EVALUATING THE EFFECTIVENESS OF A PARENT TRAINING PROTOCOL BASED ON AN
ACCEPTANCE AND COMMITMENT THERAPY PHILOSOPHY OF PARENTING

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Thirty-four parents were referred by their CPS caseworkers to participate in one of two ACT for Parenting workshops. These workshops followed a 12 hour treatment protocol based on an acceptance and commitment therapy philosophy of parenting. Briefly, an ACT philosophy of parenting maintains that effective parenting requires awareness and acceptance of thoughts and feelings as they occur in the context of the parent-child relationship. An ACT philosophy of parenting also relies heavily on the identification and commitment to parenting values. Participants were asked to track acceptance and valuing behavior on a daily basis for 25 days prior to the intervention and 25 days post-intervention, as well as to complete a package of self-report instruments designed to measure both ACT specific and general psychological processes, at three different points (pre-, post- and follow-up). Nineteen parents received the treatment, and of those, seventeen provided follow-up data 3-4 months post-intervention. Results indicate statistically significant changes in the expected directions for scores on the BASC-2 Externalizing Composite as well as on the Meta-Valuing Measure. A total of 10 parents also evidenced clinically significant change in the expected directions on a variety of outcome measures.
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INTRODUCTION

Parenting stress is ubiquitous (Deater-Deckard, 1998; Murrell, 2005), varying only in degree among individual parents. Parenting stress has been defined as the “aversive psychological reaction to the demands of being a parent” (Deater-Deckard, 1998, p. 315), differentiating it from stress related to other life domains. Though the relationship between parenting stress and parenting behavior is not simply linear (Abidin, 1992), the two are highly correlated (Deater-Deckard, 1998). Indeed, parenting stress is strongly linked with parent and child psychopathology, particularly maternal depression, separation anxiety in children, and childhood externalizing disorders (Abidin, 1995; Deater-Deckard, 1998). Parenting stress is also a risk factor for insecure attachment as well as child abuse and neglect (Abidin, 1995; Deater-Deckard, 1998).

Clearly, providing treatment for stressed parents is of the utmost importance. Yet, the vast majority of interventions designed for parents are behavioral parent training (BPT) interventions that do not directly target parents’ internal experiences. Instead, the assumption behind these interventions seems to be that improved parenting skills will lead to improved parent-child relationships which will, in turn, correspond to reduced parenting stress (Murrell, 2005). However, the relationship between impaired parenting and parenting stress is bidirectional. That is, it is also the case that high levels of parenting stress, in conjunction with all of its correlates, can interfere with parents’ ability to learn and implement behavioral parenting techniques (Murrell, 2005). Furthermore, parents’ abilities to appropriately utilize these techniques is difficult to maintain in changing contexts, i.e., in the grocery store, while visiting relatives, etc. (Wahler, Rowinski, & Williams, 2008).
One intervention that seems well-suited for the treatment of distressed parents is acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 1999; Coyne & Wilson, 2004). As a third wave behavior therapy (discussed in detail later), ACT integrates traditional behavior therapy techniques with acceptance and mindfulness techniques. Stated a different way, ACT clinicians promote and support behavior change, but (and) they also encourage acceptance of behavior that is resistant to change, specifically, thinking and feeling. An ACT intervention for parents, then, promotes changes in parenting behavior alongside acceptance of thoughts and feelings about being a parent, including parenting stress. Given that parenting stress is “an aversive psychological reaction,” parents would naturally want to avoid feeling stressed. Parents would therefore be likely to avoid any stimuli that they have indirectly learned to associate with stress. These stimuli can be external to parents, including their children, or internal, including parents’ thoughts and feelings about their children, themselves, and the parent-child relationship. This becomes problematic when, for example, parents come to avoid any situation in which the thought arises, “I’m a bad parent.” Avoiding such thoughts is an example of experiential avoidance, broadly defined as escape or avoidance of internal experiences, particularly thoughts, feelings and bodily sensations (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). One of the primary aims of an ACT clinician is to undermine experiential avoidance. Indeed, experiential avoidance shares many of the same correlates as parenting stress, psychopathology in particular (Abidin, 1995; Deater-Deckard, 1998; Hayes, Luoma, Bond, Masuda, & Lillis, 2006).

The purpose of this study is to evaluate the effectiveness of ACT in the treatment of a sample of distressed parents. The proposed intervention is based on an ACT philosophy of
parenting as outlined in *The Joy of Parenting: An Acceptance and Commitment Therapy Guide for Effective Parenting in the Early Years* (Coyne & Murrell, 2009), to be examined in detail later in the manuscript. First, an overview of research pertaining to existing parent training interventions is provided.

Overview of Parent Training Interventions

The evolution of parent training interventions: Origins and stages.

Parent training interventions arose out of the need for more effective ways to treat children than were available during the 1960s (Long, Edwards, & Bellando, 2009). Psychodynamic therapists, practitioners of the predominant theoretical orientation at the time, primarily treated adult patients. Indeed, evidence for the effectiveness of psychodynamic psychotherapy for adults with both Axis I and Axis II diagnoses has since emerged (Shedler, 2010), but in the 1960s its application with children proved unsuccessful (Long, Edwards, & Bellando, 2009). At about the same time, evidence for the effectiveness of behavior modification began to emerge (Long, Edwards, & Bellando, 2009). Later, the seminal work of Gerald Patterson (1982) revealed the role of operant conditioning processes in escalating child misbehavior, making behavioral parent training a particularly suitable intervention option. Patterson posited a coercive model in which negative parent and child behavior serve to reinforce each other. That is, child misbehavior elicits attention from parents, which in turn reinforces the misbehavior. In an effort to stop the misbehavior, parents often either acquiesce or use aggressive tactics, both of which initially work as short-term solutions. Child misbehavior stops, and parents’ behavior is reinforced. Unfortunately, this creates a pattern of reciprocal
parent-child interaction that is destined to repeat itself. Behavioral parent training programs have become the primary remedy for this problem.

Behavioral parent training programs can be classified as part of the first wave of behavior therapy, which emphasized the application of basic behavioral principles to clinical problems. That is, principles of classical and operant conditioning are applied to both general parenting skills and child behavior, resulting in improved parent-child relationships. In thinking about Patterson’s coercion model (1982), behavioral principles can be applied to change both negative parent and negative child behavior. Essentially, this is accomplished by training parents to respond differently to their children’s misbehavior so that the misbehavior is not reinforced. Parents are instructed to actively identify and reinforce good behavior in their children, and to respond to bad behavior with distraction, planned ignoring, or immediate, relevant consequences. Basic behavioral parent training interventions require that parents be consistent in their application of these techniques.

In their 2003 book on treatment for noncompliant child behavior, McMahon and Forehand identify three major stages in the evolution of parent training programs. The first stage consisted of the initial development and evaluation of a parent training paradigm and was described as spanning the 1960s and 1970s. Based on the triadic model (Tharp & Wetzel, 1969), parent training was designed to include the relationship between the therapist, the parent, and the child, with the therapist training the parent to train the child. During this stage, techniques for teaching parents to implement behavioral strategies were developed and tested, and early evidence of the short-term effectiveness of parent training came mostly from case studies or single case designs.
According to McMahon and Forehand (2003), the second developmental stage of parent training interventions spanned the mid-1970s through the mid-1980s and consisted of investigations of the external validity of parent training programs. Researchers and clinicians became concerned about whether the behaviors taught in these programs would generalize to the home setting, where parent-child interactions are more complex and contingent on unique contextual factors. Additionally, there was concern as to whether the basic behavioral techniques would generalize to behaviors other than the ones targeted specifically during parent training. Finally, doubt was cast on the ability of parent training to effect long-term change.

The third stage of the development of parent training interventions, which is theorized to be ongoing, involves improving upon existing programs (McMahon & Forehand, 2003). Given this conceptualization of the stages through which parent training programs have evolved, it stands to reason that current work on parent training interventions is part of this third stage. This would include parent training programs based on third wave behavioral therapies, which will be discussed in further detail below. First, an overview of empirical support for traditional behavioral parent trainings is provided.

Empirical support for parent training interventions.

Due to the breadth of available literature, a complete review of empirical studies of behavior parent training is beyond the scope of this paper. According to Long and colleagues (2009), 17 narrative reviews and four quantitative reviews (meta-analyses) of parent training interventions were published between 1972 and 2006. In one of these reviews, researchers
found a total of 430 parent training outcome studies published between 1974 and 2003, and these were just the studies that focused on disruptive child behavior (Lundahl, Risser, & Lovejoy, 2006). Brief overviews of the four meta-analyses is provided here (Cedar & Levant, 1990; Lundahl, Nimer, & Parsons, 2006; Lundahl, Risser & Lovejoy, 2006; Serketich & Dumas, 1996), as is descriptive summaries of a selection of well-established parent training programs. These programs include Parent Management Training (Kazdin, 2005), Helping the Non-Compliant Child (HNC; McMahon & Forehand, 2003), the Incredible Years (TIY; Webster-Stratton & Reid, 2003), and Triple P (Positive Parenting Program; Sanders & Ralph, 2004).

**Meta-analyses.** In their 2006 meta-analysis, Lundahl, Risser, and Lovejoy evaluated the ability of parent training programs to modify both child and parent behavior by examining the treatment effects of parent training interventions in 63 peer-reviewed outcome studies. Regarding short-term effectiveness, effect sizes of $d = 0.42$ and $0.47$ were reported for child and parent behavior, respectively. These effect sizes are considered to be small to moderate (Cohen, 1988). Of the 63 studies reviewed, 49 evaluated outcomes for BPT interventions. The average effect size for the short-term effectiveness of these interventions was $d = 0.57$ and the average effect size for the remaining 14 outcome studies of non-behavioral parent training was $d = 0.30$ (non-behavioral parent training interventions will be discussed in a later section of this document). Small effect sizes were reported for changes at follow-up for BPT. Additionally, a number of moderating variables were consistently identified among these studies, including socioeconomic status. Specifically, parent training was least effective for families of low socioeconomic status. Among these families, more benefit was derived from individual than from group delivery of parent training.
Another 2006 meta-analysis (Lundahl, Nimer, & Parsons) examined 23 studies in terms of the effects of BPT on parent risk factors related to child abuse. Four specific outcome measures were considered, including parents’ attitudes towards abuse, emotional adjustment, child-rearing skills, and actual abuse. Effect sizes for all outcomes were in the moderate range ($d = 0.45 - 0.60$) immediately post-treatment. Analysis of moderating factors revealed that treatment gains were enhanced when training was conducted at home as well as at the treatment site and when home visits were included. Outcomes were also enhanced when training was delivered in an individual (as opposed to group) format.

Cedar and Levant (1990) reviewed 26 studies of parent effectiveness training (PET; Gordon, 1970) for its effectiveness in changing parenting techniques as well as children’s behavior and self-esteem. Effect size ($d$) was 0.33 for PET, with better designed studies yielding greater effect sizes ($d = 0.45$) than less well-designed studies ($d = 0.26$). Findings indicated that PET was effective both short and long term (26 weeks follow-up).

A 1999 meta-analysis by Serketich and Dumas examined 27 studies for short-term effectiveness of BPT in reducing child antisocial and oppositional behavior. The average effect size for these studies was $d = 0.86$, which is considered a large effect size (Cohen, 1988). Long-term effectiveness was not reported in this study, however, based on the success of BPT with this population, it has earned the privilege of being considered an empirically validated treatment for oppositional behavior in children (Chambless et al., 1996).

**Parent training programs.** In their review of well-known parent training programs, Long and colleagues (2009) categorize the programs according to whether they were designed for parents of children with externalizing disorders, internalizing disorders, or developmental
disabilities. A vast majority of BPT interventions, including the ones to be summarized here, were designed for parents of children with externalizing disorders, including conduct disorder, oppositional defiant disorder, attention-deficit/hyperactivity disorder, and related behavioral problems. Some of these interventions have been adapted for use with parents of children with internalizing disorders, as in the case of parent-child interaction therapy (PCIT; Brinkmeyer & Eyberg, 2003) for treatment of child anxiety. Likewise, Triple P has been adapted for use with parents of children with disabilities, termed Stepping Stones Triple P (SSTP; Roberts, Mazzucchelli, Studman, & Sanders, 2006). Other BPT interventions have been specifically developed for treatment of childhood internalizing disorders and autism such as FRIENDS for Life (Barrett & Farrell, 2007) for anxiety and the TEACCH program (Treatment and Education of Autistic and Related Communication-Handicapped Children; Marcus, Kunce, & Schopler, 2005) for autism.

Kazdin’s parent management training (PMT; 2005) is a BPT intervention for oppositional, aggressive, and antisocial behavior in both children and adolescents. PMT aims to improve parent-child interactions by increasing prosocial behaviors and decreasing antisocial behaviors, with the immediate goal of developing effective parenting skills. PMT can be delivered either in individual or group format. The four major components of PMT include: (a) a conceptual view based on operant conditioning, (b) a set of techniques based on that conceptual view, (c) active skills training, and (d) assessment and evaluation of progress over the course of treatment. In session, parents are provided with opportunities to practice skills, providing therapists with the opportunity to shape parent behavior as needed. Parents first learn to apply their skills to simple problems, such as compliance or oppositional behavior, and move onto more serious
problem behaviors (e.g., truancy, fighting, stealing) as they gain proficiency. In an effort to help parents incorporate these skills into their home environments, PMT therapists maintain telephone contact with parents between sessions. During these phone calls, therapists reinforce parents’ use of skills and problem-solve when skills are not proving effective.

Helping the Non-Compliant Child (HNC; McMahon & Forehand, 2003) is a BPT intervention for non-compliant behavior in young children. HNC is delivered by a therapist to an individual family. The primary goals of HNC are to improve child compliance and to decrease disruptive behavior. HNC consists of two major phases, typically completed in 8-12 sessions. Because HNC uses a competency based approach, the number of sessions required to demonstrate competence varies by family. In Phase 1 of HNC, parents learn the skills of attending, rewarding, and ignoring. In Phase 2, parents learn to effectively give directions and use time-out. Later adaptations of HNC include self-guided instruction based on the self-help book Parenting the Strong-Willed Child (Forehand & Long, 2002) as well as a 6-session parent training class, based on the same book.

The Incredible Years (TIY; Webster-Stratton & Reid, 2003) is a BPT intervention for parents, teachers, and children 2 to 8 years old. The primary goals of TIY are to develop parent competencies and strengthen family relationships. TIY uses videotape modeling and group discussion to train parents in basic behavioral techniques, including positive reinforcement, planned ignoring, and the use of natural and logical consequences. TIY includes both a BASIC and ADVANCED program. The BASIC program consists of 13 weekly 2-hour group sessions, whereas the ADVANCED program consists of 14 sessions of videotape only. The BASIC program focuses primarily on basic behavioral techniques, whereas the ADVANCED program focuses on
personal self-control, communication skills, problem-solving skills, and strengthening social support and self-care.

Triple P (Positive Parenting Program; Sanders & Ralph, 2004) is a multilevel BPT intervention developed in Australia for the treatment of children 2 to 12 years old. Triple P consists of five levels, with each successive level designed to target more intense distress and pathology. Level 1, Universal Triple P, provides for the dissemination of basic parenting information to the public through a variety of media, including television, newspaper, radio and telephone. Level 2, Selected Triple P, provides support to Level 1 by providing information and support to primary care and other community agencies that have direct contact with parents. Selected Triple P includes individual support (primary care and other services providers’ direct instruction of parents), seminar series (delivery of information to larger groups of parents), and teen (information specific to parenting of teenagers). Level 3, Primary Care Triple P and Primary Care Triple P Teen, incorporates brief counseling into the primary care setting via the delivery of four, 15-30 minute consultations between parents and counselors. Level 4 consists of a variety of delivery formats, including individual and/or group sessions and self-directed instruction, and primarily integrates the provision of basic information with intensive skills training and support. Finally, Level 5, Enhanced Triple P, is available for families needing further assistance and consists of in-home training as well as treatment of mood symptoms, stress, and maladaptive coping. It also provides marital communication skills training. The level of intervention for a parent-child pair, or a system, is typically chosen a priori depending on hypothesized need.
Limitations of behavioral parent training interventions.

Though BPT is considered to be the gold standard for treatment of a variety of child behavior problems and psychopathology, there is evidence that this type of treatment is not always sufficient (Dumas, 1984; Law, Plunkett, Taylor & Gunning, 2009; Long, Edwards, & Bellando, 2009; Wahler, Rowinski, & Williams, 2008; Wierson & Forehand, 1994). That is, behavioral parent training often fails to address contextual factors that influence parenting behavior. These factors can be broadly categorized as either external or internal. External factors include but are not limited to culture and ethnicity, socioeconomic status, and parents’ relationships and interactions with other adults (Dumas, 1984; Long, Edwards, & Bellando, 2009). Largely, clinicians are limited in their ability to influence external contextual factors, particularly parents’ culture and ethnicity and socioeconomic status. A recent study by researchers in the United Kingdom (Law, Plunkett, Taylor, & Gunning, 2009), however, provides some guidance in terms of what to consider when planning to implement a parent training program. Phase 2 of their study consisted of a series of focus groups in which parents revealed that their participation in parent training programs was negatively impacted by external factors such as lack of affordable childcare, inconvenient geographical location, and difficult interactions with school personnel (Law, Plunkett, Taylor & Gunning, 2009). Though most clinicians are not in the position to provide childcare for their clients, they can educate themselves about local resources and referral agencies. Clinicians can also aim to provide services local to the population that they intend to serve.

As noted, BPT intervention tends to fail to address both external and internal factors. Internal factors include parents’ thoughts and feelings regarding themselves, their children, and
the parent-child relationship, as well as parenting stress and certain aspects of parent psychopathology (e.g., depression). Because psychologists and other mental health professionals have limited ability to directly change parents’ external context, the appropriate level of intervention would therefore be internal context. Parenting interventions from other theoretical orientations have been designed to address this issue, but research supporting their efficacy and/or effectiveness is sparse. Fourteen studies from these other orientations were included in a recent meta-analysis (Lundahl, Risser & Lovejoy, 2006) and, as reported earlier, yielded a smaller effect size than the BPT interventions. These studies included interventions based on reflective techniques and Adlerian theory, and in general suffered from poor methodology, making comparisons with BPT difficult. Other differences between BPT and non-behavioral interventions were that non-behavioral interventions involved mostly non-clinical samples and measured different outcomes than BPT. For example, parenting interventions based on Adlerian theory aimed to change parental attitudes and perceptions. While parental attitudes and perceptions are indeed part of parents’ internal context, a plethora of research has shown that attitude alone is a poor predictor of behavior change (Ajzen & Fishbein, 1980; Miller, 2005), and evidence supporting the effectiveness of this type of change is lacking (Long, Edwards, & Bellando, 2009).

Of note, recent developments in the field of clinical behavior analysis, concurrent with similar modifications to traditional behavioral and cognitive behavioral therapies, have resulted in a class of behavior therapies referred to as the third wave. Some parenting interventions, including those based on ACT, have already begun to emerge from this movement and are reviewed below.
The third wave: Acceptance and mindfulness based parent training.

Acceptance and mindfulness based parent training can be classified as part of the third wave of behavior therapy. Third wave behavior therapies re-emphasize basic behavioral principles with a particular emphasis on utilizing functional analysis, skills building, and shaping (Hayes, Follette, & Linehan, 2004). Like cognitive-behavior therapy, the so called second wave, third-wave behavior therapies extend beyond basic behavior principles in that they target not only overt, but also covert behaviors. Covert behaviors include but are not limited to the processes of thought, feeling, and bodily sensation, which are observable only to the person experiencing them. Cognitive behavior therapists may make attempts to identify and eliminate irrational or problematic thoughts, based on the assumption that these thoughts produce maladaptive behavior. They might work with clients to change the content of these irrational thoughts by replacing them with more rational thoughts. In contrast, third-wave behavior therapists attempt to change the context, rather than the content, of both thoughts and feelings. Instead of disputing and replacing so-called irrational thoughts, third wave behavior therapists utilize acceptance and mindfulness based techniques to build client awareness and acceptance of all thoughts as merely thoughts, and not as literal truth. Rather than changing the content of their thoughts, then, clients are changing their relationships to their thoughts.

Though third wave therapies do not all share the same theoretical bases, they do share a contextualist background (explored in depth later) as well as emphases on acceptance and mindfulness and techniques involving cognitive defusion, dialectics and values (Hayes, Masuda, Bissett, Luoma, & Guerrero, 2004). One well known third-wave behavioral therapy is Linehan’s dialectical behavior therapy (DBT; 1993). DBT was developed for the treatment of adult suicidal
females with a diagnosis of borderline personality disorder, and its therapeutic aim is the balance of acceptance and change (Linehan, 1993). One of the primary means of achieving this balance is through the development of mindful awareness of distressing emotions. Other third wave therapies include mindfulness-based cognitive therapy (MBCT; Segal, Williams, & Teasdale, 2002), functional analytic psychotherapy (FAP; Kohlenberg & Tsai, 1991), integrative behavioral couples therapy (IBCT; Christensen, Jacobson, & Babcock, 1995), and acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 1999).

The concepts of acceptance and mindfulness, though newly integrated into behavior therapy, are not new concepts. Buddhist monks have been practicing mindfulness meditation for over 2500 years (Kabat-Zinn, 2003). Jon Kabat-Zinn began introducing mindfulness practice into Western medicine and health care in the 1970s. Since founding his stress reduction clinic at the University of Massachusetts Medical School in 1979, more than 17 thousand people have completed his 8-week mindfulness-based stress reduction program (MBSR; Kabat-Zinn, 1982, 1990). MBSR, in fact, predates the third-wave behavior therapies discussed above. Not surprisingly, then, the earliest work on mindful parenting is that of Kabat-Zinn and Kabat-Zinn (1997).

selves rather than attempting to change them; empathy refers to the importance of taking on a
cchild’s perspective, even in difficult moments; and acceptance refers to an integration of
sovereignty and empathy, allowing parents to fully accept their children’s true selves, thoughts,
feelings and perspectives.

Dumas (2005) has proposed a model for mindfulness-based parent training influenced
by Kabat-Zinn and Kabat-Zinn (1997). Central to this model is the idea that behavior that has
become automatized is highly resistant to change. Automaticity, or mindlessness, is therefore
viewed as the cause of most disruptive and problematic behavior patterns in families. Dumas
(2005) recommends that clinicians employ three primary strategies to decrease automaticity
and promote mindfulness: facilitative listening, distancing, and motivated action plans.
Facilitative listening requires that clinicians model a nonjudgmental stance towards their
clients’ thoughts and feelings so that clients may begin to acquire such a stance. This requires
that clients learn to distance themselves from their thoughts and feelings at any given moment.
Both facilitative listening and distancing cultivate mindfulness in that they promote
nonjudgmental awareness of the present moment and require clients to “get out of their
heads.” Motivated action plans facilitate parents’ ability to learn mindful responding by
requiring that they have a specific, a priori plan for how they intend to respond in challenging
situations. These strategies are similar, if not identical, to the strategies employed by ACT
clinicians. ACT clinicians adopt a nonjudgmental stance towards clients’ thoughts and feelings,
promote mindfulness and distancing (referred to in ACT as cognitive defusion), and encourage
goal-setting behavior as part of a larger pattern of behavior consistent with valued directions.
Empirical support for the acceptance and mindfulness based parenting interventions is emergent. Support of the use of a parenting intervention based on Kabat-Zinn’s MBSR program (1982; 1990) comes from a study by Minor and colleagues (2006). In this study, 44 mothers of children with chronic medical conditions participated in an 8-week MBSR program. These mothers had reported high levels of stress and mood disturbance pre-treatment. Post-treatment, stress and mood symptoms had decreased by 32% and 56%, respectively.

In their parenting clinic at the University of Tennessee, Wahler and colleagues integrate mindfulness with BPT and narrative restructuring therapy (NRT). Interestingly, NRT shares the same broad philosophical background as ACT – contextualism – that is explored later. Basically, the NRT component requires parents to share their narratives about being a parent, which are often fraught with categorical memories, ambiguous thinking, and undifferentiated feeling (Wahler, Rowinski, & Williams, 2008). Mindfulness practice leads to revision of these narratives. Preliminary findings are promising, indicating increased mindfulness in parents and decreased behavior problems in children (Wahler, Rowinski, & Williams, 2008). Wahler has also worked with Singh and colleagues (2006; 2007) on the development and evaluation of mindfulness programs for parents of children with developmental disabilities. In the first study (2006), three parents of autistic children participated in a 12-week course on the practice and philosophy of mindfulness. Post-treatment, changes were seen in children’s aggression, noncompliance, and self-injury, and mother’s satisfaction with parenting increased. In the second study (2007), a follow-up to the first, four parents of children with developmental disabilities completed the same course of treatment. Outcomes included decreased aggression and improved social skills
for children, as well as greater mindfulness, increased satisfaction with parenting, and lower stress for parents. Children’s positive interactions with parents and siblings also increased.

In terms of third wave behavior therapies for parents, ACT is of particular interest to the current study because of its integration of traditional behavior therapy, especially functional analysis, with acceptance and mindfulness techniques. Unlike other third wave behavior therapies, ACT is closely linked to an empirically supported theoretical account of human language and cognition (Hayes et al., 2006). Before reviewing the theoretical and empirical literature specific to ACT for parents, an overview of the foundations and components of ACT is provided, along with a review of empirical support for ACT with a range of clinical problems.

Acceptance and Commitment Therapy

Foundations.

Acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 1999) is based on relational frame theory (RFT; Hayes, Barnes-Holmes, & Roche, 2001), a behavioral account of human language and cognition, with its roots in a functional contextual philosophy of science. Basically, ACT rests on the assumption that much of human suffering and psychopathology arise from the normal processes of language and cognition rather than from abnormal processes of disease or disorder. This assumption has been termed the assumption of destructive normality (Hayes, Strosahl, & Wilson, 1999), or the idea that normal human processes can lead to dysfunction. In that sense, ACT clinicians differ from many other mental health professionals, whose therapeutic approaches are based on an assumption of healthy normality, or the idea that illness and other deviations from good health are abnormal. In order to fully understand
this assumption, it is first necessary to have a basic understanding of both the theory and philosophy behind ACT.

