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Efficacy of ACT Components to Increase Effectiveness of Behavioral Parent Training

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By

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Abstract

Prior research has demonstrated both the efficacy of behavioral parent training in effectively teaching parent skill implementation; and of an Acceptance and Commitment Therapy (ACT) based training program in improving perceived parenting abilities. The purpose of the present study was to assess the efficacy of an ACT based training component, following a behavioral parent training, in increasing participant integrity of skill implementation. Targeted dependent measures included: (1) participant integrity of skill implementation (analog & in vivo), (2) score on Parental Locus of Control Scale (PLOCS), (3) frequency of participant child problem behavior, and (4) frequency of coercive caregiver interactions. Although the effects of intervention on reducing child problem behavior were limited, the overall effects of intervention were determined to have been successful in their primary objectives of altering caregiver covert verbal behavior in regards to parenting abilities and increasing integrity of implementation.

Chapter 1: Introduction

Efficacy of ACT Components to Increase Effectiveness of Behavioral Parent Training

Behavioral parent training (i.e., BPT) is a method for teaching parents skills aimed at improving child behavior through the targeting of parent-child interactions. Shaffer, Kotchick, Dorsey, and Forehand (2001) identify the following core elements of traditional behavioral parent trainings: (1) focusing on the parent; (2) emphasizing pro-social behavior; (3) teaching parents to define, identify, and record behavior; (4) instructing parents in behavioral principles; (5) teaching novel parenting skills through didactic instruction, modeling, role-playing, and in home practice; (6) maximizing generalization from the clinic to the home; and, under certain contexts, (7) interrupting parental, family, and community risks which may impede acquisition or maintenance of parenting skills and adaptive child behavior.

The various formats of behavioral parent training delivery include: (1) didactic instruction; (2) providing written manuals or audiotapes; (3) showing videos; (4) leading discussions; (5) teaching child-management skills in the classroom; and/or (6)at home via modeling and rehearsal techniques (Graziano & Diament, 1992; Moreland, Schwebel, Beck, & Wells, 1982; O'Dell, 1974). Graziano and Diament (1992) however, suggested that components such as modeling, role-playing and feedback may be imperative to achieving improved outcomes in parent training and may demonstrate superior success to didactic instruction alone. As a result, many behavioral parent trainings, including *The Tools for Positive Behavior Change* (Van Camp, Vollmer et al., 2008), incorporate such

components as modeling, rehearsal, and feedback in addition to didactic instruction and discussion (Hudson, 1982; Rickert et al., 1988).

BPT Content

The skills most commonly included in behavioral parent trainings include: (1) reinforcement, (2) extinction, (3) differential reinforcement and (4) antecedent manipulations (Van Camp, Montgomery et al., 2008). Behavioral parent trainings conducted within the Florida Child Welfare system, have yielded successful outcomes in teaching these skills in both relatively small groups and individualized in-home trainings. The primary area of research interest within these studies has involved the skill acquisition and integrity of implementation of caregiver's attending the behavioral parent training, with few reporting on the long-term effects of training child or parent behavior (Van Camp, Montgomery et al., 2008).

Additional Components have included training on specific skills related to the target caregiver behavior of interest (Pevsner, 1982); discrete trial training; and conflict negotiation (Lafasakis & Sturmey, 2007). A number of studies have also involved training caregivers of children diagnosed with autism and/or other developmental disabilities in behavior modification procedures (Graziano & Diament, 1992; O'Dell, 1974).

Tools for Positive Behavior Change

The behavioral parent curriculum previously investigated by a number of researchers is the *Tools for Positive Behavior Change* (see Stoutimore, Williams, Neff & Foster, 2008; Van Camp, Vollmer et al., 2008); a brief overview is provided here. Each

"tool" or targeted skill set is a behavioral procedure that is task analyzed into multiple steps. The nine tools initially identified for investigation include:

- *Stay Close* – this tool utilizes non-contingent reinforcement to establish the caregiver as a conditioned positive reinforcer. Specific steps include: speaking with the child in a pleasant non-threatening manner, asking open ended questions, and using empathy statement whiles ignoring the occurrence of inappropriate (non-harmful) behavior.
- *Use Reinforcement/Give Positive Consequences* – this tool utilizes positive reinforcement to increase the future probability of desirable behavior. This is accomplished through the delivery of specific verbal praise and/or preferred tangible/activity contingent upon the occurrence of desirable/appropriate behavior.
- *Planned Ignoring/Ignore Junk Behavior* – this tool utilizes extinction procedures to decrease the occurrence of attention maintained in appropriate (non-harmful) behavior.
- *Pivot* – this tool utilizes differential reinforcement procedures to reinforce the occurrence of appropriate alternative behavior following inappropriate (non-harmful) behavior and/or in the presence of other children. Specifically, the caregiver delivers positive reinforcement upon the occurrence of appropriate/alternative behavior following the occurrence of an undesirable behavior and/or provides positive reinforcement for the appropriate behavior of other children present, subsequently positive reinforcing the target child upon the occurrence of appropriate/alternative behavior.

- *Stop-Redirect Use Reinforcement/Give Positive Consequences* – this tool utilized slightly modified differential reinforcement procedures to address potentially harmful behaviors that could result in minor injury. Specifically the tool involves telling the child to stop engaging in target behavior (providing gentle guidance if necessary), redirecting them to an alternative/appropriate activity (providing gentle guidance as necessary), and providing positive reinforcement upon their engagement in appropriate/alternative behavior.
- *Set Expectations* – this tool utilized verbally mediated rule-governed behavior to dictate to the child, the expected desirable behavior and the delayed consequence/reinforcer that could be earned contingent upon their engagement in the behavior.
- *Using Contracts* – this tool utilized verbally mediated rule-governed behavior to dictate to the child, often more complex/detailed forms of desirable behavior and/or more delayed consequences than could be achieved through the set expectations tool.
- *Time*-Out – this tool was designed to be utilized as a form of both extinction (time-out from positive reinforcement) and a punishment procedure contingent upon the occurrence of inappropriate behavior that could not be immediately addressed through redirection procedures. This tool involved the caregiver, tell the child to stop the target behavior, removing them to a pre-designated time-out area and mandating they remain (without access to reinforcement) for a predetermined interval (up to 3 minutes), until they were calm for the whole interval. Upon completion of the interval, they are allowed to return to reinforcing

activities, and provided with specific praise following the occurrence of appropriate behavior.

- *ABC's of Behavior* – this tool utilized an abridged form of functional assessment. Specifically caregivers were taught to identify the antecedents and consequences occurring in the presence of problem behavior(s). This prepared caregivers to recognize relevant setting events and modify their interactions (increase appropriate tool implementation) with children.

The *Tools* curriculum is traditionally formatted as a 30-hour course, taught in 3 hour classes, over the course of 10 consecutive weeks. A variation of the *Tools* curriculum, *The Essential Tools for Positive Behavior Change,* traditionally formatted as a 15-hour course, taught in 3 hour classes over the course of 5 consecutive weeks, was utilized in this study. The *Tools* are typically taught using a behavioral skills training (BST) procedure which consists of didactic instruction, modeling, rehearsal, and feedback (Miltenberger, 2008). In class format, this occurs in the form of lecturing, modeling the Tool, providing the opportunity for rehearsal by role-playing, and providing feedback to the caregivers. Specifically, in-class role-plays are conducted by the trainer or co-trainer with the participants in which the trainer or co-trainer plays the role of the child and the participant plays the role of the parent. Thus, the participant practices the Tool with the trainer to ensure competency. In addition to role-playing with the trainers, participants may have the opportunity to role-play with each other.

Integrity of Treatment Implementation

In addition to extending the current efficacy behavioral parent trainings, this study seeks to extend the current literature in the area of treatment fidelity through the

assessment of relevant fidelity components of both trainer implementation and caregiver (trainee) intervention implementation.

The integrity with which intervention components are implemented by both trainer(s) and trained caregiver(s) may have a significant effect on intervention outcomes. Therefore, valid measures of treatment fidelity permit deductions as to whether change or lack of change in dependent variables is the result of treatment procedures or their application. Schoenwald et al. (2011) identified three components of treatment fidelity: therapist adherence, therapist competence, and treatment differentiation. Therapist adherence is defined as "the degree to which a therapist uses prescribed procedures and avoids proscribed procedures"; treatment differentiation is defined as "the extent to which treatments differ on critical dimensions"; and therapist competence is defined as "the level of skill and judgment used in executing the treatment" (Schoenwald et al., 2011).

The three components of treatment fidelity may be measured through direct methods (i.e. observation of live, video or audio-recorded sessions by trained observers) and/or indirect methods (e.g. questionnaires or checklists completed by therapists, clients, or experts; review of homework completed by clients; or third party review of written case notes). The specific processes involved in measuring treatment fidelity include: identifying pertinent treatment components; determining who will provide ratings on the components; obtaining ratings on the components; and devising a summary score based on the ratings (Schoenwald et al.. 2011).

Although previous research has demonstrated a relationship between integrity of intervention implementation and child outcomes; a minimal number of studies regarding

behavioral consultation have measured treatment integrity, particularly in the home environment (Gresham, Gansle, & Noell, 1993; Moncher & Prinz, 1991; Sheridan, Welch, & Orme, 1996). The measurement of treatment implementation within a consultation context, in many cases proves to be an arduous task for many researchers due to the difficulties involved in defining and controlling integrity measurement. One primary reason for this surrounds the implementation of the behavioral intervention plan by an intermediate person (i.e. parent, caregiver, staffs). A secondary reason is due to the lack of a standardized, systematic method of measuring treatment implementation integrity (Swanger-Gagne, 2010).

Noell (2008) offered the following definition of treatment implementation integrity or intervention implementation integrity: "the degree to which parents, teachers, or other consultees implement the intervention developed within consultation as intended or designed." Swanger-Gagne (2010) built upon this definition to propose the following novel approach to treatment integrity, defining it as "full engagement in the intervention implementation phase, which is operationalized as the degree with which consultee's self-monitor, record, and submit documentation of integrity measures."

Swanger-Gagne (2010) further discusses the three common methods for measuring intervention implementation integrity including: (a) self-report (Colton & Sheridan, 1998), (b) permanent products (Mortenson & Witt, 1998), and (c) direct observations (Jones, Wickstrom & Friman, 1997). Self-report measures assess adherence through the use of intervention-specific checklists of intervention components, completed by consultees. Provided their simplicity, feasibility, and convenience for providing performance feedback to consultees, self-report measures are the most commonly used

measure employed by researchers assessing intervention implementation integrity. However, due to their reliance upon consultees to record implementation, self-report measurers present the opportunity for overestimation of implementation integrity (Jones, Wickstrom & Friman, 1997).

Permanent products present an alternative and/or supplementary means through which to assess intervention implementation via tangible evidence generated on intervention records or protocols. The utilization of permanent products shares the simplicity of self-reports however are a natural result of the intervention implementation. In addition, permanent product measures provide superior information regarding implementation integrity than self-report measures. Permanent product measures do however present limitations; the primary being that some intervention components may not naturally result in a permanent product (e.g., verbal praise) (Swanger-Gagne, 2010).

Direct observation, is the third method of assessing intervention implementation integrity. Although this method provides the most objective measurement of intervention components, it is the least commonly employed assessment method due to (a) the necessary training of a reliable observer to assess direct implementation of intervention components in naturalistic settings during multiple observations and reactivity produced amongst those implementing the intervention (Swanger-Gagne, 2010).

Swanger-Gagne (2010), sought to assess intervention implementation integrity by parents in home settings. Based on the recommendation of Noell (2008), a multidimensional approach to assessing intervention implementation integrity was utilized. The two dimensions assessed included a self-report and permanent product measures. Self-report measures, assessed fidelity criteria through a checklist completed

by parents in which they indicated whether each step of the behavioral intervention plan was completed or not applicable (e.g., no occasion to deliver the step, child did not perform required behavior, change in schedule). The number of steps completed on the self-report form was summed and an average of fidelity criteria was obtained based on the total number of possible steps, excluding NA responses. Permanent product measures included charts on which evidence (e.g., stickers, notes, marks, and checks) was recorded, demonstrating the implementation of specific intervention steps; home-school notes; progress monitoring forms; positive reinforcement charts; compliance matrices; activity checklists; self-monitoring forms; charts; token economies; and time-out logs (Swanger-Gagne, 2010).

Limitations of BST/Tools for Positive Parenting

Although BST has proved an efficient and effective format through which caregivers may be taught behavior management techniques, limitations exist among some populations.

Dumas (2005) highlighted the ability of strategically planned modification of contingencies in the daily lives of caregivers to modify their maladaptive behavior during interactions with their children. However, Dumas also calls attention to the lack of such an operant model to account for numerous facets of human behavior alone. This is due to the ability for human behavior to develop and be maintained under the control of rules that may not readily respond to changes in reinforcement or punishment contingencies (Bargh & Chartrand, 1999; Bargh & Ferguson, 2000). This creates a significant limitation for the effectiveness of BPT programs, particularly when offered to caregivers whom

have established long histories of engaging in ineffective patterns of interaction that are resistant to change.

Caregiver's engaging in these patterns of behavior, may engage in rigid rule-governance which may consequently lead to an increased susceptibility to experiencing learned helplessness; a condition in which an individual may behave helplessly, even when the opportunity is restored for them to help themselves by avoiding an unpleasant circumstances to which they have been subjected. This learned helplessness may be hypothesized to result in an insufficient motivation to engage in taught behaviors, in spite of the fact they may demonstrate fluency. Another variable which may contribute to the learned helplessness of a parent is the rate of child problem behavior. These factors may not typically take into account during mainstream caregiver trainings. A primary goal of this study is to identify a subsequent treatment to BST trainings which may increase their effectiveness with these if not all populations.

