Training	Client age	Knowledge & Attitudes	Within	Attending	Within MTPS true-positive score for attending

Note. Within this table ANX represents the problem area of anxiety and DBD represents the problem area of disruptive behaviors. [1] Within MTPS reflects generalized linear mixed modeling analyses. [2] Across MTPS reflects cross-classified multilevel modeling analyses.

Table 10.

Level 3 False-Negative Analyses for Hypotheses 2aiii and 2biii

Analysis	Hypothesis	Youth Problem	Level 1	Level 2	Level 3	Within[1] or across[2] MTPS	Technique Emphasized	Full Variable
53	2aiii	ANX	Time, Training	None	Knowledge & Attitudes	Within	Exposure	Within Monthly Treatment Progress Summary (MTPS) false-negative score exposure
54	2aiii	ANX	Time, Training	None	Knowledge & Attitudes	Within	Self-monitoring	Within MTPS false-negative score for se monitoring
55	2aiii	ANX	Time, Training	None	Knowledge & Attitudes	Within	Psychoeducation, Child	Within MTPS false-negative score for psychoeducation, child
56	2aiii	ANX	Time, Training	None	Knowledge & Attitudes	Within	Relaxation	Within MTPS false-negative score for relaxation
57	2aiii	ANX	Time, Training	None	Knowledge & Attitudes	Within	Cognitive	Within MTPS false-negative score for cognitive
58	2aiii	ANX	Time, Training	None	Knowledge & Attitudes	Across	All ANX workshop PEs	Across MTPS ANX false-negative score
59	2biii	DBD	Time, Training	None	Knowledge & Attitudes	Within	Psychoeducation, Parent	Within MTPS false-negative score for psychoeducation, parent
60	2biii	DBD	Time, Training	None	Knowledge & Attitudes	Within	Commands	Within MTPS false-negative score for commands
61	2biii	DBD	Time, Training	None	Knowledge & Attitudes	Within	Tangible Rewards	Within MTPS false-negative score for tangible rewards
62	2biii	DBD	Time, Training	None	Knowledge & Attitudes	Within	Response Cost	Within MTPS false-negative score for response cost
63	2biii	DBD	Time, Training	None	Knowledge & Attitudes	Within	Parent/Teacher Praise	Within MTPS false-negative score for parent/teacher praise

Table 10 (Continued).

Level 3 False-Negative Analyses for Hypotheses 2aiii and 2biii

64	2biii	DBD	Time, Training	None	Knowledge & Attitudes	Within	Parent/Teacher Monitoring	Within MTPS false-negative score for parent/teacher monitoring
65	2biii	DBD	Time, Training	None	Knowledge & Attitudes	Within	Attending	Within MTPS false-negative score for attending
66	2biii	DBD	Time, Training	None	Knowledge & Attitudes	Across	All DBD workshop PEs	Across MTPS DBD false-negative score
67	2biii	DBD	Time, Training	Client age	Knowledge & Attitudes	Within	Commands	Within MTPS false-negative score for commands
68	2biii	DBD	Time, Training	Client age	Knowledge & Attitudes	Within	Attending	Within MTPS false-negative score for attending

Note. Within this table ANX represents the problem area of anxiety and DBD represents the problem area of disruptive behaviors. [1] Within MTPS reflects generalized linear mixed modeling analyses. [2] Across MTPS reflects cross-classified multilevel modeling analyses.

Table 11.

Practice element true-positive frequency and percent

	Frequency	%
Anxiety (ANX) Target[1]		
Cognitive/Coping	953	74.1%
Psychoeducation for Youth	673	52.3%
Relaxation	259	20.1&
Self-Monitoring	200	15.6%
Exposure	50	3.9%
Disruptive Behavior Target (DBD)[2]		
Psychoeducation for Caregivers	1483	42.8%
Tangible Rewards	1294	37.3%
Praise	1260	36.3%
Commands	1150	33.2%
Monitoring	1022	29.5%
Attending	493	14.2%
Response-Cost	361	10.4%

Note. Within this table the percentages were determined based on the total number of Monthly Treatment Progress Summary (MTPS) forms that were included within each data set. [1] The Internalizing data set had a total of 1,286 MTPSs. [2] The Externalizing data set had a total of 3,467 MTPSs.

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Table 12.

Practice element false-negative frequency and percent

	Frequency	%
Anxiety (ANX) Target[1]		
Exposure	1236	96.1%
Self-Monitoring	1086	84.4%
Relaxation	1027	79.9%
Psychoeducation for Youth	613	47.7%
Cognitive/Coping	333	25.9%
Disruptive Behavior Target (DBD)[2]		
Response-Cost	3106	89.6%
Attending	2974	85.8%
Monitoring	2445	70.5%
Commands	2317	66.8%
Praise	2207	63.7%
Tangible Rewards	2173	62.7%
Psychoeducation for Caregivers	1984	57.2%

Note. Within this table the percentages were determined based on the total number of Monthly Treatment Progress Summary (MTPS) forms that were included within each data set. [1.] The Internalizing data set had a total of 1,286 MTPSs. [2.] The Externalizing data set had a total of 3,467 MTPSs.

Table 13.
Means (SD) for therapist knowledge and attitude measures

	# of items	Min	Max	Mean	SD
Pre-Training KEBSQ					
Anxiety (ANX) Target	5	1	5	4.03	1.12
Exposure	1	1	4	3.80	0.60
Relaxation	1	1	4	2.33	1.06
Cognitive/Coping	1	1	4	2.90	0.37
Self-Monitoring	1	0	4	2.87	1.03
Psychoeducation for Youth	1	1	4	2.62	1.03
Disruptive Behavior (DBD) Target	7	2	7	5.50	1.23
Psychoeducation for Caregivers	1	1	4	2.52	0.77
Commands	1	1	4	3.02	0.83
Tangible Rewards	1	1	4	2.38	1.11
Response-Cost	1	2	4	3.09	0.81
Praise	1	2	4	2.59	0.72
Monitoring	1	0	4	1.56	1.12
Attending	1	1	4	1.91	0.99
Post-Training KEBSQ					
Anxiety (ANX) Target	5	2	5	4.855	0.40
Exposure	1	1	4	3.75	0.77
Relaxation	1	1	4	2.32	1.05
Cognitive/Coping	1	1	4	2.90	0.48
Self-Monitoring	1	2	4	2.99	0.31
Psychoeducation for Youth	1	1	4	3.33	0.68
Disruptive Behavior (DBD) Target	7	4	7	6.26	0.98
Psychoeducation for Caregivers	1	1	4	2.68	0.74
Commands	1	2	4	2.94	0.92
Tangible Rewards	1	1	4	2.73	1.17
Response-Cost	1	2	4	2.93	0.91
Praise	1	1	4	2.51	0.74
Monitoring	1	0	4	1.74	1.06
Attending	1	1	4	2.21	1.24
Pre-Training MPAS					
Total (before Anxiety Training)	12	13	29	22.87	4.09
Total (before Disruptive Behavior Training)	12	15	32	22.60	4.26
Post-Training MPAS					
Total (after Anxiety Training)	12	13	29	23.71	4.56
Total (after Disruptive Behavior Training)	12	16	32	24.10	4.77

Note. KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitude Scale

Table 14.

Cross-Classified Multilevel Model True-Positive Results for Across MTPS Anxiety Practice Elements

Model 1: Time and Training

	b	SE	p	95% Lower	95% Upper
Intercept	1.70	0.05	0.00**	1.60	1.81
Time	0.03	0.02	0.14	-0.01	0.06
ANX Training Attendance	0.21	0.06	0.00**	0.10	0.33

Model 3: Time, Training, Therapist Characteristics

	b	SE	p	95% Lower	95% Upper
Intercept	3.87	0.26	0.00**	3.36	4.37
Time	0.02	0.02	0.27	-0.01	0.05
ANX Training Attendance	0.24	0.06	0.00**	0.12	0.35
Post-KEBSQ ANX Target	1.10E-04	1.52E-05	0.00**	8.06E-05	1.40E-04
Post-MPAS Total	-0.09	0.01	0.00**	-0.11	-0.07

Note. ANX = Anxiety KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. . *p<0.05; ** p < 0.001

Table 15.

Cross-Classified Multilevel Model False-Negative Results for Across MTPS Anxiety Practice Elements

Model 1: Time and Training

	b	SE	p	95% Lower	95% Upper
Intercept	3.30	0.05	0.00**	3.19	3.40
Time	-0.03	0.02	0.14	-0.06	0.01
ANX Training Attendance	-0.21	0.06	0.00**	-0.33	-0.10

Model 3: Time, Training, Therapist Characteristics

	b	SE	p	95% Lower	95% Upper
Intercept	1.14	0.26	0.00**	0.64	1.64
Time	-0.02	0.02	0.26	-0.05	0.01
ANX Training Attendance	-0.23	0.06	0.00**	-0.34	0.12
Post-KEBSQ ANX Target	-1.10E-04	1.52E-05	0.00**	-1.40E-04	-8.06E-05
Post-MPAS Total	0.09	0.01	0.00**	0.07	0.10

Note. ANX = Anxiety KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. . *p<0.05; ** p < 0.001

Table 16.
Cross-Classified Multilevel Model True-Positive Results for Across MTPS Disruptive Behavior Practice Elements

Model 1: Time and Training

	b	SE	p	95% Lower	95% Upper
Intercept	1.62	0.05	0.00**	1.53	1.72
Time	0.05	0.02	0.00**	0.02	0.08
DBD Training Attendance	-0.74	0.05	0.00**	-0.85	-0.64

Model 2: Time, Training, and Client Age

	b	SE	p	95% Lower	95% Upper
Intercept	1.91	0.11	0.00**	1.70	2.12
Time	0.05	0.02	0.00**	0.02	0.08
DBD Training Attendance	-0.76	0.05	0.00**	-0.87	-0.66
Client Age	-0.02	0.01	0.00**	-0.04	-0.01

Model 3: Time, Training, Client Age, Therapist Characteristics

	b	SE	p	95% Lower	95% Upper
Intercept	2.53	0.25	0.00**	2.05	3.01
Time	0.05	0.02	0.00**	0.02	0.08
Client Age	-0.02	0.01	0.01*	-0.04	0.00
DBD Training Attendance	-0.76	0.06	0.00**	-0.87	-0.65
Post-KEBSQ DBD Target	0.01	0.03	0.78	-0.05	0.06
Post-MPAS Total	-0.03	0.01	0.01*	-0.04	-0.02

Note. DBD = Disruptive Behavior KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. . *p<0.05; ** p < 0.001

Table 17.
Cross-Classified Multilevel Model False-Negative Results for Across MTPS Disruptive Behavior Practice Elements

Model 1: Time and Training

	b	SE	p	95% Lower	95% Upper
Intercept	5.38	0.05	0.00**	5.28	5.47
Time	-0.05	0.02	0.00**	-0.08	-0.02
DBD Training Attendance	0.74	0.05	0.00**	0.64	0.85

Model 2: Time, Training, and Client Age

	b	SE	p	95% Lower	95% Upper
Intercept	5.09	0.11	0.00**	4.88	5.30
Time	-0.05	0.02	0.00**	-0.08	-0.02
DBD Training Attendance	0.76	0.05	0.00**	0.66	0.87
Client Age	0.02	0.01	0.00**	0.01	0.04

Model 3: Time, Training, Client Age, Therapist Characteristics

	b	SE	p	95% Lower	95% Upper
Intercept	4.47	0.25	0.00**	3.99	4.95
Time	-0.05	0.02	0.00**	-0.08	-0.02
Client Age	0.02	0.01	0.01*	0.00	0.04
DBD Training Attendance	0.76	0.06	0.00**	0.65	0.87
Post-KEBSQ DBD Target	-0.01	0.03	0.78	-0.06	0.05
Post-MPAS Total	0.03	0.01	0.00**	0.02	0.04

Note. DBD = Disruptive Behavior KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. . *p<0.05; ** p < 0.001