_Relational frame theory._ Relational frame theory (RFT; Hayes, Barnes-Holmes, & Roche, 2001) is a behavioral account of human language and cognition, or of verbal behavior. RFT posits that relations among stimulus events are derived as a result of indirect learning (Hayes et al., 2001). RFT research has shown that verbally competent humans can derive relations among stimulus events without ever having been directly taught to do so (Hayes et al., 2001), and this behavior is referred to as verbal behavior. The classic example given in the RFT literature (Hayes et al., 2001) involves an individual who is directly taught that (a) Stimulus Event A is related to Stimulus Event B in a particular manner; and that (b) Stimulus Event A is related to Stimulus Event C in a particular manner. After being directly taught these two relations, the individual then indirectly learns that B and C are related. That is, although the individual has never actually been taught that B and C are related, nor has she ever been reinforced for relating them, the relationship between B and C is nevertheless derived.

Derived relational responding, in this example, results in a three-member class (A, B, and C) or relational frame. Relational frames can be defined in terms of three properties: mutual entailment, combinatorial mutual entailment, and the transfer of functions (Hayes et al., 2001). Mutual entailment involves responding to one stimuli in terms of the other: If A is related to B, then B must be related to A. Combinatorial mutual entailment involves the combination of two or more derived relations: If A is related to B, and A is related to C, then B is related to C. Transfer (or transformation) of functions refers to the transfer of the function of a given stimuli in a relational frame to other members of that frame. As an example, if a child’s
temper tantrums (A), grocery stores (B), and the thought, “I am a bad parent,” (C) are members of a relational frame, and temper tantrums function to elicit parental anxiety, then, through transfer of function, grocery stores and the thought, “I am a bad parent,” are (indirectly) associated with anxiety as well. Both grocery stores and thoughts of being a bad parent, as well as any other related stimuli (whether directly or indirectly experienced) are therefore likely to be avoided. In sum, the avoidance of aversive thoughts and feelings, or experiential avoidance (Hayes et al., 1996), is a natural by-product of human language.

Experiential avoidance is one example of rule governed behavior (Hayes & Hayes, 1989) that illustrates the link between language and suffering, and it is a key treatment target in ACT. There are, however, other forms of rule governed behavior that can become maladaptive (Hayes, Strosahl, & Wilson, 1999) as people begin to respond to rules rather than natural environmental contingencies. Rule governed behavior can be defined as behavior that is based on a verbal statement of relations among events. Derived relational responding, then, is the process that allows rules to be understood. For example, parents might understand the rule, “If my child throws a tantrum in the grocery store, then I am a bad parent.” Because “if” and “then” are relational terms, a relationship is derived between “tantrum” and “bad parent.” Additionally, relationships can be (and will be) derived between “tantrum,” “bad parent,” and an unlimited number of additional stimuli.

In summary, RFT provides a theoretical account of human language and cognition that forms the basis for understanding the ACT model of psychopathology. That is, the normal processes of human language and cognition, conceptualized as derived relational responding, provide a basis from which maladaptive verbal behavior begins.
Functional contextualism. A functional contextual philosophy of science differs from the more mainstream philosophy of science (mechanism) that informs much of contemporary psychology in two important ways: (a) its core analytic unit, and (b) its truth criterion. The core analytic unit of contextualism is the ongoing act in context, defined both by prior learning history as well as current situational factors (Hayes, Strosahl, & Wilson, 1999). The ongoing act refers to a behavioral event or functional unit, and thus behavior is seen as intricately linked to its consequences. This influences the way ACT therapists speak about causality, so that rather than asking what is causing anxiety, ACT therapists ask what function anxiety serves in a particular context. Considering the ongoing act in context has therapeutic implications as well. Of note, ACT therapists are interested in changing the verbal context in which private events occur, rather than the content of these events. So, for example, ACT therapists would not attempt to change the thought, “I am a bad parent.” Instead, through the use of metaphor or experiential exercises, parents would be challenged to create psychological space for that thought and loosen its association with limited behavioral repertoires (e.g., avoiding grocery stores).

The truth criterion on which much of contemporary psychology is based comes from the mechanistic philosophy of science and is known as the correspondence theory of truth. Truth according to this philosophy is defined as that which corresponds to reality. In contrast, the truth criterion for contextualism is successful working (Hayes, Strosahl, & Wilson, 1999). For ACT therapists, then, what is true is what works. As such, ACT therapists will not attempt to engage a client in a discussion of whether or not their thoughts are true (i.e., whether or not they are really bad parents). Instead, ACT therapists challenge their clients to evaluate the
workability of their thoughts in terms of moving them towards meaningful and valued living.

The effectiveness of therapy is also evaluated against the successful working truth criterion. That is, functional analysis and treatment of clients’ problematic behavior is true to the extent that it works by effecting behavior change.

Treatment model and methods.

The ACT treatment model, then, has firm philosophical roots and solid theoretical ground. ACT clinicians engage in functional analysis of clients’ behavior, particularly verbal behavior, which forms the context for internal experience. At the same time, ACT clinicians attempt to (1) undermine verbal behavior that is not “workable” in the sense that it prevents clients from behaving flexibly and consistently with their own values, and (2) take advantage of workable verbal behavior. ACT clinicians adhere to a treatment model consisting of six core components, commonly referred to as the hexaflex. These components are acceptance, cognitive defusion, contact with the present moment, self-as-context, values, and committed action. Each component is now discussed in turn, as are methods commonly used for each and relevant empirical support.

**Psychological flexibility.** Before presenting the individual components of the hexaflex, the concept of psychological flexibility needs to be defined. Psychological flexibility, not symptom reduction, is the primary goal of ACT. This flexibility is cultivated primarily by undermining inflexible, often rule-governed, verbal behavior that interferes with clients’ ability to lead meaningful lives. Each component of the hexaflex is important to psychological flexibility, and the relationship among the components and psychological flexibility is embodied
in this question, “Given a distinction between you as a conscious human being and the psychological content that is being struggling with (self-as-context), are you willing to experience that content fully, and without defense (acceptance), as it is, and not what it says it is (defusion), AND... do what takes you in the direction (committed action) of your chosen values (values), at this time and in this situation (contact with the present moment)?” (Hayes & Strosahl, 2004, p. 12). When that question can be answered with a resounding yes, psychological flexibility has been achieved.

**Acceptance.** Acceptance as conceptualized in ACT is the antidote to experiential avoidance and the abandonment of unworkable change agendas. This component of ACT has perhaps the most empirical support in terms of analog research findings (Hayes et al., 2006). The prototypical experimental paradigm for evaluating acceptance strategies involves one treatment group receiving instructions to suppress thoughts and/or feelings and another group receiving instructions to accept (or do nothing with) thoughts and/or feelings. Findings uniformly point to the comparative effectiveness of acceptance strategies (Campbell-Sillis, Barlow, Brown & Hofmann, 2006; Eifert & Hefner, 2003; Feldner, Zvolensky, Eifert & Spira, 2003; Forman et al., 2008; Hayes, Bissett, et al., 1999; Gutierrez, Luciano, Rodriguez, & Fink, 2004; Keogh, Bond, Hanmer, & Tilston, 2006; Levitt, Brown, Orsillo, & Barlow, 2004; Liverant, Brown, Barlow, & Roemer, 2008; Low, Stanton, & Bower; 2008; Marcks & Woods, 2005, 2007; Masedo & Esteve, 2007; McMullen et al., 2008; Paez-Blarrina, Luciano, Gutierrez-Martinez, Valdivia, & Ortega, 2008; Roche, Forsyth, & Maher, 2007; Vowles et al., 2007).

ACT clinicians therefore attempt to foster client acceptance of painful private experiences. For example, distressed parents may engage in a number of behaviors (e.g.,
substance abuse) so as to avoid private experiences such as feelings of stress or anxiety. The first task of the ACT clinician is to engage clients in a dialogue regarding their previous attempts to manage their problem. For the stressed out, substance abusing parent, substance abuse is identified as an “unworkable” solution to the problem of stress and anxiety. One way that an ACT clinician might intervene in this situation would be through the use of metaphor (metaphor is commonly used in ACT to undermine literal language processes, as will be discussed in the cognitive defusion section below). The following polygraph metaphor is particularly appropriate for stressed and anxious clients, as it illustrates the futility of trying to avoid, rather than accept, anxiety:

> Suppose I had you hooked up to the best polygraph machine that’s ever been built. This is a perfect machine, the most sensitive ever made. When you are all wired up to it, there is no way you can be aroused or anxious without the machine’s knowing it. So I tell you that you have a very simple task here: All you have to do is stay relaxed. If you get the least bit anxious, however, I will know it. I know you want to try hard, but I want to give you an extra incentive, so I also have a .44 Magnum, which I will hold to your head. If you just stay relaxed, I won’t blow your brains out, but if you get nervous... I’m going to have to kill you. So, just relax! (Hayes, Stosahl, & Wilson, 1999, p.123)

This metaphor illustrates the paradoxical effects, or the “unworkability” of experiential avoidance and control. Acceptance does not have to be fostered only through metaphor; experiential exercises are also often used. In addition, ACT clinicians model acceptance in their own behavior during session when they accept, rather than avoid, the expression of painful thoughts and feelings.

*Cognitive defusion.* Cognitive defusion involves altering the context rather than the content of private experience. When clients are fused with their thoughts, they have “bought into” their literal truth. Parents who have the thought, “I am a bad parent,” behave as if this thought were true. Analog research findings focusing specifically on cognitive defusion
interventions are scarce when compared to those focusing on acceptance. By and large, ACT has been evaluated as a complete treatment package. However, some researchers have attempted to evaluate specific cognitive defusion strategies, and results from their studies provide support for the use of adapted forms of Titchener’s “milk-milk” exercise (Masuda, Hayes, Sackett & Twohig, 2004; Masuda et al., 2009). In this exercise, individuals repeat a single word or phrase over and over again. In doing so, they become less and less fused with that particular verbal content. Rapid repetition of a thought has proven to reduce both its believability and its aversiveness (Masuda, Hayes, Sackett & Twohig, 2004; Masuda et al., 2009). Cognitive defusion strategies other than Titchener’s repetition have also proven effective in component studies (Healy et al., 2008; Hinton & Gaynor, 2009). These include “having a thought” versus “buying a thought” (presented below) and the contents on cards exercise (Hayes, Strosahl, & Wilson, 1999).

ACT therapists, as has been reiterated throughout this manuscript, do not argue the validity of thoughts or statements. Rather, they attempt to defuse clients from thoughts’ literal meanings by altering their functions. Most simply, ACT therapists encourage clients to adopt a particular language convention when talking about thoughts in therapy. Instead of saying, “I am a bad parent,” parents are encouraged to say, “I am having the thought that I am a bad parent.” Another common cognitive defusion technique has been termed “taking your mind for a walk,” in which the therapist walks behind the client and plays the role of the client’s mind (Hayes & Strosahl, 2004). The client thus learns that s/he can continue walking even when the mind says not to or otherwise tries to interfere. The passengers on the bus metaphor (Hayes, Strosahl, & Wilson, 1999) is another core intervention for deliteralizing language. In this metaphor, the
client is the bus driver and his/her thoughts are the passengers. As the client tries to focus on driving the bus, passengers become loud and unruly, “You’re a bad parent!” The client has to decide what to do with these passengers. If s/he decides to throw them off the bus, then s/he has to stop driving. In order to stay on course, s/he has to develop a different kind of relationship with his/her thoughts.

**Contact with the present moment.** Contact with the present moment refers to a non-judgmental awareness of the present moment and is cultivated through the use of mindfulness techniques and exercises. Before clients can defuse from their cognitions, they must learn to be aware of those cognitions. Once they can mindfully observe their own internal processes, clients can behave more flexibly in their presence (i.e., they do not have to automatically react in a maladaptive way). By becoming aware of their external environment, clients come into contact with direct contingencies and their behavior is then shaped less by verbal rules.

Empirical support for the effectiveness of mindfulness techniques abounds and is not limited to the ACT literature. As previously noted, mindfulness is a core component of third wave behavior therapies in general, as well as Kabat-Zinn’s MBSR program. Greeson (2009) recently reviewed 52 theoretical and empirical studies of mindfulness, and concluded that mindfulness intervention is effective in reducing emotional stress and enhancing quality of life. Mindfulness can be linked to direct physiological changes as well, including improvements in immune system functioning and autonomic changes consistent with better overall health (Greeson, 2009).

There are countless mindfulness techniques for the ACT therapist to choose from. In general, however, the ACT therapist is less interested in mindfulness meditation and more
interested in the client’s ability to contact the present moment, on a moment-to-moment basis, in their everyday lives. Contact with the present moment begins in the therapy room, as the therapist models what it is like to be fully present with another human. ACT therapists may also use more traditional techniques such as mindful breathing and “just noticing,” thoughts, feelings, and sensations (Hayes & Strosahl, 1999). The leaves on a stream exercise (Hayes, Strosahl, & Wilson, 1999) is a popular ACT intervention in which clients are asked to observe their thoughts as they occur and imagine each thought written on a leaf, floating down a stream.

**Self-as-context.** As clients become aware of their own thoughts and feelings, they are able to separate their thoughts and feelings from themselves, their self-as contexts. Self-as-context refers to an observer self that has always been present, in contrast to self-as-content, a verbally constructed self consisting of thoughts and feelings. When a parent thinks, “I’m a bad parent,” s/he is fused with their self-as-content. Self-as-context allows the client to notice that they are having thoughts about being a bad parent. Hayes and Strosahl (2004) identify several key therapeutic lessons related to self-as-context, including, “You are not your thoughts, memories, or emotions,” “The contents of your awareness are not bigger than you; you contain them,” and “When something is fearsome, notice who is noticing it” (p.45).

Many of the same exercises that have heretofore been categorized as either cognitive defusion or contact with the present moment are also useful in cultivating self-as-context. For example, adopting the convention of saying, “I am having the thought that I am a bad parent,” rather than, “I am a bad parent,” helps create space between the thought and the thinker. Imagining one’s thoughts floating on leaves down a stream accomplishes the same end. Unique
to this ACT component is the chessboard metaphor (Hayes, Strosahl, & Wilson, 1999), which allows the client to notice that thoughts and feelings are just part of who they are. In this metaphor, clients are asked to imagine their thoughts and feelings as pieces on a chessboard, with “bad” thoughts and feelings battling “good” thoughts and feelings. At first glance, it appears that the battle really is between bad and good, however, from this perspective the client is rejecting parts of himself. Who is the client – the bad or good pieces? ACT therapists invite clients to consider that they are in fact the chessboard itself, which holds the pieces in place. Empirical support for the effectiveness of this individual component is lacking at present, however, research is taking place indicating that self-as-context is important in the development of empathy as well as theory of mind (McHugh, Barnes-Holmes, & Barnes-Holmes, 2004).

Values. Values have been defined as “chosen qualities of purposive action that can never be obtained as an object but can be instantiated moment by moment” (Hayes et al., 2006, p.9). Central to this definition is the phrase “can never be obtained,” which distinguishes values from goals. Whereas goals are obtainable, values are not. Values are meaningful life directions, not destinations. Values provide a rationale for participating in therapy at all, as acceptance, cognitive defusion, contact with the present moment, self-as-context, and committed action are all implemented in the service of a client’s valued direction. For example, parents may value rich and meaningful relationships with their children. Having rich and meaningful relationships is something that doesn’t end, as would a goal. However, parents may set goals that are consistent with moving in the direction of this value, such as, “For the next week, I will set aside one hour each evening to play with my child.” ACT clinicians often prefer
to talk about valuing, the behavior, rather than values as an abstract concept. At the theoretical level, valuing is verbally constructing “globally desired life consequences” (Hayes, Strosahl, & Wilson, 1999, p.206) and at a practical level, valuing is choosing, moment-to-moment, to act consistently with that which provides meaning and vitality.

ACT clinicians promote valuing behavior in their clients in a number of ways. One central question that ACT clinicians may ask their clients is, “In a world where you could choose to have your life be about something, what would you choose?” (Wilson & Murrell, 2004, p. 134). A commonly used exercise that helps clients to identify their values involves having them close their eyes and imagine that they are spectators at their own funerals (Hayes, Strosahl, & Wilson, 1999). In particular, clients are asked to consider what they want people to say about them in their eulogies (e.g., what kind of spouse they were, what kind parent they were, what kind of friend they were). This serves to highlight any discrepancy between the way clients are currently living and the way they would be living were they doing so according to their values.

Another tool for helping clients identify their values and assess their current valuing behavior is the Valued Living Questionnaire (VLQ; Wilson & Groom, 2002). In the first part of the VLQ, clients rate 10 life domains according to how important each domain is to them. The 10 life domains are family, marriage/couples/intimate relations, parenting, friends, work, education, recreation, spirituality, citizenship, and physical health. In the second part of the VLQ, clients rate these same domains in terms of how consistently they are living out their values in each domain. In ACT, values are freely chosen, and ACT clinicians do not judge clients’ chosen values.
Much of the research involving this particular component of the hexaflex (values) revolves around finding ways to measure it (Wilson, Sandoz, Kitchens, & Roberts, 2008). However, one recent study (Branstetter-Rost, Cushing, & Douleh, 2009) examined the additive effect of a valuing component to an acceptance-based pain coping protocol. Individuals ($N = 34$) completing a cold-pressor task were assigned to either an acceptance only condition or an acceptance plus values condition. Results indicated that the addition of a values component led to significantly greater pain tolerance than acceptance alone, and both conditions led to greater pain tolerance than the control condition.

**Committed action.** Committed action, the sixth component of the ACT hexaflex, most closely resembles traditional behavior therapy in that it often involves skills acquisition and goal setting. It has also been referred to as a form of behavioral activation (Wilson & Murrell, 2004). Unlike traditional behavior therapy and behavioral activation, however, ACT ensures that clients learn skills and set goals that serve to move them forward in their valued directions. This aspect of the ACT model has not been specifically tested in component studies (Hayes et al., 2006), but empirical support for behavioral activation treatments of depression is solid (Cuijpers, van Straten, & Warmerdam, 2007).

**Metaphors, paradox, and experiential exercises.** Several specific ACT techniques or methods have been reviewed in the above discussion of the six ACT components, but a summary of the rationale behind their use is in order. Because ACT seeks to undermine language processes using language, ACT therapists must take care that clients not remain stuck at the level of literal truth (Hayes, Strosahl, & Wilson, 1999). Metaphors are therefore particularly useful because they go beyond providing a logical verbal argument. Metaphors are
stories rather than prescribed courses of action. ACT therapists also point to the paradoxical nature of language as evidence that language is not always useful. One exercise that illustrates paradox involves instructing clients to try to grab a pen. In doing so, the client experiences the futility of such an exercise (i.e., “try” and “grab” are incompatible). Experiential exercises, in one sense, are like exposure exercises in that they require clients to contact painful thoughts and feelings. Furthermore, experiential exercises help clients to learn from experience rather than from verbal rules.

*Therapeutic stance.* It is worth noting that because psychopathology a la ACT results from normal human processes, therapists are no less susceptible than their clients to experiences like anxiety and depression. Therefore, ACT therapists view themselves as “in the same boat” as their clients, and relate to clients in a genuine, even vulnerable way (Hayes & Strosahl, 2004). There is no separate “I and you” in ACT.

Empirical support for ACT.

ACT is amassing a large body of empirical support for the treatment of a broad range of clinical problems (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). In their 2006 meta-analysis, Hayes and colleagues categorize the empirical ACT literature as follows: (a) correlational studies, (b) ACT component studies, (c) treatment outcome studies, and (d) mediation and process of change analyses. Correlational studies have largely focused on establishing relationships between experiential avoidance as measured by the AAQ or AAQ-II (Bond et al., 2009; Hayes, Strosahl, Wilson, Bissett, et al., 2004) with relevant psychological variables. Of note, the AAQ was designed to measure acceptance, but, when reverse scored, yields a
measure of experiential avoidance. Hayes and colleagues (2006) reviewed twenty-nine
correlational studies that together yielded 74 correlations between the AAQ/AAQ-II and other
outcome measures. The effect size for these correlations was $d = 0.42$, with all correlations in
the expected directions. That is, experiential avoidance as measured by the AAQ/AAQ-II is
positively correlated with a wide variety of psychological problems, including worry, stress,
anxiety, posttraumatic stress, depression, substance use, and parental stress (Hayes et al.,
2006).

Because ACT component studies have been discussed in the relevant sections of this
paper, we now turn to treatment outcomes studies. When ACT was compared to other
structured interventions for specific problems, the average effect sizes were $d = 0.48$ post-
treatment and $d = 0.63$ at follow-up (Hayes et al., 2006). Comparison conditions for these
studies included CBT (individual and group) for social phobia and end stage cancer (Block, 2002;
Branstetter, Wilson, Hildebrandt, & Mutch, 2004); workplace innovation for work stress (Bond
& Bunce, 2000); nicotine patch for smoking (Gifford et al., 2004); diabetes education for Type II
diabetes (Gregg, 2004); biological education and multicultural training for stigma and burnout
(Hayes, Bissett, et al., 2004); methadone maintenance for polysubstance abuse (Hayes, Wilson,
Gifford, Bissett, et al., 2004); suppression for agoraphobia (Levitt, Brown, Orsillo, & Barlow,
2004); cognitive therapy for depression (Zettle & Hayes, 1986; Zettle & Rains, 1989); and
systematic desensitization for math anxiety (Zettle, 2003).

When ACT was compared to wait-list control groups, treatment as usual, or placebo
conditions, the effect sizes ranged from $d = 0.71$ at follow-up to $d = 0.99$ immediately post-
treatment. Comparison conditions for these studies included treatment as usual for psychosis,
chronic pain, and borderline personality disorder (Bach & Hayes, 2002; Dahl, Wilson, & Nilsson, 2004; Gaudiano & Herbert, 2006; Gratz & Gunderson, 2006); control and/or wait-list control for social phobia, work stress, and trichotillomania (Block, 2002; Bond & Bunce, 2000; Woods, Wetterneck, & Flessner, 2006); attention placebo for epilepsy (Lundgren, 2005; Lundgren & Dahl, 2005); and distraction for agoraphobia (Levitt et al., 2004).

Following the 2006 meta-analysis by Hayes and colleagues, Powers and colleagues reviewed 18 randomized controlled trials examining the effectiveness of ACT (2009). Their meta-analysis revealed an overall effect size of $d = 0.42$ for ACT versus control groups. More specifically, the effect size for ACT versus wait-list control and/or placebo was $d = 0.68$, and the effect size for ACT versus treatment as usual was $d = 0.42$. The authors of this meta-analysis also reported an effect size of $d = 0.18$ for ACT versus established treatments. Taken together, these findings indicate that ACT is superior to control conditions and just as effective as established treatments, including cognitive therapy and cognitive behavior therapy.

In terms of mediation studies, data for an early trial of ACT versus cognitive therapy (Zettle & Hayes, 1986) were recently subjected to a formal mediation analysis (Hayes et al., 2006). Results indicated that depressed participants’ decreased believability of their thoughts was the mediating factor responsible for the superior outcome of ACT, which points to different processes of change between ACT and cognitive therapy. Specifically, cognitive defusion, rather than cognitive change, was shown to be more effective in the treatment of depression (Zettle & Hayes, 1986; Hayes et al., 2006). Believability was also found to be a mediator of change in the treatment of psychotic individuals (Gaudiano & Herbert, 2006) such that those individuals in the ACT condition evidenced decreased believability of their delusions and hallucinations and
reduced number of re-hospitalizations relative to the individuals in the enhanced treatment as usual condition. Related to that, mental disengagement was also found to mediate change in a study of distressed end-stage cancer patients (Branstetter et al., 2004).

A study by Bond and Bunce (2000) was also reanalyzed for mediation effects (Hayes et al., 2006), with results indicating that changes in AAQ scores (a measure of experiential avoidance) were responsible for the significant effects in the ACT condition versus the behavior therapy condition. Experiential avoidance has also been identified as a mediator of change in treatment of Type II diabetes (Gregg, 2004); nicotine addiction (Gifford et al., 2004); epilepsy (Lundgren, 2004; Lundgren & Dahl, 2004) and stigma and burnout among substance abuse counselors (Hayes, Bissett, Roget, et al., 2004).

Finally, Hayes and colleagues (2006) identified a number of studies reporting changes in relevant process variables. Bach and Hayes (2002) found an interesting pattern in their comparison of ACT versus treatment as usual for psychotic individuals. Though individuals in the ACT condition reported less symptom reduction, they reported lower believability ratings of psychotic symptoms and lower re-hospitalization rates. The authors concluded that ACT was therefore more effective than treatment as usual because it promoted acceptance, rather than denial, of troubling psychotic symptoms.

Another interesting finding comes from a study by Block (2002) in which individuals with social phobia were treated with either ACT, cognitive behavioral group therapy (CBGT), or a control group. Individuals in the ACT condition showed larger reductions in stress during a public speaking event and were able to remain in the public speaking situation longer than individuals in the other conditions. Willingness to experience anxiety during exposure was
identified as the process variable in this study, which is evidence that ACT processes uniquely contributed to outcome.

Other studies that have identified acceptance and willingness to experience symptoms as a primary process variable revealed treatment gains for individuals with chronic pain (McCracken, Vowles, & Eccleston, 2005), trichotillomania (Woods et al., 2006), and obsessive-compulsive disorder (Twohig, Hayes & Masuda, 2006).

The ACT literature is not devoid of problems and limitations, primarily because ACT research is relatively new. The first randomized controlled trial was conducted in 2000 (Bond & Bunce), and at this stage, many ACT interventions have been short and limited in scope due to lack of major funding (Hayes et al., 2006). Additionally, much work needs to be done in terms of linking specific components of ACT back to its theoretical roots and evaluating them each in turn (Adcock, Murrell, & O’Brien, 2007; Hayes et al., 2006). The empirical ACT literature has more breadth than depth, as researchers have attempted to design disorder-specific treatment studies so as to compete with empirically validated treatments (Hayes, 2009, August 21). Comparing ACT with other therapies is challenging because of the major differences in philosophy and conceptualization of psychopathology. That is, ACT is based on a functional contextual philosophy of science that seeks to identify the function, not the nature or taxonomy, of behavior, and the ACT conceptualization of psychopathology is notably at odds with the categorical model as laid forth in the DSM-IV. Finally, ACT clinicians and researchers must rise to the challenge posed by cognitive behavior therapists, who maintain that ACT and CBT effect change via the same processes (Hayes, 2009, August 21).
Acceptance and Commitment Training for Parents

If the empirical support for ACT in general is relatively new, the empirical support for ACT with parents is practically non-existent. However, given the preliminary success of other third wave therapies as parenting interventions, coupled with a sound theoretical rationale for the use of ACT with parents, there is evidence to suggest that ACT is particularly appropriate for distressed parents.