The remainder of this introduction will shift focus from traditional behavioral parent training interventions to acceptance and mindfulness-based intervention components that may bolster these interventions.

Acceptance and Mindfulness-Based Interventions

Acceptance and mindfulness-based techniques have recently come to the forefront as a component in many interventions to address a wide range of issues. Therapies that utilize these techniques are commonly categorized as mindfulness-based or mindfulness-oriented psychotherapies. Mindfulness-based psychotherapies include: mindfulness based stress reduction and mindfulness-based cognitive therapy. Mindfulness-oriented psychotherapies do not involve the teaching of meditation practices during the training of

mindful attention and include: dialectal behavior therapy, acceptance-based techniques, and acceptance and commitment therapy. Both mindfulness-based and mindfulness-oriented psychotherapies incorporate the use of meditative concepts to promote present moment awareness of conscious thoughts, feelings, and body sensations and seek to recognize and modify the ways in which individuals relate to these private events. They have both also been applied in a number of areas including the treatment of eating disorders (Baer, Fischer & Huss, 2005), generalized anxiety disorder (Evans et al. 2008), alcohol and substance abuse (Witkiewitz, Marlatt & Walker, 2005), and other mood-related disorders amongst other areas (Cohen & Semple, 2010).

Acceptance and Commitment Therapy has been selected as the basis of this study. Due primarily to its behavioral based foundation, sufficient empirical support in related (i.e. anxiety, stress reduction), and accessibility of resources and protocols (i.e. metaphors, exercises, etc.).

Chapter 2: Acceptance and Commitment Therapy

ACT is a behaviorally-based third wave behavior therapy based on the analysis of human cognition (Hayes, 2004). ACT seeks to promote psychological flexibility through acceptance of aversive stimulation (cognitions) and defusion of established rules that govern behavior in order to increase an individual's ability to engage in value-centered actions (Wilson, 2008). The treatment components involved in ACT include: cognitive defusion, acceptance, contact with the present moment, self-as-context, values and committed action (Fletcher & Hayes, 2005). These processes are facilitated during ACT treatment through the use of metaphors, stories, and exercises. The following are descriptive of the six components of an ACT approach.

Cognitive Defusion

Cognitive fusion is observed when individuals display a rigid adherence to verbally constructed rules, which may interfere with behaving with respect to personal values. Values being, freely chosen life directions from which we derive goals and life directions however, may not be fulfilled. Cognitive defusion involves treatment techniques that seek to alter the way in which individuals engage private events in order to reduce control that these events have over pursuit of goals and values. Techniques that promote cognitive defusion set the stage for acceptance, contact with the present moment, self-as-context and values (described below). Through undermining the literal affects of language, negative thoughts are perceived less literally, focus is shifted to the "now," attachment to the conceptualized self ("that which consists of the stories and thoughts

that we have about ourselves, our identity, and our history") (Luoma, 2011) is diminished, and independent responses are enabled (Wilson & Sandoz, 2008).

Acceptance

Acceptance of aversive private events is a process contrary to typical cognitive behavior therapy techniques such as thought suppression and/or experiential avoidance. Although attempts to alter or avoid private events may provide short term relief, this may in fact lead to long term psychological inflexibility. Acceptance rather, involves purposeful, moment by moment openness to one's private events without attempting to suppress or alter the frequency, form or intensity of such event (Wilson & Sandoz, 2008).

Contact with Present Moment

As a result of cognitive fusion, individuals frequently engage in worry and rumination of negative thoughts of a conceptualized self. Through these processes, one often experiences difficulties with acting in accordance with their values. In an effort to neutralize this effect, contact with present moment involves altering the stimulus control associated with contexts which typically evoke aversive private events. This is achieved through purposefully shifting one's attention from 'there and then', which involves negative thoughts, to 'here and now', which allows for the negative thoughts, but so too, all other stimulation. This is achieved through focusing on stimuli including: bodily sensations, thoughts and feelings, external sounds, sights, smells and touch sensations (Wilson & Sandoz, 2008).

Self-as-Context

Also closely related to exercises that promote contact with the present moment are those which target self-as-context. Self-as-context may be viewed as a "transcendent

sense of self that is more like the context, perspective, or arena where life happens" (Luoma, 2011). As a result of naturally occurring deictic relations training, language enables humans to develop a sense of self as a locus of perspective (I/here/now). This locus of perspective frequently results in the association of aversive thoughts or feelings with the verbally constructed conceptualized self (e.g. "I am depressed"). A relative example of how self-as-content/context may impact caregivers may be illustrated in the following: a caregiver engaging in the verbal behavior "I am a terrible parent," may end up acting in accordance with this belief; however, a caregiver whom rather engages this verbal behavior as "I am a parent who is currently experiencing negative thoughts regarding my ability," may be better able to engage in a broader pattern of behaviors. This association narrows an individual's repertoire and limits one's ability to act in accordance with values. Self-as-context exercises shift the identification of thoughts and feelings from this conceptualized self (e.g. "I am depressed") to a self-as-context view (e.g. "I am experiencing feelings of depression") (Wilson & Sandoz, 2008).

Values

Values identification is a key component of acceptance and commitment therapy. Values are defined within ACT as freely chosen life directions; values are distinguishable from goals in that they provide directions in which one may move however may not be fulfilled. Wilson and Sandoz (2008) define values as "a special class of reinforcers that are verbally constructed, dynamic, ongoing, patterns of activity for which the predominant reinforcer is intrinsic in the valued behavioral pattern itself." Values function as motivtative augmentals, rules that temporarily alter the effectiveness of a previously established consequence to evoke behavior. Through values clarification,

individuals identify values which will direct the course of therapy and provide a foundation for commitment. In addition to abovementioned components, chosen values promote individual engagement in valued living and liberation from verbal processes that create barriers and motivate behaviors through social compliance, avoidance, or fusion (Wilson & Sandoz, 2008).

Committed Action

The committed action component of acceptance and commitment therapy builds upon the previously identified individual values. Through committed action one establishes short, intermediate, and long term attainable goals that correspond with chosen values. As individuals acquire techniques that help them to overcome barriers to valued living, committed action involves reoccurring engagement in behavior that reflects one's freely chosen values (Wilson & Sandoz, 2008). In summary, commitment to action is the verbally mediated (rule governed) adherence to patterns of behavior that fulfill set goals reflective of chosen values.

Chapter 3: Applications of ACT in Parenting

Biglan et al. (2008) provide a comprehensive review of the current behavior analytic and clinical research in the area of experiential avoidance (EA), interventions to address EA and the implications for potential future research utilizing acceptance and mindfulness based interventions.

Of particular interest, by Biglan et al. (2008) identified the implications of this technology as a component(s) in parenting skills interventions. Given the primary focus of many parenting skills interventions is teaching parents specific skills for addressing child behavior, these interventions may fail to acknowledge the thoughts, feelings or values of the parent(s). Interventions that do attempt to address these issues often teach parents techniques to control or suppress their negative thoughts regarding their child/children (i.e. "soothing self-encouragement," refutation of upsetting thoughts, visualization of positive outcomes). Proponents of acceptance based interventions however, suggest that (a) these negative thoughts may serve as motivative augmentals for inappropriate and/or ineffective parenting behavior, and, (b) such strategies to control or suppress these negative thoughts may be counterproductive, rather intensifying the thoughts and distracting parents from utilizing newly learned parenting skills that more closely reflect their values (Biglan et al., 2008).

Acceptance and mindfulness based interventions (i.e. ACT) provide an alternative approach to traditional methods of coping with negative thoughts and emotions. Rather than attempting to control or suppress negative thoughts, through the use of exercises and

metaphors; ACT seeks to facilitate the contact with and acceptance of negative thoughts and emotions that occur during interactions with children. Through cognitive defusion and self-as-context exercises, parents are also taught to take thoughts less literarily, thereby diminishing their hindrance on valued living. Additional exercises assist parents in clarifying their values in regards to their relationships with their children and their contact with the present moment. The combined effects of these acceptance and mindfulness components is hypothesized to result in improved coping with negative thoughts and emotions and subsequently improved parenting effectiveness (Biglan, Hayes & Pistorello, 2008).

Blackledge and Hayes (2006) were amongst the first to acknowledging the lack of progress in the area of interventions aimed at addressing the psychological needs of parents of children diagnosed with Autism disorder over the last 20 years, thereby also amongst the first to conduct research in the area that would later be discussed by Biglan et al. (2008) amongst others.

Blackledge and Hayes (2006) assessed the effectiveness of 2-day (14 hour) acceptance and commitment therapy training in achieving various treatment outcomes with 20 participants, who were parents/guardians of children diagnosed with autism. Parents of children diagnosed with autism, often experience high levels of chronic stress and feelings of responsibility and blame for their children's conditions (in some cases, guilt, shame, hatred, anger, and/or blame toward partners for perceived responsibility). In addition, mothers of children diagnosed with autism may experiences increased frustration, anxiety exhaustion and pessimism (about the future) compared to those of typically developing children or children diagnosed with down syndrome (Blackledge &

Hayes, 2006). Acceptance is presented as an alternative approach to traditional methods that involve challenging or restructuring the content of aversive (difficult) cognitions (thoughts/feelings). ACT emphasizes the acceptance of and defusion from these cognitions, clarification of client personal values and corresponding goals, and enhancement of effectiveness in moving toward these values and goals (Blackledge & Hayes, 2006).

Blackledge and Hayes (2006) employed self-report assessment instruments to measure therapeutic mechanisms of change thought to be active in ACT and the domains of general distress, depression and perceived control over child behavior. The results demonstrated improved psychological outcomes of participants with a majority of achieved results showed maintenance over 3 month period. The ACT training also resulted in reduced experiential avoidance and cognitive fusion (Blackledge & Hayes, 2006).

This study seeks to provide empirical support for the hypothesized relationship, suggested by Biglan et al. (2008), between acceptance and mindfulness intervention components and the increased integrity of implementation of operationally defined parenting skills. Furthermore, the purpose of this study is to extend the research conducted by Blackledge and Hayes (2006) through the participation of parents of typically developing children and single case analysis.

Chapter 4: Method

Experimental Design

A multiple baseline across participants design was employed to evaluate in phase B, the efficacy of a behavioral parent training, *Essential Tools for Positive Behavior Change* (1) in reducing the frequency of participant child problem behavior, (2) reducing the frequency of coercive caregiver interactions and (3) increasing participant perceived parenting abilities. Phase C evaluated the efficacy of an ACT training (1) in further reducing the frequency of participant child problem behavior and (2) parent coercive interactions (3) increasing participant perceived parenting abilities, (3) and increasing the integrity of participant implementation of skills taught in behavioral parent training.

Participant Characteristics

Three child parent dyads participated in the study. Participants were adult biological caregivers from the Tampa, Fl area, with at least one child between the age of 4 and 10. Participants were recruited through approved public bulletin board postings on the University of South Florida, St. Petersburg campus and PARC Discovery Learning Center, St. Petersburg campus, in addition to recruitment through professional contacts in the greater Tampa Bay region.

Lisa was a 22 year old married female of low middle class socioeconomic status. Lisa had no history of previous behavioral training or interventions. Lisa's child did not attend a daycare or preschool, therefore data collection for Lisa reflects interactions throughout the day. Lisa initially reported to being in a state of distress due to her lack of

control of her child's behavior and the extension of his aggression towards her other child. Although present, Lisa's husband opted not to participate in study trainings or data collection. Lisa had two children, one approximately 18 months and the other 4 years old. Since the study was designed to include children ages 4 to 10, the 4 year old child was the subject of child problem behavior data recording. Lisa's child was not reported to have been previously diagnosed with any disabilities or learning delays although his speech was noticeably underdeveloped. The problem behaviors initially reported by Lisa included aggression towards others, aggression towards property, noncompliance, tantruming, and self injurious behavior (biting himself).

Anna was a single middle aged female of low socioeconomic status. Anna had two children. One was 13 years old, the other was 8 years of age. The 8 year old was the subject of child problem behavior and data collection. Anna's child was not reported to have been previously diagnosed with any disabilities or learning delays although the she did report an intention to have him assessed. The problem behaviors reported by Anna included aggression towards others, aggression towards property, noncompliance, and tantruming. Anna had previously received services from a behavior analyst for a short period of time (approximately one month) however did not report any success with the training. Anna's child attended elementary school during the day hours therefore; Anna's child behavior and caregiver data reflects interactions during the afternoon/night hours and weekends.

Sarah was a married middle aged female of upper middle socioeconomic status. Sarah's husband did agree to participate in study trainings and data collection although he was not a primary subject since he did not report the same degree of difficulty parenting

the child subject and his PLOCS scores did not meet initially set criteria. Sarah only had one child 5 years of age, whom was the subject of child problem behavior data collection. Sarah's child was not reported to have been previously diagnosed with any disabilities or learning delays although the Sarah did report a desire to have him tested for ADD and/or ADHD. Problem behaviors reported by Sarah included aggression towards others, noncompliance, tantruming, and elopement. Sarah had previously sought assistance in other parenting support services however did not have any previous history of behavioral treatment. Sarah's child attended an elementary school where she stated he was reported by teachers and administrators to engage in significant behavioral challenges. Data collection reflects interactions between the Sarah and her child during the afternoon/night hours and weekends.

Participation criteria. Participants were informed of the nature and demands of the study, and upon the persons determined eligibility and interest, the PI obtained consent prior to study enrollment. The participants were read the consent form in a closed door private room in the participant's residence and given the opportunity to ask questions and receive feedback. Once all participant questions were answered, study staff asked questions to ensure the participant understood the study consent. Consent was obtained before any study related procedures were performed. Participants who consented to join the study were given a copy of their informed consent. Contact information was provided on the consent for the PI of the study. The study participant was advised to call that number with questions relating to the research study at any time prior to, or during their participation in the study.