Table 18.
Generalized Mixed Model True-Positive Results for Exposure

Model 1: Time and Training

	b	*SE*	*t*	*p*	*Exp (b)[1]*
Intercept	-5.26	0.78	6.75	0.00**	191.64
Time=5	1.10	0.68	-1.62	0.10	0.33
Time=4	0.21	0.71	-0.30	0.76	0.81
Time=3	1.06	0.65	-1.64	0.10	0.35
Time=2	0.84	0.64	-1.33	0.18	0.43
Time=1	0.26	0.67	-0.38	0.70	0.77
Time=0	0[b]				
ANX Training Attendance	0.84	0.64	-1.32	0.19	0.41

Model 3: Time, Training, Therapist Characteristics

	b	*SE*	*t*	*p*	*Exp (b)[1]*
Intercept	-2.40	3.55	0.68	0.50	11.01
Time=5	0.80	0.72	-1.12	0.26	0.45
Time=4	-0.19	0.76	0.24	0.81	1.20
Time=3	0.84	0.68	-1.23	0.22	0.43
Time=2	0.60	0.67	-0.89	0.38	0.55
Time=1	0.26	0.70	-0.37	0.71	0.77
Time=0	0[b]				
ANX Training Attendance	0.89	0.74	-1.20	0.23	0.41
Post-KEBSQ Item Score	-1.22	0.67	1.82	0.07	3.40
Post-MPAS Total	0.07	0.19	-0.34	0.74	0.94

Note. ANX = Anxiety KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001 [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 19.
Generalized Mixed Model False-Negative Results for Exposure

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	5.26	0.78	6.75	0.00**	191.64
Time=5	-1.10	0.68	-1.62	0.10	0.33
Time=4	-0.21	0.71	-0.30	0.76	0.81
Time=3	-1.06	0.65	-1.64	0.10	0.35
Time=2	-0.84	0.64	-1.33	0.18	0.43
Time=1	-0.26	0.67	-0.38	0.70	0.77
Time=0	0[b]				
ANX Training Attendance	-0.84	0.64	-1.32	0.19	0.41

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	2.40	3.55	0.68	0.50	11.01
Time=5	-0.80	0.72	-1.12	0.26	0.45
Time=4	0.19	0.76	0.24	0.81	1.20
Time=3	-0.84	0.68	-1.23	0.22	0.43
Time=2	-0.60	0.67	-0.89	0.38	0.55
Time=1	-0.26	0.70	-0.37	0.71	0.77
Time=0	0[b]				
ANX Training Attendance	-0.89	0.74	-1.20	0.23	0.41
Post-KEBSQ Item Score	1.22	0.67	1.82	0.07	3.40
Post-MPAS Total	-0.07	0.19	-0.34	0.74	0.94

Note. ANX = Anxiety KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 20.
Generalized Mixed Model True-Positive Results for Relaxation

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	-1.45	0.46	3.14	0.00**	4.28
Time=5	-0.28	0.35	0.79	0.43	1.32
Time=4	-0.10	0.31	0.33	0.74	1.11
Time=3	-0.31	0.30	1.03	0.30	1.37
Time=2	-0.46	0.30	1.57	0.12	1.59
Time=1	-0.37	0.27	1.38	0.17	1.45
Time=0	0[b]				
ANX Training Attendance	0.06	0.27	-0.23	0.81	0.94

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	3.19	3.15	-1.01	0.31	0.04
Time=5	-0.27	0.39	0.68	0.50	1.31
Time=4	-0.19	0.35	0.54	0.59	1.21
Time=3	-0.31	0.35	0.87	0.39	1.36
Time=2	-0.38	0.34	1.12	0.26	1.46
Time=1	-0.48	0.33	1.47	0.14	1.62
Time=0	0[b]				
ANX Training Attendance	-0.06	0.32	0.18	0.85	1.06
Post-KEBSQ Item Score	0.27	0.36	-0.76	0.45	0.76
Post-MPAS Total	-0.22	0.12	1.84	0.07	1.25

Note. ANX = Anxiety KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 21.
Generalized Mixed Model False-Negative Results for Relaxation

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	1.45	0.46	3.14	0.00**	4.28
Time=5	0.28	0.35	0.79	0.43	1.32
Time=4	0.10	0.31	0.33	0.74	1.11
Time=3	0.31	0.30	1.03	0.30	1.37
Time=2	0.46	0.30	1.57	0.12	1.59
Time=1	0.37	0.27	1.38	0.17	1.45
Time=0	0[b]				
ANX Training Attendance	-0.06	0.27	-0.23	0.81	0.94

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	-3.19	3.15	-1.01	0.31	0.04
Time=5	0.27	0.39	0.68	0.50	1.31
Time=4	0.19	0.35	0.54	0.59	1.21
Time=3	0.31	0.35	0.87	0.39	1.36
Time=2	0.38	0.34	1.12	0.26	1.46
Time=1	0.48	0.33	1.47	0.14	1.62
Time=0	0[b]				
ANX Training Attendance	0.06	0.32	0.18	0.85	1.06
Post-KEBSQ Item Score	-0.27	0.36	-0.76	0.45	0.76
Post-MPAS Total	0.22	0.12	1.84	0.07	1.25

Note. ANX = Anxiety KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 22.
Generalized Mixed Model True-Positive Results for Cognitive/Coping

Model 1: Time and Training

	b	*SE*	*t*	*p*	*Exp (b)[1]*
Intercept	0.26	0.44	0.59	0.56	1.29
Time=5	0.08	0.29	0.28	0.78	1.08
Time=4	0.62	0.28	2.17	0.03*	1.85
Time=3	0.36	0.26	1.38	0.17	1.43
Time=2	0.39	0.25	1.56	0.12	1.47
Time=1	0.5	0.22	0.69	0.49	1.17
Time=0	0[b]				
ANX Training Attendance	-0.20	0.21	-0.97	0.33	0.82

Model 3: Time, Training, Therapist Characteristics

	b	*SE*	*t*	*p*	*Exp (b)[1]*
Intercept	0.25	4.13	0.06	0.95	1.28
Time=5	0.17	0.31	0.55	0.58	1.18
Time=4	0.68	0.31	2.21	0.03*	1.96
Time=3	0.53	0.29	1.83	0.07	1.70
Time=2	0.45	0.27	1.69	0.09	1.57
Time=1	0.24	0.25	0.96	0.34	1.27
Time=0	0[b]				
ANX Training Attendance	0.02	0.23	0.10	0.92	1.02
Post-KEBSQ Item Score	0.51	0.64	0.79	0.43	1.66
Post-MPAS Total	-0.07	0.15	-0.45	0.65	0.93

Note. ANX = Anxiety KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 23.
Generalized Mixed Model False-Negative Results for Cognitive/Coping

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	-0.26	0.44	0.59	0.56	1.29
Time=5	-0.08	0.29	0.28	0.78	1.08
Time=4	-0.62	0.28	2.17	0.03*	1.85
Time=3	-0.36	0.26	1.38	0.17	1.43
Time=2	-0.39	0.25	1.56	0.12	1.47
Time=1	-0.5	0.22	0.69	0.49	1.17
Time=0	0[b]				
ANX Training Attendance	0.20	0.21	-0.97	0.33	0.82

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	-0.25	4.13	0.06	0.95	1.28
Time=5	-0.17	0.31	0.55	0.58	1.18
Time=4	-0.68	0.31	2.21	0.03*	1.96
Time=3	-0.53	0.29	1.83	0.07	1.70
Time=2	-0.45	0.27	1.69	0.09	1.57
Time=1	-0.24	0.25	0.96	0.34	1.27
Time=0	0[b]				
ANX Training Attendance	-0.02	0.23	0.10	0.92	1.02
Post-KEBSQ Item Score	-0.51	0.64	0.79	0.43	1.66
Post-MPAS Total	0.07	0.15	-0.45	0.65	0.93

Note. ANX = Anxiety KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 24.
Generalized Mixed Model True-Positive Results for Self-Monitoring

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	-2.12	0.38	5.54	0.00**	8.33
Time=5	-0.06	0.33	0.18	0.86	1.06
Time=4	-0.54	0.33	1.63	0.10	1.72
Time=3	-0.21	0.30	0.67	0.50	1.23
Time=2	-0.04	0.28	0.13	0.89	1.04
Time=1	-0.42	0.28	1.54	0.12	1.53
Time=0	0[b]				
ANX Training Attendance	0.13	0.26	-0.48	0.63	0.88

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	-2.79	4.38	0.64	0.52	16.31
Time=5	-0.10	0.34	0.30	0.76	1.11
Time=4	-0.57	0.35	1.63	0.10	1.76
Time=3	-0.24	0.32	0.75	0.45	1.27
Time=2	0.01	0.29	-0.02	0.99	0.99
Time=1	-0.47	0.29	1.60	0.11	1.60
Time=0	0[b]				
ANX Training Attendance	0.26	0.28	-0.95	0.34	0.77
Post-KEBSQ Item Score	-0.26	0.83	0.32	0.75	1.30
Post-MPAS Total	0.06	0.12	-0.45	0.65	0.95

Note. ANX = Anxiety KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 25.
Generalized Mixed Model False-Negative Results for Self-Monitoring

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	2.12	0.38	5.54	0.00**	8.33
Time=5	0.06	0.33	0.18	0.86	1.06
Time=4	0.54	0.33	1.63	0.10	1.72
Time=3	0.21	0.30	0.67	0.50	1.23
Time=2	0.04	0.28	0.13	0.89	1.04
Time=1	0.42	0.28	1.54	0.12	1.53
Time=0	0[b]				
ANX Training Attendance	-0.13	0.26	-0.48	0.63	0.88

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	2.79	4.38	0.64	0.52	16.31
Time=5	0.10	0.34	0.30	0.76	1.11
Time=4	0.57	0.35	1.63	0.10	1.76
Time=3	0.24	0.32	0.75	0.45	1.27
Time=2	-0.01	0.29	-0.02	0.99	0.99
Time=1	0.47	0.29	1.60	0.11	1.60
Time=0	0[b]				
ANX Training Attendance	-0.26	0.28	-0.95	0.34	0.77
Post-KEBSQ Item Score	0.26	0.83	0.32	0.75	1.30
Post-MPAS Total	-0.06	0.12	-0.45	0.65	0.95

Note. ANX = Anxiety KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 26.

Generalized Mixed Model True-Positive Results for Psychoeducation for Youth

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	-0.93	0.52	-1.81	0.07	0.39
Time=5	0.24	0.30	0.79	0.43	1.27
Time=4	0.21	0.28	0.75	0.45	1.24
Time=3	0.56	0.27	2.06	0.04*	1.75
Time=2	0.44	0.26	1.72	0.09	1.55
Time=1	0.48	0.24	1.98	0.05*	1.62
Time=0	0[b]				
ANX Training Attendance	0.72	0.24	3.05	0.00**	2.05

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	0.17	4.29	0.04	0.97	1.18
Time=5	0.30	0.32	0.94	0.35	1.35
Time=4	0.31	0.31	1.01	0.31	1.36
Time=3	0.51	0.30	1.73	0.08	1.67
Time=2	0.55	0.28	1.96	0.05*	1.73
Time=1	0.62	0.27	2.26	0.02*	1.86
Time=0	0[b]				
ANX Training Attendance	0.86	0.26	3.33	0.00**	2.37
Post-KEBSQ Item Score	0.13	0.80	0.16	0.87	1.14
Post-MPAS Total	-0.07	0.17	-0.43	0.67	0.93

Note. ANX = Anxiety KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 27.
Generalized Mixed Model False-Negative Results for Psychoeducation for Youth

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	0.93	0.52	-1.81	0.07	0.39
Time=5	-0.24	0.30	0.79	0.43	1.27
Time=4	-0.21	0.28	0.75	0.45	1.24
Time=3	-0.56	0.27	2.06	0.04*	1.75
Time=2	-0.44	0.26	1.72	0.09	1.55
Time=1	-0.48	0.24	1.98	0.05*	1.62
Time=0	0[b]				
ANX Training Attendance	-0.72	0.24	3.05	0.00**	2.05

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	-0.17	4.29	0.04	0.97	1.18
Time=5	-0.30	0.32	0.94	0.35	1.35
Time=4	-0.31	0.31	1.01	0.31	1.36
Time=3	-0.51	0.30	1.73	0.08	1.67
Time=2	-0.55	0.28	1.96	0.05*	1.73
Time=1	-0.62	0.27	2.26	0.02*	1.86
Time=0	0[b]				
ANX Training Attendance	-0.86	0.26	3.33	0.00**	2.37
Post-KEBSQ Item Score	-0.13	0.80	0.16	0.87	1.14
Post-MPAS Total	0.07	0.17	-0.43	0.67	0.93

Note. ANX = Anxiety KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 28.
Generalized Mixed Model True-Positive Results for Psychoeducation for Caregivers

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	-1.14	0.39	-2.91	0.00**	0.32
Time=5	0.39	0.19	2.09	0.04*	1.48
Time=4	0.61	0.18	3.43	0.00**	1.83
Time=3	0.64	0.17	3.82	0.00**	1.89
Time=2	0.63	0.16	3.99	0.00**	1.87
Time=1	0.57	0.15	3.81	0.00**	1.76
Time=0	0[b]				
DBD Training Attendance	-0.04	0.15	-0.28	0.78	0.96

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	-0.91	1.34	-0.68	0.50	0.40
Time=5	0.39	0.19	2.09	0.04*	1.48
Time=4	0.61	0.18	3.43	0.00**	1.84
Time=3	0.64	0.17	3.83	0.00**	1.89
Time=2	0.63	0.16	4.00	0.00**	1.87
Time=1	0.57	0.15	3.82	0.00**	1.77
Time=0	0[b]				
DBD Training Attendance	-0.05	0.15	-0.31	0.76	0.96
Post-KEBSQ Item Score	0.00	0.00	-1.18	0.24	1.00
Post-MPAS Total	-0.01	0.05	-0.10	0.92	1.00

Note. DBD = Disruptive Behavior KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 29.