Coyne and Wilson (2004) provide a theoretical rationale for the use of mindfulness in parent training. Specifically, they discuss how cognitive fusion can lead to maladaptive parenting patterns. For example, if a parent has the thought, “I am bad parent,” then s/he will respond to that thought as if it were literally true. As such, the parent is likely to acquiesce to child non-compliance or escalate the intensity of efforts to ensure compliance when that thought shows up, for example, in the grocery store line. Because the parent is not attending to and being mindful of the child’s experience in that moment, s/he cannot effectively respond to the child. Rather, the parent responds to his or her own thoughts. In general, then, ACT (at least, in theory) can help build more adaptive responses to child misbehavior by promoting cognitive defusion and mindfulness in parents. Additionally, ACT provides parents with the motivation to do so by bringing them into contact with their values and reinforcing valued action (Coyne & Wilson, 2004).

Greco and Eifert (2004) have proposed the integration of ACT with existing BPT interventions, specifically for parent-adolescent conflict. They propose that experiential avoidance plays a large role in the development and maintenance of conflict. Specifically, both parents and adolescents, in an effort to avoid painful and distressing emotions, often behave in
ways that provide short-term relief but are inconsistent with their valued directions in the long-
term. As parents and adolescents learn to be more accepting of their thoughts and feelings and 
more mindful during challenging interactions, they have the ability to behave in more flexible 
ways that are values-consistent.

Prior to this study being conducted, only one study examining the effectiveness of ACT 
as a parent training intervention had been published (Blackledge & Hayes, 2006). In this study, 
parents (N = 20) of children diagnosed with autism participated in one of three weekend 
workshops following an ACT protocol. Two of the workshops lasted 14 hours, while the third 
workshop only lasted 12 hours due to one participant’s general medical condition. Outcome 
measures included the Global Severity Index (GSI) from the Brief Symptom Inventory (BSI; 
Derogatis & Melisaratos, 1983), the Beck Depression Inventory – II (Beck, Steer & Brown, 1996), 
the General Health Questionnaire (GHQ-12; Goldberg, 1978), the Parental Locus of Control 
Scale (PLOC; Campis, Lyman & Prentice-Dunn, 1986), the Acceptance and Action Questionnaire-
9-item version (AAQ-II), and the Automatic Thoughts Questionnaire (ATQ; Hollon & Kendall, 
1980). Parents completed these outcome measures at four different assessment points, 
including 3 weeks and 1 week pre-treatment and 1 week and 3 months post-treatment. The 
BDI-II, PSI, and GHQ were categorized as outcome measures, and the AAQ-II and ATQ were 
categorized as process measures.

Regarding outcome measures, there was no significant change in scores between the 
two pre-treatment assessment points, indicating a stable baseline. For pre- to post-treatment 
(at 1 week post), significant changes were observed in BDI-II scores and GSI scores but not in 
GHQ scores. Pre- to follow-up at three months post revealed significant changes for all three
measures. Effect sizes were not reported, but Blackledge and Hayes (2006) indicated that average changes were not large. This was attributed to sample characteristics, as the average parent in their sample did not enter treatment with high levels of distress.

A similar pattern of results was found for process measures. There was no significant change in scores between the two pre-treatment assessment points. Between pre-treatment and post-treatment, changes in ATQ, but not AAQ-II, scores were statistically significant in the expected direction. Between pre-treatment and follow-up, scores on both the ATQ and AAQ-II evidenced statistically significant change. The authors noted that assessment was not frequent enough to detect mediation effects before the intervention, therefore results indicating a mediating role for ATQ scores should only be viewed as suggestive (Blackledge & Hayes, 2006).

Overall findings support the effectiveness of ACT as an intervention for parents of children diagnosed with autism. Limitations included the small sample size and lack of pre-treatment distress among parents. Blackledge and Hayes (2006) also reported their choice of process measures as a limitation, noting that the AAQ-II and ATQ are very general measures. They also recommended that future studies include more specifically focused defusion and acceptance techniques and follow-up values clarification sessions. Additionally, given that a primary outcome for ACT is improved ability to behave flexibly and consistently with one’s values, this study would have benefited from the inclusion of a values measure.

Murrell and colleagues (2009) conducted a pilot study investigating the effectiveness of a 10-week ACT protocol for a small group of parents (N = 3) of at-risk adolescents, the findings of which have been presented at a recent conference. Outcome measures, administered pre- and post-treatment, included the Difficulties in Emotion Regulation Scale (DERS; Gratz &
Roemer, 2004), Alabama Parenting Questionnaire (APQ; Frick, 1991), Acceptance and Action Questionnaire II (AAQ-II; Bond et al., 2009), Kentucky Inventory of Mindfulness Skills (KIMS; Baer, Smith, & Allen, 2004), Behavior Assessment System for Children – Second Edition (BASC-2; Reynolds & Kamphaus, 2004), Depression Anxiety and Stress Scales, Short Form (DASS-21; Lovibond & Lovibond, 1995), Youth Outcome Questionnaire 30.1 (Y-OQ-30.1; Burlingame, et al., 2003), Stress Index for Parents of Adolescents (SIPA; Sheras, Abidin, & Konold, 1998), and a treatment utility and satisfaction interview (Murrell, Schmalz, Mitchell & LaBorde, 2009).

Of note, the DERS was included in this study given that parents’ regulation and expression of their own emotions contributes to the emotional competence and ultimately prosocial behavior in their children (Eisenberg et al., 1998). Additionally, some research has shown that emotion regulation is highly correlated with both acceptance (Gratz & Roemer, 2004) and mindfulness (Lykins, 2006), two key ACT processes. On a conceptual level, a lack of emotional acceptance does imply greater difficulties in emotion regulation, and literature from divergent areas of research supports this claim (for a review, see Gratz & Roemer, 2004). More specifically, Gratz and Roemer (2004) found a significant correlation ($r = .60$) between experiential avoidance (as measured by reverse scoring the AAQ) and difficulties with emotion regulation (total DERS scores). Difficulties with emotion regulation are associated not only with lack of emotional acceptance, but also with lack of emotional awareness (mindfulness). As expected, total DERS scores have been found to correlate negatively ($r = -.61$; Lykins, 2006) with scores on the Five Facet Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006).
An examination of the reliable change indices (RCI; Jacobson & Traux, 1991) for the various measures in Murrell and colleagues’ (2009) pilot study revealed a number of significant changes pre- to post-treatment. In terms of scores from the DERS, Parents 2 and 3 showed significant reductions in the subscale measuring ability to manage tasks in the presence of difficult emotions, and Parent 3 showed a significant reduction in the subscale measuring the availability of emotion regulation strategies. Parent 1 showed a significant change in measures of mindfulness, specifically the ability to act with awareness and accept without judgment, two subscales from the KIMS. On the SIPA, a measure of parenting stress, Parent 3 showed significant improvement on the subscale measuring adolescent-parent relations. Parents 1 and 2 reported significantly fewer symptoms on the DASS-21.

Interestingly, there were no significant changes in AAQ-II scores, with some scores actually increasing pre- to post-treatment. The authors hypothesize that participants’ increased familiarity with the concepts measured by the AAQ-II (i.e., acceptance versus experiential avoidance) as a result of involvement in treatment was a confounding factor.

Regarding child outcomes, Parent 1’s responses to the BASC-2 yielded significantly lower Externalizing and Internalizing composite scores post-treatment. Similarly, Parent 3’s responses to the YOQ 30.1 changed significantly (in the expected direction) pre- to post-treatment. Overall, data from this pilot study suggests that ACT based parent interventions impact outcome variables in desirable and predicted ways, including improvements in emotion regulation, mindfulness skills, adolescent-parent relations, mood and anxiety symptoms, and adolescent behavior.
The most recent development in the ACT for parents literature is the publication of a self-help book for parents (Coyne & Murell, 2009), *The Joy of Parenting: An Acceptance and Commitment Therapy Guide for Effective Parenting in the Early Years*, based on an ACT philosophy of parenting. This book guides parents through the basic components of ACT in an ACT-consistent way, that is, through the use of metaphor, paradox, and experiential exercises aimed at promoting acceptance, cognitive defusion, contact with the present moment, self-as-context, values, and committed action. In addition to being useful for parents’ self-directed training, this book also provides a nice framework for the development of a parent training treatment protocol.

Current Study, Research Questions, and Hypotheses

Given that behavioral parent training is limited in its ability to adequately address a parent’s thoughts and feelings about being a parent and that there is a lack of available, empirically validated alternatives, a new intervention was needed. Preliminary studies have supported the effectiveness of mindfulness-based interventions, including mindfulness based stress reduction (MBSR) and an integrative program combining BPT with mindfulness and narrative restructuring therapy. Furthermore, the conceptual and theoretical groundwork supporting the utility of mindful parenting work has been laid (Dumas, 2005; Kabat-Zinn & Kabat-Zinn, 1997). Among the third wave behavior therapies utilizing acceptance and mindfulness techniques, ACT in particular provides a comprehensive theoretical rationale for its implementation and has demonstrated effectiveness for a wide range of clinical problems. Evidence from two treatment studies supported the use of ACT as an intervention for parents.
Blackledge and Hayes (2006) found ACT to be an effective intervention for parents of children diagnosed with autism, and Murrell and colleagues (2009) found that ACT produced clinically significant change on a number of psychological distress variables in a small sample of distressed parents.

The current study involved the development, implementation, and evaluation of a parent training treatment protocol based on an ACT philosophy of parenting as outlined in *The Joy of Parenting: An Acceptance and Commitment Therapy Guide for Effective Parenting in the Early Years* (Coyne & Murrell, 2009). Parents were recruited to participate in a 2-day, 12 hour workshop based on that protocol. The study employed an interrupted time series design, as parents were asked to track daily acceptance and valuing behavior for a total of 50 days (25 days pre-intervention and 25 days post intervention) using the ACT daily diary (Appendix A). In addition, parents completed a package of self-report instruments at three assessment points: 1 week pre-intervention (pre), immediately post-intervention (post), and 3 months post-intervention (follow-up). Self-report instruments consisted of the Avoidance and Fusion Questionnaire (AFQ-Y; Greco, Murrell, & Coyne, 2005), the Meta-Valuing Measure (MVM; Adcock, LaBorde, & Murrell, 2009), the Kentucky Inventory of Mindfulness Skills (KIMS; Baer, Smith, & Allen, 2004), the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004), the Alabama Parenting Questionnaire (APQ-9; Elgar, Waschbusch, Dadds, & Sigvaldason, 2007), the short form of the Parenting Stress Index (PSI-SF; Abidin, 1995), the Parental Locus of Control scale (Campis, Lyman, & Prentice-Dunn, 1986), the Depression Anxiety and Stress Scales (DASS-21; Lovibond & Lovibond, 1995), and the Behavior Assessment System for Children
Parents were also asked to participate in the completion of a treatment utility and satisfaction interview post-intervention.

The above self-report instruments were chosen on the basis of their relationship to variables of interest. The ACT daily diary, AAQ-II, MVM, and KIMS measure ACT specific processes and outcomes, including acceptance and psychological flexibility, valuing behavior, and mindfulness, respectively. Increases in each of these behaviors pre- to post-treatment was expected, with gains either maintained or enhanced at follow up. Related to that, decreases in difficulties with emotion regulation were also expected. Based on relationships reported in the literature (see Reynolds & Kamphaus, 2004 for a brief overview) between parent-child conflict and variables such as parenting stress, negative affect and anxiety, parenting practices, parenting efficacy, and child behavior, changes on measures of these variables (DERS, PSI-SF, DASS-21, APQ-9, PLOC, and BASC-2) were expected as well. Specifically, it was hypothesized that:

1. Ratings from the ACT daily diary would indicate that the intervention had a significant impact on acceptance and valuing behavior as measured by ratings for the following four domains: suffering, struggle, workability, and valued action.
   a. Baseline data for the four domains would be stable, defined as the stability of baseline observations around the mean line as well as the stability of the trend line during baseline.
   b. Mean and level would change in the expected directions for each of the four domains (decrease for suffering and struggle, increase for workability and valued action).
c. Post-intervention trend lines would either increase or decrease for each of the four domains (decrease for suffering and struggle, increase for workability and valued action).

2. There would be clinically and statistically significant changes in ACT related variables, including acceptance, mindfulness, valuing, and emotion regulation.
   a. AFQ total scores were expected to decrease between pre- and post, with change either maintained or increased at follow-up.
   b. KIMS total scores were expected to increase between pre- and post, with change either maintained or increased at follow-up.
   c. VLQ and MVM total scores were expected to increase between pre- and post, with change either maintained or increased at follow-up.
   d. DERS total scores were expected to decrease between pre- and post, with change either maintained or increased at follow-up.

3. There would be clinically and statistically significant changes in parenting variables, including parenting practices, parenting stress, and parenting efficacy, due to treatment.
   a. APQ-9 total scores were expected to decrease between pre- and post, with change either maintained or increased at follow-up.
   b. PSI-SF total scores were expected to decrease between pre- and post, with change either maintained or increased at follow-up.
c. Scores from the PE subscale of the PLOC were expected to decrease between pre- and post, with change either maintained or increased at follow-up.

4. There would be clinically and statistically significant changes in symptoms of depression, anxiety, and stress due to treatment. DASS-21 scores were expected to decrease, between pre- and post, with change either maintained or increased at follow-up.

5. There would be clinically and statistically significant changes in child behavior due to treatment. BASC-2 Composite scores were expected to decrease, between pre- and post, with change either maintained or increased at follow-up.
METHOD

Participants

A total of 34 adult parents were screened for participation in this study. One parent was excluded based on limited English proficiency. The remaining 33 were consented, and of these, 23 parents completed the pre-test measures and attended at least one day of either Workshop A or Workshop B. A total of 19 parents completed an entire workshop (n = 2 for Workshop A and n = 17 for Workshop B), including the posttest measures. Of these 19, 14 completed follow-up measures between three and four months after the end of each workshop. The remaining 5 did not respond to contact attempts via repeated phone calls and thus did not complete follow-up measures.

Parents (n = 3) who attended Workshop A were referred by their caseworkers at Collin County Children’s Advocacy Center (CAC). Caseworkers were provided with a flyer detailing the dates, time, and location of the workshop as well as a brief workshop description with contact information for the principal investigators. Referred parents were participating in the CAC’s Family Based Safety Services program and had the opportunity to choose between a 14-week behavioral parent training provided by the CAC or the 12-hour weekend ACT Workshop as part of the current research study. Because the number of referrals (n = 7) was considerably less than expected based on the expressed interest of the CAC director, more aggressive recruiting measures were implemented for Workshop B.

First, revised flyers were distributed in a number of public access areas frequented by parents of young children, including local social service agencies, counseling centers, children’s hospitals and pediatric clinics, as well as on bulletin boards in local neighborhood communities,
grocery stores and coffee shops. Next, in addition to providing CAC caseworkers with the revised flyer via email, this writer invited caseworkers to an informational meeting during which a more in-depth description of the workshop was provided. As a result of the amended recruitment strategy, one parent self-referred after seeing a flyer posted in her local neighborhood’s web-based newsletter. The remainder of parents ($n = 27$) were referred by their CAC caseworkers.

Complete data from the demographics questionnaire are reported in the Results section below. Briefly, 13 mothers and 3 couples completed the workshops. The average age for the sample of workshop completers was 28.06. The highest level of education obtained in this sample was a master’s degree ($n = 1$), and the modal levels of education were either some high school ($n = 5$) or high school graduate/GED ($n = 5$). All but two parents ($n = 15$) reported yearly incomes below 30K; more than half the sample (52.6%) reported yearly incomes less than 15K. Most parents (36.8%) had only 1 child, with children ranging in age from 1 month to 18 years.

Measures

Participants were asked to complete the ACT Daily Diary for a total of 50 days. They were also given a demographics questionnaire as well as 10 self-report measures of parent and child functioning. The demographics questionnaire was administered only once. The 10 self-report instruments were administered 1-2 weeks prior to the intervention (pre), immediately after the intervention (post), and 3-4 months after the intervention (follow-up). Four of these instruments measured ACT specific processes, including acceptance (experiential avoidance), mindfulness, and valuing. Given its relationship with experiential avoidance, difficulty with
emotion regulation was also measured, as was parents’ levels of general distress. Four instruments that measure parenting-specific variables were also administered, including measures of parenting stress, parenting practices, and parents’ perceptions of their parenting effectiveness. Finally, parents were asked to report on various domains of their children’s behavior. Parents with more than one child were asked to report on the behavior of the child for whom they had the most behavioral concerns. In addition to self-report instruments, measures also included a treatment utility and satisfaction interview (Murrell, Schmalz, Mitchell, & LaBorde, 2009) administered at the conclusion of each workshop, as well as a checklist for ACT core therapeutic competencies (Hayes & Strosahl, 2004). The latter measure was completed by graduate students trained in ACT who observed each workshop.

ACT daily diary.

Originally intended for use as a clinical tool, there are no psychometric data available for the ACT daily diary. For the purposes of this study, the instructions were changed from, “Describe any particularly stressful events you encountered today and how you handled them” to “Describe any particularly stressful interactions with your child today and how you handled them.” After this brief documentation, parents were asked to rate four statements measuring suffering, struggle, workability and valued action on an 11-point scale from “none” (0) to “extreme amount” (10). Suffering refers to level of distress, struggle refers to experiential avoidance, workability refers to behavioral effectiveness, and valued action refers to values consistent behavior. Data from this measure are plotted graphically for visual inspection and reported in the Results section below.
Demographics questionnaire.

Participants completed a brief demographics questionnaire (Murrell, Schmalz, Mitchell, & La Borde, 2009) consisting of items chosen on the basis of their relationship to both process and outcome variables. These items require participants to report their gender, age, age at which they became parents, marital status, education and income levels, number and ages of children, and previous parent training or other mental health treatment. Additionally, this questionnaire included an item regarding the number of people comprising the parent’s social support network.

Avoidance and Fusion Questionnaire.

The Avoidance and Fusion Questionnaire for Youth (AFQ-Y; Greco, Murrell, & Coyne, 2005) is a 17-item Likert-type self-report measure designed to measure experiential avoidance and cognitive fusion. The AFQ-Y requires respondents to indicate on a 5-point scale from not at all true (0) to very true (4) how typical certain statements are of them. Sample statements include, “My thoughts and feelings mess up my life,” and “I can’t stand to feel pain or hurt in my body.” Scores can range between 0 and 68, with higher scores indicating higher levels of experiential avoidance, and therefore, lower levels of acceptance.

The AFQ-Y was originally designed for use with children and adolescents and has demonstrated good internal consistency reliability (\(\alpha = .87-.90\)) with both child and adolescent samples (Greco, Lambert & Baer, 2008; Howe-Martin, Biglan, Murrell, & Hankini, in preparation). However, a recent study (Schmalz & Murrell, 2010) provided evidence that the AFQ-Y can also be used to measure acceptance/avoidance in an adult sample. Traditionally, the
Acceptance and Action Questionnaire-II (AAQ-II) and its variants have been used to measure acceptance/avoidance in adult samples. However, this measure has evidenced only moderate internal consistency (Bond et al., 2009; Hayes et al., 2004; Kortte, Veiel, Batten, & Wegener, 2009) and has been critiqued for its use of ACT-specific language and level of reading difficulty. In contrast, items on the AFQ-Y were intentionally constructed so as to contain simpler language that is not dependent on an ACT knowledge base. Furthermore, there are no items on the AFQ-Y that are inherently inapplicable to adults.

Notably, the AFQ-Y demonstrated good internal consistency reliability (α = .92) in a sample (n = 552) of college students ranging in age from 18 to 53 (M = 20.6, SD = 3.45) (Schmalz & Murrell, 2010). The AFQ-Y has also demonstrated good convergent and divergent validity with an adult sample (Schmalz & Murrell, 2010). Relationships with all other measures were in the expected directions. That is, the AFQ-Y was significantly correlated with the AAQ-II (r = .68). Additionally, correlations between the AFQ-Y and other measures of psychological distress were in the predicted direction and of sufficient magnitude to provide evidence of convergent validity (r = .53-.61). Finally, the AFQ-Y and a Quality of Life Measure were negatively correlated (r = -.30), as would be expected given that avoidance as measured by the AAQ-II has been demonstrated to negatively predict quality of life in other studies.

Kentucky Inventory of Mindfulness Skills.

The Kentucky Inventory of Mindfulness Skills (KIMS; Baer, Smith, & Allen, 2004) is a 39-item Likert-type self-report measure designed to assess four mindfulness skills (observing, describing, acting with awareness, and accepting without judgment), as well as the overall
construct of mindfulness as an aggregate of these skills. Though this operational definition of mindfulness most closely aligns with mindfulness skills as conceptualized in dialectical behavior therapy (Linehan, 1993), it is also generally consistent with a broader conceptualization of mindfulness that has informed other acceptance and mindfulness based interventions, including but not limited to ACT (Baer, Smith, & Allen, 2004). In fact, the KIMS is consistently utilized in ACT empirical studies with the aim of measuring the ACT components of contact with the present moment, self-as-context, acceptance, and defusion.

Items from the KIMS require respondents to indicate on a 5-point scale from never or rarely true (1) to almost always or always true (5) how typical certain statements are of them. Sample statements include, “I drive on ‘automatic pilot’ without paying attention to what I’m doing,” and “I make judgments about whether my thoughts are good or bad.” Total scores can range from 39 to 195, with higher scores indicating more developed mindfulness skills. For the purposes of this study, KIMS total scores are examined.

The KIMS was originally validated on two samples of students and one sample of outpatient adults diagnosed with borderline personality disorder (Baer, Smith & Allen 2004). Both exploratory and confirmatory factor analyses (conducted on the two student samples, respectively) yielded a four factor solution corresponding to the four mindfulness skills of observing, describing, acting with awareness, and accepting without judgment. Internal consistency reliability was calculated for each of the four factors and ranged from .76 (acting with awareness in the second student sample) to .91 (observing in the first student sample). Test-retest reliability for the KIMS is adequate to good, with correlations ranging from .65
(observing) to .86 (acting with awareness) when the KIMS was administered between 14-17
days after the initial administration.

Construct validity of the KIMS was explored and supported by examining correlations
between KIMS total scores and scores from measures of personality, psychopathology,
emotional intelligence, alexithymia, experiential avoidance, absorption, dissociative
experiences, life satisfaction, and impression management (Baer, Smith, & Allen 2004). The
KIMS also demonstrated adequate convergent validity with the Mindful Attention and
Awareness Scale (MAAS; Brown & Ryan, 2003), with correlation coefficients indicating that
mindfulness as measured by the MAAS is strongly related to acting with awareness on the
KIMS. Finally, the KIMS demonstrated good discriminant validity in that scores from the student
samples were significantly higher than scores from the sample of adults diagnosed with
borderline personality disorder (Baer, Smith, & Allen, 2004).

Valued Living Questionnaire.

The Valued Living Questionnaire (VLQ; Wilson, 2002) is a 2-part, 20 item self-report
measure originally designed for use as a clinical tool in ACT. The first part of the VLQ requires
respondents to rate on a 10-point Likert-type scale how important particular valued domains
are to them. These domains include: (a) family (other than parenting and intimate relations), (b)
marriage/coupes/intimate relations, (c) parenting,(d) friendship, (e) work, (f) education, (g)
recreation, (h) spirituality, (i) citizenship, and (j) physical health. The second part of the VLQ
requires participants to rate on a 10-point Likert-type scale how consistently they have behaved
according to these valued domains in the past week. Responses from the two parts of the VLQ,
referred to as importance and consistency, are used to calculate a valued living composite. According to Wilson and colleagues (2009), the valued living composite is theoretically consistent with an ACT conceptualization of values.

Though the VLQ was designed for use as a clinical tool, it has also been used in a number of research studies. The VLQ was recently validated on two undergraduate samples (Wilson, Sandoz, Kitchens, & Roberts, 2009). Internal consistency reliability was adequate for the first sample (\(N = 76\)), ranging from .79-.83 for the Importance scale, .58-.60 for the Consistency scale, and .65-.74 for the valued living composite. Because Consistency is theoretically more likely to fluctuate than Importance, the different reliability coefficients for these subscales make sense. Internal consistency reliability was also adequate for the second sample (\(n = 338\)), ranging from .75 (Consistency) to .77 (Importance and valued living composite). In the validation study, test-retest reliabilities were calculated based on data collected from the first sample (\(n = 76\)) and were reported at .90 for Importance, .58 for Consistency, and .75 for valued living composite.

Regarding validity, factor analysis yielded a one-factor solution for the VLQ, which measures the correspondence between an individual’s behavior within a valued domain and the overall pattern of valued behavior. Correlations with the AAQ-16, the Butcher Treatment Planning Inventory (BPTI; Butcher, 1998), and the Short-Form 36 (SF-36; Brazier et al., 1992) were in the expected directions. Valued living was significantly, negatively correlated with experiential avoidance as measured by the AAQ-16 (\(r = -.14\)) and BPTI scores (\(r = -.27\) for general pathology), and significantly, positively correlated with SF-36 scores (\(r = .27\) for vitality and .23 for mental health).
Meta-Valuing Measure.

The Meta-Valuing Measure (MVM; Adcock, LaBorde, & Murrell, 2009) is a 22-item Likert-type self-report measure designed to assess valuing behavior as conceptualized in ACT. Items from the MVM require respondents to indicate how much they agree with a particular statement on a 6-point scale from strongly agree to strongly disagree. Higher scores on the MVM represent more valuing behavior.

The MVM has been validated on two samples of college students. Exploratory and confirmatory factor analyses consistently yielded a two factor solution corresponding to the Whole Life Valuing ($\alpha = .91$) and Freedom from Values Conflict ($\alpha = .85$). The Whole Life Valuing factor included 26 items such as, “There are things that matter to me,” and “I have many areas of my life that are interconnected.” The Freedom from Values Conflict factor included 22 items such as, “I feel like I have to choose between what’s most important to me,” and “When I’m upset, it’s difficult to do what’s important to me.”