Upon obtaining informed consent participants were requested to complete the Parental Locus of Control Scale, on which they were required to score a minimum score of 141on the entire assessment and/or a minimum of 60 on two subtests (perceived parenting abilities and control of child behavior) in order to participate in training interventions (Campis et al., 1986). The rationale for establishing a minimum score of 141 overall score on PLOCS assessment or minimum score of 60 on the subscales parental efficacy and parental control of child behavior was due to these scores representing an average rating of 3 on each question in the assessment. In addition, participants reported ongoing daily occurrences of observable and measurable child problem behavior. A list of possible target behaviors included: hitting, screaming, tantrum, non-compliance, aggression towards others and/or property, elopement etc.

Behavioral Parent Training Intervention

Behavioral parent training sessions utilized the *Essential Tools for Positive Parenting*, based on Glenn Latham's book "The Power of Positive Parenting" (Latham, 1994). Training procedures were conducted in the same sequence and method as described in Van Camp, Vollmer, et al., (2008). This includes practice and assessment role play scenarios employed during in-class curriculum.

However, in contrast to the traditional training format (5 weeks/3 hours per week) of the Essential Tools for Positive Parenting is implemented, this study implemented all BPT trainings in 1 training session (with the exception of Lisa's BPT training, which was conducted over 2 consecutive training sessions). The rationale for conducting trainings in 1 session as opposed to the traditional 5 was due to the less time required to review

materials, conduct role plays, etc. with 1-2 participants in comparison to a typical classroom of 10-20 participants.

Specific to each participant: Lisa's BPT training was conducted across two consecutive weekend days, for approximately 3 hours each day. Lisa's ACT training was conducted on a single weekend day and lasted approximately 3 hours; Anna's BPT training was conducted on one weekend day and lasted approximately 4 hours. Ann's ACT training was also conducted on a single weekend day and lasted approximately 3 hours; Sarah and David's BPT training was conducted on a single weekend day and lasted approximately 5 hours. Sarah and David's ACT training was also conducted on a single weekend day and lasted approximately 3 hours.

Training sessions included a course overview, a pretest skills assessment for each participant, an introduction to the research study and training on how to avoid coercion, punitive behavior management strategies, and training on how to implement the skills: ABC assessment and Stay Close and Use Reinforcement, Pivot, Redirect-Use Reinforcement, and Set Expectations. The session also included a post-training skills assessment.

The training session was conducted in a behavior skills training format utilizing, training and modeling of implementation skills, engagement in interactive activities and role plays, followed by constructive feedback. At the end of the training session, participants completed feedback forms regarding value of training.

Setting and Materials

Training sessions were conducted in the home of individual participants or in an alternative environment conducive to training (Lisa's ACT training was conducted at a

Starbucks location). Participants were provided with a binder including printed caregiver guides of training curriculum. Caregiver guides provided notes on training material, interactive activities/exercises pertaining to the implemented skills targeted for acquisition during the session.

Target Behaviors and Data Collection

The dependent variables included: (1) frequency of parent identified child problem behavior, (2) integrity of implementation for behavior curriculum (tools) by parents, (3) score on The Parental Locus of Control Scale (PLOC; Campis et al., 1986) (Appendix H), and (4) and frequency of coercive caregiver interactions.

Parents were trained to record occurrences of each individual child's target behavior using frequency data forms, which included a topographical definition of the problem behavior. This was supplemented with observation by trained observers, 1-2 hours each week, at times most likely to occasion undesirable behavior, for the duration of the study.

Frequency of (a) participant child problem behavior **and (b) coercive caregiver interaction** were individually topographically defined as occurrences of child problem behavior identified prior to baseline condition (phase A) and (b) any occurrence of caregiver engagement in coercive interaction as defined on caregiver weekly data collection sheet (appendix J).

Specific child problem behavior identified by Lisa included the following:

- Aggression Towards Others – any occurrence of child hitting, kicking, and/or biting others.

- Aggression Towards Property – any occurrence of child throwing, hitting, kicking, or otherwise damaging property (i.e., wall, door, toy, etc.)
- Non-Compliance – any occurrence of child refusing to complete a task following being asked 1-2 times.
- Tantrum - any occurrence of child dropping to the floor, crying, kicking, and/or screaming.
- Self-Injurious Behavior – any occurrence of child biting himself.

Specific child problem behavior identified by Anna included the following:

- Aggression Towards Others – any occurrence of child hitting, kicking, and/or biting others.
- Aggression Towards Property – any occurrence of child throwing, hitting, kicking, or otherwise damaging property (i.e., wall, door, toy, etc.)
- Non-Compliance – any occurrence of child refusing to complete a task following being asked 1-2 times.
- Tantrum - any occurrence of child dropping to the floor, crying, kicking, and/or screaming.

Specific child problem behavior identified by Sarah included the following:

- Aggression Towards Others – any occurrence of child hitting, kicking, and/or biting others.
- Aggression Towards Property – any occurrence of child throwing, hitting, kicking, or otherwise damaging property (i.e., wall, door, toy, etc.)
- Non-Compliance – any occurrence of child refusing to complete a task following being asked 1-2 times.

- Tantrum - any occurrence of child dropping to the floor, crying, kicking, and/or screaming.
- Elopement – any occurrence of child running or walking out of arms reach of a parent or other adult in a community setting without prior permission.

Prior to initiating baseline observations, participants were trained on data collection procedures using weekly data collection form (Appendix J). This sheet required participants to record a tally mark for each occurrence of child problem behavior in addition to each specific coercive interaction listed on the data sheet. Problem behaviors were operationally defined on the data collection sheet as well as targeted coercive interactions.

Integrity of implementation is defined as consistent and accurate implementation of skills/tools taught in the way they were planned as defined (Gresham, 1989) in task analysis for each skill/tools (Appendix A - F).

Integrity of implementation was measured as a percentage of steps correct (according to task analysis of each tool), obtained through verbal scenarios during baseline, and in situ assessment during experimental conditions.

During baseline, in order to assess the integrity of participation implementation of untaught skills, participants were provided with a verbal description of a hypothetical scenario in which their child was engaging in a specific behavior (good, bad or neutral) which set the stage for implementation of a specific skill. Participants were then asked to describe in as much detail as possible how they would respond in each given scenario. Hypothetical scenarios were based on the role play scenarios typically used in the *Essential Tools for Positive Parenting* training.

Examples of hypothetical scenarios relative to each skill are as follows:

- Use reinforcement: Researcher: "you walk into your child room to find that they have done an exceptional job cleaning their room without your having to ask. They're lying on their bed playing a game, what do you do?"
- Stay close: Researcher: "you pick your child up from school, they get into the car and look unusually sad, what do you do?" or "you pick your child up from school, and they are very excited they got picked first for a sport in their P.E. class, what do you do?"
- Set expectations: Researcher: "your child typically engages in problem behavior at bath time/in the grocery store/other, you're about to prepare for bath time/walk into the grocery store, what can you do before bath time/walking into the store to make sure they don't engage in problem behavior?"
- Pivot: Researcher: "you tell your child they may not have an item they asked for and they begin to tantrum on the floor, they aren't endangering anyone, themselves or property, what do you do?"
- Redirect: Researcher: "your child is approaching your other child and is about to hit them with a hard toy, what do you do?" or "you child is about to engage in a dangerous or inappropriate behavior (e.g. put a pen in an electric outlet, color on the walls with a marker), what do you do?"

During weekly observation sessions in BPT and ACT conditions participants were prompted to demonstrate implementation of at least 2-3 skills/tools (per observation

session) if they were not occasioned by the natural environment in order to ensure consistent observation of each skill/tool (e.g. Researcher: “could you show me how you would stay close with stay close with Johnny?”).

Frequencies of child problem behavior and caregiver coercive use were also recorded during weekly observation sessions (Appendix M). However, given the short observation periods and child reactivity, the primary child behaviors observed during weekly observation sessions however were not considered to be consistent with topographically defined problem behaviors, rather “junk behavior”, or behavior that may be agitating but not necessarily potentially dangerous to themselves or others was observed. Examples of this “junk behavior” would be repetitive question asking or attention seeking such as rolling around on the floor.

The Parental Locus of Control Scale is a 47-item (self-report) questionnaire that can be used to assess parents’ perceptions of their child management effectiveness. Sample items include “My child’s behavior is sometimes more than I can handle,” and “Sometimes when I’m tired I let my children do things I normally wouldn’t”. The PLOCS is reported to demonstrate both strong internal consistency (a = .93) and test retest reliability (r = .83) (Campis, Lyman, & Prentice-Dunn, 1986; O’Brien & Murrell, 2011).

The PLOCS subscales (a) parental efficacy and (b) parental control of child behavior, were selected to be scored and displayed separate of the aggregate PLCOS score following Blackledge and Hayes (2006) use of the scales as the most relevant to parenting in relation to managing child behavior.

The Parental Locus of Control Scale was administered at three points during the experiment. The first assessment point was immediately prior to initiating data collection for all participants. The second assessment point occurred 2 weeks following the initial behavioral parent training for Lisa and Anna, and 7 weeks for Sarah. The third assessment was completed two weeks following the ACT training for Lisa and Anna, and 9 weeks for Sarah.

Data was also collected on participant pre/post assessments scores (on each individual task analyzed tool) in role-play scenarios. Throughout BPT intervention, participants were also be required to score a minimum criterion score of 80% of steps on the task analyzed tools during role-play scenarios to progress to the next training component.

The frequency of coercive caregiver interactions were recorded by caregivers on self report data collection forms as well as by trained observers during weekly observation sessions in the natural environment on a frequency checklist data sheet. These interactions included (see Appendix I for additional information):

- Sarcasm/teasing
- Criticism
- Threats
- Arguing
- Questioning
- Lecturing
- Despair (bribing, pleading, hopelessness)
- Force

- Sudden subtraction
- One up-man-ship
- Silent treatment
- Telling on them to others

ACT Training Intervention

The ACT training intervention utilized a curriculum developed and delivered by the primary researcher in a workshop format, based on the book "The Joy of Parenting: An Acceptance & Commitment Therapy Guide to Effective Parenting in the Early Years," by Lisa Coyne and Amy Murrell (Coyne & Murrell, 2009). Participant training session was conducted in one session lasted approximately 3 hours. The training session included a course overview, training on the role of values in parenting, followed by contacting the present moment in parenting, and commitment to values through actions. Participants engaged in exercises throughout training to facilitate the identification and clarification of values, increasing momentary awareness, and goal setting to assist in commitment to valued actions.

The components of ACT training intervention are operationally defined as follows:

I. Training Session
    a. Introduction/Overview
        i. Key Components
            1. Values Assessment
            2. Contact with the Present Moment
            3. Commitment to Valued Action
        ii. Traditional Behavioral Parent Training: The Missing Link

1. Parents Thoughts & Feelings – Examples
2. Minding Your Child or Mind your Mind?
3. Noticing Your Mind Exercise
4. How Mindfulness Changes Parenting
5. Accept, Choose, and Take Action

b. Values Clarification
    i. What type of parent do you want to be?
    ii. Parenting values: This is all your fault – Go away!
c. Contact with the present Moment
    i. Knee-jerk parenting exercise
    ii. The desert island exercise
d. Values Identification
    i. How do you want to be remembered?
    ii. Parenting values vs. goals
    iii. Moving toward your horizon
e. Contact with the Present Moment
    i. Practicing mindfulness
    ii. Awareness of the smallest sounds exercise
    iii. Notice the words exercise
    iv. Getting hooked on your thoughts
    v. Appreciating your child exercise
    vi. Parenting mindfully: Appreciating your child
    vii. Seeing your child as a whole person

viii. The two monks at the riverbank

f. Commitment to Values

i. Standing for your child

ii. Willingness: Having what you've got

iii. Noticing willingness in challenging situations

iv. A letter to your child exercise

g. Wrap-up/Conclusion

The following provides a brief description of each of the specific ACT components utilized in the current study:

- *Values* - "Values are freely chosen, verbally constructed consequences of ongoing, dynamic, evolving patterns of activity, which establish predominant reinforcers for that activity that are intrinsic in engagement in the valued behavioral pattern itself" (Coyne, McHugh & Martinez, 2011). In behavior analytic terms, values would be defined as unobtainable, highly preferred reinforcers.
- *Values Clarification* – "a method whereby a person can discover his or her own values by assessing, exploring, and determining what those personal values (reinforcers) are and how they affect personal decision making" (Coyne, McHugh & Martinez, 2011).
- *Contact with Present Moment* - Facilitation of an observer perspective through mediation-like exercise that aims to promote stimulus control of private events (Coyne, McHugh & Martinez, 2011).

- *Values Commitment* – "commitment involves returning again and again to movement in a valued direction. Commitment refers to letting go of interruptions in valued living, and to that gentle turn back toward the chosen value. Committed action is the logical extension of values, wherein clients and clinicians work together to foster larger and larger patterns of values directed behavior, and clients practice being open to contacting reinforcement for engaging in these patterns of behavior via mindfulness skills" (Coyne, McHugh & Martinez, 2011).

Through the use of various exercises that promote flexible persistence, participants are taught (a) methods of consistently monitoring their behavior, moment by moment, toward chosen values and of choosing whether to alter their behavior or goals accordingly at points in which reinforcement diminishes and (b) to persist engagement in behavior that reflects their chosen personal values even in situations which external barriers arise (Plumb, Stewart, Dahl, & Lundgren, 2009).