Generalized Mixed Model False-Negative Results for Psychoeducation for Caregivers

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	1.14	0.39	-2.91	0.00**	0.32
Time=5	-0.39	0.19	2.09	0.04*	1.48
Time=4	-0.61	0.18	3.43	0.00**	1.83
Time=3	-0.64	0.17	3.82	0.00**	1.89
Time=2	-0.63	0.16	3.99	0.00**	1.87
Time=1	-0.57	0.15	3.81	0.00**	1.76
Time=0	0[b]				
DBD Training Attendance	0.04	0.15	-0.28	0.78	0.96

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	0.91	1.34	-0.68	0.50	0.40
Time=5	-0.39	0.19	2.09	0.04*	1.48
Time=4	-0.61	0.18	3.43	0.00**	1.84
Time=3	-0.64	0.17	3.83	0.00**	1.89
Time=2	-0.63	0.16	4.00	0.00**	1.87
Time=1	-0.57	0.15	3.82	0.00**	1.77
Time=0	0[b]				
DBD Training Attendance	0.05	0.15	-0.31	0.76	0.96
Post-KEBSQ Item Score	0.00	0.00	-1.18	0.24	1.00
Post-MPAS Total	0.01	0.05	-0.10	0.92	1.00

Note. DBD = Disruptive Behavior KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 30.

Generalized Mixed Model True-Positive Results for Commands

Model 1: Time and Training

	b	*SE*	*t*	*p*	*Exp (b)[1]*
Intercept	-0.29	0.38	-0.76	0.45	0.75
Time=5	0.24	0.23	1.03	0.30	1.27
Time=4	0.15	0.22	0.68	0.50	1.16
Time=3	0.27	0.20	1.35	0.18	1.32
Time=2	0.55	0.19	2.94	0.00**	1.73
Time=1	0.35	0.18	1.99	0.05*	1.42
Time=0	0[b]				
DBD Training Attendance	-3.03	0.17	-17.46	0.00**	0.05

Model 2: Time, Training Attendance, and Client Age

	b	*SE*	*t*	*p*	*Exp (b)[1]*
Intercept	0.12	0.51	0.24	0.81	1.13
Time=5	0.24	0.23	1.01	0.31	1.27
Time=4	0.14	0.22	0.65	0.51	1.15
Time=3	0.27	0.20	1.32	0.19	1.31
Time=2	0.55	0.19	2.93	0.00**	1.73
Time=1	0.35	0.18	1.98	0.05*	1.42
Time=0	0[b]				
DBD Training Attendance	-3.06	0.18	-17.44	0.00**	0.05
Client Age	-0.03	0.03	-1.27	0.21	0.97

Table 30 (Continued).
Generalized Mixed Model True-Positive Results for Commands

Model 3: Time, Training, Client Age, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	-2.77	1.58	-1.76	0.08	0.06
Time=5	0.24	0.23	1.03	0.30	1.27
Time=4	0.15	0.22	0.68	0.50	1.16
Time=3	0.27	0.20	1.33	0.18	1.31
Time=2	0.56	0.19	2.97	0.00**	1.75
Time=1	0.36	0.18	2.03	0.04*	1.43
Time=0	0[b]				
DBD Training Attendance	-3.09	0.18	-17.47	0.00**	0.05
	-0.04	0.03	-1.35	0.18	0.97
Client Age Post-KEBSQ Item Score	0.00	0.00	-1.22	0.22	1.00
Post-MPAS Total	0.13	0.06	2.05	0.04*	1.14

Note. DBD = Disruptive Behavior KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 31.
Generalized Mixed Model False-Negative Results for Commands

Model 1: Time and Training

	b	*SE*	*t*	*p*	*Exp (b)[1]*
Intercept	0.29	0.38	-0.76	0.45	0.75
Time=5	-0.24	0.23	1.03	0.30	1.27
Time=4	-0.15	0.22	0.68	0.50	1.16
Time=3	-0.27	0.20	1.35	0.18	1.32
Time=2	-0.55	0.19	2.94	0.00**	1.73
Time=1	-0.35	0.18	1.99	0.05*	1.42
Time=0	0[b]				
DBD Training					
Attendance	3.03	0.17	-17.46	0.00**	0.05

Model 2: Time, Training Attendance, and Client Age

	b	*SE*	*t*	*p*	*Exp (b)[1]*
Intercept	-0.12	0.51	0.24	0.81	1.13
Time=5	-0.24	0.23	1.01	0.31	1.27
Time=4	-0.14	0.22	0.65	0.51	1.15
Time=3	-0.27	0.20	1.32	0.19	1.31
Time=2	-0.55	0.19	2.93	0.00**	1.73
Time=1	-0.35	0.18	1.98	0.05*	1.42
Time=0	0[b]				
DBD Training					
Attendance	3.06	0.18	-17.44	0.00**	0.05
Client Age	0.03	0.03	-1.27	0.21	0.97

Table 31 (Continued).
Generalized Mixed Model False-Negative Results for Commands

Model 3: Time, Training, Client Age, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	2.77	1.58	-1.76	0.08	0.06
Time=5	-0.24	0.23	1.03	0.30	1.27
Time=4	-0.15	0.22	0.68	0.50	1.16
Time=3	-0.27	0.20	1.33	0.18	1.31
Time=2	-0.56	0.19	2.97	0.00**	1.75
Time=1	-0.36	0.18	2.03	0.04*	1.43
Time=0	0[b]				
DBD Training Attendance	3.09	0.18	-17.47	0.00**	0.05
	0.04	0.03	-1.35	0.18	0.97
Client Age Post-KEBSQ Item Score	0.00	0.00	-1.22	0.22	1.00
Post-MPAS Total	-0.13	0.06	2.05	0.04*	1.14

Note. DBD = Disruptive Behavior KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 32.
Generalized Mixed Model True-Positive Results for Tangible Rewards

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	-1.20	0.39	-3.08	0.00**	0.30
Time=5	0.65	0.21	3.06	0.00**	1.91
Time=4	0.55	0.20	2.80	0.01*	1.74
Time=3	0.71	0.18	3.87	0.00**	2.03
Time=2	0.57	0.17	3.37	0.00**	1.77
Time=1	0.50	0.16	3.14	0.00**	1.65
Time=0	0[b]				
DBD Training Attendance	-0.32	0.15	-2.13	0.03*	0.72

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	-3.43	1.33	-2.58	0.01*	0.03
Time=5	0.68	0.21	3.18	0.00**	1.97
Time=4	0.59	0.20	2.93	0.00**	1.80
Time=3	0.73	0.18	3.97	0.00**	2.08
Time=2	0.60	0.17	3.54	0.00**	1.83
Time=1	0.50	0.16	3.13	0.00**	1.65
Time=0	0[b]				
DBD Training Attendance	-0.33	0.15	-2.18	0.03*	0.72
Post-KEBSQ Item Score	-0.23	0.30	-0.79	0.43	0.79
Post-MPAS Total	0.12	0.05	2.64	0.01*	1.13

Note. DBD = Disruptive Behavior KEBSQ = Knowledge of Evidence-Based Services
Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)*
represents the exponentiated log odds or the odds ratio.

Table 33.
Generalized Mixed Model False-Negative Results for Tangible Rewards

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	1.20	0.39	-3.08	0.00**	0.30
Time=5	-0.65	0.21	3.06	0.00**	1.91
Time=4	-0.55	0.20	2.80	0.01*	1.74
Time=3	-0.71	0.18	3.87	0.00**	2.03
Time=2	-0.57	0.17	3.37	0.00**	1.77
Time=1	-0.50	0.16	3.14	0.00**	1.65
Time=0	0[b]				
DBD Training Attendance	0.32	0.15	-2.13	0.03*	0.72

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	3.43	1.33	-2.58	0.01*	0.03
Time=5	-0.68	0.21	3.18	0.00**	1.97
Time=4	-0.59	0.20	2.93	0.00**	1.80
Time=3	-0.73	0.18	3.97	0.00**	2.08
Time=2	-0.60	0.17	3.54	0.00**	1.83
Time=1	-0.50	0.16	3.13	0.00**	1.65
Time=0	0[b]				
DBD Training Attendance	0.33	0.15	-2.18	0.03*	0.72
Post-KEBSQ Item Score	0.23	0.30	-0.79	0.43	0.79
Post-MPAS Total	-0.12	0.05	2.64	0.01*	1.13

Note. DBD = Disruptive Behavior KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 34.
Generalized Mixed Model True-Positive Results for Response-Cost

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	-4.35	0.53	8.23	0.00**	77.74
Time=5	0.91	0.32	-2.85	0.00**	0.40
Time=4	0.75	0.30	-2.51	0.01*	0.47
Time=3	0.37	0.28	-1.31	0.19	0.69
Time=2	0.43	0.25	-1.71	0.09	0.65
Time=1	0.32	0.24	-1.35	0.18	0.73
Time=0	0[b]				
DBD Training Attendance	0.91	0.26	-3.58	0.00**	0.40

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	-12.00	3.13	3.83	0.00**	162558.26
Time=5	0.93	0.32	-2.89	0.00**	0.40
Time=4	0.76	0.30	-2.55	0.01*	0.47
Time=3	0.38	0.28	-1.35	0.18	0.68
Time=2	0.43	0.25	-1.73	0.08	0.65
Time=1	0.33	0.24	-1.38	0.17	0.72
Time=0	0[b]				
DBD Training Attendance	0.93	0.26	-3.59	0.00**	0.40
Post-KEBSQ Item Score	1.37	0.60	-2.29	0.02*	0.26
Post-MPAS Total	0.14	0.08	-1.77	0.08	0.87

Note. DBD = Disruptive Behavior KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 35.
Generalized Mixed Model False-Negative Results for Response-Cost

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	4.35	0.53	8.23	0.00**	77.74
Time=5	-0.91	0.32	-2.85	0.00**	0.40
Time=4	-0.75	0.30	-2.51	0.01*	0.47
Time=3	-0.37	0.28	-1.31	0.19	0.69
Time=2	-0.43	0.25	-1.71	0.09	0.65
Time=1	-0.32	0.24	-1.35	0.18	0.73
Time=0	0[b]				
DBD Training Attendance	-0.91	0.26	-3.58	0.00**	0.40