Construct validity of the MVM was explored and supported by examining correlations between each factor and other measures. All correlations were in the expected directions. Valuing as measured by the MVM was positively correlated with valuing as measured by the VLQ and PVQ, mindfulness as measured by the KIMS, and quality of life as measured by the QOLI. Valuing as measured by the MVM was negatively correlated with experiential avoidance as measured by the AAQ and distress as measured by the OQ-45. More specifically, the Whole Life Valuing factor was significantly correlated with scores from the VLQ ($r = .22$ for Importance and .13 for Consistency), the PVQ ($r = .43$), the AAQ ($r = -.29$), the OQ-45 ($r = -.30$), the KIMS ($r = .36$), and the QOLI ($r = .31$). The Freedom from Values Conflict factor was significantly
correlated with scores from the VLQ ($r = .21$ for Importance), the PVQ ($r = .178$), the AAQ ($r = - .54$), the OQ-45 ($r = -.55$), the KIMS ($r = .35$), and the QOLI ($r = .31$).

The MVM shows promise as an instrument for use in both clinical and research settings, but at present a final version has not been published. For the current study, a 22-item version was used. Internal consistency reliability coefficients for the total score, which were used in the forthcoming analyses, were excellent, ranging from .90 (post-test) to .93 (follow-up).

Difficulties in Emotion Regulation Scale.

The Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) is a 36-item Likert-type self-report measured designed to assess the degree to which individuals have difficulties across six domains of emotion regulation, including acceptance of emotions, ability to accomplish tasks when overwhelmed with emotion, ability to control reactions to emotions, awareness of emotions, ability to regulate emotions, and ability to understand and interpret emotions. The DERS also yields a total score across all six domains, with higher scores indicating greater difficulties with emotion regulation. The DERS total score was used in this study.

Items from the DERS require respondents to indicate on a 5-point scale from almost never (1) to almost always (5) how often certain statements are true for them. Sample items include, “I experience my emotions as overwhelming and out of control,” “When I’m upset, I have difficulty getting work done,” and “When I’m upset, I lose control over my behaviors.”

The DERS demonstrated good internal consistency for both overall scores ($\alpha = .93$) and domain scores ($\alpha = .80-.89$) when initially validated on a sample of college students. Test-retest reliability for overall DERS scores is also good, as is construct validity, with correlations in the
expected directions for experiential avoidance (AAQ-II; Bond et al., 2009) and emotional expressivity (EES; Kring, Smith, & Neale, 1994).

Alabama Parenting Questionnaire - 9.

The short form of the Alabama Parenting Questionnaire (APQ-9; Elgar, Waschbusch, Dadds, & Sigvaldason, 2007) is a 9-item Likert-type self-report measure designed to assess parenting practices among parents of children with disruptive behavior. Items from the APQ-9 require parents to indicate on a 5-point scale from never (1) to always (5) how often certain behaviors typically occur at home. Sample items include such statements as, “You threaten to punish your child and then do not actually punish him/her,” and “You complement your child when he/she does something well.”

The APQ-9 measures three primary domains of parenting practices. These include Positive Parenting, Inconsistent Discipline, and Poor Supervision. Internal consistency is adequate for each domain, ranging from .59 to .79 for mothers and .63 to .84 for fathers. In the current study, an APQ-9 total score was used in statistical analyses. The internal consistency reliability coefficient for the entire scale, in this study, ranged from .67 (pre-test) to .79 (post-test).

The APQ-9 has shown adequate discriminant validity in differentiating between parents of children with behavioral disorders and parents of children without behavioral disorders. The APQ-9 also has significant yet moderate correlations with the Conners Parent Rating Scale – Revised (CPRS-R; Conners, Sitarenios, Parker & Epstein, 1998). Specifically, scores from the Oppositional, Social Problems, and Psychosomatic scales of the CPRS-R were negatively
correlated with the Positive Parenting domain of the APQ-9 ($r = .20-.22$, $p < .05$). Both the Inconsistent Discipline and Poor Supervision domains of the APQ-9 were significantly positively correlated with all but one subscale of the CPRS-R (Perfectionism for Inconsistent Discipline and Anxious-Shy for Poor Supervision).

**Parenting Stress Index (Short Form).**

The short form of the Parenting Stress Index (PSI-SF; Abidin, 1995) is a 36-item Likert-type self-report measure that yields a total score for parenting stress as well as three subscale scores, including Parental Distress (PD), Parent-Child Dysfunctional Interaction (P/CDI), and Difficult Child (DC). A factor analysis conducted by Haskett and colleagues (2006), however, resulted in a two-factor structure. For the purposes of this study, then, the PSI-SF total score was used. Respondents are asked to indicate how strongly they agree or disagree with certain statements on a 5-point scale from *strongly agree* (1) to *strongly disagree* (5). Higher T-scores indicate higher levels of parenting stress for both the overall scale as well as the three subscales.

The PSI-SF was validated on a sample of 800 participants (Abidin, 1995) and demonstrated adequate internal consistency for each of the three subscales ($\alpha = .80-.87$) as well as good internal consistency for the overall scale ($\alpha = .91$). Test-retest reliability for the subscales ranged between .68 and .85, and test-retest reliability for the overall scale was reported at .84. Support for the validity of the PSI-SF can be found in the correlation ($r = .94$) between PSI-SF total scores and total scores on the full-length version of the PSI (Abidin, 1995). Validation studies on the 120-item PSI abound, providing solid support for both its construct
and predictive validity (Abidin, 1995). Specifically, PSI scores are elevated for parents of children with developmental issues, behavior problems, and disabilities and illnesses (Abidin, 1995). PSI scores are also elevated in at-risk families, as evidenced by studies with battered women, negligent mothers, mothers exposed to drugs during pregnancy, teenage parents, abusive parents, and stressed parents (Abidin, 1995). Finally, PSI scores co-vary as expected with variables such as maternal emotional availability, depression, family and/or marital conflict, child behavior, family resources, and parental locus of control (Abidin, 1995).

Parental Locus of Control.

The Parental Locus of Control scale (Campis, Lyman, & Prentice-Dunn, 1986) is a 47-item Likert-type self-report instrument that measures various facets of parental locus of control, and includes the following subscales: Parental Efficacy (PE), Parental Responsibility (PR), Child Control of Parents’ Life (CC), Fate/Chance, and Parental Control of Child’s Behavior (PC). Internal consistency for the PLOC is excellent ($\alpha = .93$), and test-retest reliability is good ($r = .83$). The PLOC has also demonstrated good discriminant validity in terms of its ability to differentiate between parents of children with and without reported behavioral problems.

In the current study, the 10-item Parental Efficacy subscale of the PLOC was used in an effort to determine whether participants would report increased levels of parental efficacy after an ACT intervention, which by its nature seeks to foster effective parenting regardless of the presence of negative thoughts and feelings. Respondents were asked to rate on a 5-point scale how strongly they agreed or disagreed with statements such as, “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.” Scores on the subscale range from 0 to 50 with higher scores reflecting lower parental efficacy. This 10-item subscale was used by Blackledge and Hayes (2006) as part of a total assessment package of an ACT weekend intervention for parents of children with autism. In their study, the subscale was found to have adequate internal consistency ($\alpha = .65$). The mean score for their sample of parents requesting professional help with parenting was 31.44.

**Depression Anxiety and Stress Scales.**

The Depression Anxiety and Stress Scales (DASS-21; Lovibond & Lovibond, 1995) is a 21-item Likert-type self-report instrument that measures symptoms of depression, anxiety, and stress. Respondents are asked to rate each item on a 4-point scale according to how much the statement applied to them during the past week, ranging from *did not apply to me at all* (0) to *applied to me very much, or most of the time*. Scores range from 0 to 63, with higher scores representing higher levels of depression, anxiety and stress.

The DASS-21 yields both a total score and a score for each subscale (depression, anxiety, and stress). A study by Henry and Crawford (2005) examined the psychometric properties of the DASS-21 in a sample of 1794 participants. Internal consistency for each subscale was adequate to good ($\alpha = .82-.90$), as was the internal consistency for the overall scale ($\alpha = .93$). Competing models of the DASS-21 exist, based on different factor solutions obtained in different samples, but in terms of total scores the DASS-21 does evidence good convergent and discriminate validity when correlated with total scores from the Hospital Anxiety and

The Behavior Assessment System for Children (BASC-2 PRS; Reynolds & Kamphaus, 2004) is a multidimensional, multi-method system for child and adolescent behavior, including both internalizing and externalizing symptoms, as well as a number of adaptive behaviors. Though forms for Teacher Rating Scales, Parent Rating Scales, and Self-Report of Personality are all available (as well as materials for gathering a structured developmental history (SDH) and a student observation system (SOS)), only the Parent Rating Scales form was used in the current study. There are three different versions of Parent Rating Scales, depending on the age of the child being rated. Participants in this study completed PRS-P for a child between ages 2 to 5, the PRS-C for a child between the ages of 6 to 11, or the PRS-A for an adolescent between ages 12 to 21.

The BASC-2 PRS yields T-scores for four overall scales, or composites, and between 16-19 subscales (depending on age of child). The four composites are labeled Internalizing Problems, Externalizing Problems, Behavioral Symptoms Index, and Adaptive Skills. The subscales load onto the composite scales for each of the three age ranges as depicted in Table 1. Each form of the PRS contains between 134-160 items (again, depending on the age of the child) that are rated on 4-point scale ranging from never (0) to always (3).
Table 1

**Summary of BASC-2 PRS Composite and Subscales**

<table>
<thead>
<tr>
<th></th>
<th>Externalizing Problems</th>
<th>Internalizing Problems</th>
<th>Behavioral Symptoms Index</th>
<th>Adaptive Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRS-P</strong></td>
<td>Hyperactivity</td>
<td>Anxiety</td>
<td>Hyperactivity</td>
<td>Adaptability</td>
</tr>
<tr>
<td></td>
<td>Aggression</td>
<td>Depression</td>
<td>Aggression</td>
<td>Social Skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Somatization</td>
<td>Depression</td>
<td>Activities of Daily Living</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Atypicality</td>
<td>Functional Communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Withdrawal</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Attention</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Problems</td>
<td></td>
</tr>
<tr>
<td><strong>PRS-C</strong></td>
<td>Hyperactivity</td>
<td>Anxiety</td>
<td>Hyperactivity</td>
<td>Adaptability</td>
</tr>
<tr>
<td></td>
<td>Aggression</td>
<td>Depression</td>
<td>Aggression</td>
<td>Social Skills</td>
</tr>
<tr>
<td></td>
<td>Conduct</td>
<td>Somatization</td>
<td>Depression</td>
<td>Leadership</td>
</tr>
<tr>
<td></td>
<td>Problems</td>
<td></td>
<td>Atypicality</td>
<td>Activities of Daily Living</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Withdrawal</td>
<td>Functional Communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Attention</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Problems</td>
<td></td>
</tr>
<tr>
<td><strong>PRS-A</strong></td>
<td>Hyperactivity</td>
<td>Anxiety</td>
<td>Hyperactivity</td>
<td>Adaptability</td>
</tr>
<tr>
<td></td>
<td>Aggression</td>
<td>Depression</td>
<td>Aggression</td>
<td>Social Skills</td>
</tr>
<tr>
<td></td>
<td>Conduct</td>
<td>Somatization</td>
<td>Depression</td>
<td>Leadership</td>
</tr>
<tr>
<td></td>
<td>Problems</td>
<td></td>
<td>Atypicality</td>
<td>Activities of Daily Living</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Withdrawal</td>
<td>Functional Communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Attention</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Problems</td>
<td></td>
</tr>
</tbody>
</table>

Composite scales and subscales of the BASC-2 PRS demonstrate good internal consistency in both males and females, at different age levels, in both general norm samples ($\alpha = .80 - .87$) and clinical samples ($\alpha = .84 - .87$). Test-retest reliability for the Composite scales is high, with alpha coefficients ranging from low .80s to low .90s. Individual scales also have good test-retest reliability at all age levels, with $r = .77$ for the preschool level, $r = .84$ at the child level, and $r = .81$ at the adolescent level. Inter-rater reliability among different parents and/or caregivers is adequate, ranging between .69 and .77 for the different age levels. Inter-rater agreement is lowest at the child level and highest at the adolescent level.
The BASC-2 PRS correlates highly with the Achenbach System of Empirically Based Assessment (ASEBA) Child Behavior Checklist (ASEBA; Achenbach & Rescorla, 2000) at all age levels in both Internalizing ($r = .65 - .75$) and Externalizing domains ($r = .74 - .83$), as well as scores for total problems ($r = .73 - .84$). Similar correlations between corresponding subscales of the CPRS-R (Conners, 1997) and the Behavior Rating Inventory of Executive Functioning (BRIEF; Gioia, Isquith, Guy, & Kenworthy, 2000) lend solid support to the construct validity of the BASC-2 PRS.

Treatment utility and satisfaction interview.

The treatment utility and satisfaction interview used in this study (Appendix B) was modified from a similar interview used in an ACT for Parents pilot study (Murrell, Schmalz, Mitchell & LaBorde, 2009). The purpose of the interview is to gather qualitative data that researchers can use in planning future interventions. Sample questions from the interview include, “Was there anything particularly difficult for you to understand?” and “Was the experience emotionally difficult or distressing in any way?”

Adherence.

As a manipulation check, adherence was measured using a checklist of ACT core competencies adapted from an outline presented by Hayes and Strosahl (2004) and presented in Appendix C. The checklist is divided into 7 sections, the first of which lists the core competencies involved in the basic ACT therapeutic stance, including but not limited to modeling the ability to hold uncomfortable or contradictory thoughts and feelings, modeling
compassion, appropriate self-disclosure, and speaking to the client from an equal, vulnerable, and human point of view. The remaining six sections correspond to the six core components of ACT and include developing acceptance and willingness/undermining experiential control, undermining cognitive fusion, getting in contact with the present moment, distinguishing the conceptualized self from self-as-context, defining valued directions, and building patterns of committed action.

Design

The proposed design for this study was an interrupted time series design consisting of 50 observations from the ACT daily diary (25 pre-intervention and 25 post-intervention). Interrupted time series designs (ITSD) have become the preferred quasi-experimental design in applied behavior research (Glass, 1997). Casual inferences can be drawn from ITSD when a graph of the dependent variable shows an abrupt change immediately following the intervention (Cooper, Heron, & Heward, 1987; Glass, 1997; Kazdin, 2003). Due to the number of pre- and post-intervention observations involved in ITSD, intervention effects can be separated from long-term trends and other time related threats to internal validity (Glass, 1997; Kazdin, 2003).

Time-series data is, arguably, best interpreted via visual inspection of the data when the sample size is small (Shadish, Cook & Campbell, 2002). To strengthen confidence in findings, however, additional statistical analyses are often recommended. As such, and given that ACT treatment outcomes are typically measured using relevant scales, this study will also involve the administration of 10 scales, or self-report measures, at three time periods as outlined
above. Data from these measures will be analyzed for both clinical and statistical significance, using reliable change indices (Jacobson & Traux, 1991) and a series of repeated measures ANOVAs, respectively.

Procedure

Screening, informed consent, and compensation.

After each referral was received, parents were individually screened by the principal investigator. Parents were included in the study if they were native English speakers, at least 18 years old, and provided subjective report of parenting stress. Only one parent was excluded based on these criteria, for having limited English proficiency. Originally, there was an additional exclusion criterion that parents had at least one child between the ages of 2 and 12. Because of the small number of referrals, parents with children below the age of 2 and above the age of 12 ($n = 3$) were included. Each parent eligible for participation was asked to read and sign an informed consent form at the time of screening. The entire process for screening and informed consent lasted no longer than 30 minutes for each parent.

Parents were compensated for their participation in a number of ways. First, each parent was paid $40: $10 upon completion of each day of the workshop and $20 at the follow-up assessment point (for those who completed follow-up measures). Funds came from a faculty research grant awarded to Dr. Amy Murrell for use in treatment outcome research for parents. Each participant also received a copy of *The Joy of Parenting: An Acceptance and Commitment Therapy Guide for Effective Parenting in the Early Years* (Coyne & Murrell, 2009). Finally, lunch
was provided to the participants on the first day of the workshop, and childcare was provided on both days.

Assessment.

Fifty copies of the ACT daily diary were provided to each participant during screening, with instructions to begin completing the diary 25 days prior to the intervention. Of the 17 parents who completed the study, 8 were referred prior to the 25 day period and could thus potentially provide data for all 25 days. The remaining 9 parents provided data for the available number of days prior to the workshop, based on date of screening and consent. Immediately following the workshop, parents were instructed to complete the ACT daily diary for 25 additional days.

As noted, parents were asked to complete 10 self-report measures at each of the three assessment points (with the exception of the demographics form, which was only completed once). Participants received a phone call by the principal investigator and/or one of the research assistants 1-3 days prior to each assessment point to remind them of the upcoming assessment. Completion time for all 10 instruments ranged from 25 to 45 minutes.

The treatment utility and satisfaction interview was conducted once for each parent, immediately post intervention (coinciding with the second administration of the self-report instruments). After Workshop A, the interview was conducted with the 2 parents who completed the workshop with the principal investigator as interviewer. Due to the number of parents in attendance at Workshop B and the relatively few number of researchers and staff, parents were asked to complete the interview in written format, with instructions to answer
both the lead questions as well as the follow-up questions. Parents completed both the oral
and the written interview in 15 minutes or less.

Treatment protocol.

*Overview.* Treatment was delivered via two 2-day weekend workshops that were co-
facilitated by the principal investigator and Dr. Amy Murrell. Workshops were held at the Collin
County Children’s Advocacy Center. The first day of each workshop lasted 8 hours, including
lunch. The second day of the workshop lasted 5 hours, with the last hour reserved for
completion of post-measures.

Treatment was delivered in group (as opposed to individual) format mostly for purposes
of practicality, however, there are also several advantages to applying ACT in a group setting
(Walser & Pistorello, 2004). First, the experiential exercises characteristic of ACT benefit from
interpersonal interaction. Related to that, group members often help one another to grasp
some of the more abstract ACT concepts. Group work also allows for the provision of objective
feedback among group members, who often develop self-awareness vicariously. Other group
benefits include the encouragement that comes from witnessing others’ struggles and the
accountability that comes from publicly committing to valued directions. Finally, the group
format provides members with in vivo opportunities to experience being in the present
moment with other human beings.

The content of the workshops was based on *The Joy of Parenting: An Acceptance and
Commitment Therapy Guide for Effective Parenting in the Early Years (Joy of Parenting)*, an ACT
for the treatment protocol can be found in Appendix D. In general, treatment included a combination of didactic training and experiential exercises, with a greater emphasis on the latter. Didactic training consisted of introduction to basic behavioral parenting skills and well as the six core ACT components. Experiential exercises consisted of role-playing, imaginal exposure, behavioral activation, and a writing exercise.

Parents received a copy of *Joy of Parenting* prior to the study, with instructions to read Chapters 1 and 2 after the last pre-assessment point. On the first day of the workshop, they were asked to complete a short questionnaire designed to determine whether or not they had read the chapters. Chapter 1, “An ACT Philosophy of Parenting: Accept, Choose, and Take Action,” provides a brief introduction to an ACT philosophy of parenting, and Chapter 2, “Parenting a Child in the Early Years is Tough Work: Common Challenges,” describes common challenges faced by parents of young children. These chapters were assigned as pre-treatment reading so that parents would come to the workshop with a basic framework for understanding ACT and conceptualizing their parenting difficulties.

*Horizon metaphor.* Though a variety of metaphors were utilized throughout the workshop, the horizon metaphor was revisited as a guiding force and is worth describing in detail. The horizon metaphor is presented as a guided-meditation exercise, and is adapted from Blackledge and Hayes (2006) in *Joy of Parenting*:

Imagine a limitless oceanic skyline. In front of you, the sun rises over the horizon—gold and orange light illuminates the clouds around it. Valuing is like sailing toward the horizon. The horizon is always changing; it seems to rise or fall, or even seem to move around you at times. Because it’s always shifting, you can never reach it—you can only move toward it. When you’re heading toward the horizon, you’re warmed by the sun’s light. You feel vital; the vitamins from the sunlight enrich your body. Perhaps a soothing breeze gently moves along with you. Notice that you do not have to be directly in the path of the rising sun. As long as you are heading toward the horizon, the sun shines on
you and all the things around you. Your behavior doesn’t always have to match your values flawlessly; if you are generally heading in the direction of what you want your life to stand for, you will feel the importance in that. It won’t always be easy or feel good. Strong winds may blow you around and try to keep you away from your course, and dark clouds will sometimes block your view. Your life circumstances may make it hard to stay on the course, and your mind may tell you that it’s not possible. There may be storms: feelings of despair and failure may cover you like rain, and you may lose your way. So, it’s probably a good idea to lay down some buoys to mark your course. Each buoy, representing a goal, or a valued action, shows your progress and can guide you toward your horizon as well. (Coyne & Murrell, 2009, p. 50)

Day 1. The first day of each workshop began with an introduction to group rules and expectations, with a particular emphasis on sharing and confidentiality. The introduction lasted no longer than 15 minutes. Next, parents were introduced to an ACT-consistent conceptualization of human suffering and an ACT philosophy of parenting. This part of the workshop lasted for approximately 1 hour. Parents were then introduced to valuing from an ACT perspective. Both the didactic and experiential pieces for this portion of the workshop were in close parallel to Chapter 3 of Joy of Parenting, “Parenting Values: What Matters Most.” Two hours were allotted for this portion of the workshop. Parents were then given a break for lunch, with lunch provided on site. The remainder of Day 1 was spent covering the Chapter 4 of Joy of Parenting, “Is the Goal Control? Managing Feelings vs. Managing Behavior,” which elaborates on the ACT component of acceptance and the problem with experiential avoidance.

Day 2. The second day of the workshop began by covering the material presented in Chapter 5, “Being Mindful: Appreciating Your Child,” introducing parents to the ACT component contact with the present moment through a series of mindfulness exercises. Following that, parents were introduced to the ACT components of willingness and committed action, as well as defusion and self-as-context, through the presentation of ideas and exercises from Chapter 6, “Doing What Works, Not What’s Easy: Standing for Your Child.”
RESULTS

Descriptive Statistics for Participants and Scales

Of the 19 parents who attended both days of the workshop, 84.2% were female (n = 16). Each of the three males was partnered and attended the workshop with their partner, so there were 13 mothers and 3 couples in attendance. Of the three couples who attended, two reported being currently married to each other. Frequency data for marital status, level of education, and current income range are presented below in Table 2.

Table 2

Demographics for Parents who Completed Treatment

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Percentage (n = 17)</th>
<th>Frequency (n = 17)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>26.3</td>
<td>5</td>
</tr>
<tr>
<td>Married</td>
<td>26.3</td>
<td>5</td>
</tr>
<tr>
<td>Separated</td>
<td>5.3</td>
<td>1</td>
</tr>
<tr>
<td>Divorced</td>
<td>21.1</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>10.5</td>
<td>2</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some high school</td>
<td>26.3</td>
<td>5</td>
</tr>
<tr>
<td>High school grad/GED</td>
<td>26.3</td>
<td>5</td>
</tr>
<tr>
<td>Some college</td>
<td>21.1</td>
<td>4</td>
</tr>
<tr>
<td>4 year college grad</td>
<td>10.5</td>
<td>2</td>
</tr>
<tr>
<td>Grad school</td>
<td>5.3</td>
<td>1</td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 15K</td>
<td>52.6</td>
<td>10</td>
</tr>
<tr>
<td>15001-30000</td>
<td>26.3</td>
<td>5</td>
</tr>
<tr>
<td>30001-50000</td>
<td>5.3</td>
<td>1</td>
</tr>
<tr>
<td>50001-75000</td>
<td>5.3</td>
<td>1</td>
</tr>
</tbody>
</table>

Of the 17 parents who completed the demographics questionnaire, the mean age was 28.06 (SD = 7.72). Ages ranged from 18 to 46. The mean age for becoming a parent was 22.18 (SD = 6.12), range 14 to 36. The modal parent (n = 7) reported having 1 child under the age of
18. Three parents, all single mothers, reported having 2 children under the age of 18. Six parents reported having 3 children under the age of 18; of these six parents, four represent mother-father dyads (i.e., two couples each reported having 3 children). Only one mother reported having 4 children under the age of 18.

Parents also provided information about their treatment history. Three parents reported that they have attended parenting classes in the past, but none of the parents reported being currently enrolled in any parenting classes other than this one. However, 7 parents (5 mothers and 1 couple) reported that they are currently in some kind of mental health treatment with a variety of provider types, for a variety of issues, presented in Table 3.

Only 11 parents answered the question about social support, “How many people do you have to count on when you need social support?” Their answers ranged from 3 to 10, with 5 being the modal answer. It is unclear whether those parents who did not answer this item skipped it or intended to answer zero.