ACT training session. Following an introduction to ACT based therapies/trainings; utilizing the ACT training curriculum, the trainer progressed through the material, completing experiential exercises over the course of one session approximately 3 hours.

Treatment Integrity

Training session procedures were observed and monitored for fidelity of implementation by a second observer trained to mastery across all conditions. Training for secondary observers included pre-study implementation training in all caregiver training curriculum with achievement of a mastery criterion determined by both correct verbal description of the steps involved in target behaviors (tools) and identification of

task analyzed steps (or lack of) in role play scenarios. All three participants rated treatment integrity in the area of instructor adherence and effectiveness as 100% (i.e. the tools ABC, Pivot and Redirect were taught during the session, the instructor was effective in delivering the information).

As a further measure to increase fidelity of intervention implementation, a secondary observer checked off each intervention component (i.e. skill and/or exercise as well as each printed PowerPoint handout slide covered) as they were completed in order to ensure that they were covered. The resulting score of this was 100% adherence of intervention implementation components.

Target Behaviors and Data Collection

The dependent variables remained consistent in this condition, including: (1) frequency of identified participant child problem behavior, (2) participant integrity of behavior curriculum (tools) implementation, (3) score on The Parental Locus of Control Scale (PLOC; Campis, Lyman, & Prentice-Dunn, 1986) (Appendix H), and (4) and frequency of coercive caregiver interactions. Data was obtained on hand written documents by the participants and transferred into electronic format by researchers. In addition, participants were required to complete ACT workshop training and all inclusive exercises.

Records were stored on a password protected laptop during the study. Data entered into computerized files are accessible only by authorized personnel directly involved with the study. After study completion, all data will be removed from the laptop and stored in the faculty adviser's locked office in accordance with university policy (minimum of 5 years after the final report has been submitted to the USF IRB).

Final results of research may also be reported in reports, discussion papers, conference presentations and/or publication.

Observation Sessions

Observation sessions occurred 1-2 times per week (contingent upon the weekly schedule flexibility of participants) during experimental conditions, at times most likely to occasion undesirable child behavior; each session lasted approximately 1-2 hours. Observation sessions were conducted by trained observers who have demonstrated proficiency on data collection procedures. Dependent variable recording during observation sessions was completed utilizing attached data collection forms (Appendix A-F/H/I).

Interobserver agreement. Interobserver agreement (IOA) was calculated by comparing the scores collected by two trained researchers on the skill implementation task list obtained through direct observation. IOA was collected for at least 30% of weekly home visits following initial behavioral parent training (phase B) and ACT training (Phase C). During sessions, in which IOA was collected, observers independently scored task lists corresponding to specific tool implementation as they were implemented by the caregiver(s) in the natural environment during ongoing daily activities.

Specifically, the task analysis enables the trainer and co-trainer to score the performance based on how many steps are performed accurately. For example, the "Use Reinforcement" Tool consists of the following steps:

1. Tell the child what behavior you liked.
2. Provide a consequence for the behavior that matches the value of the behavior.

3. Provide the positive consequence within three seconds of recognizing the appropriate behavior.
4. Use sincere and appropriate facial expression, tone of voice, and body language.
5. Avoid reacting to junk behavior.
6. Avoid coercion and punishment.

If a participant accurately performed all five of the steps listed above, he or she scored 100%. An IOA score was determined by comparing the primary and secondary observer's scores on the task analysis of each step, which was calculated by dividing agreements by agreements plus disagreements and multiplying by 100.

Completed study IOA equaled 95% across all three participants for all conditions. IOA for individual participant were as follows: Lisa, 95% overall, with a range of 91% - 100%; Anna, 92% overall, with a range of 90% - 95%; and Sarah, overall 100%.

Social Validity

Training sessions ended with an evaluation form for participants to complete as is typical for the *Tools for Positive Behavior Change* course (Appendix G).This evaluation also measured instructor adherence to intervention and effectiveness of intervention.

Roles of Study Team Members

The principal investigator was responsible for implementation of all study procedures including but not limited to recruitment, training and observation of participants and data collection. The co-investigator was responsible for monitoring the activities of the principal investigator and advising on development and implementation of study procedures. Any additional key personnel (i.e. research assistant was responsible

for assisting in implementation of training procedures, participant observation and data collection.

Chapter 5: Results

Lisa

Child problem behavior and caregiver coercives. Lisa reported and average of 5.58 daily occurrences of child problem behavior and 2.58 daily use of caregiver coercives during baseline; an average of 2.8 daily occurrences of child problem behavior and 1.6 daily use of caregiver coercives during BPT condition; and an average 3 daily occurrences of child problem behavior and 1daily use of caregiver coercive during ACT condition. See figure 1.

Frequency data was also collected during weekly observation sessions on Lisa's coercive use in order to provide support for her self-reported frequency. This data demonstrated an overall reduction in her frequency of coercive use across all three conditions. Lisa's coercive interactions included: questioning, force, threats, sudden subtraction, despair, silent treatment, and arguing. See table 1.

PLOCS. The initial score for the PLOCS was 141 and/or 60 on the PLOCS subtests (control of child behavior and parental ability). Lisa scored an initial score of 148 on the parental locus of control scale (PLOCS) and 66 on two subtests of the PLOCS during baseline. Two weeks following BPT training Lisa scored 145 on the PLCOS and 61 on the subtests, and upon last assessment two weeks following ACT training, Lisa scored 114 on the PLOCS and 44 on the subtests. See Figure 2.

Upon analysis of each subscale scores, Lisa demonstrated sequential decreases in score across each condition on both the parental efficacy and parental responsibility

scales. Lisa demonstrated an increase in score following the BPT condition on the child control of parent's life, parent belief in fate/chance, and parental control of child behavior, and a decrease to below baseline score on these scales following the ACT condition. See Table 2.

Integrity of implementation. Lisa demonstrated an average implementation score of 20% on the stay close tool during baseline, 76.5% during BPT condition and 100% during ACT condition; an average implementation score of 0% on the pivot tool during baseline, 0% during BPT condition, and 37.5% during ACT condition; an average implementation score of 25% on the redirect tool during baseline, 28.5% during BPT condition and 37.5% during ACT condition; an average of 30.5% on the set expectations tool during baseline, 29.5% during BPT condition, 33% during ACT condition; and an average of 50% on the use reinforcement tool during baseline, 66.5% during BPT condition and 95% during ACT condition. See figure 5.

Secondary ACT measures for Lisa, recorded on weekly self-report data collection sheets indicate the level of anxiety, present moment awareness, and commitment to valued actions relative to implementation integrity scores. Lisa however did not complete the ACT measure questions for 6 of the 7 weeks of her data collection therefore analysis of the associations between her ACT measures and implementation integrity are limited. See table 5.

Anna

Child problem behavior and caregiver coercives. Anna reported an average of 9.4 occurrences of child problem behavior and 10.9 daily use of caregiver coercives during baseline; an average of 6.1 occurrences of daily child problem behavior and 8.9

daily use of caregiver coercives during BPT condition; and an average of 7 occurrences of daily child problem behavior and 8.6 daily use of caregiver coercives during the ACT condition. See figure 1.

Frequency data was also collected during weekly observation sessions on Anna's coercive use in order to provide support for her self-reported frequency. This data demonstrated a slight reduction in her frequency of coercive use following the BPT intervention and maintaining levels during the ACT condition. Anna's coercive interactions included: lecturing, telling on them to others, questioning, force, threats, sudden subtraction, sarcasm, silent treatment, and criticism. See table 1.

PLOCS. Anna scored an initial score of 132 on the parental locus of control scale (PLOCS) and 63 on two subtests of the PLOCS (control of child behavior and parental ability) during baseline. Two weeks following BPT training Anna scored 122 on the PLCOS and 64 on the subtests, and upon last assessment two weeks following ACT training, Anna scored 111 on the PLOCS and 50 on the subtests. See figure 3.

Upon analysis of each subscale scores, Anna demonstrated equal or increasing scores on the parental efficacy and parental control of child behavior scales following the BPT condition, and decreasing scores on the parental responsibility, parent belief in fate/chance, and child control of parent's life scales. Following the ACT condition, Anna demonstrated equal or increasing scores on the child control of parent's life and parent belief in fate/chance scales, and decreases on the parental efficacy, parental responsibility and parental control of child behavior scales to levels below baseline. See Table 3.

Integrity of implementation. Anna demonstrated an average implementation score of 58% on the stay close tool during baseline, 62.5% during BPT condition and

80% during ACT condition; an average implementation score of 0% on the pivot tool during baseline, 0% during BPT condition, and 20% during ACT condition; an average implementation score of 41.5% on the redirect tool during baseline, 36.5% during BPT condition and 66.5% during ACT condition; an average of 25% on the set expectations tool during baseline, 26% during BPT condition, 25% during ACT condition; and an average of 67.5% on the use reinforcement tool during baseline, 30% during BPT condition and 100% during ACT condition. See figure 6.

Secondary ACT measures for Anna, recorded on weekly self-report data collection sheets indicate the level of anxiety, present moment awareness, and commitment to valued actions relative to implementation integrity scores. Anna's ACT measure scores demonstrated reductions in levels of anxiety upon implementation of each intervention. However, Anna's present moment awareness and commitment to values measures demonstrate reductions in the level of present moment awareness and commitment to valued action upon implementation of both BPT and ACT interventions, although this also demonstrates high level of association with her variable and reducing levels of implementation integrity in the ACT condition. See table 6.

Sarah

Child problem behavior and caregiver coercives. Sarah reported an average of 7.5 occurrences of child problem behavior and 5.24 daily use of caregiver coercives during baseline; an average of 4.3 occurrences of child problem behavior and 2.4 daily use of caregiver coercives during BPT condition; and an average of 3.5 occurrences of child problem behavior and 1 use of daily caregiver coercive during ACT condition. See figure 1.

Frequency data was also collected during weekly observation sessions on Sarah's coercive use in order to provide support for her self-reported frequency. This data demonstrated an overall reduction in her frequency of coercive use following the BPT intervention and levels of zero during the ACT condition. Sarah's coercive interactions included: lecturing, threats, sudden subtraction, telling on them to others, and silent treatment. See table 1.

PLOCS. Sarah scored an initial score of 148 on the parental locus of control scale (PLOCS) and 65 on two subtests of the PLOCS (control of child behavior and parental ability) during baseline. Two weeks following BPT training Sarah scored 148 on the PLOCS and 60 on the subtests, and upon last assessment two weeks following ACT training, Sarah scored 140 on the PLOCS and 54 on the subtests. See figure 4.

Upon analysis of each subscale score, Sarah demonstrated equal or increasing scores on the parental responsibility, child control of parent's life, parent belief in fate/chance and parent control of child behavior scales following the BPT condition, and a decrease on the parental efficacy scale. Following implementation of the ACT condition, Sarah demonstrated an increasing score on the parental efficacy and parental responsibility scales and decreasing scores on the child control of parent's life, parent belief in fate/chance, and parent control of child behavior scales. See Table 4.

Sarah's husband David, participated in trainings and scored an initial score of 129 on the parental locus of control scale (PLOCS) and 56 on two subtests of the PLOCS (control of child behavior and parental ability) during baseline. Two weeks following BPT training David scored 135 on the PLCOS and 59 on the subtests, however David was not present for the final PLCOS assessment 2 weeks following the ACT training.

Integrity of implementation. Sarah demonstrated an average implementation score of 75.6% on the stay close tool during baseline, 75% during BPT condition and 85% during ACT condition; an average implementation score of 5% on the pivot tool during baseline, 30% during BPT condition, and 75% during ACT condition; an average implementation score of 42.5% on the redirect tool during baseline, 39% during BPT condition and 66% during ACT condition; an average of 50% on the set expectations tool during baseline, 50% during BPT condition, 57.5% during ACT condition; and an average of 83% on the use reinforcement tool during baseline, 73% during BPT condition and 95% during ACT condition. See figure 6.

David demonstrated an average implementation score of 77.5% on the stay close tool during baseline, 73% during BPT condition and 77% during ACT condition; an average implementation score of 6.6% on the pivot tool during baseline, 60% during BPT condition, and 75% during ACT condition; an average implementation score of 30% on the redirect tool during baseline, 50% during BPT condition and 50% during ACT condition; an average of 52.5% on the set expectations tool during baseline, 50% during BPT condition, 55% during ACT condition; and an average of 77.5% on the use reinforcement tool during baseline, 90% during BPT condition and 90% during ACT condition. See figure 7.

Secondary ACT measures for Sarah, recorded on weekly self-report data collection sheets indicate the level of anxiety, present moment awareness, and commitment to valued actions relative to implementation integrity scores. Sarah's ACT measure scores demonstrated reductions in levels of anxiety upon implementation of each intervention with her lowest levels of anxiety during the final weeks of the ACT

condition. Sarah's present moment awareness and commitment to values measures are relatively consistent across all condition and demonstrate a high level of association with her high levels of implementation integrity in all conditions. See table 7.