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	12.00	3.13	3.83	0.00**	162558.26
Time=5	-0.93	0.32	-2.89	0.00**	0.40
Time=4	-0.76	0.30	-2.55	0.01*	0.47
Time=3	-0.38	0.28	-1.35	0.18	0.68
Time=2	-0.43	0.25	-1.73	0.08	0.65
Time=1	-0.33	0.24	-1.38	0.17	0.72
Time=0	0[b]				
DBD Training Attendance	-0.93	0.26	-3.59	0.00**	0.40
Post-KEBSQ Item Score	-1.37	0.60	-2.29	0.02*	0.26
Post-MPAS Total	-0.14	0.08	-1.77	0.08	0.87

Note. DBD = Disruptive Behavior KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 36.
Generalized Mixed Model True-Positive Results for Praise

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	-1.09	0.29	-3.79	0.00**	0.34
Time=5	0.56	0.18	3.06	0.00**	1.76
Time=4	0.43	0.17	2.46	0.01*	1.54
Time=3	0.58	0.16	3.56	0.00**	1.79
Time=2	0.73	0.15	4.79	0.00**	2.07
Time=1	0.63	0.15	4.35	0.00**	1.88
Time=0	0[b]				
DBD Training Attendance	-0.83	0.15	-5.68	0.00**	0.44

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	-0.08	1.47	-0.06	0.95	0.92
Time=5	0.57	0.19	3.07	0.00**	1.76
Time=4	0.43	0.18	2.47	0.01*	1.54
Time=3	0.58	0.16	3.50	0.00**	1.78
Time=2	0.74	0.15	4.83	0.00**	2.09
Time=1	0.63	0.15	4.32	0.00**	1.88
Time=0	0[b]				
DBD Training Attendance	-0.83	0.15	-5.66	0.00**	0.43
Post-KEBSQ Item Score	-0.29	0.33	-0.89	0.37	0.75
Post-MPAS Total	-0.01	0.05	-0.13	0.89	0.99

Note. DBD = Disruptive Behavior KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 37.
Generalized Mixed Model False-Negative Results for Praise

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	1.09	0.29	-3.79	0.00**	0.34
Time=5	-0.56	0.18	3.06	0.00**	1.76
Time=4	-0.43	0.17	2.46	0.01*	1.54
Time=3	-0.58	0.16	3.56	0.00**	1.79
Time=2	-0.73	0.15	4.79	0.00**	2.07
Time=1	-0.63	0.15	4.35	0.00**	1.88
Time=0	0[b]				
DBD Training Attendance	0.83	0.15	-5.68	0.00**	0.44

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	0.08	1.47	-0.06	0.95	0.92
Time=5	-0.57	0.19	3.07	0.00**	1.76
Time=4	-0.43	0.18	2.47	0.01*	1.54
Time=3	-0.58	0.16	3.50	0.00**	1.78
Time=2	-0.74	0.15	4.83	0.00**	2.09
Time=1	-0.63	0.15	4.32	0.00**	1.88
Time=0	0[b]				
DBD Training Attendance	0.83	0.15	-5.66	0.00**	0.43
Post-KEBSQ Item Score	0.29	0.33	-0.89	0.37	0.75
Post-MPAS Total	0.01	0.05	-0.13	0.89	0.99

Note. DBD = Disruptive Behavior KEBSQ = Knowledge of Evidence-Based Services
Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)*
represents the exponentiated log odds or the odds ratio.

Table 38.
Generalized Mixed Model True-Positive Results for Monitoring

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	-2.12	0.37	-5.67	0.00**	0.12
Time=5	0.63	0.21	2.96	0.00**	1.87
Time=4	0.81	0.20	4.06	0.00**	2.24
Time=3	0.92	0.19	4.97	0.00**	2.52
Time=2	0.84	0.17	4.91	0.00**	2.32
Time=1	0.55	0.16	3.37	0.00**	1.73
Time=0	0[b]				
DBD Training Attendance	0.09	0.17	0.56	0.58	1.10

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	-0.52	1.71	-0.30	0.76	0.60
Time=5	0.63	0.21	2.97	0.00**	1.89
Time=4	0.79	0.20	3.97	0.00**	2.21
Time=3	0.91	0.19	4.90	0.00**	2.49
Time=2	0.85	0.17	4.93	0.00**	2.33
Time=1	0.55	0.16	3.37	0.00**	1.74
Time=0	0[b]				
DBD Training Attendance	0.11	0.17	0.64	0.52	1.12
Post-KEBSQ Item Score	-0.04	0.36	-0.10	0.92	0.96
Post-MPAS Total	-0.06	0.06	-1.04	0.30	0.94

Note. DBD = Disruptive Behavior KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 39.
Generalized Mixed Model False-Negative Results for Monitoring

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	2.12	0.37	-5.67	0.00**	0.12
Time=5	-0.63	0.21	2.96	0.00**	1.87
Time=4	-0.81	0.20	4.06	0.00**	2.24
Time=3	-0.92	0.19	4.97	0.00**	2.52
Time=2	-0.84	0.17	4.91	0.00**	2.32
Time=1	-0.55	0.16	3.37	0.00**	1.73
Time=0	0[b]				
DBD Training Attendance	-0.09	0.17	0.56	0.58	1.10

Model 3: Time, Training, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	0.52	1.71	-0.30	0.76	0.60
Time=5	-0.63	0.21	2.97	0.00**	1.89
Time=4	-0.79	0.20	3.97	0.00**	2.21
Time=3	-0.91	0.19	4.90	0.00**	2.49
Time=2	-0.85	0.17	4.93	0.00**	2.33
Time=1	-0.55	0.16	3.37	0.00**	1.74
Time=0	0[b]				
DBD Training Attendance	-0.11	0.17	0.64	0.52	1.12
Post-KEBSQ Item Score	0.04	0.36	-0.10	0.92	0.96
Post-MPAS Total	0.06	0.06	-1.04	0.30	0.94

Note. DBD = Disruptive Behavior KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 40.
Generalized Mixed Model True-Positive Results for Attending

Model 1: Time and Training

	b	*SE*	*t*	*p*	*Exp (b)[1]*
Intercept	-5.76	0.52	10.99	0.00**	318.16
Time=5	0.22	0.28	-0.76	0.45	0.80
Time=4	0.33	0.27	-1.19	0.23	0.72
Time=3	0.33	0.26	-1.25	0.21	0.72
Time=2	0.53	0.24	-2.23	0.03*	0.59
Time=1	0.30	0.23	-1.30	0.19	0.74
Time=0	0[b]				
DBD Training Attendance	3.14	0.30	-10.43	0.00**	0.04

Model 2: Time, Training Attendance, and Client Age

	b	*SE*	*t*	*p*	*Exp (b)[1]*
Intercept	-4.66	0.64	7.26	0.00**	106.03
Time=5	0.20	0.29	-0.69	0.49	0.82
Time=4	0.31	0.27	-1.14	0.25	0.73
Time=3	0.31	0.26	-1.20	0.23	0.73
Time=2	0.53	0.24	-2.19	0.03*	0.59
Time=1	0.30	0.23	-1.29	0.20	0.74
Time=0	0[b]				
DBD Training Attendance	3.19	0.31	-10.44	0.00**	0.04
Client Age	-0.10	0.03	2.94	0.00**	1.10

Table 40 (Continued).
Generalized Mixed Model True-Positive Results for Attending

Model 3: Time, Training, Client Age, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	-3.35	2.14	1.56	0.12	28.50
Time=5	0.20	0.30	-0.69	0.49	0.82
Time=4	0.31	0.28	-1.14	0.25	0.73
Time=3	0.32	0.26	-1.20	0.23	0.73
Time=2	0.53	0.24	-2.20	0.03*	0.59
Time=1	0.31	0.24	-1.31	0.19	0.73
Time=0	0[b]				
DBD Training Attendance	3.20	0.31	-10.39	0.00**	0.04
	-0.10	0.03	2.88	0.00**	1.10
Client Age					
Post-KEBSQ Item Score	-0.61	0.40	1.51	0.13	1.83
Post-MPAS Total	0.00	0.07	0.01	0.99	1.00

Note. DBD = Disruptive Behavior KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.

Table 41.
Generalized Mixed Model False-Negative Results for Attending

Model 1: Time and Training

	b	SE	t	p	Exp (b)[1]
Intercept	5.76	0.52	10.99	0.00**	318.16
Time=5	-0.22	0.28	-0.76	0.45	0.80
Time=4	-0.33	0.27	-1.19	0.23	0.72
Time=3	-0.33	0.26	-1.25	0.21	0.72
Time=2	-0.53	0.24	-2.23	0.03*	0.59
Time=1	-0.30	0.23	-1.30	0.19	0.74
Time=0	0[b]				
DBD Training Attendance	-3.14	0.30	-10.43	0.00**	0.04

Model 2: Time, Training, and Client Age

	b	SE	t	p	Exp (b)[1]
Intercept	4.66	0.64	7.26	0.00**	106.03
Time=5	-0.20	0.29	-0.69	0.49	0.82
Time=4	-0.31	0.27	-1.14	0.25	0.73
Time=3	-0.31	0.26	-1.20	0.23	0.73
Time=2	-0.53	0.24	-2.19	0.03*	0.59
Time=1	-0.30	0.23	-1.29	0.20	0.74
Time=0	0[b]				
DBD Training Attendance	-3.19	0.31	-10.44	0.00**	0.04
Client Age	0.10	0.03	2.94	0.00**	1.10

Table 41 (Continued).
Generalized Mixed Model False-Negative Results for Attending

Model 3: Time, Training, Client Age, Therapist Characteristics

	b	SE	t	p	Exp (b)[1]
Intercept	3.35	2.14	1.56	0.12	28.50
Time=5	-0.20	0.30	-0.69	0.49	0.82
Time=4	-0.31	0.28	-1.14	0.25	0.73
Time=3	-0.32	0.26	-1.20	0.23	0.73
Time=2	-0.53	0.24	-2.20	0.03*	0.59
Time=1	-0.31	0.24	-1.31	0.19	0.73
Time=0	0[b]				
DBD Training Attendance	-3.20	0.31	-10.39	0.00**	0.04
Client Age	0.10	0.03	2.88	0.00**	1.10
Post-KEBSQ Item Score	0.61	0.40	1.51	0.13	1.83
Post-MPAS Total	0.00	0.07	0.01	0.99	1.00

Note. DBD = Disruptive Behavior KEBSQ = Knowledge of Evidence-Based Services Questionnaire; MPAS = Modified Practice Attitudes Scale. *p<0.05; ** p < 0.001. [1] *Exp (b)* represents the exponentiated log odds or the odds ratio.
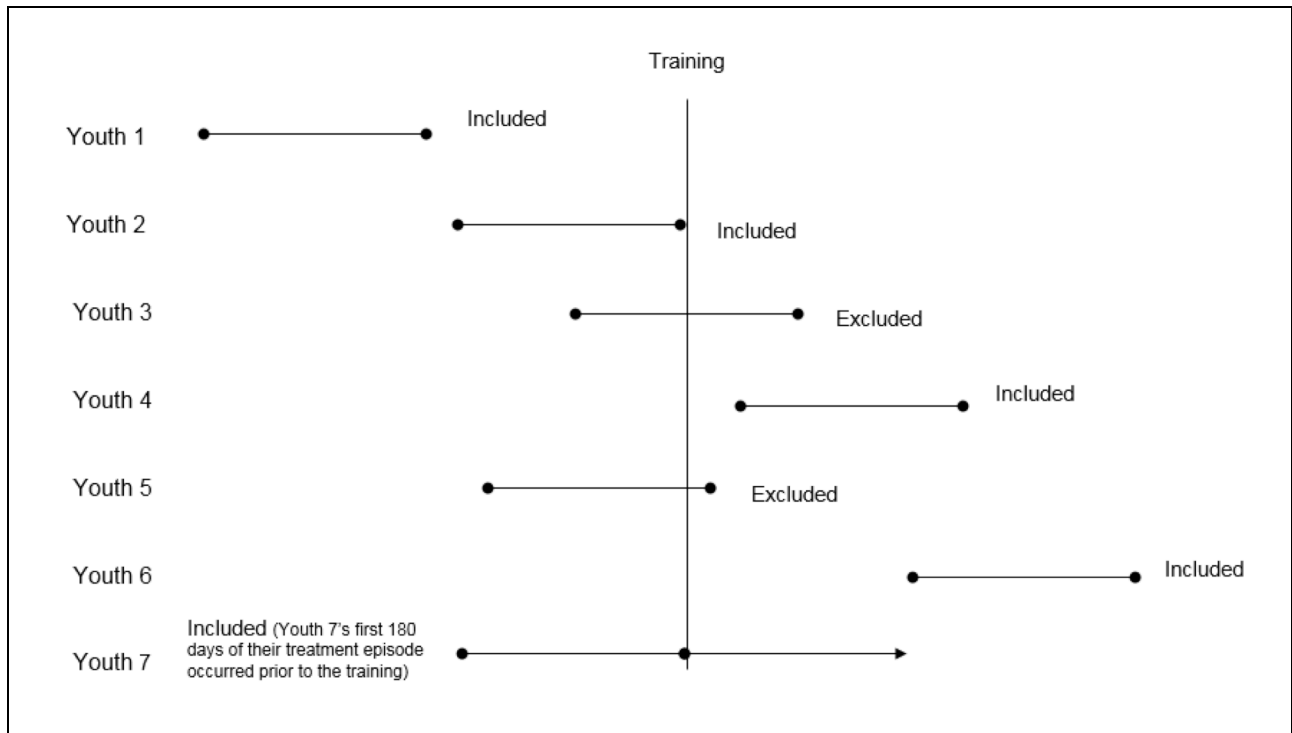
Figure 1. Youth treatment episode inclusion/exclusion criteria applied to several examples.