Table 4 presents pre, post, and follow-up means, standard deviations, and values for Cronbach’s alpha for the following scales and relevant subscales, including those parents who did not complete the study: AFQ, KIMS, VLQ, MVM, DERS, APQ-9, PSI-SF, PLOC, and DASS-21. Values reported for BASC-2 Composite scores are for the PRS-P form (Parent Rating Schools – Preschool, age 2-5), followed by values for the PRS-C form (ages 6-11) in parentheses. Nineteen parents completed the PRS-P, 5 parents completed the PRS-C (ages 6-11), and 2 parents completed the PRS-A (ages 12-21). Due to the small number of parents completing the PRS-A, Cronbach’s alpha could not be computed for any of those Composite scores.
<table>
<thead>
<tr>
<th>Voluntary</th>
<th>Provider Type</th>
<th>Frequency</th>
<th>Treatment issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Marriage counselor</td>
<td>Weekly</td>
<td>Communication, appreciation, alcoholism and recovery</td>
</tr>
<tr>
<td></td>
<td>Counselor</td>
<td>Weekly</td>
<td>General issues, re: illness, finances, SA</td>
</tr>
<tr>
<td>No</td>
<td>Counselor</td>
<td>Twice (once individually and once as a couple)</td>
<td>How to handle stress better and couples counseling</td>
</tr>
<tr>
<td></td>
<td>Counselor</td>
<td>Weekly</td>
<td>For domestic violence</td>
</tr>
<tr>
<td></td>
<td>Psychiatrist/counselor/social worker through CPS/GP for meds</td>
<td>Weekly for SA and individual therapy, every 6 months for meds</td>
<td>Substance abuse, individual counseling to cope and make sure of bipolar</td>
</tr>
<tr>
<td></td>
<td>Counselor</td>
<td>Weekly (12)</td>
<td>My emotions</td>
</tr>
<tr>
<td>Unknown</td>
<td>Social worker, counselor</td>
<td>Weekly</td>
<td>CPS requirement</td>
</tr>
</tbody>
</table>
### Table 4

**Scale Properties for the Current Study**

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th></th>
<th></th>
<th>Post</th>
<th></th>
<th></th>
<th>Follow-up</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>α</td>
<td>Mean</td>
<td>SD</td>
<td>α</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>AFQ</td>
<td>18.40</td>
<td>14.66</td>
<td>.94</td>
<td>16.43</td>
<td></td>
<td></td>
<td>16.04</td>
<td>8.29</td>
</tr>
<tr>
<td>VLQ</td>
<td>56.80</td>
<td>19.93</td>
<td>.88</td>
<td>63.04</td>
<td>15.69</td>
<td>.85</td>
<td>59.36</td>
<td>21.13</td>
</tr>
<tr>
<td>MVM</td>
<td>91.39</td>
<td>16.86</td>
<td>.89</td>
<td>93.60</td>
<td>14.69</td>
<td>.90</td>
<td>92.00</td>
<td>15.46</td>
</tr>
<tr>
<td>KIMS</td>
<td>126.76</td>
<td>16.41</td>
<td>.79</td>
<td>122.90</td>
<td>16.58</td>
<td>.79</td>
<td>129.11</td>
<td>18.58</td>
</tr>
<tr>
<td>DERS</td>
<td>73.18</td>
<td>25.00</td>
<td>.96</td>
<td>71.95</td>
<td>18.51</td>
<td>.93</td>
<td>72.00</td>
<td>17.47</td>
</tr>
<tr>
<td>DASS-21</td>
<td>11.89</td>
<td>11.67</td>
<td>.94</td>
<td>10.19</td>
<td>7.75</td>
<td>.89</td>
<td>16.38</td>
<td>13.52</td>
</tr>
<tr>
<td>PSI-SF Total</td>
<td>76.88</td>
<td>27.52</td>
<td>.96</td>
<td>77.20</td>
<td>23.98</td>
<td>.96</td>
<td>79.57</td>
<td>23.72</td>
</tr>
<tr>
<td>APQ-9</td>
<td>16.08</td>
<td>4.32</td>
<td>.67</td>
<td>16.15</td>
<td>4.67</td>
<td>.79</td>
<td>15.64</td>
<td>3.79</td>
</tr>
<tr>
<td>PLOC</td>
<td>25.08</td>
<td>9.64</td>
<td>.87</td>
<td>23.55</td>
<td>6.46</td>
<td>.71</td>
<td>24.29</td>
<td>6.60</td>
</tr>
<tr>
<td>BASC-2: Int</td>
<td>55.74</td>
<td>16.70</td>
<td>.90(.97)</td>
<td>54.47</td>
<td>11.48</td>
<td>.89*</td>
<td>49.55</td>
<td>11.36</td>
</tr>
<tr>
<td>BASC-2: Ext</td>
<td>59.47</td>
<td>15.83</td>
<td>.97(.95)</td>
<td>59.00</td>
<td>11.17</td>
<td>.90(.53)</td>
<td>51.64</td>
<td>8.77</td>
</tr>
<tr>
<td>BASC-2: BSI</td>
<td>62.21</td>
<td>13.34</td>
<td>.92(.97)</td>
<td>60.40</td>
<td>9.75</td>
<td>.92(.91)</td>
<td>53.64</td>
<td>9.15</td>
</tr>
<tr>
<td>BASC-2: Adap</td>
<td>41.84</td>
<td>8.97</td>
<td>.78(.78)</td>
<td>41.13</td>
<td>8.45</td>
<td>.75(.83)</td>
<td>44.64</td>
<td>10.04</td>
</tr>
</tbody>
</table>

*For these Composite scores, n = 1, and therefore Cronbach’s alpha could not be computed.

### Assessment of Treatment Fidelity

Therapist adherence.

Two graduate student research assistants trained in acceptance and commitment therapy were present at each of the two workshops. These assistants completed a checklist of ACT core competencies (Hayes & Strosahl, 2004; Appendix C) for each day they observed the workshop. As noted, this checklist is divided into seven sections and requires raters to check either “Yes” or “No” for each competency listed. The first section lists core competencies involved in the basic ACT therapeutic stance, and the remaining six sections correspond to the six core components of ACT.
Ratings from Day 1 and Day 2 were collapsed for each workshop. Because some material was not covered until Day 2, ratings from Day 1 and Day 2 sometimes differed. For example, for the item, “Helped client contact paradoxical effects of control strategies?” “No,” was checked for Day 1, whereas “Yes” was checked for Day 2. The overall rating for that item, then, was “Yes,” as that competency was met during the course of the workshop.

For Workshop A, Raters 1 and 2 differed on 5 out of 56 items (91% agreement). Of the 51 remaining items, all items were endorsed in favor of the corresponding competency (i.e., competency was met). Of the items that were disagreed upon, one fell under the therapist stance category, “Explained metaphors or paradoxes, or otherwise reinforced ‘insight’ or cheap understanding.” One item fell under the present moment category, “Helped client contact paradoxical effects of control strategies.” Two items in the self-as-context category received different ratings, including “Employed mindfulness exercises to help client contact self-as-context,” and “Gave client behavioral tasks to help client practice distinguishing private events from self.” Finally, one item from the valued direction category received different ratings, “Distinguished between outcomes and processes.”

For Workshop B, Raters 1 and 2 differed on 2 out of 56 items (96% agreement). Of the 54 remaining items, all items were endorsed in favor of the corresponding competency (i.e., the competency was met). Of the items that were disagreed upon, the first item fell under the therapist stance category, “lectured, argued, ‘taught,’ convinced client or otherwise undermined their discovery processes.” The second item fell under the developing acceptance/willingness and undermining experiential control category, “Highlighted vitality associated with willingness when attempted by client.”
Parent adherence.

At the beginning of the first day of each workshop, parents were asked to complete a short reading check. Of the 19 parents who completed the reading check, 10 parents indicated that they did read the assigned chapters prior to attending Day 1 of the workshop. Of the remaining parents, 8 indicated that they did not read the assigned chapters, and 1 parent indicated that she only read part of the assignment (but did not indicate which part or how much). Reasons cited for not reading the assigned chapters were the same for all but one parent, and included some reference to not having enough time due to work and parenting responsibilities. One parent indicated that she had been in camp for the entire week prior to the workshop.

The reading check also consisted of 5 true/false questions to assess for reading comprehension. The average score for parents who read the assigned chapters was 100%. The average score for parents who did not read the assigned chapters was 75% \((SD = 33.38)\). In a later section of this document, variables related to this reading check are included in an overall analysis of variables that predicted treatment outcome.

Analysis of ACT Daily Diary Data: Visual Inspection

Central to the idea of visual inspection is the presentation of graphs. Graphs are the primary means for interpreting and communicating results in the field of applied behavior analysis (Cooper, Heron, & Heward, 1987; Glass, 1997), and graphs for the current study were constructed accordingly. Parents were asked to complete the diary for 25 consecutive days before and after the workshop, for a total of 50 observation points. Only one parent (Parent B
from Table 5) from the current sample had a complete set of 50 observation points. As such, a series of 4 line graphs (one for each domain of the ACT daily diary) was constructed and visually analyzed for any parent with both pre- and post data on the ACT daily diary \((n = 6)\), regardless of number of observations, as well as for individuals with post only data \((n = 2)\). Table 5 below presents a summary of baseline and post-intervention observations for these eight parents.

**Table 5**

*Number of Observations for the ACT Daily Diary*

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<tr>
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<td>Parent D</td>
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<td>Parent E</td>
<td>9</td>
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</tr>
<tr>
<td>Parent F</td>
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<tr>
<td>Parent H</td>
<td>0</td>
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</tbody>
</table>

The horizontal axis for each graph represents the passage of time, with intervals defined by observation points. The vertical axis for each graph represents changes in ACT daily diary ratings. A phase change line is inserted at the point of intervention, separating each graph into baseline and post-treatment phases. Data points represent ratings at each observation point.

Data from the four domains of the ACT daily diaries (suffering, struggle, workability, and valued action) were visually inspected according to criteria outlined by Kazdin (2003). In particular, four characteristics of the data were evaluated. Two characteristics are related to
the magnitude of change across phases, and these include changes in mean and changes in level. The other two characteristics are related to the rate of change, and these include trend and latency of the change. Given the overall instability of trends for the ACT daily diary data, latency was not detectable for the majority of parents, and therefore not reported. A checklist of visual inspection criteria for each parent with both baseline and post-intervention ACT daily diary data can be found in Appendix E.

Magnitude of change.

When visually inspecting data for magnitude of change, changes in both mean and level are considered. For the purposes of this study, changes in means refer to changes in the average scores on diary ratings across phases. Changes in level are independent from changes in mean. Changes in level refer to the shift in performance from the end of one phase to the beginning of the next phase. Because both changes in mean and changes in level depend on the presence of both pre- and post- observation points, data from only 6 parents were graphed and visually inspected for variables related to magnitude of change.

Mean level lines were added to graphs to represent average scores at each assessment point, and for each graph we expected to see different mean level lines post-treatment (Hypothesis 1). In general, if 80-90% of the data points in a phase fall within a 15% range of the mean level for that phase, the data is considered stable (Cooper, Heron, & Heward, 1987). Therefore, Hypothesis 1 was tested by calculating the stability of pre-treatment data.

Changes in level are determined by calculating the difference in absolute value between the first and last data points within a phase and noting whether the change is in the desired
direction (Cooper, Heron, & Heward, 1987). Changes in the desired directions were examined for scores on all four diary ratings (Hypothesis 1).

**Magnitude of change in suffering ratings.** The first item on the ACT daily diary asks parents to rate how upset they were overall for that day, on a scale of 0 (none) to 10 (extreme amount). This item was designed to measure suffering. In a theoretical sense, ACT is not expected to reduce suffering, only the attempts to avoid or control suffering, so suffering ratings were not expected to decrease for parents in the current study. However, they were not expected to increase either.

Regarding changes in mean, 50% of parents ($n = 3$) showed decreases in suffering ratings, and 50% of parents ($n = 3$) showed increases in suffering ratings. For those parents with decreases in suffering, the changes in mean ratings were 0.43, 2.56, and 1.81 points respectively. For those parents who reported an average increase in suffering, the changes in mean ratings were all less than 1 point. Regarding changes in level, 66% of parents ($n = 4$) showed decreases in suffering ratings immediately post intervention. The average change in ratings for these parents was 3 points, indicating an average drop of 3 points for suffering ratings between the last pre-intervention observation point and the first post-intervention observation point. The remaining 33% of parents ($n = 2$) showed increases in suffering ratings immediately post intervention, with the average change in ratings being 2 points.

Baseline data was unstable for all 6 parents whose responses to the ACT daily diary were graphed and visually inspected for magnitude of change. That is, fewer than 80% of the baseline or pre-treatment ratings fell within a 15% range of the mean level for the pre-treatment phase. In the absence of stable baseline data, any conclusions about changes in
mean and level across phases should be interpreted with caution. This instability during baseline, in combination with observations gleaned from visual inspection of changes in mean and level for these 6 parents, precludes any conclusions about the effect of treatment on parents’ ratings of their own daily suffering.

Magnitude of change in struggle ratings. The second item on the ACT daily diary asks parents to rate how much they tried to make their suffering (upsetting thoughts or feelings) go away, on a scale of 0 (none) to 10 (extreme amount). This item was designed to measure struggle, or parents’ attempts to avoid or control their suffering. Struggle ratings were expected to decrease post-intervention.

Regarding changes in mean, 66% of parents (n = 4) showed decreases in struggle ratings, and 33% (n = 2) showed increases in struggle ratings. For those parents reporting decreases in struggle, the change in mean ratings were 1.08, 3.55, 2.66, and 1.98, respectively. For those parents reporting increases in struggle, the changes in mean ratings were all less than 1 point. Regarding changes in level, the same set of 4 parents showed decreases in struggle ratings immediately post intervention. The average change in ratings for these parents was 4.75, indicating an average drop of 4.75 points in struggle ratings between the last pre-intervention observation and the first post-intervention observation. Of remaining 2 parents, one showed an increase of 5 points immediately post intervention, and one showed no change (rating her struggle a zero both immediately before and after the intervention took place).

Baseline data for struggle ratings was stable for 2 out of 6 parents, one of whom showed a slight increase in mean struggle ratings (0.32), and one of whom showed a decrease in mean struggle ratings (3 points). The latter parent (Parent F) is the only parent for whom any
meaningful conclusions can be drawn about changes in struggle over time. That is, data from Parent F clearly show an intervention effect (in terms of magnitude of change), as evidenced by stable baseline data, and changes in mean and level in the expected directions (see Figure 1).

![Struggle Ratings](image)

**Figure 1.** Struggle ratings for Parent F.

*Magnitude of change in workability ratings.* The third item on the ACT daily diary is worded as follows, “If life in general were like this day, how much would today be part of a vital, workable life?” Parents were asked to rate this item on a scale of 0 (none) to 10 (extreme amount). This item was designed to measure workability, and workability ratings were expected to increase post-intervention.

Regarding changes in mean, 100% of parents \((n = 6)\) showed increases in mean workability ratings across phases. The average increase in mean workability ratings was .86, or less than 1 point. Regarding changes in level, 50% of parents \((n = 3)\) showed increases in workability ratings immediately post-intervention. The average change in ratings for these parents was 2.33, indicating an average increase of 2.33 in workability ratings between the last pre-intervention observation and the first post-intervention observation. Two parents showed
decreases in workability ratings immediately post-intervention (2 points and 1 point, respectively), and one parent showed no change between the last pre-intervention observation and the first post-intervention observation.

Baseline data for workability ratings was stable for only 1 out of 6 parents (Parent A). Parent A also showed changes in both mean and level in the expected direction, thus meeting all three criteria necessary to conclude that changes in magnitude were due to treatment (see Figure 2).

Figure 2. Workability ratings for Parent A.

*Magnitude of change in values ratings.* The fourth and last item on the ACT daily diary asks parents to rate how effective they were in acting consistently with their values, on a scale of 0 (*none*) to 10 (*extreme amount*). This item was designed to measure valued living. Values ratings were expected to increase post-intervention.

Regarding changes in mean, 66% of parents (*n* = 4) showed increases in values ratings, and 33% (*n* = 2) showed decreases in values ratings. For those parents reporting increases in
values, the changes in mean ratings were 0.54, 0.26, 2.41, and 0.34, respectively. For those parents reporting decreases in values, the changes in mean ratings were 1.02 and 4.24.

Regarding changes in level, only 2 of the 4 parents who showed increases in values ratings also showed increases in level immediately post intervention. The average change in ratings for these parents was 4, indicating an average increase of 4 points in values ratings between the last pre-intervention observation and the first post-intervention observation. Of the remaining 4 parents, two showed an average decrease of 3 points immediately post intervention, and two parents showed no change.

Baseline data for values ratings was stable for 2 parents, one of whom showed an overall decrease in values ratings in terms of both mean and level. The other parent showed a mean overall increase post-intervention (0.34) but no change in level immediately post-intervention. In sum, none of the parents met all three criteria necessary to conclude that changes in magnitude were due to changes in treatment.

Rate of change.

Trend (slope) refers to the tendency of the data to show systematic change over time. In general, trend should change according to phase. Trend is represented by a trend line or line of progress, which is equivalent to the slope for that data. There is no direct way to determine the specific rate of change for trend, however, trends are considered stable when 80-90% of the data points within a phase fall within a 15% range of the trend line. For the purposes of this study, no trend is expected during baseline (Hypothesis 1), and post-treatment trends will
either increase or decrease depending on the rating in question (e.g., ratings for valued action will increase whereas ratings for suffering will decrease; Hypothesis 1).

*Rate of change for suffering ratings.* As noted (for theoretical reasons), suffering ratings were not expected to increase or decrease post-intervention. Of the 6 parents with baseline data, only 2 parents have suffering ratings that appear somewhat stable, i.e., the slope for the baseline trend is less than 0.10. Three parents show clear increasing trends in suffering ratings during baseline, and 1 parent shows a clear decreasing trend in suffering ratings during baseline.

Post-intervention trends were examined for all 8 parents with post-intervention data. Of these 8 parents, suffering ratings show a decreasing trend for 3 parents and an increasing trend for 5 parents. Trend direction was actually reversed for 3 parents. For Parents B and D, suffering ratings tended to increase during baseline and decrease post-intervention (i.e., in the desired directions). These are the same two parents with relatively stable baselines (see Figures 3 and 4). For one parent (Parent F), suffering ratings tended to decrease during baseline and increase post-intervention.

![Figure 3. Suffering ratings for Parent B.](image)
Rate of change for struggle ratings. As noted, struggle ratings were expected to decrease post-intervention. Of the six parents with baseline data, four participants have struggle ratings that appear somewhat stable, i.e., the slope for the baseline trend is less than 0.10. The remaining two participants show clear increasing trends in struggle ratings during baseline.

As with suffering ratings, post-intervention trends in struggle ratings were then examined for all 8 parents with post-intervention data. Of these 8 parents, suffering ratings show a decreasing trend for 4 parents and an increasing trend for 4 parents. Trend direction was again reversed for 3 parents. For Parents B and D, struggle ratings tended to increase during baseline and decrease post-intervention (i.e., in the desired directions). Parent B also shows a relatively stable baseline (see Figure 5). The trend for Parent D’s baseline data was clearly an increasing one, so this parent’s struggle ratings increased during baseline and decreased post-intervention. For one parent (Parent F), struggle ratings tended to decrease during baseline and increase post-intervention. Of note, the slope of the post-intervention
trend lines for parents whose post-intervention struggle ratings generally decreased were less than 0.10 for all but one parent.

**Figure 5.** Struggle ratings for Parent B.

*Rate of change for workability ratings.* As noted, workability ratings were expected to increase post-intervention. Baseline data for all six parents are unstable, i.e., there are clear increasing ($n = 4$) or decreasing ($n = 2$) trends for all parents in baseline workability ratings. Of the eight parents with post-intervention data, workability ratings show an increasing trend for 3 parents and a decreasing trend for the remaining 5 parents. Only one parent whose workability ratings increased post-intervention showed a clear increase, with the slope of the trend line greater than 0.10. This parent (Parent G) had no baseline data.

*Rate of change for values ratings.* As noted, values ratings were expected to increase post-intervention. Of the six parents with baseline data, two parents have values ratings that appear somewhat stable. Two parents have values ratings that are clearly increasing during baseline, and two parents have values ratings that are clearly decreasing during baseline.
Post-intervention data was examined for all eight parents with post-intervention data. For six of these parents, values ratings show an increasing trend post-intervention. Of those six, Parent B also has a relatively stable baseline. Values ratings for the remaining two parents show decreasing trends. Trend direction was reversed for 3 parents. For parents C and D, values ratings tended to decrease during baseline but increase post-intervention. For Parent F, the reverse was true.

![Figure 6. Values ratings for Parent B.](image)

Analyses for Statistical and Clinical Significance

Repeated-measures analysis of variance.

Shadish, Cook, and Campbell (2002) list a number of statistical analyses that can be used with time-series data for small sample sizes, including repeated-measures ANOVAs (RM ANOVAS). RM ANOVAS have considerable support in terms of their robustness in the face of violations of underlying assumptions (Howell, 2002). Though the current study involved a number of different dependent variables, a multivariate analysis was not utilized since its only advantage over a series of univariate ANOVAS is control of familywise Type I error (Tabachnick
& Fidell, 2007). Therefore, one RM ANOVA was run for each dependent variable, and Type I error rate was controlled using a Bonferroni correction. The dependent variables included AAQ-II total scores, KIMS total scores, VLQ total scores, MVM total scores, DERS total scores, PSI-SF total scores, APQ-9 total scores, DASS-21 total scores, scores from the PE scale of the PLOC, and the four BASC-2 composite scores.

Prior to performing the RM ANOVAS, data were examined for missing values and outliers. Assumptions for RM ANOVA were tested, including the assumptions of normality, independence, and sphericity. Two variables were found to have non-normal distributions according the Shapiro-Wilk test of normality, APQ total scores at post-test and BASC-2 Internalizing scores at pre-test. The Shapiro-Wilk test was used to supplement visual inspection and is considered appropriate for small sample sizes ($n < 50$) (Lund & Lund, 2010). Though the distributions were only non-normal at one time point, APQ and BASC-2 Internalizing scores were transformed using a square root transformation at all three time points (pre-, post- and follow-up) so that scores could be compared on the same scale. After the square root transformation, the distributions of BASC-2 Internalizing scores at post-test and follow-up were no longer normal. Other transformations were applied to BASC-2 Internalizing scores, none of which resulted in normal distributions at all 3 time points. As such, analyses were run on both transformed and non-transformed data, with no change in pattern of results.

For some variables, Mauchly’s test of sphericity was significant, indicating that the assumption of sphericity was violated. This is likely due to the size of the sample. Greenhouse-Geisser values were utilized for analysis of change in those variables, denoted as such in Table 6.
A series of one-way RM ANOVAs revealed statistically significant main effects for changes in MVM scores, $F(2, 11) = 3.54, p = .047$, partial $\eta^2 = .24$, changes in BASC Externalizing scores, $F(2, 9) = 5.42, p = .01$, partial $\eta^2 = .38$, and changes in the BASC Behavioral Symptom Index, $F(2, 9) = 4.57, p = .03$, partial $\eta^2 = .34$, all in the predicted directions. Post-hoc pairwise comparisons reveal that, for MVM scores, the significant change occurred between pre-test and post-test, whereas for BASC Externalizing and Behaviors Symptom Index scores, significant change occurred between pre-test and follow-up.

One-way RM ANOVAS for the remainder of variables were not significant for main effects. Table 6 presents relevant statistics for all RM ANOVAs run.

Table 6

<table>
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<th>Post-Intervention</th>
<th>Follow-Up</th>
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*Greenhouse-Geisser correction for violation of sphericity assumption.
** Significant at $\alpha<.05$.
***Values are reported for non-transformed scores.
Intention to treat analysis.

Intention to treat (ITT) analysis was conducted according to the last observation carried forward method. Subsequently, the distributions changed for a number of variables. Appropriate transformations were made, and the ITT analysis was run on both transformed and non-transformed data. Results for both analyses were the same in terms of statistical significance ($\alpha = .05$). Additionally, results for both analyses mirrored the results of the original RM ANOVA, so that the same statistically significant changes were observed for both the entire sample and the sample of only those parents who received treatment.

Reliable change indices.

Reliable change indices were calculated as a means of evaluating treatment effectiveness. Reliable change indices (RCIs) were developed by Jacobson and colleagues (1984) as a means of measuring clinically significant change in psychotherapy outcome research. Examination of reliable change indices allows for change to be assessed at the individual level, which is not possible with inferential statistics such as the RM ANOVAs reported above. In addition, the use of the reliable change statistic allows for the conclusion that change, when it is present, is not due to measurement error. Still, it should be noted that clinical significance data (RCIs) often make interventions look less effective than data from inferential statistical tests (Jacobson & Truax, 1991), precisely because we are looking beyond group means.

Methods for calculating RCIs are presented by Jacobson and Traux (1991), and the equation presented in their article was used in this study. Relevant variables include (for each scale): the pre- and post-treatment mean scores, the standard deviation of pre-treatment
scores, and the test-retest reliability statistic. In general, for a change to be considered meaningful, the RCI value must exceed 1.96. RCIs were calculated for each scale administered in this study, and results are discussed below by scale. Due to the non-normal distributions of RCI statistics, medians are reported as measures of central tendency.

Reliable change on the Acceptance and Fusion Questionnaire. From pre-test to post-test, 73.70% \((n = 14)\) of the total sample \((n = 19)\) changed in the desired direction, that is, scores decreased. The median RCI value was -.11. Of those that changed in the desired direction, only one parent evidenced reliable change, Parent M (RCI = -2.94). One parent evidenced no change, RCI = 0, and two parents’ scores increased. From pre-test to follow-up, 42.9% \((n = 6)\) of the total sample \((n = 14)\) changed in the desired direction. The median RCI value was .07. Of those that changed in the desired direction from pre-test to follow-up, Parent M (RCI = -2.11) was again the only parent who evidenced reliable change. For the remainder of parents, AFQ scores increased between pre-test and follow-up.

Reliable change on the Valued Living Questionnaire. From pre-test to post-test, 76.50% \((n = 13)\) of the total sample \((n = 17)\) changed in the desired direction, that is, scores increased. The median RCI value was .57. Of those that changed in the desired direction, only one parent evidenced reliable change, Parent J (RCI = 2.26). For the remainder of parents, scores decreased. From pre-test to follow-up, 66.70% \((n = 8)\) of the total sample \((n = 12)\) changed in the desired direction. The median RCI value was .21. Of those that changed in the desired direction, only one parent evidenced reliable change, Parent I (RCI = 2.05). For the remainder of parents, VLQ scores decreased between pre-test and follow-up.
Reliable change on the Meta-Valuing Measure. From pre-test to post-test, 77.80% (n = 14) of the total sample (n = 18) changed in the desired direction, that is, scores increased. The median RCI value was .67. Of those that changed in the desired direction, only one parent evidenced reliable change, Parent J (RCI = 2.09). One parent evidenced no change, RCI = 0, and 3 parents’ scores increased. From pre-test to follow-up, 75% (n = 9) of the total sample (n = 12) changed in the desired direction. The median RCI value was .50. Of those that changed in the desired direction, only one parent evidenced reliable change, RCI = 2.00 (Parent M). For the remainder of parents, MVM scores decreased between pre-test and follow-up.

Reliable change on the Kentucky Inventory of Mindfulness Skills. From pre-test to post-test, 36.80% (n = 7) of the total sample (n = 19) changed in the desired direction, that is, scores increased. The median RCI value was -.17. None of the parents evidenced reliable change. From pre-test to follow-up, 50% (n = 7) of the total sample (n = 14) changed in the desired direction. The median RCI value was .16. None of the parents evidenced reliable change.