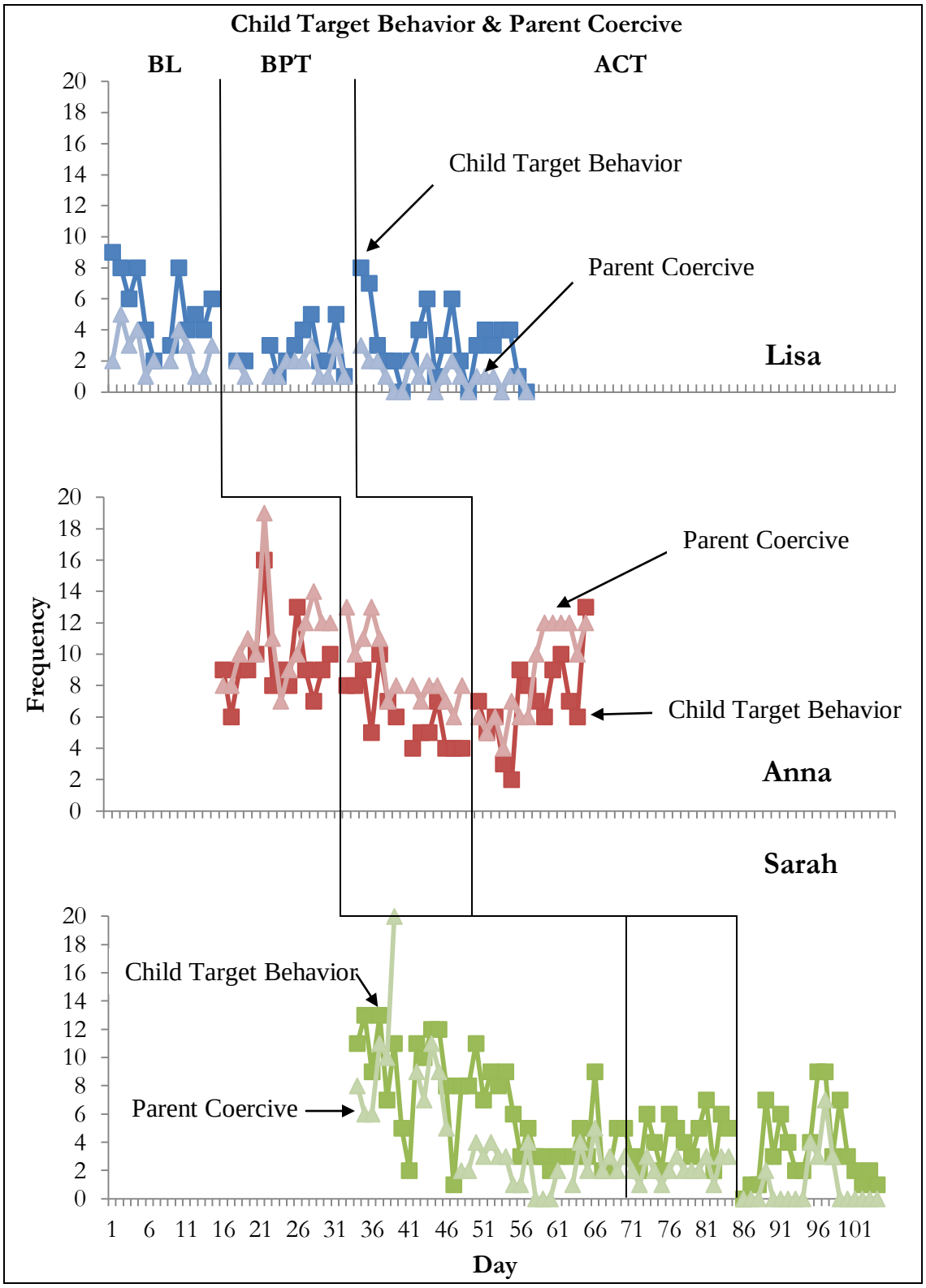

Figure 1: Multiple baseline across participants showing daily self-reported frequency of child maladaptive target behavior and caregiver (participant) coercive.

Table 1. A table display of the frequency of coercive caregiver interactions recorded during weekly observation sessions.

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Lisa	**5**	**4**	**3**	**3**	**2**	**2**	**N/A**	**N/A**
Anna	**5**	**5**	**5**	**4**	**4**	**4**	**N/A**	**N/A**
Sarah	**4**	**5**	**4**	**2**	**1**	**1**	**0**	**0**

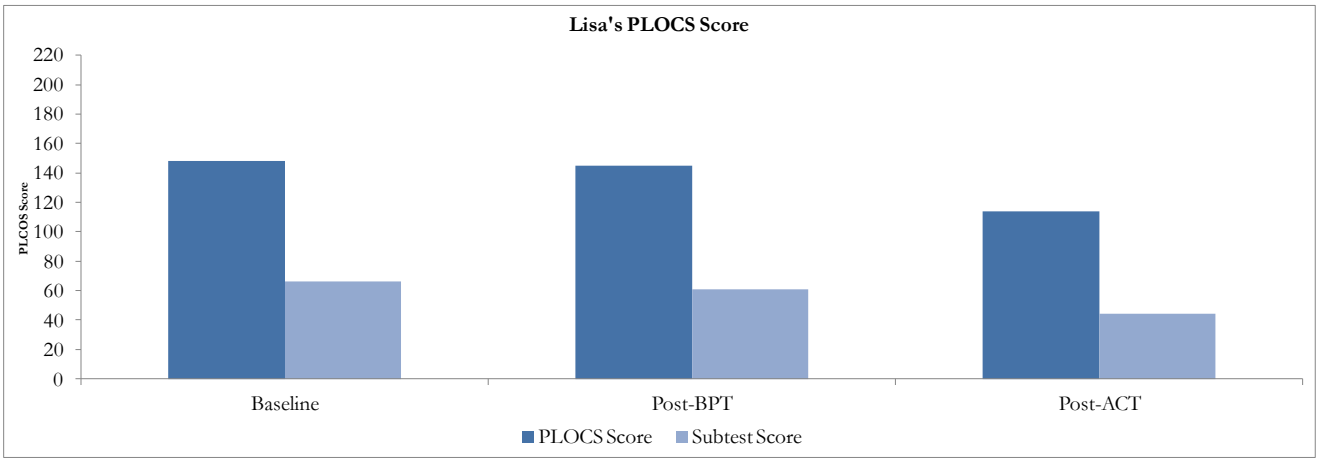

Figure 2: Lisa's parental locus of control scale (PLOCS) score assessed during baseline, post behavior parent training (BPT) and post acceptance and commitment therapy training (ACT).

Table 2: A table display of Lisa's PLOCS subscale scores across all three study conditions.

	Parental Efficacy			Parental Responsibility			Child's Control of Parents Life			Parent Belief in Fate/Chance			Parental Control of Child Behavior		
	BL	**BPT**	**ACT**	**BL**	**BPT**	**ACT**	**BL**	**BPT**	**ACT**	**BL**	**BPT**	**ACT**	**BL**	**BPT**	**ACT**
Lisa	39	31	22	37	36	35	25	26	17	19	22	18	29	32	23

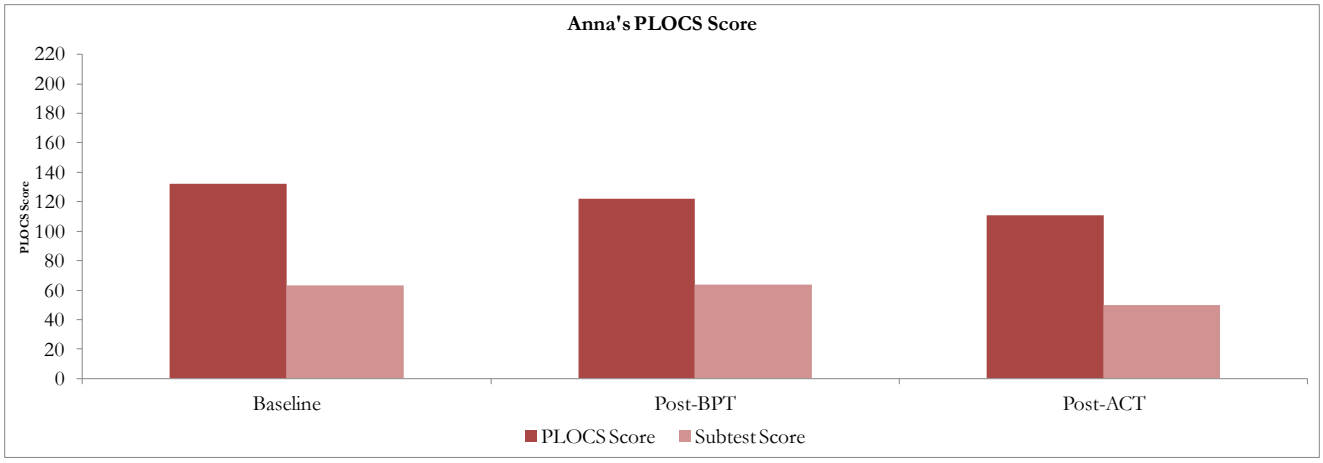

Figure 3: Anna's parental locus of control scale (PLOCS) score assessed during baseline, post behavior parent training (BPT) and post acceptance and commitment therapy training (ACT).

Table 3: A table display of Anna's PLOCS subscale scores across all three study conditions.

	Parental Efficacy			**Parental Responsibility**			**Child's Control of Parents Life**			**Parent Belief in Fate/Chance**			**Parental Control of Child Behavior**		
	BL	**BPT**	**ACT**	**BL**	**BPT**	**ACT**	**BL**	**BPT**	**ACT**	**BL**	**BPT**	**ACT**	**BL**	**BPT**	**ACT**
Anna	30	30	24	20	16	14	19	17	22	31	25	25	33	36	26

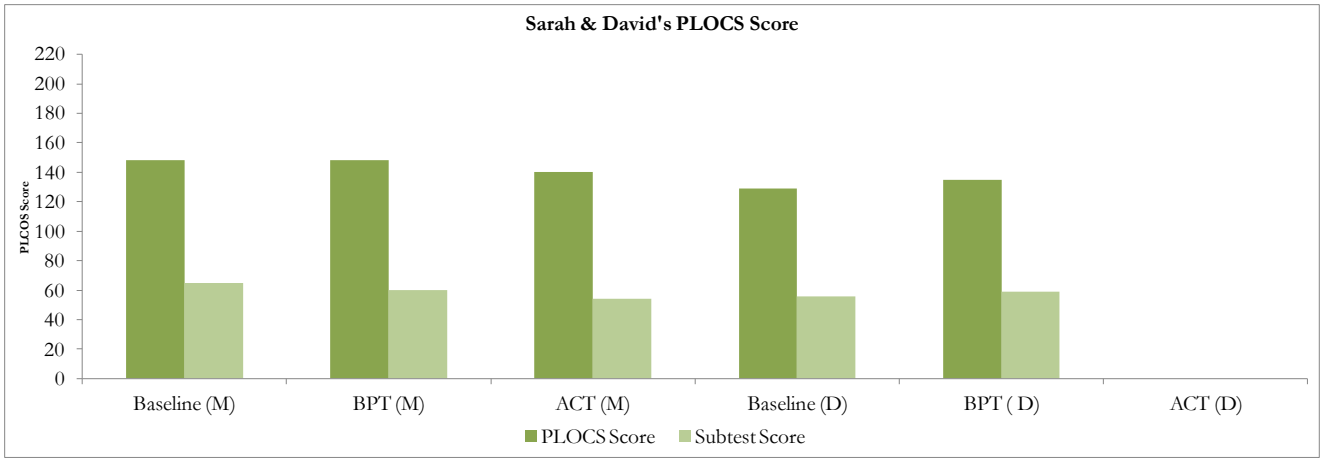

Figure 4: Sarah's (2 parent dyad) parental locus of control scale (PLOCS) score assessed during baseline, post behavior parent training (BPT) and post acceptance and commitment therapy training (ACT).

Table 4: A table display of Sarah's PLOCS subscale scores across all three study conditions.

	Parental Efficacy			**Parental Responsibility**			**Child's Control of Parents Life**			**Parent Belief in Fate/Chance**			**Parental Control of Child Behavior**		
	BL	**BPT**	**ACT**	**BL**	**BPT**	**ACT**	**BL**	**BPT**	**ACT**	**BL**	**BPT**	**ACT**	**BL**	**BPT**	**ACT**
Sarah	24	20	28	27	33	36	25	25	23	31	30	23	40	40	26

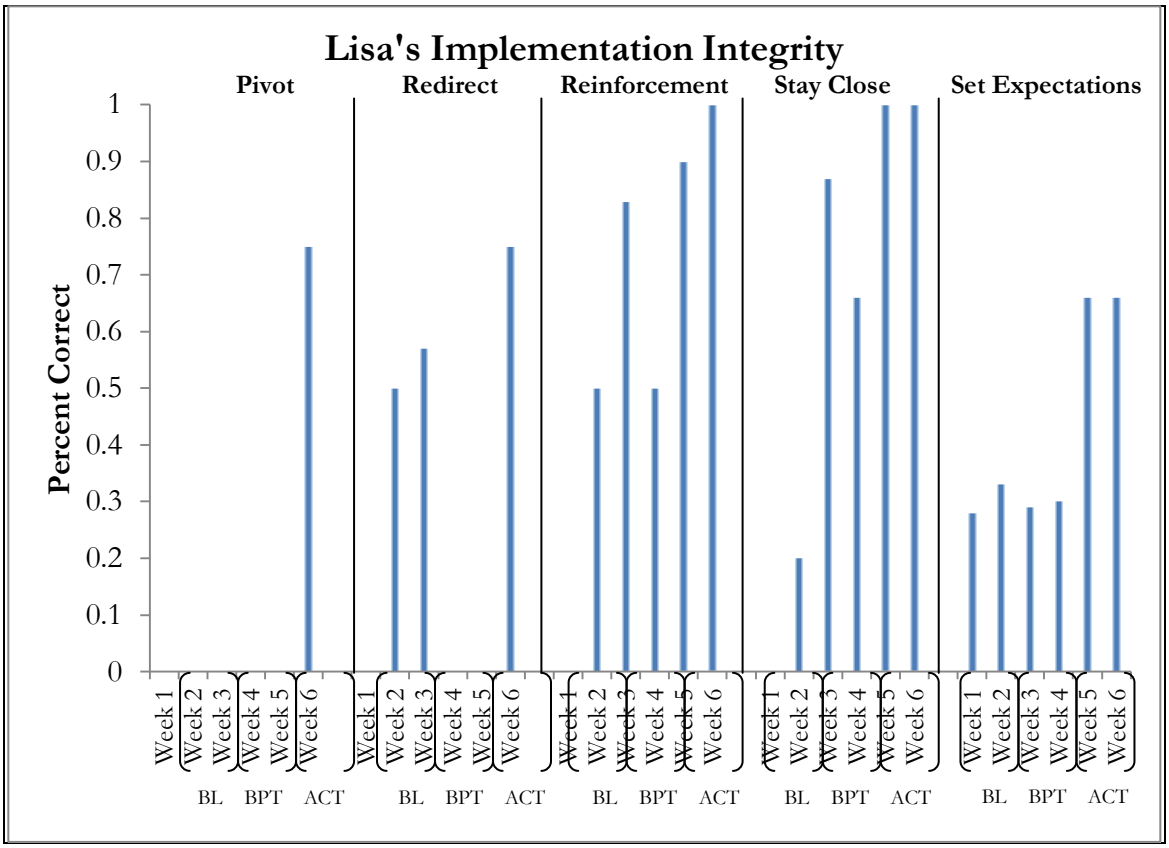

Figure 5: Lisa's implementation integrity probe scores assessed for each tool (pivot, redirect, use reinforcement, stay close and set expectations) across all three phases, baseline (weeks 1-2), BPT (weeks 3-4) and ACT (weeks 5-6).