Note. The first 180 days of a youth's treatment episode will be included, if the full 180 days occurred either entirely before the training or entirely after the training.
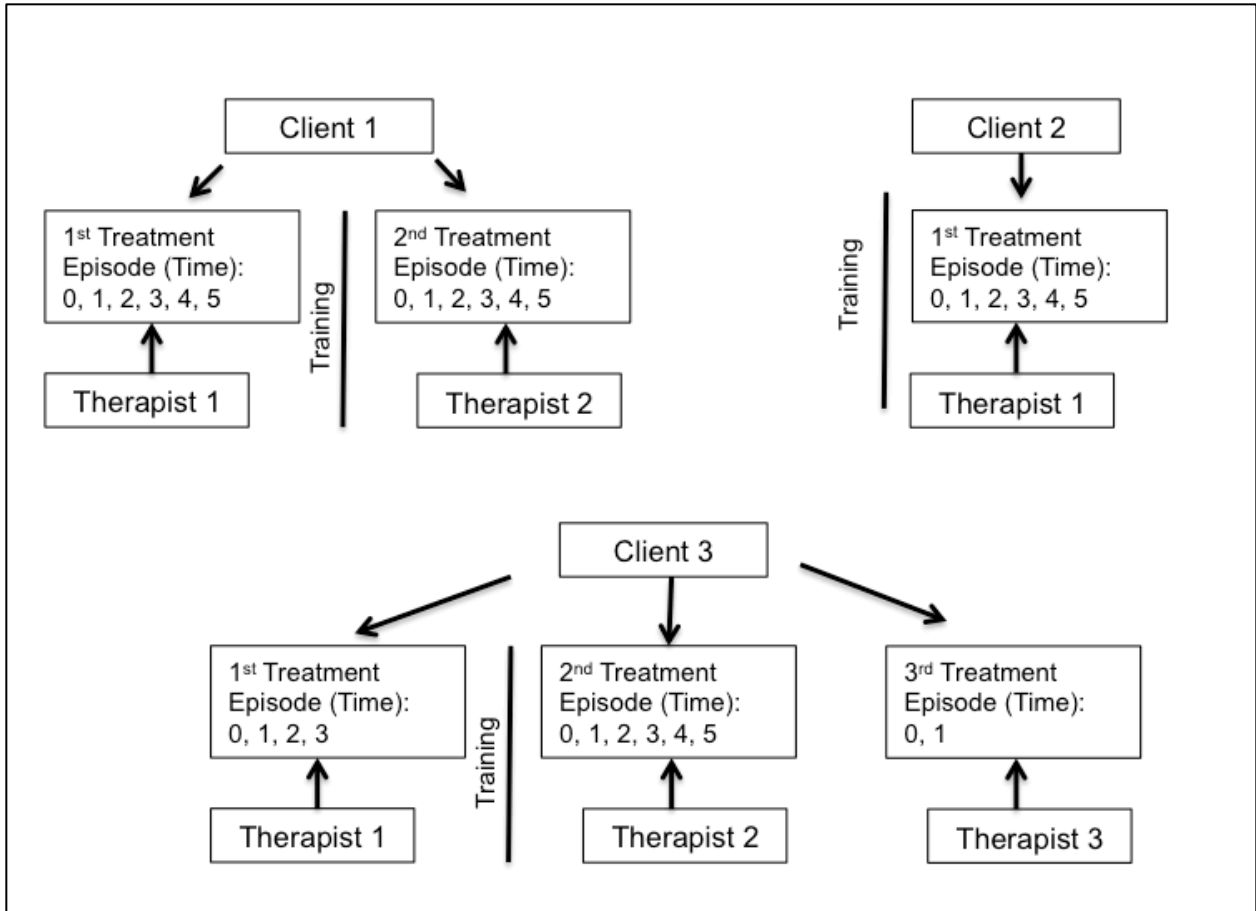
Figure 2. Cross-classification data structure for 3 randomly selected clients in the data set.

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
Anxious/ Avoidant	*Depressed/ Withdrawn*	*Disruptive Behavior*	*Attention/ Hyperactivity*	*None*

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 and 2007

Item	2004 Practice Element Name	2007 Practice Element Name	2004 Scoring	2007 Scoring
1	Exposure		A	A, **B**
2	Modeling		A, D, B, H	A, D, B, H
3	Relaxation		A, D, B, H	A, D, B, H
4	Therapist praise/Rewards		A, D	A, D, **B**, **H**
5	Self-monitoring		A, D	A, D, **B**
6	Psychoeducation-child	Psychoeducational-Child	A, D	A, D, **B**
7	Activity Scheduling		D	D
8	Skill Building/Behavioral Rehearsal	Talent or Skill Building	D, B, **H**	D, B
9	Self-reward/Self-praise		A, D, B, H	A, D, B, H
10	Commands/Limit Setting	Commands	B, H	B, H
11	Psychoeducation-parent	Psychoeducational-Parent	**A**, D, B, H	D, B, H
12	Response Cost		B, H,	B, H
13	Tangible Rewards		A, B, H	A, **D**, B, H
14	Parent Praise	Praise	B, H	**A**, B, H
15	Parent-monitoring	Monitoring	B, H	B, H
16	Directed Play	Attending	B, **H**	B
17	Stimulus/Antecedent Control	Stimulus Control or Antecedent Management	B, H	**D**, B, H
18	Social Skills Training		D, B	**A**, D, B, **H**
19	Family Engagement		**D, H**	**B**
20	Crisis Management		**D**	**B**
21	Play Therapy		**N**	**A, B**
22	Supportive Listening		N	N

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#	Term	Alt Term	Col3	Col4
23	Parent Coping		B	B
24	Emotional Processing		N	N
25	Mentoring		N	N
26	Family Therapy		**N**	**B**
27	Relationship/Rapport Building		A	A, **D**, **B**
28	Educational Support		**N**	**A, B**
29	Maintenance/Relapse Prevention		A, D, **H**	A, D, **B**
30	Peer Modeling/Pairing	Peer Pairing	**D**	**A, B**
31	Cognitive/Coping	Cognitive	A, D, B	A, D, B
32	Natural/Logical Consequences	Natural and Logical Consequences	B	B
33	Insight Building		**N**	**B, H**
34	Assertiveness Training		**N**	**A, D, B**
35	Problem Solving		A, D, B, H	A, D, B, H
36	Time-out	Time Out	B, H	B, H
37	Ignoring or DRO	Differential Reinforcement	B, H	**A**, B, H
38	Communication Skills		D, B	**A**, D, B
39	Line of Sight Supervision		N	N
40	Milieu Therapy		N	N

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
Not at All	*To a Slight Extent*	*To a Moderate Extent*	*To a Great Extent*	*To a Very Great Extent*

	0	1	2	3	4
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 D
Monthly Treatment Progress Summary

SERVICE PROVIDER MONTHLY TREATMENT & PROGRESS SUMMARY
Child and Adolescent Mental Health Division (CAMHD)

Instructions: Please complete and electronically submit this form to CAMHD by the 5th working day of each month (summarizing the time period of 1st to the last day of the previous month). The information will be used in service review, monitoring, planning and coordination in accordance with CAMHD policies and standards. Mahalo!

Client Name:	CR #:	DOB:
Month/Year of Services:	Eligibility Status:	Level of Care (one per form):
Axis I Primary Diagnosis:	Axis I Secondary Diagnosis:	Axis I Tertiary Diagnosis:
Axis II Primary Diagnosis:	Axis II Secondary Diagnosis:	

Service Format (circle all that apply):

Individual   Group   Parent   Family   Teacher   Other:_____

Service Setting (circle all that apply):

Home   School   Community   Out of Home   Clinic/Office   Other:_____

Service Dates:														

Targets Addressed This Month (*number* up to 10):

	Activity Involvement		Community Involvement		Hyperactivity		Positive Peer Interaction		Shyness
	Academic Achievement		Contentment, Enjoyment, Happiness		Learning Disorder, Underachievement		Phobia/Fears		Sleep Disturbance
	Adaptive Behavior/Living Skills		Depressed Mood		Low Self-Esteem		Positive Thinking/ Attitude		Social Skills
	Adjustment to Change		Eating, Feeding Problems		Mania		Pregnancy Education/ Adjustment		Speech and Language Problems
	Aggression		Empathy		Medical Regimen Adherence		Psychosis		Substance Use
	Anger		Enuresis, Encopresis		Occupational Functioning/Stress		Runaway		Suicidality
	Anxiety		Fire Setting		Oppositional/ Non-Compliant Behavior		School Involvement		Traumatic Stress
	Assertiveness		Gender Identity Problems		Peer Involvement		School Refusal/Truancy		Treatment Engagement
	Attention Problems		Grief		Peer/Sibling Conflict		Self-Control		Willful Misconduct, Delinquency
	Avoidance		Health Management		Personal Hygiene		Self-Injurious Behavior		Other:
	Cognitive-Intellectual Functioning		Housing/Living Situation		Positive Family Functioning		Sexual Misconduct		Other:

CR # _____ (please repeat the number here)

Progress Ratings This Month (check appropriate rating for any target numbers endorsed as targets):

#	Deterioration < 0%	No Significant Changes 0%-10%	Minimal Improvement 11%-30%	Some Improvement 31%-50%	Moderate Improvement 51%-70%	Significant Improvement 71%-90%	Complete Improvement 91%-100%	Date (If Complete)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Intervention Strategies Used This Month (check all that apply):

	Activity Scheduling		Emotional Processing		Line of Sight Supervision		Personal Safety Skills		Stimulus or Antecedent Control
	Assertiveness Training		Exposure		Maintenance or Relapse Prevention		Physical Exercise		Supportive Listening
	Attending		Eye Movement, Tapping		Marital Therapy		Play Therapy		Tangible Rewards
	Behavioral Contracting		Family Engagement		Medication/ Pharmacotherapy		Problem Solving		Therapist Praise/Rewards
	Biofeedback, Neurofeedback		Family Therapy		Mentoring		Psychoeducation, Child		Thought Field Therapy
	Care Coordination		Free Association		Milieu Therapy		Psychoeducation, Parent		Time Out
	Catharsis		Functional Analysis		Mindfulness		Relationship or Rapport Building		Twelve-Step Program
	Cognitive		Goal Setting		Modeling		Relaxation		Other:
	Commands		Guided Imagery		Motivational Interviewing		Response Cost		Other:
	Communication Skills		Hypnosis		Natural and Logical Consequences		Response Prevention		Other:
	Crisis Management		Ignoring/Differential Reinforcement of Other Behavior		Parent Coping		Self-Monitoring		
	Cultural Training		Individual Therapy for Caregiver		Parent/Teacher Monitoring		Self-Reward/ Self-Praise		
	Discrete Trial Training		Insight Building		Parent/Teacher Praise		Skill Building		
	Educational Support		Interpretation		Peer Pairing		Social Skills Training		