Reliable change on the Difficulties in Emotion Regulation Scale. From pre-test to post-test, 31.6% (n = 6) of the total sample (n = 19) changed in the desired direction, that is, scores decreased. The median RCI value was .05. Of those that changed in the desired direction, two parents evidenced reliable change, Parent I (RCI= -2.72) and Parent M (RCI= -1.96). One parent evidenced no change, RCI = 0, and scores for the remainder of parents increased. From pre-test to follow-up, 50% (n = 7) of the total sample (n = 14) changed in the desired direction. The median RCI value was -.03. None of the parents evidenced reliable change from pre-test to follow-up.
Reliable change on the Depression, Anxiety and Stress Scales. From pre-test to post-test, 52.60% \((n = 10)\) of the total sample \((n = 19)\) changed in the desired direction, that is, scores decreased. The median RCI value was -.21. Of those that changed in the desired direction, only one parent evidenced reliable change, Parent N \((RCI = -2.23)\). One parent evidenced no change, RCI = 0, and the remainder of scores increased. From pre-test to follow-up, 28.6% \((n = 4)\) of the total sample \((n = 14)\) changed in the desired direction. The median RCI value was .18. None of the parents evidenced reliable change in the expected direction between pre-test and follow-up.

Reliable change on the Alabama Parenting Questionnaire-9. From pre-test to post-test, 47.4% \((n = 9)\) of the total sample \((n = 19)\) changed in the desired direction, that is, scores decreased. The median RCI value was 0. Of those that changed in the desired direction, two parents evidenced reliable change, Parents A and B \((RCI = -2.08)\). One parent evidenced no change, RCI = 0, and for the remainder of parents, scores increased. From pre-test to follow-up, 50% \((n = 7)\) of the total sample \((n = 14)\) changed in the desired direction. The median RCI value was -.20. None of the parents evidenced reliable change in the expected direction between pre-test and follow-up.

Reliable change on the Parental Locus of Control scale. From pre-test to post-test, 47.40% \((n = 9)\) of the total sample \((n = 19)\) changed in the desired direction, that is, scores decreased. The median RCI value was 0. Of those that changed in the desired direction, two parents evidenced reliable change, Parent L \((RCI = -2.56)\) and Parent I \((RCI=-2.45)\). One parent evidenced no change, RCI = 0, and for the remainder or parents, scores increased. From pre-test to follow-up, 57.1% \((n = 8)\) of the total sample \((n = 14)\) changed in the desired direction.
The median RCI value was -.19. Of those that changed in the desired direction, only one parent evidenced reliable change, Parent L (RCI = -2.19). One parent evidenced no change, RCI=0, and PLOC scores increased for the remainder of parents.

**Reliable change on the Parenting Stress Index-Short Form.** From pre-test to post-test, 57.90% (n = 11) of the total sample (n = 19) changed in the desired direction, that is, scores decreased. The median RCI value was -.34. One parent evidenced no change, and scores increased for the remainder of parents. From pre-test to follow-up, 64.30% (n = 9) of the total sample (n = 14) changed in the desired direction. The median RCI value was -.52. Of those that changed in the desired direction, only one parent evidenced reliable change, Parent M (RCI = -2.03). For the remainder of parents, PSI-SF scores increased between pre-test and follow-up.

**Reliable change on the Behavior Assessment System for Children.** For all four BASC-2 composite scores (Internalizing, Externalizing, BSI, and Adaptive Skills), the percentage of the total sample that changed in the desired direction from pre- to post- (n = 13) and pre to follow-up (n = 10) was greater than 50%. Tables 7 and 8 present specific percentages for each BASC-2 composite score, as well as summary data for all of the other measures examined above. Reliable change in the expected direction was observed for one parent on the BASC-2 Externalizing Composite, both from pre- to posttest (Parent I) as well as from pre- to follow-up (Parent I). Additionally, reliable change was observed on the BASC-2 BSI Composite for one parent from post to follow-up (Parent I). Finally, reliable change was observed on the BASC-2 Adaptive Skills composite for two parents from pre- to posttest (Parents E and K).
### Table 7

**Reliable Change from Pre- to Posttest and Posttest to Follow-Up**

<table>
<thead>
<tr>
<th></th>
<th>Pre-test to Posttest</th>
<th>Posttest to Follow-up</th>
<th>#parents with reliable change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median RCI</td>
<td>Range*</td>
<td>% change in desired direction</td>
</tr>
<tr>
<td>AFQ</td>
<td>-.11</td>
<td>.68/-2.94</td>
<td>73.7%</td>
</tr>
<tr>
<td>VLQ</td>
<td>.57</td>
<td>-1.78/2.26</td>
<td>76.5%</td>
</tr>
<tr>
<td>MVM</td>
<td>.67</td>
<td>-1.19/2.09</td>
<td>77.80%</td>
</tr>
<tr>
<td>KIMS</td>
<td>-.17</td>
<td>-2.03/1.92</td>
<td>36.8%</td>
</tr>
<tr>
<td>DERS</td>
<td>-.16</td>
<td>2.45/-1.26</td>
<td>52.60%</td>
</tr>
<tr>
<td>DASS-21</td>
<td>-.21</td>
<td>1.46/-2.23</td>
<td>52.60%</td>
</tr>
<tr>
<td>APQ-9</td>
<td>0</td>
<td>1.67/-2.08</td>
<td>47.4%</td>
</tr>
<tr>
<td>PSI-SF</td>
<td>-.34</td>
<td>2.02/-1.82</td>
<td>57.90%</td>
</tr>
<tr>
<td>PLOC</td>
<td>0</td>
<td>.64/-2.56</td>
<td>47.4%</td>
</tr>
<tr>
<td>BASC-2 Int</td>
<td>-.30</td>
<td>.91/-1.51</td>
<td>61.50%</td>
</tr>
<tr>
<td>BASC-2 Ext</td>
<td>-.61</td>
<td>.78/-2.79</td>
<td>76.90%</td>
</tr>
<tr>
<td>BASC-2 BSI</td>
<td>-.61</td>
<td>.76/-1.84</td>
<td>69.20%</td>
</tr>
<tr>
<td>BASC-2 Adaptive</td>
<td>-.20</td>
<td>1.18/-2.36</td>
<td>69.20%</td>
</tr>
</tbody>
</table>

*Range is reported as Maximum change in non-desired direction/maximum change in desired direction

**Reliable change by parent.** A total of 10 different parents had clinically significant change on at least one measure. Parents M and I evidenced the most reliable change in the expected direction in terms of numbers of measures. That is, these parents each evidenced clinically significant change on four different measures, or in four different domains. Parent M evidenced clinically significant change in AFQ scores (at both post and follow up), MVM scores (at follow up), DERS Scores (at post), and PSI-SF scores (at follow-up). Parent I evidenced clinically significant change in PLOC scores (post), VLQ scores (follow-up), DERS Scores (at post), BASC-2 Externalizing scores (post and follow-up), and BASC-2 BSI scores (follow-up).
Parents A and B both had clinically significant decreases in APQ scores (post), and Parents E and K both had clinically significant decreases in BASC-2 Adaptive Skills scores (post). Parent J had clinically significant increases in both valuing measures, the VLQ and MVM (post). Parents H and N had clinically significant decreases on the DASS-21 (Parent H at follow-up and Parent N at post). Finally, Parent L had clinically significant decreases on the PLOC (post and follow-up).

Predictors of Treatment Outcome

As previously discussed, traditional behavioral parent training has been charged with failure to address certain contextual factors, both external and internal, that influence parenting behavior. External factors assessed in the current study include (1) socioeconomic status, as measured by reported income and education level, as well as (2) social support, as measured by reported number of people that can be counted on for social support when needed. Internal factors assessed in the current study include variables related to parents’ thoughts and feelings regarding themselves, their children, and the parent-child relationship (PSI subscales, PLOC scores), as well as parenting stress (PSI total score) and certain aspects of parent psychopathology (DASS-21 and subscales, DERS scores).

In examining predictors of treatment outcome, then, relevant independent variables include income, education level, social support, PSI scores (overall scale), PLOC scores (parental efficacy subscale only), DASS-21 scores (overall scale), and DERS scores. Treatment outcome was defined as whether or not a parent showed reliable change in the expected direction on any measure. Those parents who did show reliable change were categorized as treatment
responders, and those parents who did not show reliable change were categorized as treatment non-responders. Table 8 presents relevant summary statistics for all predictor variables by parent, for those parents who evidenced reliable change on any measure (treatment responders).

Table 8

*Predictors of Treatment Outcome by Parent for Treatment Responders*

<table>
<thead>
<tr>
<th></th>
<th>Income</th>
<th>Education Level</th>
<th>Social Support</th>
<th>Baseline PSI Total</th>
<th>Baseline PLOC</th>
<th>Baseline DASS-21</th>
<th>Baseline DERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent A</td>
<td>50001-75000</td>
<td>4 year college grad</td>
<td>10</td>
<td>111.00</td>
<td>33.00</td>
<td>8.00</td>
<td>90.00</td>
</tr>
<tr>
<td>Parent B</td>
<td>15001-30000</td>
<td>Some high school</td>
<td>*</td>
<td>46.00</td>
<td>14.00</td>
<td>3.00</td>
<td>38.00</td>
</tr>
<tr>
<td>Parent E</td>
<td>Less than 15k</td>
<td>High school grad/GED</td>
<td>5</td>
<td>95.00</td>
<td>28.00</td>
<td>4.00</td>
<td>81.00</td>
</tr>
<tr>
<td>Parent H</td>
<td>Less than 15K</td>
<td>Some college</td>
<td>*</td>
<td>82.00</td>
<td>28.00</td>
<td>21.00</td>
<td>59.00</td>
</tr>
<tr>
<td>Parent I</td>
<td>Less than 15k</td>
<td>Some high school</td>
<td>8</td>
<td>127.00</td>
<td>49.00</td>
<td>33.00</td>
<td>135.00</td>
</tr>
<tr>
<td>Parent J</td>
<td>Less than 15k</td>
<td>Some college</td>
<td>*</td>
<td>103.00</td>
<td>25.00</td>
<td>19.00</td>
<td>87.00</td>
</tr>
<tr>
<td>Parent K</td>
<td>Less than 15k</td>
<td>High school grad/GED</td>
<td>3</td>
<td>91.00</td>
<td>19.00</td>
<td>7.00</td>
<td>73.00</td>
</tr>
<tr>
<td>Parent L</td>
<td>Less than 15k</td>
<td>High school grad/GED</td>
<td>10</td>
<td>59.00</td>
<td>42.00</td>
<td>16.00</td>
<td>59.00</td>
</tr>
<tr>
<td>Parent M</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>110.00</td>
<td>32.00</td>
<td>23.00</td>
<td>95.00</td>
</tr>
<tr>
<td>Parent N</td>
<td>30001-50000</td>
<td>Some college</td>
<td>10</td>
<td>47.00</td>
<td>28.00</td>
<td>43.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Not reported*

Two chi-square tests of independence were performed to examine the relationships between treatment outcome and both education and income levels. The relationship between treatment outcome and education was not significant, \( \chi^2 (4, n = 21) = 1.61, p = .81 \). The relationship between treatment outcome and income was not significant either, \( \chi^2 (4, n = 21) = 5.25, p = .15 \). Regarding income, only 2 participants from the entire sample reported annual income greater than $30,001, and both of these parents are represented in Table 8. That is, 100% of parents with reported income greater than $30,001 can be classified as treatment responders. Of the 5 parents who reported incomes between $15,001 and $30,000, 20% (\( n = 1 \))
were treatment responders. Of the 10 parents who reported incomes of less than $15,000, 60% \((n = 6)\) were treatment responders. At the extreme ends of the income range, then, higher proportions of parents responded to treatment than in the middle income range.

A series of independent sample t-tests were run to examine the relationship between treatment outcome and baseline scores on the PSI-SF, DERS, PLOC, and DASS-21, as well as between treatment outcome and social support. There were no statistically significant differences between treatment responders and non-responders in DERS scores, PSI-SF scores, or social support. Treatment responders had higher DASS-21 scores at baseline \((M = 17.65, SD = 12.96)\) than non-responders \((M = 7.79, SD = 9.01), t(22) = 2.21, p = .04.\) Treatment responders also had higher PLOC scores at baseline \((M = 29.80, SD = 10.17)\) than non-responders \((M = 21.71, SD = 7.97), t(22) = 2.19, p = .04.\) These findings are contrary to what the literature suggests. That is, DASS-21 and PLOC scores would be expected to be lower for those parents who responded to treatment. In this study, however, parents reporting more depression, anxiety, and stress, and less parental efficacy actually showed more treatment gains than less distressed parents.

Post Treatment Interview Data

The treatment utility and satisfaction interview was completed by 20 parents. Of those, 19 parents completed both days of the workshop, whereas one parent was only present for the second day of Workshop B. As noted elsewhere in this document, parents from Workshop A were interviewed by the principal investigator, whereas parents from Workshop B completed the interview as a paper-and-pencil measure.
The first subset of interview questions was designed to elicit parents’ perceptions of the understandability of material presented during the workshop. The average rating for understandability on a scale of 1 (least understandable) to 10 (most understandable) was 8.38 (SD = 1.33). All general comments in the comments section contained positive feedback regarding understandability. Two parents indicated that understandability increased as the workshop progressed, “At first it was pretty weird but once you listen or think about it, it’s pretty good,” and, “I was having trouble understanding in the beginning but everything was eventually explained clearly.” These responses are appropriate from an ACT perspective, in which initial confusion indicates the beginnings of the deliteralization of language. In addition to general comments, parents were asked to indicate specific concepts that were either easy or difficult to understand. Two parents reported that the FEAR acronym was particularly easy to understand, and two other parents reported that the horizon metaphor was easily understood. Other concepts identified as easily understandable were related to defusion and mindfulness (“about [the] mind talking to us all the time”), goals and values, and basic behavioral parenting principles (the ABCs of behavior, specifically, “ignore a fit”). Two parents identified concepts that were difficult to understand, (1) “letting go of a thought or feeling,” and (2) “understanding barriers.” The latter concept refers to the FEAR acronym. Fusion, evaluation, avoidance, and reason-giving were discussed as barriers to valued living and committed action.

The second subset of interview questions was designed to elicit parents’ perceptions of treatment utility, or usefulness. The average rating for usefulness, on a scale of 1 (least useful) to 10 (most useful) was 8.23 (SD = 2.14). All but one general comment in the comments section contained positive feedback regarding usefulness. The single negative comment was, “Not
really usefullness.” Parents were then asked to indicate whether they perceived anything as “a waste of time.” Two parents commented that they did not like the imagery exercises; of these two parents, one specifically stated that she did not like the “putting your thoughts on clouds,” exercise. Another parent commented, “At times there were a lot of extended pauses.” When asked to identify workshop components that were particularly helpful, participants gave a variety of responses, presented in the table below. Some parents identified more than one component, and some parents gave only vague answers, i.e., “Yes it was helpful.”

Table 9

*Treatment Components Identified as Helpful by Parents*

<table>
<thead>
<tr>
<th>Treatment Component</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying barriers to valued living and committed action (FEAR)</td>
<td>2</td>
</tr>
<tr>
<td>Behavioral parenting techniques (ABC chart)</td>
<td>6</td>
</tr>
<tr>
<td>Defusion and/or mindfulness exercises</td>
<td>3</td>
</tr>
<tr>
<td>Acceptance of difficult thoughts and emotions</td>
<td>3</td>
</tr>
<tr>
<td>Visual aids</td>
<td>1</td>
</tr>
<tr>
<td><em>Joy of Parenting</em> (book)</td>
<td>1</td>
</tr>
<tr>
<td>Atmosphere of sharing parenting experiences with other parents</td>
<td>5</td>
</tr>
</tbody>
</table>

The third subset of interview questions was designed to determine whether the parents experienced any emotional distress during the workshops, and if so, to what extent. Fourteen parents indicated that the workshop did not cause any emotional distress for them. One parent answered yes to the question of emotional distress, explaining, “because even though I have to be tough with the kids, their behavior will make a difference.” Three parents provided answers indicating some level of distress, and provided explanations for their answers: (1) “somewhat...
it's just hard to incorporate new ideas, but it can be done,” (2) “not distressing but it was emotional and then again I guess it depends on how you take self-criticism as well… understanding your emotions, realizing that they're there and what is there and accepting it” and (3) “not a whole lot - a little bit when I talk about how my temper flared up or I lost control... talking about omg what have I just said [to my child]? It's pretty depressing. But you know it's past. I'm going to be mindful and slow down, talk about our mindset or feeling. I never really had a chance to talk out loud what I think.” One parent did not answer yes or no to the question of whether emotional distress was present, but did state, “some of the parents’ stories made me sad and grateful for what I have.”

The overall rating for the workshop, on a scale of 1 (lowest) to 10 (highest) was 8.58 (SD = 1.39). Nine parents indicated that the way they view their particular concerns, their children, and their life in general changed in a positive direction as a result of having attended the workshop. When asked specifically whether their situation with their children had changed, three parents answered that they were hopeful but not sure, as they hadn’t yet had the opportunity to implement what they had learned (the interview was administered at the end of the second day of each workshop). In the additional comments section, one parent noted that the compensation (money and childcare) were essential factors in her decision to participate in the study. Six parents wrote that they were thankful to have attended the workshop. One mother wrote, “Thank you for introducing this topic to the general public! I believe there is a serious need for this info to be more available.”
DISCUSSION

The purpose of the current study was to evaluate the effectiveness of a 2-day, 12-hour acceptance and commitment therapy (ACT) workshop for parents reporting stress associated with parenting their children. Based on combined findings from the ACT literature and behavioral parent intervention in general, it was hypothesized that the intervention would impact parents in a number of ways. Generally, we expected to see changes in ACT-related variables such as increases in mindfulness, acceptance, and valuing behavior. We also expected to see changes in variables indicating general clinical distress and difficulty, including depression, anxiety, stress, and emotion regulation; changes in parent-specific variables, including parenting stress, parenting practices, and parenting efficacy; and changes in child-specific variables, specifically child behavior.

Overall, results from the study support a clear intervention effect for valuing behavior as measured by the Meta-Valuing Measure (MVM) and for child externalizing behavior as measured by the Behavior Assessment System for Children (BASC-2). Other intervention effects were observed but were more idiosyncratic and varied not only by person but also among outcome measures. For example, although 73.3% of the sample reported decreases in experiential avoidance, only one of those parents reported a decrease large enough to be considered clinically significant according to reliable change analyses. Similarly, although mean levels of parenting stress decreased steadily over time, these changes were not large enough to be considered statistically significant, and only one parent reported a decrease large enough to be considered clinically significant according to reliable change analyses. Furthermore, parents reporting decreases in experiential avoidance and/or parenting stress were not necessarily the
same parents who also reported increases in valuing behavior or improvements in child behavior. The results of hypothesis testing will be discussed in greater detail below, as will general implications of these findings, limitations to the current study, and directions for future research.

ACT Daily Diary Data

The purpose of administering the ACT daily diary was to establish a 25-day baseline in the absence of a control group. Only 8 parents were referred by their caseworkers more than 25 days in advance of either workshop, despite efforts to communicate this requirement. Of those eight parents, only one parent actually provided 25 baseline observations. In general, in fact, there was a marked lack of compliance with keeping the ACT daily diary, leading to a reduced number of observations during both baseline and post-intervention, making it difficult to draw any conclusions about intervention effect using this data.

For those parents who did provide some baseline observations (n = 6), visual inspection of the data revealed that baseline data was generally unstable. This was true for measures of suffering, struggle, valuing, and workability. In the absence of stable baseline data, it is difficult to draw any general conclusions about treatment effect regardless of apparent changes in mean or trend. For example, for suffering ratings, baseline data was unstable for all 6 parents. Furthermore, though 50% of parents did show decreases in mean suffering ratings post-intervention, the remaining 50% showed increases in mean suffering ratings post-intervention. The average decrease was larger than the average increase, but an examination of post-
intervention trends reveals that 5 out of the 8 parents with post-intervention observations actually reported increasing levels of suffering after the workshop.

Based on this latter statement, it might make sense to conclude that these workshops actually induced suffering. However, as noted elsewhere in this document, our aim was not to reduce suffering. From a theoretical standpoint, ACT interventions are expected to reduce attempts to avoid or control suffering, not suffering itself. Stated differently, the goal of ACT interventions is increased psychological flexibility rather than symptom reduction. The classic evidence for this assertion is the study by Bach and Hayes (2004) in which, following an ACT intervention for psychosis, more ACT participants (versus TAU participants) reported positive psychotic symptoms, but significantly fewer ACT participants were later re-hospitalized. The popularly accepted explanation for these findings is that higher levels of symptom reporting in the ACT condition reflects higher levels of acceptance of symptoms.

Fortunately, the ACT daily diary also measures the attempts to avoid or control suffering by asking parents about their struggle with their own thoughts and feelings. Unfortunately, some parents \( n = 2 \) did also show increases in mean struggle ratings post-intervention. The same is true for both valued action and workability ratings, the remaining two items on the ACT daily diary. That is, some parents showed decreases in valued action \( n = 2 \) and workability \( n = 2 \) ratings post-intervention, which is opposite the intended effect of treatment.

Still, it would be remiss to assume that parents’ reports of increased struggle or decreased valued action and workability on the ACT daily diary is evidence for iatrogenic effects, for a number of reasons. First, the ACT daily diary was developed as a clinical tool, and nothing is known of its psychometric properties or performance in treatment studies. Second,
even if the measure were known to be reliable and valid with similar samples, what stands out in this study is parents’ general non-compliance with this particular request. That is, very few parents completed the ACT daily diary at all, and of those who did, even fewer completed it as instructed (i.e., for the correct number of days). Fifty observations (25 baseline and 25 post-intervention) is the minimum number of observations required to detect trends by visual inspection, and only one parent provided 50 observations.

Finally, in many cases, given the instability of both baseline and post-intervention data, it seems probable that parents did not complete the measure with care, and perhaps even answered in a random fashion. Because parents were not asked about when, how, or why they did or not did not complete this measure, this assertion is only conjecture. In part, it is based in part on observations of some parents’ completing the actual measures on the morning of the workshop. Also, when reminder calls were given during baseline, some parents would say that they had forgotten about the diary and would try to “catch up,” which may have resulted in some inaccurate retrospective reports. Even if parents did not intentionally answer carelessly, the general instability in the lives of most of these families likely precluded them from giving the ACT daily diary the attention it required. Many of the parents in this study did not have reliable internet access, so that making the measure available online might not have helped in this sample. However, future researchers should consider the use of online technology for collecting multiple baseline data, or at least implement a more regular reminder system. Future researchers should also elicit feedback from parents on what influenced their ability to record baseline data and perhaps ask parents for recommendations on facilitating the process in additional studies.
At the individual level, there were two parents who had relatively stable baselines and for whom mean ratings changed significantly post-intervention and, Parents A and F. Parent A showed a significant increase in mean workability ratings, and Parent F showed a significant decrease in mean struggle ratings. However, the ratings for these parents did not meet visual inspection criteria for rate of change, (i.e., Parent A’s workability ratings and Parent F’s struggle ratings did not show the expected trends post-intervention). In contrast, Parents B and D did show the expected trends post-intervention (Parent B for suffering and valued action, and Parent D for suffering), but did not show significant changes in mean ratings. In summary, there were no parents that met all of the visual inspection criteria necessary to conclude that the intervention had an effect on ratings in any area.

Of note, Parent B, according to this measure, showed the most change. That is, Parent B met visual inspection criteria for rate of change on both suffering and valued action ratings. Parent B is also, perhaps not coincidentally, the only parent who provided all 50 observations, so we might conclude that if other parents had provided sufficient observations we would have detected more changes in the desired directions.

Clinically and Statistically Significant Change in ACT Related Variables
Avoidance and Fusion Questionnaire (AFQ).

It was hypothesized that mean AFQ scores would decrease between pre-test and post-test, with change either maintained or increased at follow-up. Because the AFQ performed well in this study, conclusions about changes in AFQ scores are unlikely due to measurement error. That is, the AFQ demonstrated excellent internal consistency reliability both pre- (α = .94) and
post-test ($\alpha = .93$). Reliability at follow-up was adequate ($\alpha = .76$), and this difference can best be understood as a reflection of the smaller sample size at that time.

Findings from the one-way RM ANOVA suggest that mean AFQ scores did not change significantly across time ($p = .05$). Though mean AFQ scores did decrease from pre-test to post-test, they increased from post-test to follow-up, and none of these changes were large enough to assume that they did not occur merely by chance. However, 73.7% of the sample scores changed in the desired direction from pre- to post-test, and of those, reliable change, or clinically significant change, was observed for Parent M. From pre-test to follow-up, only 42.9% of sample scores changed in the desired direction, and reliable change was observed for the same parent, Parent M.

These findings suggest that, in general, avoidance and fusion decrease immediately post-treatment. However, these gains were not maintained at follow-up for most individuals. This is in direct contrast to the pattern of results found by Blackledge and Hayes (2006). In their study of ACT for parents of children diagnosed with autism, there were no significant changes in the Acceptance & Action Questionnaire -9 item (AAQ-9) scores between pre-test and post-test, but there were significant changes from post-test to follow-up. The authors explained their findings in terms of an incubation effect, that is, that acceptance skills require time to be developed and practiced (Blackledge & Hayes, 2006). Other ACT studies have revealed similar effects, including an ACT intervention for smoking cessation (Gifford et al., 2004) and ACT plus 12-step facilitation for opiate addicts (Hayes, Wilson, et al., 2004).

This difference in patterns of change at follow-up could also be a reflection of the different measures used. The AFQ and the AAQ-9, though both designed to measure
experiential avoidance (or acceptance, depending on the direction in which the measures are scored), may not in fact be measuring the same construct (Schmalz & Murrell, 2010). Further research is needed to determine whether one measure might be more accurately measuring experiential avoidance than the other, and to what degree each measures related processes, like fusion or the overall concept of psychological flexibility. Differences between AFQ/AAQ findings between this study and the study by Blackledge and Hayes (2006) might also reflect different emphases in the treatment protocols. Whereas this workshop emphasized parenting values, the workshop for parents of children with autism emphasized acceptance, defusion and willingness.

Still, we cannot conclude that differential emphasis on acceptance/experiential avoidance is the only factor contributing to change in AAQ or AFQ scores. In the pilot study by Murrell and colleagues (2009), acceptance/experiential avoidance were as prominent in the treatment protocol as they were in the Blackledge and Hayes (2006) study, yet none of the 3 parents evidenced reliable change in AAQ-II scores, with some scores actually increasing from pre-test to post-test. As noted earlier in this document, Murrell and colleagues hypothesized that increased familiarity with the concepts of acceptance and experiential avoidance might be a confounding factor. That is, prior to treatment, parents have little to no understanding of acceptance and experiential avoidance, which would affect the way they comprehend the items on the AAQ-II. After treatment, parents’ level of comprehension changes, thus fundamentally changing the way they interpret the measure. It was based on this line of reasoning that the AFQ was chosen for this study. That is, the AFQ was created with the expressed intention of including less ACT-specific language, and though we did not find statistically significant change
in AFQ scores, we did find reliable change for one parent, and we did have a majority of scores change in the desired direction from pre to post.