Table 5: A table display of Lisa's self-recorded ACT measure responses across all experimental conditions, Baseline (weeks 1-2), BPT (weeks 3-4), and ACT (weeks 5-6).

Lisa's ACT Measures Table							
Measure	**Week 1**	**Week 2**	**Week 3**	**Week 4**	**Week 5**	**Week 6**	**Week 7**
Felt Anxious	N/A	1	N/A	N/A	N/A	N/A	N/A
Fully experienced thoughts, feelings, memories, or bodily sensations, in order to do things you value.	N/A	2	N/A	N/A	N/A	N/A	N/A
Worked towards specific behavioral goals that fit with your chosen overall values.	N/A	2	N/A	N/A	N/A	N/A	N/A
Took Actions in accord with your own personal values even when those actions were painful or difficult.	N/A	1	N/A	N/A	N/A	N/A	N/A
Implementation Integrity							
Pivot	0%	0%	0%	0%	0%	75%	N/A
Redirect	0%	50%	57%	0%	0%	75%	N/A
Use Reinforcement	N/A	50%	83%	50%	90%	100%	N/A
Stay Close	N/A	20%	87%	66%	100%	100%	N/A
Set Expectations	28%	33%	29%	30%	66%	66%	N/A

1 = Not at all; 2 = somewhat; 3 = moderately; 4 = A lot; 5 = extremely

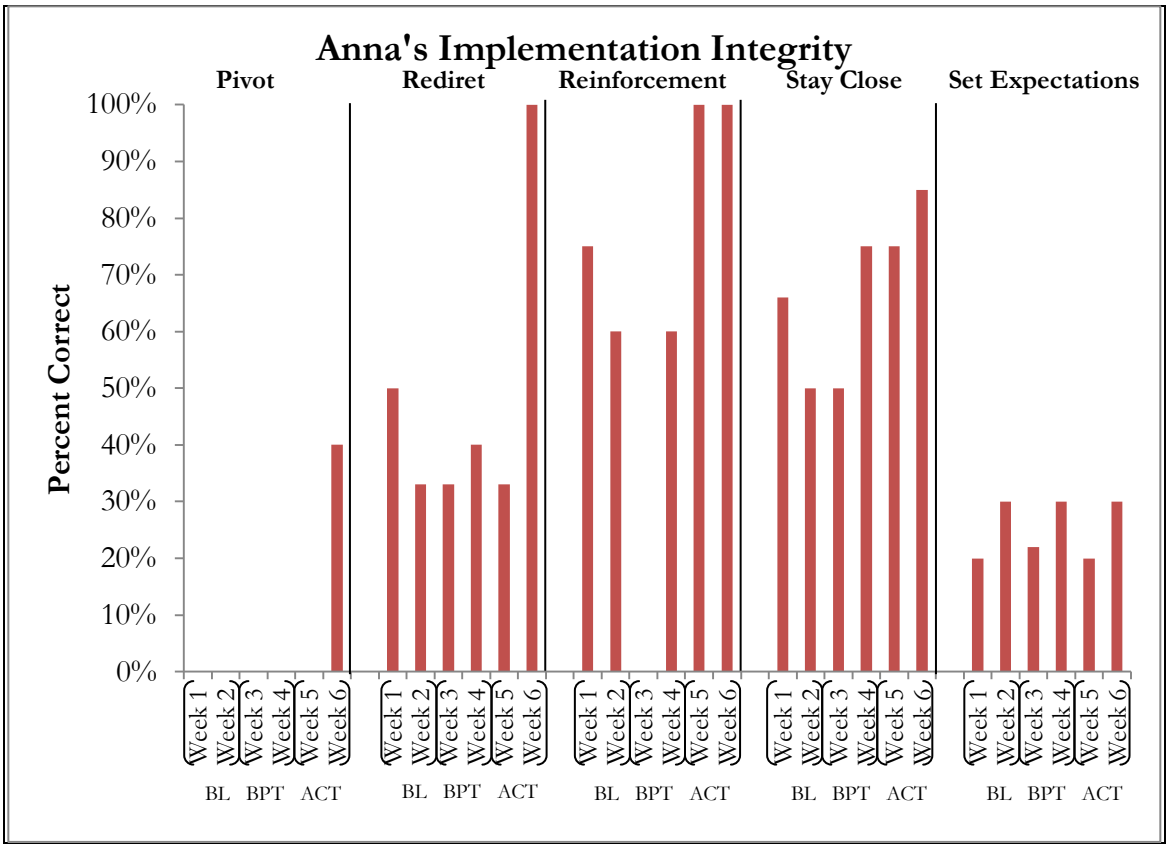

Figure 6: Anna's implementation integrity probe scores assessed for each tool (pivot, redirect, use reinforcement, stay close and set expectations) across all three phases, baseline (weeks 1-2), BPT (weeks 3-4) and ACT (weeks 5-6).

Table 6: A table display of Anna's self-recorded ACT measure responses across all experimental conditions, Baseline (weeks 1-2), BPT (weeks 3-4), and ACT (weeks 5-6).

Anna's ACT Measures Table						
Measure	**Week 1**	**Week 2**	**Week 3**	**Week 4**	**Week 5**	**Week 6**
Felt Anxious	5	4	2	3	N/A	3
Fully experienced thoughts, feelings, memories, or bodily sensations, in order to do things you value.	1	4	2	3	N/A	2
Worked towards specific behavioral goals that fit with your chosen overall values.	3	4	2	2	N/A	3
Took Actions in accord with your own personal values even when those actions were painful or difficult.	3	4	2	2	N/A	2
Implementation Integrity						
Pivot	0%	0%	0%	0%	0%	40%
Redirect	50%	33%	33%	40%	33%	100%
Use Reinforcement	75%	60%	0%	60%	100%	100%
Stay Close	66%	50%	50%	75%	75%	85%
Set Expectations	20%	30%	22%	30%	20%	30%

1 = Not at all; 2 = somewhat; 3 = moderately; 4 = A lot; 5 = extremely

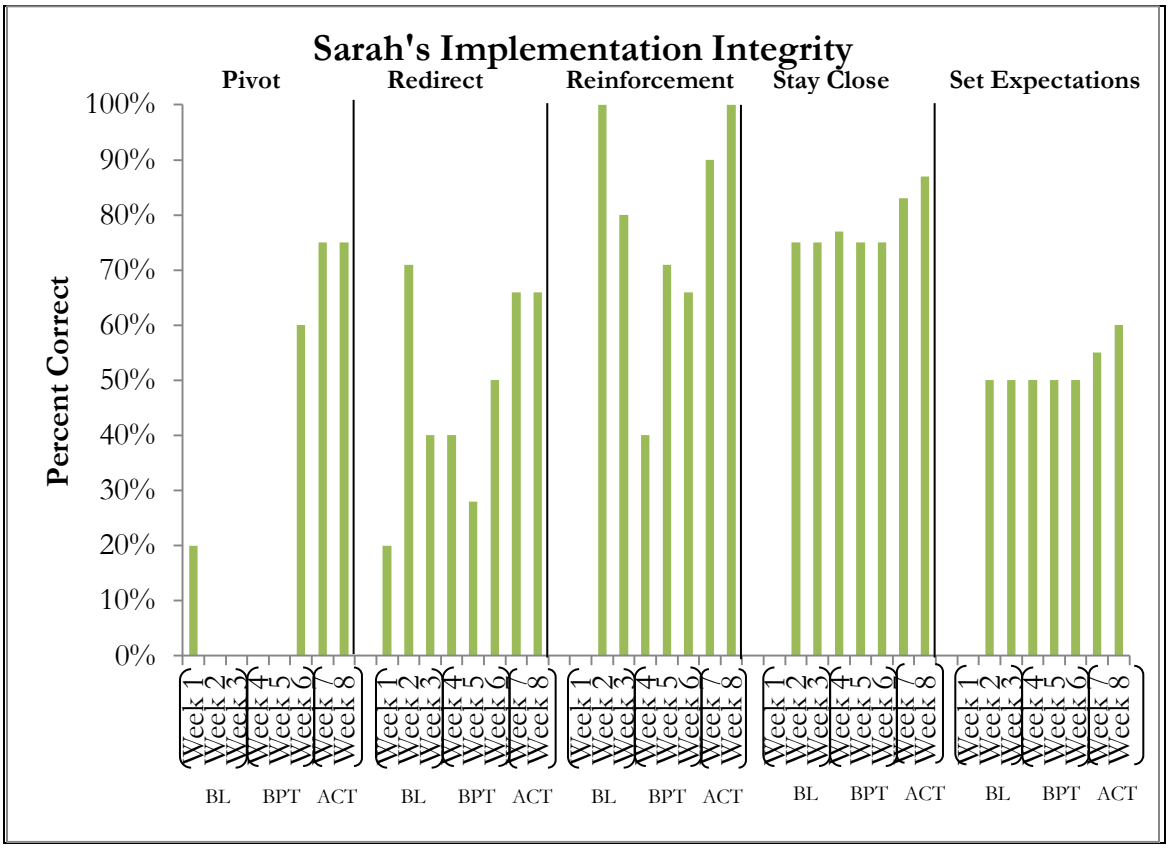

Figure 7: Sarah's implementation integrity probe scores assessed for each tool (pivot, redirect, use reinforcement, stay close and set expectations) across all three phases, baseline (weeks 1-3), BPT (weeks 4-6) and ACT (weeks 7-8).

Table 7: A table display of Sarah's self-recorded ACT measure responses across all experimental conditions, Baseline (weeks 1-3), BPT (weeks 4-5), and ACT (weeks 6-9).

Sarah's ACT Measures Table									
Measure	**Week 1**	**Week 2**	**Week 3**	**Week 4**	**Week 5**	**Week 6**	**Week 7**	**Week 8**	**Week 9**
Felt Anxious	**5**	**5**	**4**	**3**	**1**	**2**	**4**	**2**	**1**
Fully experienced thoughts, feelings, memories, or bodily sensations, in order to do things you value.	**N/A**	**4**	**N/A**	**2**	**2**	**3**	**2**	**2**	**4**
Worked towards specific behavioral goals that fit with your chosen overall values.	**5**	**5**	**5**	**4**	**4**	**4**	**3**	**3**	**4**
Took Actions in accord with your own personal values even when those actions were painful or difficult.	**4**	**4**	**4**	**4**	**4**	**4**	**3**	**3**	**4**
Implementation Integrity									
Pivot	**20%**	**0%**	**0%**	**0%**	**0%**	**60%**	**75%**	**75%**	**N/A**
Redirect	**20%**	**71%**	**40%**	**40%**	**28%**	**50%**	**66%**	**66%**	**N/A**
Use Reinforcement	**N/A**	**100%**	**80%**	**40%**	**71%**	**66%**	**90%**	**100%**	**N/A**
Stay Close	**N/A**	**75%**	**75%**	**77%**	**75%**	**75%**	**83%**	**87%**	**N/A**
Set Expectations	**N/A**	**50%**	**50%**	**50%**	**50%**	**50%**	**55%**	**60%**	**N/A**

1 = Not at all; 2 = somewhat; 3 = moderately; 4 = A lot; 5 = extremely

Chapter 6: Discussion

The training interventions investigated in this study yielded varying degrees of effectiveness in reducing PLOCS scores, reducing frequency of child problem behavior and caregiver coercive use and increasing integrity of skill implementation across all three participants. However, although the effects of intervention on reducing child problem behavior were limited, the overall effects of intervention were determined to have been successful in their primary objectives of altering caregiver perception of parenting abilities and increasing integrity of implementation integrity. It is hypothesized that the long term effects of this will be an increase in consistent and accurate implementation as compared to a traditional behavior parent training only and will likely result in an eventual decrease in child problem behavior.