CR # _____ (please repeat the number here)

Psychiatric Medications (List All)	Total Daily Dose	Dose Schedule	Check if Change	Description of Change
_____	_____	_____	☐	_____
_____	_____	_____	☐	_____
_____	_____	_____	☐	_____
_____	_____	_____	☐	_____
_____	_____	_____	☐	_____

Projected Discharge Date: _____ ☐ **Check if Discharged During Current Month**

IF YOUTH WAS DISCHARGED THIS MONTH, PLEASE COMPLETE ITEMS A & B:

A. Discharge Living Situation (check one):
☐ Home   ☐ Foster Home   ☐ Group Care   ☐ Residential Treatment
☐ Institution/Hospital   ☐ Jail/Correctional Facility   ☐ Homeless/Shelter   ☐ Other:_____

B. Reason(s) for Discharge (check all that apply):
☐ Success/Goals Met   ☐ Insufficient Progress   ☐ Family Relocation
☐ Runaway/Elopement   ☐ Refuse/Withdraw   ☐ Eligibility Change   ☐ Other:_____

Outcome Measures: Optional. If you have any of the following data, please report the most recent scores:

CAFAS (8 Scales): (1-School:) (2-Home:) (3-Community:) (4-Behavior Toward Others:) (5-Moods/Emotions:) (6-Self-Harm:) (7-Substance:) (8-Thinking:) (Total:)			Date:
CASII/CALOCUS (Total):	CASII/CALOCUS (Level of Care):		Date:
CBCL (Total Problems T):	CBCL (Internalizing T):	CBCL (Externalizing T):	Date:
YSR (Total Problems T):	YSR (Internalizing T):	YSR (Externalizing T):	Date:
TRF (Total Problems T):	TRF (Internalizing T):	TRF (Externalizing T):	Date:
Arrested During Month? (Y/N):	School attendance (% of days):		

Comments/Suggestions (*attach additional sheets if necessary*):

Provider Agency & Island: _____	Clinician Name and ID#:_____
Provider Supervisor Signature: _____	Clinician Signature: _____
Submitted to CAMHD (date): _____	Care Coordinator: _____

Monthly Treatment Progress Summary Codebook

DOH Child and Adolescent Mental Health Division

Instructions and Codebook for Provider Monthly Treatment and Progress Summary

Effective July 1, 2008

The instructions and codebook are to be used in conjunction with the CAMHD Service Provider Monthly Treatment and Progress Summary form. This codebook defines the numerous terms and possible responses necessary to accurately complete the form. For questions regarding these definitions or the use of the Monthly Treatment and Progress Summary, please contact the Clinical Services Office at 733-9349.

Instructions

Please complete and electronically submit to CAMHD the Monthly Treatment and Progress Summary by the 5th working day of the month. The summary should pertain to the previous month's services. This form should be completed by the clinician who is most familiar with the current status of the youth and family and with the services provided during the month. When necessary, the responding clinician should gather information from other provider team members to assure the most accurate description possible. Once completed by the clinician, the form should be reviewed and signed by a qualified supervisor.

At the top section, please write the Client Name, CR Number, Date of Birth (DOB), Home School, School Complex, Eligibility Status [i.e., Educationally Supportive (IDEA), Support for Emotional and Behavioral Development (SEBD), Mental Health Only], Axis I Primary Diagnosis, Axis I Secondary Diagnosis, Axis I Tertiary Diagnosis, Axis II Primary Diagnosis, Axis II Secondary Diagnosis, Level of Care, and Month/Year of Services. If some Diagnosis fields do not apply to the youth, please leave those fields blank. The Month/Year of Services refers to the month in which the service was provided, not the date the Monthly Provider Summary was completed. For example, if the report is submitted in the first week of June, the Month/Year of Services would read "May," because the services were delivered in May. For youth receiving more than one level of care during the month, please complete a separate form for each.

Under Service Format, please indicate whether services were delivered in the following manner (more than one format can be selected):

Individual –Working with youth directly

Group –Working with youth along with other youths receiving services

Parent –Working directly with parents or caregivers, with youth not present

Family – Working with parents or caregivers and youth together. Can include other family
members

Teacher – Working with a teacher directly

Other – Another format not specified above; please write description

Under Service Setting, please note whether services were delivered in the following locations (more than one setting can be selected):

Home –Working with youth or family members in the youth's home

School –Working with youth or professionals in the youth's educational setting, other than in the context of an IEP/MP meeting

Community – Working with youth or others in the youth's community/neighborhood

Out of Home – Working with the youth or family in a residential facility

Clinic/Office – Working with the youth or family in a clinical office

Other – Another setting not specified above; please write description

For Service Dates, please provide the dates for each service provided during that month. If additional space is required, please continue writing dates in the area below the boxes provided. If the service was provided out of home (i.e., continuously), please provide start and end dates for that month's services and put the word "to" in between in one of the boxes.

Targets

Targets are the strengths and needs being addressed as part of the mental health services for that youth. When completing the Targets Addressed This Month, please put numbers (1, 2, 3…) rather than checkmarks (X,) to the left of each target addressed. This is so that progress ratings in the next section can be attached to each target. For example, if "Academic Achievement" was targeted, place a "1" in the box to the left of that target on the form. Numbers do not need to reflect any particular order. If more than 10 targets were addressed during the month, please provide only those you feel are the 10 most important. If a target was addressed for which there is no option, please number the "other" box, and write in the target.

The list of treatment targets is intended to provide a summary of strengths and needs that are commonly targeted for change during mental health service provision. These problem areas are NOT diagnostic descriptions and the primary targets for treatment may change over time for a particular youth. For example, when treating a youth with an eating disorder, treatment may target eating/feeding behavior at one point, but target medical regimen adherence or positive family functioning on other occasions. These treatment targets are for progress summary purposes and should NOT replace the detailed specification of goals and objectives as part of the treatment planning process.

Definitions of Targets

1.   **Academic Achievement** – Issues related to general level or quality of achievement in an educational or academic context. This commonly includes performance in coursework, and excludes

cognitive-intellectual ability/capacity issues (#11) and specific challenges in learning or achievement (#24)

2. **Activity Involvement** – Issues related to general engagement and participation in activities. Only code here those activities that are not better described by the particular activity classes of school involvement (#40), peer involvement (#30), or community involvement (#12).

3. **Adaptive Behavior/Living Skills** – Skills related to independent living, social functioning, financial management, and self-sufficiency that are not better captured under other codes such as personal hygiene (#33), self-management/self-control (#43), social skills (#47), housing/living situation (#22), or occupational functioning/stress (#28).

4. **Adjustment to Change** – Issues related to a youth's global response to a life transition or specific challenge (e.g., change of school, living situation, treatment transition or discharge, etc.).

5. **Aggression** – Verbal and/or physical aggression, or threat thereof, that results in intimidation, physical harm, or property destruction.

6. **Anger –** Emotional experience or expression of agitation or destructiveness directed at a particular object or individual. Common physical feelings include accelerated heartbeat, muscle tension, quicker breathing, and feeling hot.

7. **Anxiety** – A general uneasiness that can be characterized by irrational fears, panic, tension, physical symptoms, excessive anxiety, worry, or fear.

8. **Assertiveness** – The skills or effectiveness of clearly communicating one's wishes. For example, the effectiveness with which a child refuses unreasonable requests from others, expresses his/her rights in a non-aggressive manner, and/or negotiates to get what s/he wants in their relationships with others.

9. **Attention Problems** – Described by short attention span, difficulty sustaining attention on a consistent basis, and susceptible to distraction by extraneous stimuli.

10. **Avoidance** – Behaviors aimed at escaping or preventing exposure to a particular situation or stimulus.

11. **Cognitive-Intellectual Functioning** – Issues related to cognitive-intellectual ability/capacity and use of those abilities for positive adaptation to the environment. This includes efforts to increase IQ, memory capacity, or abstract problem-solving ability.

12. **Community Involvement** – Issues related to the amount of involvement in specific community activities within the child's day.

13. **Contentment/Enjoyment/Happiness –** Refers to issues involving the experience and expression of satisfaction, joy, pleasure, and optimism for the future.

14. **Depressed Mood** – Behaviors that can be described as persistent sadness, anxiety, or "empty" mood, feelings of hopelessness, guilt, worthlessness, helplessness, decreased energy, fatigue, etc.

15. **Eating/Feeding Problems**– Knowledge or behaviors involved with the ingestion or consumption of food. May include nutritional awareness, food choice, feeding mechanics (e.g., swallowing, gagging, etc.), and social factors relating with eating situations.

16. **Empathy** – Identifications with and understanding of another person's situation, feelings, and motives.

17. **Enuresis/Encopresis** – Enuresis refers to the repeated pattern of voluntarily or involuntarily passing urine at inappropriate places during the day or at night in bed or clothes. Encopresis refers to a repeated pattern of voluntarily or involuntarily passing feces in inappropriate places.

18. **Fire Setting** – Intentionally igniting fires.

19. **Gender Identity Problems –** Issues related with a youth's self-concept or self-understanding involving gender roles and social behaviors in relation to their biological sex. This does not address self-concept issues involving sexual orientation, which would be coded as "other."

20.   **Grief** – Feelings associated with a loss of contact with a significant person in the youth's environment (e.g., parent, guardian, friend, etc.).

21.   **Health Management** – Issues related to the improvement or management of one's health, inclusive of both physical illness and fitness. In addition to dealing with the general development of health-oriented behavior and management of health conditions, this target can also focus on exercise or lack of exercise.

22.   **Housing/Living Situation** – Refers to finding or stabilizing an appropriate living situation for a youth.

23.   **Hyperactivity** – Can be described by fidgeting, squirming in seat, inability to remain seated, talking excessively, difficulty engaging in leisure activities quietly, etc.

24.   **Learning Disorder, Underachievement** – Refers to specific challenges with learning or educational performance that are not better accounted for by cognitive-intellectual functioning (#11) or general academic achievement (#1).

25.   **Low Self-Esteem** – An inability to identify or accept his/her positive traits or talents, and accept compliments. Verbalization of self-disparaging remarks and viewing him or herself in a negative manner.

26.   **Mania** – An inflated self-perception that can be manifested by loud, overly friendly social style that oversteps social boundaries, and high energy and restlessness with a reduced need for sleep.

27.   **Medical Regimen Adherence** – Knowledge, attitudes, and behaviors related to regular implementation procedures prescribed by a health care professional. Commonly include lifestyle behaviors (e.g., exercise, nutrition), taking medication, or self-administration of routine assessments (e.g., taking blood samples in a diabetic regimen).

28.   **Occupational Functioning/Stress** – Issues related to career interests, seeking employment, obtaining work permits, job performance, or managing job stress or strain that are not better characterized under other targets (e.g., anxiety).

29.   **Oppositional/Non-Compliant Behavior** – Behaviors that can be described as refusal to follow adult requests or demands or established rules and procedures (e.g., classroom rules, school rules, etc.).

30.   **Peer Involvement** – A greater involvement in activities with peers. Activities could range from academic tasks to recreational activities while involvement could range from working next to a peer to initiating an activity with a peer.

31.   **Peer/Sibling Conflict** – Peer and/or sibling relationships that are characterized by fighting, bullying, defiance, revenge, taunting, incessant teasing and other inappropriate behaviors.

32.   **Phobia/Fears** – Irrational dread, fear, and avoidance of an object, situation, or activity.

33.   **Personal Hygiene** – Challenges related to self-care and grooming.

34.   **Positive Family Functioning** – Issues related with healthy communication, problem-solving, shared pleasurable activities, physical and emotional support, etc. in the context of an interaction among multiple persons in a family relation, broadly defined.

35.   **Positive Peer Interaction** – Social interaction and communication with peers that are pro-social and appropriate. This differs from peer involvement (#30) in that it focuses on interactional behavior, styles, and intentions, whereas peer involvement targets actual engagement in activities with peers regardless of interactional processes.