As an alternative to the AFQ and AAQ, researchers interested in measuring experiential avoidance in parents might consider using the Parental Acceptance and Action Questionnaire (PAAQ; Cheron, Ehrenreich, & Pincus, 2009). The PAAQ is a 15-item self-report measure asking parents to rate the degree to which a series of statements are true on seven-point Likert-type scale from 1 (never true) to 7 (always true). This measure was developed with the goal of capturing experiential avoidance in the context of interpersonal interaction, notably parent-child. In contrast, the AAQ and the AFQ measure experiential avoidance as a global private experience. In the validation study (n = 267), factor analysis of the PAAQ yielded a two-factor solution consisting of Inaction and Unwillingness. Inaction is defined as parent’s inability to effectively manage their own reactions to their children’s affect. Unwillingness is defined as a parent’s unwillingness to witness their child experience negative emotions. Significant correlations were found between PAAQ and AAQ scores for both mothers and fathers, r = .64. The correlation is not high enough to suggest that the two measures are tapping into the same construct, but the construct measured by the PAAQ may be more relevant to parenting intervention studies.

Before any meaningful conclusions can be drawn about the impact of ACT interventions for parents on experiential avoidance, then, researchers need to first clarify the differences among the existing measures and improve measurement of experiential avoidance in general. Ideally, experiential avoidance would be measured behaviorally, and some efforts to develop those measures have been developed and tested in laboratory studies, e.g., the Paced Auditory
Serial Addition Task–Computerized Version (PASAT-C; modified from the original, Gronwall, 1977) PASAT-C, which measures the willingness to tolerate psychological distress in terms of latency in seconds to task termination for a difficult and frustrating math task (Lejuez, Kahler, & Brown, 2003). Because the PASAT-C is not as practical as a self-report measure, particularly for repeated measures of experiential avoidance, the PAAQ may be the best substitute for a behavioral measure at this time, given its specificity with respect to parent behavior. In the meantime, the AFQ seems better suited than the AAQ for detecting change in the underlying global processes. And, future ACT interventions with parents should give equal attention to all six components of the hexaflex while still allowing some time for introduction of basic behavior modification strategies.

Valued Living Questionnaire and Meta-Valuing Measure (VLQ and MVM).

Both the VLQ and the MVM were administered in this study to measure valuing behavior. It was hypothesized that mean scores on both measures would increase between pre-test and post-test, with change either maintained or increased at follow-up. The VLQ has been more widely used and its psychometric properties more widely reported, however, it was developed as a clinical tool for helping clients clarify their valued directions in 10 different life domains. The VLQ does not address valued living more generally, as defined in an ACT context. For these reasons, the MVM was administered as an adjunct measure of valuing behavior, despite its still being under development.

Both measures evidenced good internal consistency reliability across time, with alpha coefficients ranging from .85 (VLQ at post-test) to .93 (MVM at follow-up). Findings from the
one-way RM ANOVAs indicate that while mean MVM scores did change significantly over time, mean VLQ scores did not. Overall, valuing behavior seems to have been impacted by treatment, at least per self-report. From pre-test to post-test, 76.5% of VLQ scores changed in the desired direction, and 77.8% of MVM scores changed in the desired direction. From pre-test to follow-up, 66.7% of VLQ scores changed in the desired direction, and 75% of MVM scores changed in the desired direction. At the individual level, three parents evidenced clinically significant change in valuing behavior according to reliable change analyses. Parent I’s VLQ scores changed reliably from pre-test to follow-up, Parent M’s MVM scores changed reliably from pre-test to follow-up, and Parent J’s scores on both the VLQ and the MVM increased reliably from pre-test to post-test.

Neither the Blackledge and Hayes (2006) study nor the pilot by Murrell and colleagues (2009) assessed valuing behavior, so there is no data other than the data from this study from which to draw conclusions about the impact of ACT parenting interventions on VLQ or MVM scores. Had the sample for the current study been larger, we might have seen statistically significant changes in mean VLQ scores in addition to changes in mean MVM scores. Or, the differences in findings could reflect the fact that the VLQ and MVM measure different aspects of valuing behavior. Again, the original purpose of the VLQ was for use as a clinical tool to help with values clarification and identification of specific goals that lead to patterns of committed action. Additionally, internal consistency reliability coefficients for the VLQ have typically been lower than is ideal for research purposes (DeVellis, 2003). The MVM measures valuing behavior more broadly, irrespective of life domain. That is, meta-valuing as a construct refers to flexible valuing, or freely chosen behavior across domains (LaBorde, 2010). The Freedom from Values
Conflict subscale in particular seems to be measuring a different aspect of valuing behavior than does the VLQ, the ability to engage in values-consistent behavior across domains and contexts, even in the presence of psychological distress (LaBorde, 2010).

Future research utilizing both measures will elucidate whether the differences in findings between the MVM and the VLQ would disappear given a larger sample size. Rather than interpret the VLQ composite score, researchers trying to understand the impact of an ACT for parents’ intervention on valuing behavior may choose to look only at the change in discrepancy scores for the Parenting domain. Alternatively, the development of a parenting-specific values measure, similar to the PAAQ as a measure of parenting-specific experiential avoidance, should be considered.

Kentucky Inventory of Mindfulness Skills.

We hypothesized that mean KIMS scores would increase between pre-test and post-test, with change either maintained or increased at follow-up. Internal consistency reliability for the KIMS was mostly adequate for this study, ranging from .79 at pre- and post-test to .87 at follow-up. Examination of reliability coefficients for each of the subscales reveals that, consistent with findings from other studies (Schmalz & Murrell, 2010), the coefficients are lowest for acting with awareness at pre-, post-, and follow-up, (α = .56, .53, .81).

Findings from the one-way RM ANOVA indicate that mean KIMS scores did not change significantly over time. Consistent with that, no reliable change was observed on this measure for any parent in the study. Interestingly, there was more change in the desired direction from pre-test to follow-up (50%) than from pre-test to post-test (36.8%), indicating that mindfulness
continued to increase over time in the absence of further treatment. One interpretation of these findings is that mindfulness skills improve with practice, and what we are seeing is an incubation effect—similar to the pattern of results seen by Blackledge and Hayes (2006) on AAQ-9 scores.

Blackledge and Hayes (2006) did not measure mindfulness in their study. In the pilot study by Murrell and colleagues (2009), mindfulness was measured with the KIMS. One parent showed a clinically significant change in mindfulness, specifically on the acting with awareness and accepting without judgment subscales. This is interesting given the relatively poor internal consistency reliability of the former subscale. Future researchers may consider utilizing other measures of mindfulness, for example, the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2008), which has better psychometric properties in general. Alternatively, and perhaps ideally, the Interpersonal Mindfulness in Parenting scale (IM-P; Duncan 2007) should be utilized. Again, we are seeing the development of more domain specific measures for measurement of acceptance and mindfulness processes as they relate to parenting behavior. The IM-P is a 10-item self-report measure designed to assess mindful parenting as conceptualized by Kabat-Zinn and Kabat-Zin (1997). This includes present-centered attention during parent-child interactions, present-centered emotional awareness during parent-child interactions, openness and non-judgment of children’s thoughts and emotions, and the ability to regulate reactivity to child behavior.

In terms of understanding why there were no statistically or clinically significant changes on KIMS scores in this study, then, four primary explanations should be considered. First, and again, perhaps the sample size was just not large enough to detect a statistically significant
change. KIMS scores generally increased over time, just not enough to be considered statistically or clinically meaningful. Second, the KIMS is not the most reliable measure of mindfulness currently available. Third, and arguably most interestingly, findings on the impact of mindfulness training for parents is mixed. In a study by Coyne and Silva (2007), parents assigned to a mindfulness condition after a distressing parent-child interaction task showed fewer positive parenting behaviors than those parents in the control condition. One explanation for these findings is that mothers learned to observe their thoughts before mastering the skill of accepting without judgment, so that negative self-evaluations were heightened and interfered with mothers’ ability to implement parenting skills. Finally, as will be discussed in greater detail later in this discussion, perhaps parents in the current study did not receive sufficient mindfulness skills training.

Difficulties in Emotion Regulation Scale (DERS).

It was hypothesized that mean DERS scores would decrease between pre-test and post-test, with change either maintained or increased at follow-up. The DERS performed well in this study, demonstrating excellent internal consistency reliability at all three time points (α = .96, .93, and .93). Findings from the one-way RM ANOVA indicate that mean DERS scores did not change significantly over time. More specifically, the mean score decreased from pre-test to post-test, but decreased by less than 1 point from post-test to follow-up. Though not statistically significant, these mean changes are in the desired directions. Only 31.6% of DERS scores changed in the desired direction from pre-test to post-test. As with the KIMS, however, a greater percentage of scores changed from pre-test to follow-up (50%). Interestingly, though,
at the individual level, Parents I and M evidenced clinically significant change from pre-test to post-test, but not from pre-test to follow-up. Also of note, Parents I and M evidenced the most clinically significant change across the board, in terms of numbers of outcome measures, and what they had in common was a significant change in DERS scores. This suggests that emotion regulation is a key skill for parents, and that the acquisition of better emotion regulation skills may free up psychological resources for overall change in parenting behavior, or at least in beliefs about parenting behavior.

That a greater percentage of scores decreased from pre-test to follow-up than from pre-test to post-test suggests that emotion regulation skills, similar to mindfulness skills in this study and acceptance and active coping in the Blackledge and Hayes (2006) study, might improve over time as parents have opportunities to practice them in everyday parent-child interactions. Indeed, in a recent study by Havighurst and colleagues (2010), parents’ emotion regulation skills as measured by the DERS increased over time rather than immediately after an intervention designed to improve both parent and child emotion regulation and expression.

However, that Parents I and M changed reliably from pre-test to post-test but not from pre-test to follow-up clearly contradicts the incubation effect hypothesis. This could be attributed to a variety of factors, not the least of which is that emotion regulation skills were not specifically targeted in our study, as they were in the study by Havighurst and colleagues (2010). More research on the impact of ACT interventions on emotion regulation is needed, as is research on the role of emotion regulation in parenting behavior. Emotion regulation is highly correlated with both acceptance (Gratz & Roemer, 2004) and mindfulness (Lykins, 2006), both of which are regularly impacted by ACT interventions. Thus, it stands to reason that emotion regulation...
regulation would also be impacted. There is some evidence for this claim. In the pilot study by Murrell and colleagues (2009), there was clinically significant change in DERS scores for all three parents at post-test (there was not a follow-up assessment in that study). Two parents showed reliable change on the subscale measuring ability to manage tasks in the presence of difficult emotions, and the third parent showed reliable change on the subscale measuring the availability of emotion regulation strategies. As will be emphasized throughout the remainder of this discussion, parents in the current study likely did not receive enough treatment.

Clinically and Statistically Significant Change in Parental Distress and Related Variables

Depression, Anxiety, and Stress Scales.

It was hypothesized that mean DASS-21 scores would decrease between pre-test and post-test, with change either maintained or increased at follow-up. The DASS-21 demonstrated excellent internal consistency reliability at pre-test ($\alpha = .94$) and follow-up ($\alpha = .95$), and good internal consistency reliability at post-test ($\alpha = .89$). Findings from the one-way RM ANOVA indicate that mean DASS-21 scores did not change significantly across time, suggesting that treatment did not have an impact on self-report of depression, anxiety and stress. Additionally, there was not a decreasing trend in mean scores over time. Only one parent, Parent N, evidenced reliable change on the DASS-21 from pre-test to post-test, and this parent did not provide follow-up data. Therefore, it is unclear whether the change for Parent N was due to intervention or not. Overall, 52.6% of DASS-21 scores changed in the desired direction from pre-test to post-test, and 28.6% changed in the desired direction from pre-test to follow-up.
These findings are somewhat inconsistent with the other two ACT for parent studies. In the pilot study by Murrell and colleagues (2009), 2 out of 3 parents showed reliable change on the DASS-21. Both of these parents had baseline scores in at least the mild to moderate range. Of note, these parents were not referred by CPS and voluntarily sought treatment. In general, they were higher SES than the current sample, and so were not subject to stressors related to that. Similarly, in the study by Blackledge and Hayes (2004), significant changes were observed in BDI-II scores between pre- to post treatment as well as at follow-up. These parents also participated in treatment of their own accord. However, effect size (though not reported) was not large, which Blackledge and Hayes attributed to the fact that their sample was not particularly distressed prior to treatment. The current sample was moderately distressed at baseline ($M = 11.89$, $SD = 11.67$).

Interestingly, baseline scores on the DASS-21 predicted treatment response in our study such that those parents with higher baseline DASS-21 scores were more likely to demonstrate clinically significant change on at least one outcome measure (as opposed to those parents who did not demonstrate clinically significant change on any measure). This finding is consistent with findings from Blackledge and Hayes (2006), who also found that their intervention had a larger effect on the more distressed participants. Of note, this trend might merely reflect floor effects, as the parents who were less distressed to begin with had less room for improvement. As such, future researchers wishing to study the effects of an ACT intervention for parents might consider screening their parents for clinically significant levels of psychological distress (or other predictor of interest) before including them in their study.
Alabama Parenting Questionnaire-9.

It was hypothesized that mean APQ-9 scores would decrease between pre-test and post-test, with change either maintained or increased at follow-up. The APQ-9 demonstrated poor to average internal consistency reliability for the current sample, with alpha coefficients ranging from .67 at pre-test to .79 at post-test. This could in part be due to the small number of items (9) and the small number of people completing the questionnaire, but it should be noted that its psychometric properties were similarly unimpressive in the validation study (Elgar, Waschbusch, Dadds, & Sigvaldason, 2007). That this measure performed so poorly is particularly unfortunate given that it was our only measure of parenting practices. The full length APQ (Shelton, Frick, & Wootton, 1996) should be used in future studies. There is a notable absence of measures of parenting practices in the field, and future researchers should consider the development and validation of alternate parenting practices measure prior to or in conjunction with any evaluation of the effectiveness of ACT parent training.

Given the poor reliability of this measure in the current study, the following results should be interpreted with caution. Findings from the one-way RM ANOVA indicate that mean APQ-9 scores did not change significantly over time. In fact, the mean APQ-9 scores at pre-test, post-test, and follow-up do not differ by more than 1 point. Still, a substantial number of individual APQ-9 scores changed in the expected direction – at least initially. From pre-test to follow-up, 47.4% of scores decreased, and from pre-test to follow-up, 50% of scores increased. Two parents evidenced reliable change from pre-test to post-test, Parents A and B. Again, though mean scores did not change significantly, for at least two parents, treatment seems to have had an immediate effect. Gains, however, were not maintained at follow-up.
Blackledge and Hayes (2006) did not measure parenting practices in their study. Murrell and colleagues (2009) used the APQ-9 in their study, and none of their three participants demonstrated reliable change on this measure. This discrepancy in findings between the Murrell pilot and the current study might be due to the differences in child age groups. That is, in the Murrell pilot study, parents of adolescents were treated, whereas in the current study, parents of young children were treated. Alternatively, parents from the current study may have been responding to social desirability concerns. Though they were assured confidentiality, they were still under pressure to comply with Children Protective Services (CPS) requirements.

Parental Locus of Control.

Only one subscale of the PLOC was administered – the Parenting Efficacy (PE) subscale. It was hypothesized that mean PE scores would decrease (indicating increased parental efficacy) between pre-test and post-test, with change either maintained or increased at follow-up. This subscale demonstrated adequate internal consistency reliability, ranging from .71 at post-test to .87 at pre-test. Mean scores on this subscale changed in the expected direction from pre-test to post-test, but not at follow-up, and none of these changes were statistically significant according to the one-way RM ANOVA.

The overall percentage of scores that changed in the expected direction was 47.4% from pre- to post-test and 57.1% from pre to follow-up. In fact, Parents L and I evidenced clinically significant change from pre to post-test, and Parent L maintained those changes at follow-up. This suggests that parental efficacy may be impacted by treatment, at least for some individuals.
In the Blackledge and Hayes (2006) study, PE scores did not change significantly over time. The PLOC was included in their study, but not in the pilot study by Murrell and colleagues (2009). Blackledge and Hayes (2006) chose to include the PE subscale in their study given their hypothesis that an ACT intervention would remove cognitive and affective barriers to parenting effectiveness (by targeting fusion and avoidance) and therefore increase parent perceptions of their own effectiveness – that is, increase parental efficacy. They note, however, that this would depend on the existence of effective skills in the first place, and therefore suggest that future studies supplement ACT with behavioral skills training. That is exactly what we did in the current study, and we did see some movement in scores on the PE subscale. It could be, then, that reductions in avoidance and fusion allowed for more flexibility and utilization of behavioral skills in the current study. Or, perhaps parents were more likely to implement behavioral skills after having engaged in values clarification. That is, they were able to engage in committed action because they could see its relevance to their overall parenting values. It is important to be cautious though, as the overall group level change was not significant and reliable clinical change only occurs for two participants. With a larger sample and more treatment (i.e., a lengthier protocol), we would expect to see greater and more uniform impact on measures of parental efficacy.

Parenting Stress Index-Short Form.

It was hypothesized that mean PSI-SF scores would decrease between pre-test and post-test, with change either maintained or increased at follow-up. The PSI-SF demonstrated excellent internal consistency reliability at all three time points ($\alpha = .96, .96, \text{ and } .95$). Findings
from the one-way RM ANOVA indicate that, though mean PSI-SF scores did decrease at each
time point, the change was not statistically significant. The overall percentage of PSI-SF scores
that changed in the expected direction was 57.9% from pre-test to post-test, and 64.3% from
post-test to follow-up. One parent, Parent M, evidenced reliable change on this measure from
pre-test to follow-up. Based on these findings, it seems that self-report of parenting stress is
impacted by treatment, at least for some individuals.

Blackledge and Hayes (2006) did not measure parenting stress. In the pilot study by
Murrell and colleagues (2009), parenting stress was measured with the SIPA, designed for
parents of adolescents. Only one of the three parents showed reliable change on the SIPA,
specifically the subscale measuring parent-adolescent relations. Given the strong relationships
between parenting stress and relevant variables such as maternal depression, separation
anxiety in children, and childhood externalizing disorders (Abidin, 1995; Deater-Deckard, 1998),
it remains an important variable for inclusion in treatment studies. Parenting stress was the
only inclusion criterion for this study (apart from age), but parents were not included on the
basis of a particular level of stress. Pre-treatment stress levels for the overall sample were at
least two standard deviations above the mean, so parents were, on average, endorsing high
levels of parenting stress. However, unlike DASS-21 scores, PSI scores did not predict treatment
outcome for this study. In part, this last statement should be interpreted with caution, as
treatment outcome in this study was dichotomized based on whether parents showed reliable
change on any measure. Still, parents had more room for improvement with regard to
parenting stress than with general psychological distress as measured by the DASS-21.
PSI mean scores did decrease at post-test, and then again at follow-up, but these decreases were not large enough for statistical significance. Small sample size might partly explain these findings, but, as discussed in detail later, it is likely that not enough treatment was provided. That is, this sample of parents would have benefited from more treatment, either in the form of booster sessions or a longer original protocol.

Clinically and Statistically Significant Change in Child Behavior

Child behavior is one of the most widespread outcomes studied in the behavioral parent training (BPT) literature (Cedar & Levant, 1990; Lundahl, Nimer, & Parsons, 2006; Lundahl, Risser, & Lovejoy, 2006; Serketich & Dumas, 1996). A majority of BPT interventions were designed for parents of children with externalizing disorders, though there have been some modifications for children with anxiety disorders (Long et al., 2009) and developmental disorders (Long et al., 2009). In the current study, parents were included regardless of the particular behavioral problems displayed by their children. As such, all four composite scores from the BASC-2 were analyzed for clinical and statistically significant change. These include the Internalizing Behavior Composite, the Externalizing Behavior Composite, the Behavioral Symptom Index, and the Adaptive Skills Composite. Internal consistency reliability was excellent for the BASC-2 PRS-P, which is the form completed by parents reporting on children ages 2 to 5. Only 5 parents completed the PRS-C (ages 6 to 11), and only 2 parents completed the PRS-A (12-21), so reliability coefficients for these forms were generally not as high, and in some instances (for the PRS-A) not calculable.
Internalizing versus externalizing behavior.

Findings from the one-way RM ANOVA indicate that changes in mean BASC-2 Int scores over time were not statistically significant. Still, the changes in mean scores were in the expected direction from pre-test to post-test, and from post-test to follow-up. That is, parent reports of child internalizing behavior (symptoms of depression, anxiety, and somatization) seem to have been impacted by treatment, with gains continuing after treatment had ended. This is consistent with findings from reliable change analyses, which indicate that 61.5% of individual BASC-2 Int scores decreased from pre-test to post-test, and 70% decreased from pre-test to follow-up.

The BASC-2 BSI contains a number of subscales, including aggression, hyperactivity and conduct problems, the three of which comprise the entirety of the BASC-2 Ex Composite. As such, that there were statistically significant decreases in both BASC-2 BSI and BASC-2 Ex mean scores is not surprising, and it is redundant to report changes in both as if they were different types of changes. That being said, there was a clear intervention effect on parent report of child externalizing behavior in this study. From pre-test to post-test, 76.9% of BASC-2 scores decreased, and from pre-test to follow-up, 80% of scores decreased.

During the actual workshop, more attention was given to childhood externalizing behavior than to internalizing symptoms, so the differences in impact on the two sets of behavior is to be expected. That mean BASC-2 Externalizing scores changed significantly in spite of the small sample size suggests that this effect is robust. That is, parent report of childhood externalizing behavior seems to have been impacted by our intervention. In general, our findings are consistent with the findings by Murrell and colleagues (2009). In their pilot study,
one parent’s responses to the BASC-2 yielded significantly lower Externalizing and Internalizing scores post-treatment. Another parent showed reliable change on the YOQ 30.1. Though none of the parents from the current study reported clinically significant changes in internalizing symptoms, the general decreasing trend over time is promising, particularly given that not much attention was given to internalizing symptoms at the workshop.

Adaptive skills.

Interestingly, though adaptive skills (e.g., functional communication, activities of daily living) were not targeted by the current intervention, two parents demonstrated reliable change on the BASC-2 Adap composite. There was no statistically significant change in mean scores, however, and though scores decreased from pre-test to post-test, they increased slightly from post-test to follow-up. It is difficult to say what impacted scores for these two parents, as adaptive skills were not addressed at the workshop. Furthermore, the two parents who evidenced reliable change on this measure did not evidence reliable change on any other measure, so it cannot be concluded that changes in childhood adaptive behavior were mediated in any way by changes in parent distress or by skill acquisition (e.g., mindfulness and acceptance skills).

In order to draw more specific conclusions about the impact of ACT parent interventions on child behavior, parents should be asked to report, pre-treatment, what their particular behavioral concerns are. Ideally, with a large enough recruitment pool, parents would be assigned to treatment based on whether they are primarily concerned about internalizing
symptoms, externalizing symptoms, the development of adaptive skills, or some combination of the three.

Sample Specific Limitations and Future Directions

Though parents were recruited in a number of ways, all of the parents who received treatment in this study came from one referral source, caseworkers for CPS. All parents referred for and included in this study were participating in the Collin County Children’s Advocacy Center (CAC) Family Based Safety Services program and had the opportunity to choose between a 14-week behavioral parent training program offered by the CAC or the 12-hour weekend ACT workshop. Because it was not anticipated that all parents would come from one referral source, intervention was not tailored to the ideal extent. For example, approval to collect data on the specific reasons that these parents were involved with CPS (e.g., for allegations of abuse or neglect, or any other information regarding their CPS cases) was not obtained. Future researchers desiring to study this population should keep in mind a number of considerations.

Recruitment and measurement.

Recruitment for the study was difficult. After the first workshop, which was only completed by 2 parents, recruitment strategies changed. The details of this study were presented to case workers, who responded enthusiastically to requests for referrals. However, receiving referrals 25 days (or more) prior to the workshop, for the purposes of collecting baseline data, proved to be very difficult.
Data collection was perhaps the most difficult methodological challenge in this study. Most parents did not have reliable transportation, so that measures had to be delivered to them at home for pre-test and follow-up (post-test measures were completed at the workshop at the end of the second day). Coordinating the initial meeting for informed consent and completion of pre-test measures was difficult enough; many times, parents cancelled and rescheduled 2 or 3 times, and sometimes did not keep their appointments at all (hence the discrepancy between number of parents referred and number of parents completing the study). Coordinating meetings for completion of follow-up measures was even more difficult. Many parents’ cases with CPS had closed by the time follow-up data was requested, and presumably they saw no need to complete the study. This lack of adherence occurred in spite of the fact that parents were provided with postage-paid envelopes to return their follow-up measures – many parents reported having lost the envelopes. The only consequence for not completing follow-up data was not receiving the final payment of $20. Despite multiple sustained efforts, some parents just could not be contacted.

The use of online measures would have precluded the need to schedule data collection appointments, but many of the parents referred for inclusion in this study reported not having internet access. Future researchers should take this into consideration when deciding when and how to collect data. Ideally, CPS caseworkers would take on a more collaborative role, perhaps coordinating data collection with home visits. This would necessitate institutional review board (IRB) approval, and perhaps even that CPS caseworkers complete the required training to be added to IRB protocols.
Other concerns related to this sample include social desirability and socio-economic status (SES). Though parents were assured confidentiality, they were referred by their CPS caseworkers, and therefore had motivation to present themselves in a more positive light. Also, reading level was not assessed and should have been, particularly for those parents reporting lower levels of education. This could have interfered not only with their ability to correctly complete the self-report measures, but also with their ability to read the assigned chapters in *Joy of Parenting*.

Intervention.

Parents who chose to participate in the ACT workshop rather than the 14-week training offered by the CAC reported a specific preference for the weekend format. That is, they preferred to have the training requirement fulfilled over a 2-day time span than a 14-week time span, even though this meant that they had to sacrifice an entire weekend. The weekend format also seemed more suitable for working parents, as trying to find a weekly time for group sessions that matched everyone’s schedules seemed to be a significant obstacle in the pilot study by Murrell and colleagues (2009).