Lisa demonstrated only a slight decrease on both overall PLOCS score and subtest score and the largest decrease occurring upon implementation of ACT training. Lisa also decreased average frequency of daily coercive use across all three phases however, while average frequency of child problem behavior from baseline to BPT condition, frequency of child problem behavior remained consistent and rose by slightly less than an average of once daily following implementation of the ACT training. It is hypothesized that the implementation of ACT training was effective with Lisa to decrease rule governance in the context of parent-child interactions in order to facilitate an improved implementation of skills learned in BPT training as well as a lessening of frequency of coercive interactions. This hypothesis is supported by increasing integrity of implementation

scores demonstrated for each skill across all 6 weeks. In addition, the spontaneous increases in child problem behavior may be evidence of extinction bursts exhibited by the child as a result of increased or improved skill implementation (e.g. extinction procedures). The weakened association between frequency of coercive use and frequency of child problem behavior may also be indicative of BPT skills being implemented as alternative antecedent or consequence responses to previous coercive responses to child problem behavior.

Anna demonstrated equal reductions in overall PLOCS score following implementation of both trainings however an increase in subtest score following BPT training and a slight reduction following implementation of ACT training. The average daily frequency of child problem behavior was reduced from baseline to BPT condition however remained consistent and rose by less than 1 per day in the ACT condition. The average daily use of caregiver coercives however were reduced from baseline to BPT condition and slightly more so upon implementation of the ACT training. Anna demonstrates an increased in frequency of child problem behavior and caregiver coercive use as well as an increased association between these measures in the final week of ACT condition. During all weeks of participation Anna anecdotally expressed her frustration with her child's behavior, reporting that he had "been real bad" or other similar phrase, with the exception of the first week of the ACT condition. This provides further support to the effectiveness of the ACT training in addition to the low frequencies of child problem behavior and caregiver coercives. Anna reported prior to the last week of ACT condition that her child had a weekend of exceptionally high intensity problem behavior which may have served to alter the properties of her covert verbal behavior (i.e.,

frequency and intensity of aversive private events, acceptance of aversive verbal behavior) subsequently affecting her implementation of BPT skills and leading to an increase in her coercive interactions. This hypothesis is supported by further examination of Anna's weekly reported ACT measures in which she reported an increased level of anxiety (moderate) in comparison to previous weeks in addition to less contact with the present moment and less commitment to valued action as both were indicated to only be 'somewhat'. Furthermore, while Anna's implementation integrity improved for 4 of the 5 skills during the final week, her overall PLOCS score did not demonstrate a substantial decrease from the previous assessment point. This serves to support that although Anna may have a verbal knowledge of the steps to implement the skills, her covert verbal behavior may have hindered her implementation of the skills and motivated her reliance upon coercive interactions for which she has an established history of reinforcement. Anna also anecdotally reported on a weekly basis, a desire for in situ training with her child as well as "therapy". As this study did not involve in situ training or traditional therapy, this could contribute to the effectiveness demonstrated in this case. Anna did however demonstrate an increase in implementation of all BPT skills across all three conditions.

Sarah demonstrated no change in overall PLOCS score from baseline to BPT condition and a slight reduction from BPT to ACT condition and equal reductions in subtest scores across all three conditions. David participated in assessments and trainings although his overall PLOCS and subtest scores did not meet initial participation criteria and was not available for final PLCOS assessment. David demonstrated an increase in both overall PLOCS and subtest score from baseline to BPT condition. Sarah and 3(b)

collectively recorded data on both child problem behavior and caregiver coercive use, 3(a) being the primary caregiver and source of data collection. Average daily frequency of child problem behavior and caregiver coercive use was reduced across all three conditions. The effectiveness of ACT training is supported in the case of Sarah by the reduction in both overall PLOCS score and subtest score as well as the weakened association between child problem behavior and caregiver coercive use following implementation of the ACT training. Sarah demonstrated relatively high scores of implementation integrity beginning in baseline in comparison to other participants however these scores do increase and reach maximum in the ACT condition. David was not available for all implementation probes and since his scores PLOCS scores did not meet participation criteria, his implementation scores were excluded. Sarah also anecdotally reported an increased level of parenting confidence and gratitude following ACT training.

The link between ACT training and an improved implementation on BPT skills is hypothesized to be the result of a shift in the way in which parents engage potentially aversive covert verbal behavior. Although, they may continue to experience aversive private events, ACT techniques promote their acceptance of these events and function to desensitize their aversive properties. The goal of the training, exercises, and metaphors in the ACT training is to increase parent acceptance of their child's problem behavior, inform them that it is typical of parents to struggle with aversive thoughts, feelings and emotions when their child are engaging in problem behavior, and encourage parents to engage in more positive interactions with their child in order to foster their future relationships.

This modification of parent verbal behavior and their acceptance of aversive private events are hypothesized to result in increased positive interactions between parents and children at times which they may have previously attempted to escape or avoid them when possible. As parents experience an increase in positively reinforcing contingencies involved in the interactions with their children may function to establish novel positive verbal behavior associated with their child. The specific skills which are most likely to be impacted by this are skills which are implemented on the antecedent end of parent-child interactions, at times which the child is not necessarily engaging in problem behavior (i.e., use reinforcement and stay close). The other skills (pivot, redirect, and set expectations) may also be impacted however may take a longer period to see effects due to an established history of engaging in coercive responses to child problem behavior. Specifically in regards to the set expectations skill, the response effort necessary to fully engage may serve as a hindrance due to the number of steps involved. The focus of the ACT intervention on the utilization of specific ACT components (values, contact with the present moment, and commitment) as opposed to all of the ACT components may also have affected the degree of effectiveness the intervention demonstrated on specific skills. The use of exercises focusing on values, contact with the present moment, and commitment are hypothesized to have functioned to increase parent awareness of child behavior, particularly appropriate behavior as opposed to focusing primarily on problem behavior. This provides parents with an increase in opportunities to provide reinforcement for appropriate behavior while values and commitment are hypothesized to increase the motivation to provide reinforcement. Along with the use reinforcement skill, the redirect tool also demonstrates a noteworthy increase in

implementation integrity, which may be due to the increased awareness of child behavior in addition to an increased motivation to engage in an alternative response to child problem behavior by redirecting them to an alternative activity as opposed to utilizing a coercive or simply ignoring the behavior. The inclusion of all ACT components however may demonstrate improved outcomes on an increased number of skills.

The maintenance of these skills was demonstrated contrary to Van Camp, Montgomery, et al. (2008) which demonstrated a 21% aggregate decrease in average participant post training scores on skill assessments conducted post training and pre-booster training. Although this decrease was demonstrated over a range of 8 to 35.5 months between assessments, it does suggest a low maintenance of skills over time. Therefore, whereas previous research has identified a lack of maintenance in caregiver implementation skills over time to be a shortcoming of traditional behavior parent training (Van Camp, Montgomery, et al., 2008), the ACT phase does show an overall maintenance of implementation scores even in the tools which may not have demonstrated the most significant impact. This provides support for the hypothesis that the ACT training intervention may have increased the parent motivation to engage in previously taught skills to at least the degree which they maintain over a longer period of time.

Primary limitations within this study include the following. Specific to Lisa, the decision of the husband not to participate may create inconsistency in the responses to child problem behavior. This may in turn lead to a variable reinforcement of problem behavior and a lack of support in her participation.

Specific to Anna, the presence of the child in the home during trainings proved to be an interruption and distraction. Although the home was otherwise a conducive environment to training and the Anna arranged for someone to watch the child, her engagement in the training was likely weakened. Also, as she repeatedly stated that she had previously received behavior services which were not as helpful as she would have hoped, that she felt she needed both in situ BST with the child and therapy, her engagement in the interventions may have been less than optimal. Also, the consistent involvement of the child's biological father on variable weekend schedules and Anna's significant other whom were not trained in interventions may have also resulted in the variable reinforcement of problem behaviors.

Sarah had the least confounding variables as both parents were trained in interventions and data collections procedures. The primary limitations surround their limited opportunity for scheduling trainings and observations. This resulted in a necessary phase change to intervention 1 proceeded by a drop in baseline data recording. The drop however is easily explained by the setting events consistently preceding both child problem behavior and caregiver coercives.

Overall limitations include, the inability to accurately assess the integrity of participant data recording (frequency, latency of recording, etc), as well as the possibility of observer drift and recording bias contingent upon receipt of intervention. For instance, although participants were instructed following each training to continue recording of their child and their own behavior with fidelity one must consider the possibility that the intervention could have a placebo effect following which their perception of the severity

of the behavior and therefore need to record is altered to a degree as well as their possible desire to please their trainer.

Also, as the primary researcher is not an ACT clinician, the intervention was homogenous and protocol driven across participants, restricting the ability to utilize additional exercises, metaphors or activities that may enhance intervention effectiveness and address any issues specific to each participant.

Lastly, the task analysis of BPT skills utilized to assess skill implementation integrity includes a number of steps in across each tool that may be considered less relevant or contributing to overall skill effectiveness (e.g., empathy statement, praise previous, etc.). The exclusion of certain less core steps in many cases resulted in a lower score which may not have been representative of a participant's ability to utilize the skill effectively.

Suggestions for future research include comparing the effectiveness of an acceptance and commitment therapy based intervention to that of a behavioral parent training; focusing on the implementation of ACT therapy sessions to target and overcome any known issues the parent may have following a BPT training as opposed to a ACT based protocol; and the incorporation of an ACT based training following a BPT training in a classroom/group setting.

Conducting trainings in a classroom or group setting would allow for less possible distractions and disruptions as well as provide an opportunity for parents to establish peer support systems with other parents. Also, comparing the implementation of interventions in a group design would allow for an enhanced analysis if whether each training is in fact

modifying the frequency of parent and caregiver behavior or simply their perception of their interactions, as well as their effectiveness in isolation.

A final consideration is the use of additional or alternative psychometric measures. Future research should consider the use of more researched assessments to measure the parental locus of control and/or other psychological assessments (e.g. valued living questionnaire, acceptance and action questionnaire).

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APPENDICES

Appendix A- Tools Tasks Analysis 1

ABC's Tool Checklist

Participant Name: _____

Behavior Analyst: _____Date: _____

Before (Antecedent)	Behavior	After (Consequences)
Yes		
No		
N/A		

Before (Antecedent)	Behavior	After (Consequences)
Yes		
No		
N/A		

Appendix B- Tools Tasks Analysis 2

Reinforcement Tool Checklist

Participant Name: _____

Behavior Analyst: _____ Date: _____

Step	Yes	No	N/A	Comments
1. Use specific verbal praise				
2. Provide a potentially reinforcing consequence, if needed.				(Circle those provided): • Social Interaction • Appropriate touch • Tangible item • Privilege • Break from task
3. Immediately provide a positive consequence.				
4. Sincere body language (facial expression, tone of voice and body language.)[1]				
5. Stay Focused (avoid junk behavior)				
6. Stay Cool and use no caregiver traps				

Trainer's Notes:

1Score "No" if there is any instance of inappropriate expression, tone of voice, or body language. If the observation is a competency check-off, caregiver should tell you how they would make sure the consequence is reinforcing without prompting.

2Step 6 is scored on its own and does not effect other steps in this tool.

3If arms are crossed, count step 4 as No.

4If the CG scores yes on 1 or 2, then if done immediately, score yes for 3.

Overall Comments: (Circle any caregiver traps used: sarcasm/teasing; criticism; threats; arguing; questioning; lecturing; despair (bribing, pleading, hopelessness; force; sudden subtraction; one up-man-ship; silent treatment; telling on them to others. Be specific.)

Appendix C - Tools Tasks Analysis 3

Redirect Tool Checklist

Participant Name: _____

Behavior Analyst: _____ Date: _____

Step	Yes	No	N/A	Comments
1. Get close within arm's reach of the child (before saying anything)				
2. Make sure the child stops the inappropriate behavior. (Use gentle physical guidance if necessary)				
3. Calmly say something like, "Hey (child's name), I want you to (state the positive alternative behavior)"				
4. Give an opportunity for the child to engage in the appropriate behavior on their own. If the child does not begin to do the suggested activity within 3 seconds, model, or gently guide her/him to do the activity				
5. Acknowledge when the child does the appropriate behavior				
6. Stay Focused (avoid junk behavior)				
7. Stay cool and use no caregiver traps				

Overall Comments: (Circle any caregiver traps used: sarcasm/teasing; criticism; threats; arguing; questioning; lecturing; despair (bribing, pleading, hopelessness; force; sudden subtraction; one up-man-ship; silent treatment; telling on them to others. Be specific.)

1. Score a yes for step 3 if the caregiver makes this statement at any time during the role-play
2. Score a yes for step 5 if the caregiver provides any verbal statement or comment about the appropriate behavior (i.e., yes, that's right, wee wee, thank you)

Appendix D - Tools Tasks Analysis 4

Set Expectations Tool Checklist

Participant Name: _____

Behavior Analyst: _____ Date: _____

Step	Yes	No	N/A	Comments
1. Set the stage (Time away from the behavior and uninterrupted) [1]				
2. Praise Previous				
3. State the expectation clearly and specifically.				
4. If the child asks "Why?"				
5. State the consequences for meeting the expectation.				
6. State the consequences for not meeting the expectation				
7. Ask the child to restate the expected behavior				
8. Ask the child to restate the consequences for meeting				
9. Ask the child to restate the consequences for not meeting				
10. Acknowledge the child's restatement.				
11. Stay Focused (avoid junk behavior)				
12. Stay cool and use no caregiver traps				

Trainer's Notes:

1 Ask participant to describe when, where, and how setting expectations is occurring (i.e., time, place).
2 Score yes if the reason for doing the behavior is a benefit to the child.
3. If the caregiver did not ask for a restatement, wait until the end of the conversation and then provide the restatement to score step 7.
4. Score a yes for step 7 if the caregiver provides any verbal statement or comment about the appropriate behavior (i.e., yes, that's right, you got it, thank you)
5. Score a yes only for step 3 if the caregiver states specifically when (i.e. before school). Stating the time of day only is not specific enough and would score as a No.