36.   **Positive Thinking/Attitude** – This target involves clear, healthy, or optimistic thinking, and involves the absence of distortions or cognitive bias that might lead to maladaptive behavior.

37.   **Pregnancy Education/Adjustment** – Issues related to helping a pregnant youth prepare and adjust to parenthood.

38.   **Psychosis** – Issues related to atypical thought content (delusions of grandeur, persecution, reference, influence, control, somatic sensations), and/or auditory or visual hallucinations.

39.   **Runaway** – Running away from home or current residential placement for a day or more.

40.   **School Involvement** – Detailed description of amount of involvement in specific school activities within the child's scheduled school day.

41.   **School Refusal/Truancy** – Reluctance or refusal to attend school without adult permission for the absence. May be associated with school phobia or fear manifested by frequent somatic complaints associated with attending school or in anticipation of school attendance, or willful avoidance of school in the interest of pursuing other activities.

42.   **Self-Injurious Behavior** – Acts of harm, violence, or aggression directed at oneself.

43.   **Self-Management/Self-Control** – Issues related to management, regulation, and monitoring of one's own behavior.

44.   **Sexual Misconduct** – Issues related with sexual conduct that is defined as inappropriate by the youth's social environment or that includes intrusion upon or violation of the rights of others.

45.   **Shyness** – Social isolation and/or excessive involvement in isolated activities. Extremely limited or no close friendships outside the immediate family members. Excessive shrinking or avoidance of contact with unfamiliar people.

46.   **Sleep Disturbance** – Difficulty getting to or maintaining sleep.

47.   **Social Skills** – Skills for managing interpersonal interactions successfully. Can include body language, verbal tone, assertiveness, and listening skills, among other areas.

48.   **Speech and Language Problems** – Expressive and/or receptive language abilities substantially below expected levels as measured by standardized tests.

49.   **Substance Abuse/Substance Use** – Issues related to the use or misuse of a common, prescribed, or illicit substances for altering mental or emotional experience or functioning.

50.   **Suicidality** – Issues related to recurrent thoughts, gestures, or attempts to end one's life.

51.   **Traumatic Stress** – Issues related to the experience or witnessing of life events involving actual or threatened death or serious injury to which the youth responded with intense fear, helplessness, or horror.

52.   **Treatment Engagement** – The degree to which a family or youth is interested and optimistic about an intervention or plan, such that they act willfully to participate and work toward the success of the plan.

53.   **Willful Misconduct/Delinquency** – Persistent failure to comply with rules or expectations in the home, school, or community. Excessive fighting, intimidation of others, cruelty or violence toward people or animals, and/or destruction of property.

Progress Ratings

Please provide a single progress rating for each target selected above (up to 10). Numbers 1 through 10 in the left column refer to the targets selected in the Targets Addressed This Month section above. For example, had you selected "Academic Achievement" above, there would be a "1" in the box to the left of that target on that section. Then, the first row of the Progress Ratings, labeled "1," is where you would note the progress ratings associated with academic achievement.

Please place a mark (X,   ) in the column corresponding to your subjective rating of progress associated with this target. When possible, your overall subjective ratings should be informed by a review of objective measures such as any available and relevant questionnaires or behavioral observation data. For example, if a youth receives a T-score of 70 during an intake assessment and the treatment goal is to reduce this score to 60, then if a youth receives a T-score of 65 during a monthly assessment, than 50% progress may be reported [i.e., 70 – 65 / 70 – 60 = 5 / 10 = 50%]. Or if a youth gets into 10 fights per week initially and the treatment goal is to reduce fighting to 0 fights

per week, then during a month in which the youth was fighting only 3 times per week, that would reflect 70% progress [i.e., 10 – 3 / 10 – 0 = 7 / 10 = 70%].

Anchors refer to changes from baseline or beginning of services for that target. Thus, a youth who had reached 90% of an initial goal would receive a rating of "significant improvement." If that progress were to decline to 70% in the following month, the youth would then get a rating of "moderate improvement" for that target for that month (not "deterioration"). "Deterioration" refers to when a target gets worse from the time it was initially addressed. If there is a break in addressing a specific target (e.g., a target is addressed, then not addressed for a month, then addressed again in a later month), use the initial baseline from the first time as the point of comparison. Only when there is a break in the complete episode of care (i.e., discharge followed by later admission), should that reset the baseline for a given target.

If a goal is reached (improvement is complete), the provider may choose to note the date in the rightmost column. This implies that the target is no longer being addressed. Targets that are not complete should be rated again on the following month's summary form.

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Intervention Strategies

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Please place a mark (X,) to the left of any intervention strategies used during the past month. There is no limit to how many may be checked. If strategies were employed that are not in the following list of definitions, please mark the "other" box and write in the strategy used.

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Definitions of Intervention Strategies

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1. **Activity Scheduling** – The assignment or request that a child participate in specific activities outside of therapy time, with the goal of promoting or maintaining involvement in satisfying and enriching experiences.
2. **Assertiveness Training** – Exercises or techniques designed to promote the child's ability to be assertive with others, usually involving rehearsal of assertive interactions.
3. **Attending** – Exercises involving the youth and caregiver playing together in a specific manner to facilitate their improved verbal communication and nonverbal interaction. Can involve the caregiver's imitation and participation in the youth's activity, as well as parent-directed play (previously called "Directed Play").
4. **Behavioral Contracting** – Development of a formal agreement specifying rules, consequences, and a commitment by the youth and relevant others to honor the content of the agreement.
5. **Biofeedback/ Neurofeedback** – Strategies to provide information about physiological activity that is typically below the threshold of perception, often involving the use of specialized equipment.
6. **Care Coordination** – Coordinating among the youth's service providers to ensure effective communication, receipt of appropriate services, adequate housing, etc.
7. **Catharsis** – Strategies designed to bring about the release of intense emotions, with the intent to develop mastery of affect and conflict.

8. **Cognitive** – Any techniques designed to alter interpretation of events through examination of the child's reported thoughts, typically through the generation and rehearsal of alternative counter-statements. This can sometimes be accompanied by exercises designed to comparatively test the validity of the original thoughts and the alternative thoughts through the gathering or review of relevant information.
9. **Commands** – Training for caregivers in how to give directions and commands in such a manner as to increase the likelihood of child compliance.
10. **Communication Skills** – Training for youth or caregivers in how to communicate more effectively with others to increase consistency and minimize stress. Can include a variety of specific communication strategies (e.g., active listening, "I" statements).
11. **Crisis Management** – Immediate problem solving approaches to handle urgent or dangerous events. This might involve defusing an escalating pattern of behavior and emotions either in person or by telephone, and is typically accompanied by debriefing and follow-up planning.
12. **Cultural Training** – Education or interaction with culturally important values, rituals, or sites with no specific practices identified.
13. **Discrete Trial Training** – A method of teaching involving breaking a task into many small steps and rehearsing these steps repeatedly with prompts and a high rate of reinforcement.
14. **Educational Support** – Exercises designed to assist the child with specific academic problems, such as homework or study skills. This includes tutoring.
15. **Emotional Processing** – A program based on an information processing model of emotion that requires activation of emotional memories in conjunction with new and incompatible information about those memories.
16. **Exposure** – Techniques or exercises that involve direct or imagined experience with a target stimulus, whether performed gradually or suddenly, and with or without the therapist's elaboration or intensification of the meaning of the stimulus.
17. **Eye Movement/ Tapping** – A method in which the youth is guided through a procedure to access and resolve troubling experiences and emotions, while being exposed to a therapeutic visual or tactile stimulus designed to facilitate bilateral brain activity.
18. **Family Engagement** – The use of skills and strategies to facilitate family or child's positive interest in participation in an intervention.
19. **Family Therapy** – A set of approaches designed to shift patterns of relationships and interactions within a family, typically involving interaction and exercises with the youth, the caregivers, and sometimes siblings.
20. **Free Association** – Technique for probing the unconscious in which a person recites a running commentary of thoughts and feelings as they occur.
21. **Functional Analysis** – Arrangement of antecedents and consequences based on a functional understanding of a youth's behavior. This goes beyond straightforward application of other behavioral techniques.
22. **Goal Setting** – Setting specific goals and developing commitment from youth or family to attempt to achieve those goals (e.g., academic, career, etc.).
23. **Guided Imagery** – Visualization or guided imaginal techniques for the purpose of mental rehearsal of successful performance. Guided imagery for the purpose of physical relaxation (e.g., picturing calm scenery) is not coded here, but rather coded under relaxation (#50).
24. **Hypnosis** – The induction of a trance-like mental state achieved through suggestion.
25. **Ignoring/Differential Reinforcement of Other Behavior** – The training of parents or others involved in the social ecology of the child to selectively ignore mild target behaviors and selectively attend to alternative behaviors.
26. **Individual Therapy for Caregiver** – Any therapy designed directly to target individual (non-dyadic) psychopathology in one or more of the youth's caregivers. If the therapy for caregivers

involves marital therapy (#31) or communication skills (#10) those are not coded here, unless there are additional services for individual caregiver psychopathology, in which case all that apply should be coded.

27. **Insight Building** – Activity designed to help a youth achieve greater self-understanding.
28. **Interpretation** – Reflective discussion or listening exercises with the child designed to yield therapeutic interpretations. This does not involve targeting specific thoughts and their alternatives, which would be coded as cognitive/coping.
29. **Line of Sight Supervision** – Direct observation of a youth for the purpose of assuring safe and appropriate behavior.
30. **Maintenance/Relapse Prevention** – Exercises and training designed to consolidate skills already developed and to anticipate future challenges, with the overall goal to minimize the chance that gains will be lost in the future
31. **Marital Therapy** – Techniques used to improve the quality of the relationship between caregivers.
32. **Medication/ Pharmacotherapy** – Any use of psychotropic medication to manage emotional, behavioral, or psychiatric symptoms.
33. **Mentoring** – Pairing with a more senior and experienced individual who serves as a positive role model for the identified youth.
34. **Milieu Therapy** – A therapeutic approach in residential settings that involves making the environment itself part of the therapeutic program. Often involves a system of privileges and restrictions such as a token or point system.
35. **Mindfulness** – Exercises designed to facilitate present-focused, non-evaluative observation of experiences as they occur, with a strong emphasis of being "in the moment." This can involve the youth's conscious observation of feelings, thoughts, or situations.
36. **Modeling –** Demonstration of a desired behavior by a therapist, confederates, peers, or other actors to promote the imitation and subsequent performance of that behavior by the identified youth.
37. **Motivational Interviewing** – Exercises designed to increase readiness to participate in additional therapeutic activity or programs. These can involve cost-benefit analysis, persuasion, or a variety of other approaches.
38. **Natural and Logical Consequences** – Training for parents or teachers in (a) allowing youth to experience the negative consequences of poor decisions or unwanted behaviors, or (b) delivering consequences in a manner that is appropriate for the behavior performed by the youth.
39. **Parent Coping** – Exercises or strategies designed to enhance caregivers' ability to deal with stressful situations, inclusive of formal interventions targeting one or more caregiver.
40. **Parent/Teacher Monitoring** – The repeated measurement of some target index by the parent, teacher, or other adult involved in the child's social ecology.
41. **Parent/Teacher Praise** – The training of parents, teachers, or other adults involved in the social ecology of the child in the administration of social rewards to promote desired behaviors. This can involve praise, encouragement, affection, or physical proximity.
42. **Peer Pairing** – Pairing with another youth of same or similar age to allow for reciprocal learning or skills practice.
43. **Personal Safety Skills** – Training for the youth in how to maintain personal safety of one's physical self. This can include education about attending to one's sense of danger, body ownership issues (e.g., "good touch-bad touch"), risks involved with keeping secrets, how to ask for help when feeling unsafe, and identification of other high-risk situations for abuse.
44. **Physical Exercise –** The engagement of the youth in energetic physical movements to promote strength or endurance or both. Examples can include running, swimming, weight-lifting, karate, soccer, etc. Note that when the focus of the physical exercise is also to produce talents or

competence and not just physical activity and conditioning, the code for "Skill Building" (#55) can also be applied.