Overall Comments: (Were any caregiver traps used: sarcasm/teasing; criticism; threats; arguing; questioning; lecturing; despair(bribing, pleading, hopelessness; force; sudden subtraction; one up-man-ship; silent treatment; telling on them to others? Be specific.)

Appendix E - Tools Tasks Analysis 5

Stay Close Tool Checklist

Participant Name: _____

Behavior Analyst: _____ Date: _____

Step	Yes	No	N/A	Comments
1. Get physically close to the child (move toward child and be within arms reach, etc.)				
2. Touch appropriately (pat, hug, rub, etc.)				
3. Appropriate body language (facial expression, tone of voice and body language.) [1]				
4. Ask open-ended questions (what? who? how? when? where?) [2]				
5. Listen while the child is speaking. Talk less than the child (Do not problem-solve unless the child asks for help. Do not interrupt or abruptly change the topic.) [3]				
6. Use empathy statements. (Act like a mirror and reflect the child's feelings, express understanding, caring, etc.)[4]				
7. Stay Focused (avoid junk behavior)[5]				
8. Stay cool and use no caregiver traps				

Trainer's Notes: After step 3, steps do not have to be completed in any particular order.

[1] A single instance of a punitive, disgusted or inappropriate facial expression, tone of voice or body language (step 3), during any part of the role play should be scored "no" for step 3.

[2] Only one open-ended question is needed to score a "yes" for step 4.

[3] If problem-solving is used without the child asking for it, score "no" for step 5. If two or more problem solving statements occur consecutively, score as lecturing. Score no for step 5, if they talk more than the child, interrupt the child, and/or change the topic. If the trainer does not provide an opportunity, count as N/A.

[4] Only one instance of an empathy statement is needed to score a "yes" for step 6.

[5] A single instance of attending to undesirable behavior throughout the role play will be scored "no" for step 7. If the role-play is ended early by the caregiver, score steps 7 & 8 as N/A.

Overall Comments: (Circle any caregiver traps used: sarcasm/teasing; criticism; threats; arguing; questioning; lecturing; despair (bribing, pleading, hopelessness); force; sudden subtraction; one up-man-ship; silent treatment; telling on them to others. Be specific.)

Appendix F - Tools Tasks Analysis 6

Pivot Tool Checklist

Participant Name: _____

Behavior Analyst: _____ Date: _____

Step	Yes	No	N/A	Comments
1. Say nothing about the junk behavior. (For example: Don't say, "Stop that now!" or "Quit doing that!")[1]				
2. Do nothing to react to the junk behavior (for example: don't roll your eyes, stomp out of the room, cross your arms, stare.)[2]				
3. Turn to another child, person, or activity. (For example: Read a book or praise another child for behaving appropriately.)				
4. Immediately once the child who displayed junk behavior behaves appropriately; acknowledge the appropriate behavior of this child.				
5. Stay cool and use no caregiver traps				

Trainer's Notes:

[1,2] Score "No" if there is any response to the junk behavior, including laughing or any change of expression. However, if the caregiver realizes they have responded to the junk behavior and stops the response, note this in the Comments column and reinforce the acknowledgment and correction.

Overall Comments: (Circle any caregiver traps used: sarcasm/teasing; criticism; threats; arguing; questioning; lecturing; despair (bribing, pleading, hopelessness); force; sudden subtraction; one up-man-ship; silent treatment; telling on them to others. Be specific.)

Appendix G – Social Validity Assessment

Session 1 Evaluation

Trainer/Site_____Date_____

1. What did you like best? ☺

2. What did you like the least? ☹

3. What is the most important thing you learned? 👌

4. Other comments:

	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
This class was beneficial.	**1**	**2**	**3**	**4**	**5**
The information was easy to understand and presented clearly.	**1**	**2**	**3**	**4**	**5**
The instructors took time to answer questions.	**1**	**2**	**3**	**4**	**5**
The reading and homework were helpful.	**1**	**2**	**3**	**4**	**5**
I feel better prepared for managing child behavior after this session.	**1**	**2**	**3**	**4**	**5**
The ABC, Stay Close and Set Expectations Tools were taught in this session.	**1**	**2**	**3**	**4**	**5**
The instructor was effective in teaching these tools.	**1**	**2**	**3**	**4**	**5**
I will use these tools taught in this class in my home.	**1**	**2**	**3**	**4**	**5**
The Pivot and Redirect Tools were taught in this session.	**1**	**2**	**3**	**4**	**5**
The instructor was effective in teaching these tools.	**1**	**2**	**3**	**4**	**5**
I will use these tools taught in this class in my home.	**1**	**2**	**3**	**4**	**5**

Appendix H – PLOCS

Parental Efficacy	Not at all consistent 1 2 3 4 5 Extremely consistent
1. What I do has little effect on my child's behavior.	1 2 3 4 5
2. When something goes wrong between me and my child, there is little I can do to correct it.	1 2 3 4 5
3. Parents should address problems with their children because ignoring them won't make them go away.	1 2 3 4 5
4. If your child tantrums no matter what you try, you might as well give up.	1 2 3 4 5
5. My child usually ends up getting his/her way, so why try.	1 2 3 4 5
6. No matter how hard a parent tries, some children will never learn to mind.	1 2 3 4 5
7. I am often able to predict my child's behavior in situations.	1 2 3 4 5
8. It is not always wise to expect too much from my child because many things turn out to be a matter of luck anyways.	1 2 3 4 5
9. When my child gets angry, I can usually deal with him/her if I stay calm.	1 2 3 4 5
10. When I set expectations for my child, I am almost certain that I can help him/her meet them.	1 2 3 4 5

Parental Responsibility	
11. There is no such thing as good or bad children – just go or bad parents.	1 2 3 4 5
12. When my child is well-behaved, it is because he/she is responding to my efforts.	1 2 3 4 5
13. Parents who can't get their children to listen to them don't understand how to get along with their children.	1 2 3 4 5
14. My child's behavior problems are no one's fault but my own.	1 2 3 4 5
15. Capable people who fail to become good parents have not followed through on their opportunities.	1 2 3 4 5
16. Children's behavior problems are often due to mistakes their parents made.	1 2 3 4 5
17. Parents whose children make them feel helpless just aren't using the best parenting techniques.	1 2 3 4 5
18. Most children's' behavior problems would not have developed if their parents had had better skills.	1 2 3 4 5
19. I am responsible for my child's behavior.	1 2 3 4 5
20. The misfortunes and success I have had as a parent are the direct result of my own behavior.	1 2 3 4 5

Child Control of Parent's Life	
21. My life is chiefly controlled by my child.	1 2 3 4 5
22. My child does not control my life.	1 2 3 4 5
23. My child influences the number of friends I have.	1 2 3 4 5
24. I feel like what happens in my life is mostly determined by my child.	1 2 3 4 5
25. It is easy for me to avoid and function independently of my child's attempts to have control over me.	1 2 3 4 5
26. When I make a mistake with my child I am usually able to correct it.	1 2 3 4 5
27. Even if your child frequently tantrums, a parent should not give up.	1 2 3 4 5

Parental Belief in Fate/Chance	
28. Being a good parent often depends on being lucky enough to have a good child.	1 2 3 4 5
29. I'm just one of the lucky parents who happened to have a good child.	1 2 3 4 5
30. I have often found that when it comes to my children, what is going to happen will happen.	1 2 3 4 5
31. Fate was kind to me – if I had had a bad child I don't know what I would have done.	1 2 3 4 5
32. Success in dealing with children seems to be more a matter of the child's moods and feeling at the time rather than one's own actions.	1 2 3 4 5
33. Neither my child nor myself is responsible for his/her behavior.	1 2 3 4 5
34. In order to have my plans work, I am sure they fit in with the desires of my child.	1 2 3 4 5
35. Most parents don't realize the extent to which how their children turn out is influenced by accidental happenings.	1 2 3 4 5
36. Heredity plays a major role in determining a child's personality.	1 2 3 4 5
37. Without the right breaks one cannot be an effective parent.	1 2 3 4 5

Parental Control of Child's Behavior	
38. I always feel in control when it comes to my child.	1 2 3 4 5
39. My child's behavior is sometimes more than I can handle.	1 2 3 4 5
40. Sometimes I feel that my child's behavior is hopeless.	1 2 3 4 5
41. It is often easier to let my child have his/her way than to put up with a tantrum.	1 2 3 4 5
42. I find that sometimes my child can get me to do things I really did not want to do.	1 2 3 4 5
43. My child often behaves in a manner very different from the way I would want him/her to behave.	1 2 3 4 5
44. Sometimes when I'm tired I let my children do things I normally wouldn't.	1 2 3 4 5
45. Sometimes I feel that I do not have enough control over the direction my child's life is taking.	1 2 3 4 5
46. I allow my child to get away with things.	1 2 3 4 5
47. It is not too difficult to change my child's mind about something.	1 2 3 4 5

Appendix I - Weekly Data Collection Sheet

Instructions: Please answer all of the items. Put a check after each item to indicate what degree, during the past week including today you have…

(Date Range)	**Not at All**	**Somewhat**	**Moderately**	**A Lot**	**Extremely**
1. Felt Anxious					
2. Fully experienced thoughts, feelings, memories, or bodily sensations, in order to do things you value.					
3. Worked towards specific behavioral goals that fit with your chosen overall values.					
4. Took Actions in accord with your own personal values even when those actions were painful or difficult.					

Instructions: Please place a tally in the daily box for every occurrence of identified problem behavior as defined below.

(Date Range)	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Sunday**
Child Problem Behavior							
1. Behavior							
2. Behavior							
3. Behavior							

Behavior	Definition
Behavior	Definition
Behavior	Definition

Instructions: Please place a tally in the daily box for every occurrence of identified interaction as defined below.

(Date Range)	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Sunday**
Caregiver Interactions							
1. Sarcasm							
2. Lecturing							
3. One-Up-Man-ship							
4. Telling on them to Others							
5. Criticism							
6. Questioning							
7. Force							
8. Threats							
9. Sudden Subtraction							
10. Arguing							
11. Despair							
12. Silent Treatment							

1. Sarcasm	Making fun of the child or teasing. "Monkey see/Monkey do, huh?" "That was a *bright* thing to do." "Let's try it again with your brain engaged this time." "You're such a tough guy, hitting on people that are smaller than you!"
2. Lecturing	Putting the child down by showing how illogical their behavior is during the time of that behavior. Example: Telling a 3-year-old "You have to stay in your car seat because you could get really hurt without it if we have an accident. Your car seat is designed to protect you. Do you understand?"
3. One-Up-Man-ship	Trying to give the child something to think about or show them how good their life is by telling stories about how difficult your life has been, or what would have happened if you misbehaved. Example: "Don't complain about being hot to me. When I was growing up, there was no such thing as air conditioning."
4. Telling on them to Others	Telling of the child's inappropriate behaviors to another person in the presence of that child or making a child tell of their own inappropriate behavior to another person. Example: "Do you know what Billy did? Billy, tell her what you did. I'll tell you what he did…."
5. Criticism	Putting the child down. Examples: "Don't be so stupid." "You can't chew gum and walk at the same time." "I can't trust you to do anything right." "You look like a tramp in that dress."
6. Questioning	Asking questions that the questioner knows the child does not have any good answers to, already knows the answers, or does not care to hear the answer to. ("Why do you continue to do things that just get you in trouble? How many times do I have to tell you not to do this?")
7. Force	Causing pain, forcing a child against their will, yelling, and/or creating fear in the child. Example: smacks, slaps, paddling, ear-flicking, pushing, aggressive posturing over the child, yelling, screaming, backing the child into a corner, banging objects/wall/chair/table, locking the child in a closet, having the child kneel on the floor holding weights of any kind. "If you do that, it will be over my dead body." "Go ahead, push me, just see what happens."
8. Threats	Threatening some negative consequence. Example: "If you don't stop this, you'll never see your Nintendo game again." "If you don't soon straighten out, you won't be able to get a job and live a good life."
9. Sudden Subtraction	Removing a desired item or preferred activity, toy, or money after a child has misbehaved in order to make the child want to behave better in the future. Example: Grounding the child, withholding allowance that has been earned, taking a toy away, etc.
10. Arguing	Attempting to "force" the child to agree with him/her, responding to any/all objections on the part of the child. Basically, any situation where the caregiver engages the child in a back and forth conversation in an attempt to force the child's verbal agreement to comply with the expectations.
11. Despair	Making the child feel guilty. ("I can't handle this anymore. Why can't you just make this easier for me? Do you always have to ruin everything for me.")
12. Silent Treatment	Obviously ignoring the child beyond the occurrence of inappropriate behavior in order to punish the child.

Appendix J – Recruitment Flyer

Do you have a child between the ages of 4 and 10 that engages in difficult behaviors?

Would you benefit from training/assistance handling these behaviors?

If you answered YES to these questions, you may be eligible to participate in a caregiver/parent training research study.

Purpose: The purpose of this research study is to assess the effectiveness of an Acceptance and Commitment Therapy based parent training following a traditional behavioral parent training.

Benefits: Benefits include training on behaviorally based parenting curriculum designed to help support effective parenting as well as training in Acceptance and Commitment Therapy practices intended to help support parenting in times of challenging behavior.

Location: Trainings will be conducted by a certified assistant behavior analyst, on two consecutive weekend days followed by two additional weekend days in participant home or community setting.

Eligibility: Participants must be biological caregivers 18 years or older, with at least one child between the ages of 4-10 that engages in a minimum of 10 identifiable difficult behaviors (e.g. tantrum, hitting, etc.). Participants must have flexible scheduling to allow daily/weekly observation session for approximately 6-8 weeks. Additional eligibility criteria may apply, please contact for additional information!

Contact: Corey Cohrs, B.A., BCaBA **(727) 420-7461**
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