45. **Play Therapy** – The use of play as a primary strategy in therapeutic activities. This may include the use of play as a strategy for clinical interpretation. Different from Attending (#3), which involves a specific focus on modifying parent-child communication. This is also different from play designed specifically to build relationship quality (#49).

46. **Problem Solving** – Techniques, discussions, or activities designed to bring about solutions to targeted problems, usually with the intention of imparting a skill for how to approach and solve future problems in a similar manner.

47. **Psychoeducational-Child** – The formal review of information with the child about the development of a problem and its relation to a proposed intervention.

48. **Psychoeducational-Parent** – The formal review of information with the caregiver(s) about the development of the child's problem and its relation to a proposed intervention. This often involves an emphasis on the caregiver's role in either or both.

49. **Relationship/Rapport Building** – Strategies in which the immediate aim is to increase the quality of the relationship between the youth and the therapist. Can include play, talking, games, or other activities.

50. **Relaxation** – Techniques or exercises designed to induce physiological calming, including muscle relaxation, breathing exercises, meditation, and similar activities. Guided imagery exclusively for the purpose of physical relaxation is also coded here.

51. **Response Cost** – Training parents or teachers how to use a point or token system in which negative behaviors result in the loss of points or tokens for the youth.

52. **Response Prevention** – Explicit prevention of a maladaptive behavior that typically occurs habitually or in response to emotional or physical discomfort.

53. **Self-Monitoring** – The repeated measurement of some target index by the child.

54. **Self-Reward/Self-Praise** – Techniques designed to encourage the youth to self-administer positive consequences contingent on performance of target behaviors.

55. **Skill Building** – The practice or assignment to practice or participate in activities with the intention of building and promoting talents and competencies.

56. **Social Skills Training** – Providing information and feedback to improve interpersonal verbal and non-verbal functioning, which may include direct rehearsal of the skills. If this is paired with peer pairing (#42), that should be coded as well.

57. **Stimulus/Antecedent Control** – Strategies to identify specific triggers for problem behaviors and to alter or eliminate those triggers in order to reduce or eliminate the behavior.

58. **Supportive Listening** – Reflective discussion with the child designed to demonstrate warmth, empathy, and positive regard, without suggesting solutions or alternative interpretations.

59. **Tangible Rewards** – The training of parents or others involved in the social ecology of the child in the administration of tangible rewards to promote desired behaviors. This can involve tokens, charts, or record keeping, in addition to first-order reinforcers.

60. **Therapist Praise/Rewards** – The administration of tangible (i.e., rewards) or social (e.g., praise) reinforcers by the therapist.

61. **Thought Field Therapy** – Techniques involving the tapping of various parts of the body in particular sequences or "algorithms" in order to correct unbalanced energies, known as thought fields.

62. **Time Out** – The training of or the direct use of a technique involving removing the youth from all reinforcement for a specified period of time following the performance of an identified, unwanted behavior.

63. **Twelve-Step Program** – Any programs that involve the twelve-step model for gaining control over problem behavior, most typically in the context of alcohol and substance use, but can be used to target other behaviors as well.

For medication interventions please list each psychiatric medication the youth is taking (e.g., Adderall ER), describe the prescribed total daily dose for each medication (e.g., 30 mg,), identify the prescribed dose schedule (e.g., 2x/week, 3x/day, 15-10-5/day, etc.), place a check mark in the appropriate box if there was a change in the medication or regimen during the reporting month, and provide a description of the change on the line to the right (e.g., new medication, daily dosage change from 10 to 30 mg, change in dose schedule from 5-5/day to 10-10-10/day, etc.).

For Projected End Date, please indicate the expected date for termination of the services for which this form was completed.

For Discharged During Month please indicate if the youth was discharged from your program during the reporting month. If the youth was discharged, please indicate the Living Situation that the youth was entering upon discharge and the Reason for Discharge. For Projected End Date, please indicate the expected date for termination of the services for which this form was completed.

Living Situation upon Discharge

Please place a mark (X,   ) to the left of statement that best describes the type of living environment in which the youth was expected to reside at the time of discharge. Please select only one option. If the youth's living situation at discharge is not well described by the following list of definitions, please mark the "other" box and write in the youth's living situation.

1. **Home** - Youth to live in a house, apartment, trailer, hotel, dorm, barrack, and/or single room occupancy. This excludes situations better characterized as foster homes.
2. **Foster Home**-Youth to reside in a foster home or therapeutic foster home. A foster home is a home that is licensed to provide foster care to children, adolescents, and/or adults.
3. **Group Care**-Youth to reside in a group care facility. This level of care may include a group home, therapeutic group home, or board and care. This excludes community-based residential and hospital-based residential care
4. **Residential Treatment**- Youth to reside in a community-based residential treatment, rehabilitation center, or other residential treatment that is not better characterized as a group home or institution/hospital facility. An organization, not licensed as a psychiatric hospital, whose primary purpose is the provision of individually planned programs of mental health treatment services in conjunction with residential care for children and youth. The services are provided in facilities that are certified by state or federal agencies or through a national accrediting agency.
5. **Institutional/Hospital**-Youth resides in an institutional care or hospital-based residential care facility with care provided on a 24 hour, 7 day a week basis. This level of care may include a skilled nursing/intermediate care facility, nursing homes, institutes of mental disease, inpatient psychiatric hospital, psychiatric health facility, Veterans Affairs hospital, or state hospital.
6. **Jail/Correctional Facility**-Youth resides in a Jail and/or Correctional facility with care provided on a 24 hour, 7 day a week basis. This level of care may include a jail, correctional facility, detention centers, prison, youth authority facility, juvenile hall, boot camp, or boys ranch.

7. **Homeless/Shelter**- A youth is considered homeless if s/he lacks a fixed, regular, and adequate nighttime residence or his/her primary nighttime residency is a supervised publicly or privately operated shelter designed to provide temporary living accommodations, an institution that provides a temporary residence for individuals intended to be institutionalized, or a public or private place not designed for, or ordinarily used as, a regular sleeping accommodation for human beings (e.g., on the street). Youth who were discharged due to extended runaway or elopement episode should be recorded in this category.

Reason(s) for Discharge

Please place a mark (X,) to the left of each statement that describes the reasons for discharging youth from the program during the reporting month. There is no limit to how many may be checked. If the discharge reason is not well characterized by the following list of definitions, please mark the "other" box and write in the reason.

1. **Success/Goals Met**-Youth was clinically discharged due to sufficient treatment progress (e.g., symptoms reduced, functioning improved), treatment goals were met, youth was evaluated and services were determined unnecessary, services were completed, or youth was moving to a less restrictive and intensive level of care.
2. **Insufficient Progress**-Youth was discharged from service without showing sufficient treatment progress to be judged as clinically successful (i.e., little symptom reduction, improvement in functioning, or goal attainment was achieved).
3. **Family Relocation**-Youth was discharge because the youth and family moved out of state or out of the service area.
4. **Runaway/Elopement**-Youth was discharged in association with an extended period of unavailability for treatment because the youth had runaway from home or eloped from the program.
5. **Refuse/Withdraw**-Youth was discharged due to parental refusal, non-participation in treatment, lack of consent, or other indication that client withdrew from services against professional advice.
6. **Eligibility Change**-Youth was discharged in association with a change in eligibility for services, such as a termination of a court order or commitment, aging out of child and adolescent services, loss of Medicaid insurance, etc.

Please provide any other Comments or Suggestions for the youth's care coordinator you think would be important. If scores are available on any of the Outcome Measures recommended in the Interagency Practice Guidelines, please provide them along with dates in the optional section provided. Include whether or not youth was arrested during the past month, and an estimate of the percentage of school days that were attended. If school is attended in a residential setting, this counts toward the percentage of days attended. For the CAFAS, the numbered spaces refer to the following scales: 1-School, 2-Home, 3-Community, 4-Behavior Towards Others, 5-Moods/Emotions, 6-Self-Harm, 7-Substance, 8-Thinking. "Total" refers to the sum of these 8 scales. Please write the name of the agency including location (e.g., Maui, Big Island) and name of the clinicians (along with CAMHMIS ID#) and provider, along with appropriate signatures of the clinician completing the form and the qualified supervisor. Note the date that the form was submitted electronically to CAMHD and provide name of Care Coordinator.

THERAPIST BACKGROUND QUESTIONNAIRE

1. CAMHD Provider ID#:	2. Agency Name:	3. Today's Date: / /	4. Age:	5. Gender: Male Female

6. Race/Ethnicity: (Check ALL that apply)

Alaska Native or American Indian	Asian	Black or African American	Hispanic or Latino	Pacific Islander	White or Caucasian
☐ Alaska Native	☐ Asian Indian	☐ Black or African American	☐ Chicano or Mexican	☐ Fijian	☐ Caucasian
☐ American Indian	☐ Chinese		☐ Puerto Rican	☐ Guamanian or Chamorro	☐ Portuguese
	☐ Filipino		☐ Other Hispanic or Latino:	☐ Marshallese	
	☐ Japanese			☐ Micronesian	
	☐ Korean		_____	☐ Native Hawaiian	
	☐ Okinawan			☐ Palauan	
	☐ Thai			☐ Samoan	
	☐ Vietnamese			☐ Tahitian	
	☐ Other Asian:			☐ Tongan	
	_____			☐ Other Pacific Islander:	
				_____	

☐ **Other Ethnicity**: _____

☐ **Ethnicity Unknown**

7. Race/Ethnicity Identity – If you checked more than one Race/Ethnicity above, please CIRCLE the one that you identify with most.

8. Degrees Earned: (Check ALL that apply)	9. Date of most advanced degree:	10. Professional Specialty: (Check ONLY one)	11. Position: (Check ONLY one)
_____ HS diploma or GED		_____ Counselor	_____ Qualified Mental Health Professional
_____ A.A./Voc./Non-Degree Cert. (e.g., CSAC)	(Mo/Yr)	_____ Marriage & Family Therapist	_____ Mental Health Professional
_____ B.A./B.S.	____/____	_____ Psychiatrist	_____ Paraprofessional
_____ M.Ed.		_____ Psychologist	_____ Other (specify:
_____ MSW, LCSW, etc.		_____ Social Worker	)
_____ M.A./M.S. Counseling	**10. State licensed?**	_____ Other (specify:	
_____ M.A./M.S. Other (specify:		)	
)	Yes No		
_____ R.N., L.P.N., etc.			
_____ Doctoral Student/Intern			
_____ Psy.D.			
_____ Ph.D.			
_____ M.D.			
_____ Other (specify:			
)			

12. **Level of Care** (type of therapeutic service) you provide: (Check ALL that apply; if you do not provide direct care services, check "Other" and enter position title)

Out-of-Home	Intensive Home & Community	Outpatient	Support Services
☐ Acute Hospitalization	☐ Intensive In-Home	☐ Assessment	☐ Peer Support
☐ Community High Risk (Benchmark)	☐ Intensive Outpatient	☐ Functional Family Therapy (FFT)	☐ Respite Home
☐ Community Mental Health Shelter	☐ Multisystemic Therapy (MST)	☐ (Less Intensive) Outpatient	☐ Respite Support
☐ Community Residential		☐ Medication Management	
☐ Hospital Residential		☐ Parent Skills Training	
☐ Multidimensional Treatment Foster Care (MTFC)			
☐ Therapeutic Foster Care			
☐ Therapeutic Group Home	☐ Other (specify position): _____		

13. **Primary Level of Care** (type of therapeutic service) – If you checked more than one Level of Care above, please CIRCLE the one that you provide the most.

14. Years of clinical **training** (beyond undergraduate degree) _____ ended _____

15. Years of full-time clinical **experience** since your training

16. How many **active cases** do you typically carry at one time? _____

17. About how many **hours of supervision** do you receive each week? _____

18. Please check ALL **theoretical orientations** you use in your clinical work:

19. **Primary theoretical orientation** – If you checked more than one Theoretical Orientation above, please CIRCLE the one that you use/identify with most.

_____ Behavioral

_____ Cognitive or Cognitive-Behavioral

_____ Eclectic

_____ Object Relations

_____ Psychodynamic

_____ Systems or Family-Systems

_____ Other (specify: _____)

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