Still, the overall pattern of results suggest that these parents did not receive enough treatment. That is, though scores on most outcome measures showed decreasing trends, they did not decrease enough. Results from the 2006 meta-analysis by Lundahl, Risser, and Lovejoy indicate that BPT interventions are generally less effective for parents of lower SES unless delivered in individual (as opposed to group) format. In another meta-analysis (Lundahl, Nimer, & Parsons, 2006), the authors concluded that treatment gains were enhanced when training
was conducted in the home. Ideally, then, parents of lower SES should receive individual treatment, with at least some in-home training. Alternatively, a group workshop could be followed by individual, in-home booster sessions, to troubleshoot individual parents’ barriers to change.

General Limitations and Recommendations

A major limitation to the current study was the small sample size. With larger samples, more subtle changes in mean scores can be detected over time. However, statistical significance is not the ideal standard by which to measure treatment effectiveness. In contrast, clinically significant change was sought, and the most likely reason for not seeing enough clinically significant change in the current study is that enough treatment was not provided. As noted above, particularly for individuals of low SES, individual sessions are more effective than group sessions.

Although the goal of placing greater emphasis on values than previous studies was achieved, this may have occurred at the expense of other equally important ACT components, particularly self-as-context. In fact, two of the rater disagreements on the ACT core competency checklist for Workshop A occurred for items related to self-as-context, including, “Employed mindfulness exercises to help client contact self-as-context,” and “Gave client behavioral tasks to help client practice distinguishing private events from self.” This is a reflection of the relative lack of emphasis on self-as-context in Joy of Parenting, which was used to guide protocol development in this study. Compared to other hexaflex components, there is little research on self-as-context in isolation. Of particular importance to this study, however, are preliminary
findings from a study (Boals & Murrell, in progress) with domestic violence survivors showing changes in posttraumatic stress disorder (PTSD) and depressive symptoms, as well as on subscales of the APQ, after a 4-session ACT intervention with a heavy emphasis on self-as-context. This suggests that self-as-context is equally as important as the more well-researched components of acceptance and mindfulness and should be emphasized accordingly in treatment.

At Workshop B, care was taken to introduce more specific self-as-context interventions. Although it is difficult to compare the two workshops given that only 2 parents completed Workshop A, it should be noted that both parents who completed Workshop A were classified as treatment responders, i.e., they evidenced reliable change on at least one measure. In fact, Parent I, who attended this first workshop, evidenced reliable change in the expected direction on the VLQ, DERS, PLOC, and BASC-2 Externalizing Composite. The other parent who attended the first workshop evidenced reliable change on the APQ-9, and showed significant improvement (according to change in magnitude criteria) on her ACT daily diary workability ratings. Therefore, it seems unlikely that differential treatment of self-as-context between the two workshops was particularly detrimental in this study.

The lack of a control group also proved to be a weakness for this study, particularly given that not enough parents provided observations on the ACT daily diary to establish any sort of baseline measure of functioning. At any rate, this is a threat to internal validity that cannot be overlooked. The intention to treat analysis gives us some confidence that those parents who dropped out of the study would have been impacted by treatment in the same way as those who competed treatment, but as a control group a wait list, or even treatment as
usual group would be better assurance against Type I error. And, given the difficulty in collecting 25 baseline observations (a minimal number), it seems likely that it would have been easier.

Finally, the measures used in this study may not have been ideal. As psychologists, we are always measuring hypothetical constructs, so our measurement is only as good as our operational definitions. In the ACT literature in particular, there have been calls for more behavioral observations and measures, particularly given that ACT is a behavioral intervention. What we really want to know is not whether parents’ self-report of depression or mindfulness skills changed as a result of treatment. We want to know whether parents, particularly the parents in this study, continued to abuse or neglect their children. Behavioral observations or a behavioral checklist for child behavior or parent-child interactions would be a major improvement over self-report measures, but the process of observing and coding interactions is cumbersome at best. Perhaps future studies could include CPS re-referral rates or other data provided by CPS as outcome measures, which would require a more longitudinal design with yearly follow-ups.

While behavioral measures are being developed and refined, perhaps the best alternative is the utilization of more domain specific measures. For this study and other studies involving parents and children, this would mean using measures like the PAAQ instead of the AAQ or AFQ, or the IM-P instead of the KIMS. As noted, ACT is grounded in a functional contextual philosophy of science, with great emphasis placed on the context in which behavior occurs. Domain specific measures describe behaviors in a particular context, such as the context of a parent-child relationship, and can therefore more accurately predict behavior.
change. Findings from a number of ACT studies with other populations (diabetics, smokers, and chronic pain patients) suggest that domain specific measures of acceptance/avoidance are in fact more predictive than more global measures of desired behavior change (Geiser, 1992; Gregg, 2007; Gifford et al., 2004; McCracken, Spertus, Janeck, Sinclair & Wetzel, 1999).

Concluding Thoughts

In spite of the above mentioned limitations, particularly the small sample size, statistically significant changes were observed in self-report of valuing behavior and in parent report of child externalizing behavior. These are important pilot findings that justify the need for replication and more work on ACT with parents. The change in valuing behavior in particular seems important, given that the current treatment protocol was designed with an emphasis on the ACT component of values, so as to provide motivation and reinforcement for parent behavior change on behalf of their children.

Most other measures changed in the desired direction from pre to post. In many cases though, from post to follow up, scores looked like they were returning to baseline. This underscores the need for more treatment, either initially or in the form of booster sessions or both, particularly given that many of the outcome measures used in this study have previously shown incubation effects – acceptance, mindfulness, and emotion regulation skills in particular.

The two parents who changed the most, per self-report, were the same two parents that showed clinically significant decreases in difficulty with emotion regulation. This suggests that changes in emotion regulation are an important mediating factor for changes in other areas, which, given the strong correlation between emotion regulation difficulties and
experiential avoidance (Gratz & Roemer, 2004), is highly consistent with the literature pointing to experiential avoidance as a mediator of change (Hayes et al., 2006). As previously noted, emotion regulation is also correlated to both acceptance (Gratz & Roemer, 2004) and mindfulness (Lykins, 2006), further supporting the use of ACT as a treatment for difficulties in emotion regulation. Other third wave treatments with emphases on acceptance and mindfulness, such as DBT, have also demonstrated success in the treatment of emotion dysregulation (Axelrod, Perepletchikova, Holtzman, & Sinha, 2011). In fact, DBT was developed specifically for the purposes of treating problems in emotion regulation (Linehan, 1993). Perhaps some combination of mindfulness, acceptance, and emotion socialization as delivered in the Havighurst study (2010) will prove to be the most ideal intervention for parents. Interestingly, one of the two parents who evidenced reliable change on the DERS stated the following during her post-treatment interview, when asked whether and how the workshop was distressing, “Not distressing, but it was emotional... understanding your emotions, realizing they’re there and what is there, and accepting it.”

Two other parents, who showed reliable change on the APQ-9 as well as some meaningful change on their ACT daily diary ratings, referenced mindfulness as well. One parent answered that she did find the workshop useful, explaining, “Yes, to allow my thoughts to take place and me to make a good choice.” The second parent reported that she found it useful to talk about her feelings, which had previously been very difficult for her. She also stated, “I'm going to be mindful and slow down, talk about our mindsets and feelings,” regarding future interactions with her daughter.
Even participants who did not evidence reliable change rated the workshop positively, mostly because of the opportunity to share their parenting experience with other parents. In many ways, this was a normalizing experience for them. One parent stated, “I like the atmosphere of sharing personal experience... I feel more empowered because I learned that my thoughts and feelings are normal. Thank you for introducing this topic to the general public! I believe there is a serious need for this to be more available.” Beyond the particular intervention strategies appearing in the protocol, then, acceptance of thoughts and feelings was bolstered by interaction with other parents who have the same thoughts and the same feelings. This mechanism of change, though not a direct result of treatment per se, is highly consistent with the theory and philosophy behind ACT, according to which we are all subject to suffering and struggle because we are all verbal human beings. Likewise, we all strive, however imperfectly, towards meaning and vitality; we all continue to sail towards the horizon.
APPENDIX A

ACT DAILY DIARY
Date: ______________________

Think about any particularly stressful interactions with your child today and how you handled them (It may help to write down a word or two to help you remember the interactions):

**Suffering**

Rate how upset and distressed [NOTE: IN ACTUAL CLINICAL USE YOU CAN REPLACE THE GENERAL LANGUAGE WITH THE SPECIFIC FORM OF DISTRESS THAT IS THE MAIN COMPLAINT, SUCH AS “depressed” OR “anxious”] you were today overall:

None          Extreme amount

0     1    2    3    4    5    6    7    8   9   10

**Struggle**

Rate how much you tried to make these upsetting feelings or thoughts go away (for example, trying to stop feeling or thinking):

None          Extreme amount

0     1    2    3    4    5    6    7    8   9   10
Workability

If life in general were like this day, to what degree would today be part of a vital, workable way of life?

Not at all          Extreme amount

0     1    2    3    4    5    6    7    8   9   10

Valued Action

Rate how effective you were in acting consistent with your values today:

Not at all          Extreme amount

0     1    2    3    4    5    6    7    8   9   10
APPENDIX B

TREATMENT UTILITY AND SATISFACTION INTERVIEW
Welcome the participant back, thank them for their time. Inquire, (1) “Are you feeling as though you are in need of any emergency mental health services?” If not continue interview, if so, immediately end interview and contact appropriate mental health professionals.

Then say, “I’d like to get a general idea of how this group is going for you. (2a) How understandable has the group presentation so far been for you?” Allow a response and record it.

Say, (2b) “If you could rate the understandability of this group so far on a scale of 1 to 10, 1 being lowest and 10 being highest, what would it be?” Allow a response and record it.

Say, (2c) “Has there been anything particularly difficult for you to understand?” Allow a response and record it.

Say, (2d) “Has there been anything particularly easy for you to understand?” Allow a response and record it.

Say, (3a) “What about usefulness, what would you say about the group so far?” Allow a response and record it.

Say, (3b) “If you could rate the usefulness of this group so far on a scale of 1 to 10, 1 being lowest and 10 being highest, what would it be?” Allow a response and record it.

Say, (3c) “Has there been anything that you felt was a particular waste of time?” Allow a response and record it.

Say, (3d) “Has there been anything that you felt was particularly helpful?” Allow a response and record it.

Say, (4a) “Has the experience thus far been emotionally difficult or distressing in any way?” Allow a response and record it.

If yes, (4b) ask how.

In all instances say, (4c) “If you could rate this group overall on a scale of 1 to 10, 1 being lowest and 10 being highest, what would it be?” Allow a response and record it.
Say, (5a) “Has your opinion changed with regard to the way you see your particular concerns, with your kids, or in your life more generally?” Allow a response and record it.

If yes, (5b) ask how.

Say, (6a) “Do you think that your situation with your kids has changed?” Allow a response and record it.

If yes, (6b) ask how.

Say, (7) “Do you have you any other comments you would like to add?” Allow a response and record it.
APPENDIX C

ACT CORE THERAPEUTIC SESSION CHECKLIST CROSS REFERENCE
<table>
<thead>
<tr>
<th>Extended</th>
<th>N</th>
<th>Y</th>
<th>Brief</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapist stance</td>
<td></td>
<td></td>
<td>Demonstrated ‘down-withness’(^1)</td>
</tr>
<tr>
<td>Held yourself as in the same boat as client?</td>
<td></td>
<td></td>
<td>Demonstrated ‘down-withness’(^1)</td>
</tr>
<tr>
<td>Modeled willingness to hold uncomfortable or</td>
<td></td>
<td></td>
<td>Held contradictions</td>
</tr>
<tr>
<td>contradictory ideas, feelings?</td>
<td></td>
<td></td>
<td>Modeled compassion</td>
</tr>
<tr>
<td>Communicated and modeled compassion &amp;</td>
<td></td>
<td></td>
<td>Modeled compassion</td>
</tr>
<tr>
<td>humanity re client’s suffering?</td>
<td></td>
<td></td>
<td>Identified experience as arbiter</td>
</tr>
<tr>
<td>Called attention to client’s experience as</td>
<td></td>
<td></td>
<td>Argued or lectured</td>
</tr>
<tr>
<td>source of authority?</td>
<td></td>
<td></td>
<td>Validated ‘insight’</td>
</tr>
<tr>
<td><em>L ectured, argued, ‘taught’, convinced client or</em></td>
<td></td>
<td></td>
<td>Self-disclosed appropriately</td>
</tr>
<tr>
<td><em>otherwise undermined their discovery</em></td>
<td></td>
<td></td>
<td>Fit interventions to client</td>
</tr>
<tr>
<td><em>processes?</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Explained metaphors or paradoxes, or otherwise</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>reinforced “insight” or cheap understanding?</em></td>
<td></td>
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</table>

\(^1\) The feeling of being ‘down with’ the client, in the same boat, not ‘one-upping’ the client by displaying greater intellect, insight, peacefulness or emotional integrity.
<table>
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<tr>
<th>Extended</th>
<th>N</th>
<th>Y</th>
<th>Brief</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapist strategies are applied flexibly in response to client needs vs. develop a ‘theory’ and stick with it hoping the client proves you right?</td>
<td></td>
<td></td>
<td>Applied interventions flexibly</td>
</tr>
<tr>
<td>Interventions and exercises emerge from the client’s unique presence in the session?</td>
<td></td>
<td></td>
<td>Sourced from here/now</td>
</tr>
<tr>
<td>Recognized ACT relevant processes and supported them in service of client’s growth?</td>
<td></td>
<td></td>
<td>Supported relevant processes</td>
</tr>
</tbody>
</table>

**Developing acceptance/willingness and undermining experiential control**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Y</th>
<th>Brief</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicated unworkability of client strategies vs. ‘defectiveness’ of client?</td>
<td></td>
<td></td>
<td>Denoted unworkability</td>
</tr>
<tr>
<td>Helped client examine experience for presence of emotional control strategies?</td>
<td></td>
<td></td>
<td>Detected control strategies</td>
</tr>
<tr>
<td>Helped client contact paradoxical effects of control strategies?</td>
<td></td>
<td></td>
<td>Elicited paradoxicality</td>
</tr>
<tr>
<td>Emphasized workability as a criterion?</td>
<td></td>
<td></td>
<td>Emphasized workability</td>
</tr>
<tr>
<td>Extended</td>
<td>N</td>
<td>Y</td>
<td>Brief</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
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<td>---</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Encouraged client to experiment with willingness as alternative to control?</td>
<td>☐</td>
<td>☐</td>
<td>Encouraged experimentation</td>
</tr>
<tr>
<td>Highlighted vitality associated with willingness when attempted by client?</td>
<td>☐</td>
<td>☐</td>
<td>Linked vitality to willingness</td>
</tr>
<tr>
<td>Brought client into contact with secondary pain – costs to vitality – of unwillingness?</td>
<td>☐</td>
<td>☐</td>
<td>Highlighted unwillingness costs</td>
</tr>
<tr>
<td>Fostered client’s experience of qualities of willingness (choice, discrete, not wanting)?</td>
<td>☐</td>
<td>☐</td>
<td>Fostered willingness experiences</td>
</tr>
<tr>
<td>Structured steps to practice willingness in the face of difficult experiences?</td>
<td>☐</td>
<td>☐</td>
<td>Structured willingness</td>
</tr>
<tr>
<td>Modeled willingness in the therapeutic relationship?</td>
<td>☐</td>
<td>☐</td>
<td>Modeled willingness</td>
</tr>
<tr>
<td>Extended</td>
<td></td>
<td>Y</td>
<td>Brief</td>
</tr>
<tr>
<td>----------</td>
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<td>-------</td>
</tr>
<tr>
<td>Detected own struggles as they occurred, stepped out and found opportunities to teach client the same skill?</td>
<td></td>
<td></td>
<td>Discerned own struggles</td>
</tr>
</tbody>
</table>

**Undermining cognitive fusion**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Y</th>
<th>Brief</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identified client’s barriers to willingness?</td>
<td></td>
<td></td>
<td>Identified willingness barriers</td>
</tr>
<tr>
<td>Contrasted ‘mind’s’ concept of what should work vs. experience of what is/is not working?</td>
<td></td>
<td></td>
<td>Distinguished ‘does/should work’</td>
</tr>
<tr>
<td>Split client from their conceptualized experience using metaphors, language tools and experiential exercises?</td>
<td></td>
<td></td>
<td>Distinguished real/conceptual experience</td>
</tr>
<tr>
<td>Extended</td>
<td>N</td>
<td>Y</td>
<td>Brief</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
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<td>-------------------------------------</td>
</tr>
<tr>
<td>Revealed hidden, paradoxical and counter-productive properties of language (e.g. Milk, Numbers, Don’t think of…)?</td>
<td></td>
<td></td>
<td>Revealed language traps</td>
</tr>
<tr>
<td>Helped client recognize ‘story’ and to distinguish arbitrary nature of its causal relationships?</td>
<td></td>
<td></td>
<td>Revealed arbitrary causality</td>
</tr>
<tr>
<td>Helped client recognize inevitability of evaluative functions and reason-giving?</td>
<td></td>
<td></td>
<td>Revealed relentless ‘mindness’²</td>
</tr>
<tr>
<td>Detected and highlighted fusion in session and taught client to detect it also?</td>
<td></td>
<td></td>
<td>Taught fusion traps</td>
</tr>
<tr>
<td>Revealed flow of private experience?</td>
<td></td>
<td></td>
<td>Revealed private experience</td>
</tr>
</tbody>
</table>

² i.e. ‘mind’-given functions such as evaluative functions, reason-giving, explanation-seeking, labelling, privileging understanding over experience, etc.
<table>
<thead>
<tr>
<th>Extended</th>
<th>N</th>
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<th>Brief</th>
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</thead>
<tbody>
<tr>
<td>Highlighted non-toxic nature of private experiences?</td>
<td></td>
<td></td>
<td>Revealed ‘mind’s’ harmlessness</td>
</tr>
<tr>
<td>Contact with the present moment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Able to defuse from client content and direct attention to the present?</td>
<td></td>
<td></td>
<td>Unhooked from client</td>
</tr>
<tr>
<td>Permitted own thoughts, feelings and self to be present in therapeutic relationship?</td>
<td></td>
<td></td>
<td>Permitted therapist presence</td>
</tr>
<tr>
<td>Provided exercises to expand client’s sense of self as ongoing process?</td>
<td></td>
<td></td>
<td>Oriented client to self-as-process</td>
</tr>
<tr>
<td>Extended</td>
<td>N</td>
<td>Y</td>
<td>Brief</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
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<td>------------------------------------------</td>
</tr>
<tr>
<td>Tracked client’s content at several levels and emphasized present when helpful?</td>
<td></td>
<td></td>
<td>Tracked content levels/forms</td>
</tr>
<tr>
<td>Modeled returning to the present?</td>
<td></td>
<td></td>
<td>Modeled ‘presencing’³</td>
</tr>
<tr>
<td>Brought client away from past/future and back to present?</td>
<td></td>
<td></td>
<td>Present-focused the client</td>
</tr>
<tr>
<td>Taught client to detect own shifts away from present?</td>
<td></td>
<td></td>
<td>Taught client unhooking</td>
</tr>
</tbody>
</table>

### Self-as-context vs. Conceptualized self

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Y</th>
<th>Brief</th>
</tr>
</thead>
<tbody>
<tr>
<td>Differentiated evaluations of self from evaluating self (e.g. Thank your mind, Who’s saying that?, label evaluations, etc.)?</td>
<td></td>
<td></td>
<td>Differentiated context/evaluations</td>
</tr>
<tr>
<td>Employed mindfulness exercises to help client contact Self-As-Context?</td>
<td></td>
<td></td>
<td>Directed client to sac</td>
</tr>
<tr>
<td>Highlighted distinction between consciousness and its contents/products?</td>
<td></td>
<td></td>
<td>Distinguished content/context</td>
</tr>
<tr>
<td>Gave client behavioral tasks to help client practice distinguishing private events from self?</td>
<td></td>
<td></td>
<td>Distinguished ‘self’ behaviorally</td>
</tr>
</tbody>
</table>

³ i.e. the process of being present and ‘unhooking’ oneself from ‘absenting’ processes like struggling with own reactions and evaluations.
<table>
<thead>
<tr>
<th>Extended</th>
<th>N</th>
<th>Y</th>
<th>Brief</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helped client understand the different qualities of self-conceptualization, just noticing events and simple open awareness?</td>
<td></td>
<td></td>
<td>Contacted open awareness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Defining valued directions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helped client clarify valued life directions?</td>
<td></td>
<td></td>
<td>Clarified valued directions</td>
</tr>
<tr>
<td>Helped client formulate a personal stand for valued life ends?</td>
<td></td>
<td></td>
<td>Formulated client stand</td>
</tr>
<tr>
<td>Brought own therapy-relevant values into conversation and modeled them?</td>
<td></td>
<td></td>
<td>Modeled coherent values</td>
</tr>
<tr>
<td>Helped client distinguish values from goals?</td>
<td></td>
<td></td>
<td>Distinguished values/goals</td>
</tr>
<tr>
<td>Distinguished between outcomes and processes?</td>
<td></td>
<td></td>
<td>Distinguished outcome/process</td>
</tr>
<tr>
<td>Respected client’s values and if unable to support them, provided options (e.g. referral)?</td>
<td></td>
<td></td>
<td>Supported client values</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Building patterns of committed action</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extended</td>
<td>N</td>
<td>Y</td>
<td>Brief</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>----------------------------</td>
</tr>
<tr>
<td>Helped client create goals and action plan?</td>
<td></td>
<td></td>
<td>Developed goals</td>
</tr>
<tr>
<td>Fostered permission for client to “have” barriers, yet still make and keep commitments?</td>
<td></td>
<td></td>
<td>Permitted barriers</td>
</tr>
<tr>
<td>Provided experiences and language tools to uncover sources of interference to committed actions?</td>
<td></td>
<td></td>
<td>Revealed barriers</td>
</tr>
<tr>
<td>Encouraged client to take small steps and get in contact with the quality of committed action?</td>
<td></td>
<td></td>
<td>Encouraged small steps</td>
</tr>
<tr>
<td>Kept client focused on developing larger and larger patterns of committed action?</td>
<td></td>
<td></td>
<td>Developed action patterns</td>
</tr>
<tr>
<td>Integrated slips or relapses into the experiential base for future effective action?</td>
<td></td>
<td></td>
<td>Integrated slips</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fostered continual action/attention</td>
</tr>
</tbody>
</table>
APPENDIX D

ACT FOR PARENTS WORKSHOP OUTLINE
Day 1 (8 hours)

1. Discussion of Group Rules and Expectations (15 minutes)
2. Introduction to an ACT and an ACT Philosophy of Parenting (1 hour)
   2.1. ACT and Human Suffering
      2.1.1. Didactic: Discussion about human suffering according to ACT.
      2.1.2. Exercise: Parents will be asked to think about a parenting moment of which they are the least proud, and to consider how much they would be willing to share their experience of that moment with others. Would they feel ashamed or embarrassed? Are there certain thoughts and feelings that parents have been taught are wrong or bad? As parents are thinking, they will be asked to think of times when they’ve judged others’ parenting moments. Everybody is in the same boat!
      2.1.3. Didactic: Introduction to three parenting practices that lead to behavior problems in children. These practices will be presented on a poster which will be used for reference throughout the workshop. Parents will be asked to volunteer one of their not-so-proud parenting moments as an example of these practices. What gets in the way of not falling into these traps?
      2.1.4. Exercise: My Process of Self-Evaluation – Noticing Your Mind. In Joy of Parenting, this is presented as a journal writing exercise, but in the workshop parents will be asked to close their eyes and visualize a time when their children were not behaving well in the presence of other parents. What thoughts and feelings come up?
   2.2. Accept, Commit, and Take Action
      2.2.1. Exercise: What if these thoughts and feelings were just that – thoughts and feelings?
      2.2.2. Didactic: Introduce ways in which parents try to avoid their internal thoughts and feelings, including the use of rigid and inflexible parenting strategies; being inconsistent; overreacting to children’s negative emotions; focusing on bad rather than good behavior; and paying attention to their minds instead of the children. This will also be presented on a poster.
      2.2.3. Exercise: What Type of Parent do you want to be? Parents will be asked to think about their parenting values, committing to those values, and taking action even in the presence of difficult thoughts and feelings.

Chapter 3, “Parenting Values: What Matters Most” (2 Hours)
   2.3. Story: The facilitator will read the story from Chapter 3 about Carrie and her knee-jerk parenting.
   2.4. Exercise: The Deserted Island Metaphor for Parenting is introduced. Parents are asked to imagine that they have learned to survive on a deserted island and have become comfortable with the way things are, with no thoughts of rescue. This deserted island is compared to their lives as parents, where they have settled into ways of doing things that work in the short-term but aren’t compatible with vital, valued directions.
2.5. **Didactic/Group Exercise:** Parents will be introduced to the idea of valuing as a behavior rather than a feeling. Valuing behavior is freely chosen. Parents will also be introduced to the difference between values and goals. Parents will generate and share examples of values and corresponding goals in their own lives. These will be written on the dry erase board.

2.6. **Exercise:** How do you want to be remembered? Parents are asked to visualize their own funerals, including the eulogies given for them. How do they want to be remembered? This is what is vital.

2.7. **Didactic/Group Exercise:** Parents will be asked to generate other obstacles to valued living in addition to thoughts and feelings discussed during the first hour. This will lead into a guided discussion about values conflicts, and a reiteration of valuing as a behavior that is freely chosen, in any given moment.

2.8. **Didactic:** Vulnerability and Valuing. Parents will be introduced to the idea that feelings of vulnerability are most likely to occur in relation to their valued directions in life, particularly if their behavior is not moving them in that direction.

2.9. **Exercise:** Horizon Metaphor Introduced.

**LUNCH BREAK**

3. **Chapter 4, “Is the Goal Control?: Managing Feelings vs. Managing Behavior” (1.5 hours)**

3.1. **Didactic:** Parents will be introduced to the ABC’s of behavior (functional analysis), using a temper tantrum example. We will also review common control strategies that parents use, including giving in, getting loud, and giving up.

3.2. **Story:** The facilitator will read the story from Chapter 4 about a mother’s experience on her child’s first day of Kindergarten. This story will be used to illustrate the ABC’s of behavior and how parent’s attempts to control emotions go awry.

3.3. **Exercise:** Parents will be asked to return to the Horizon metaphor, this time envisioning clouds in the horizon. The clouds are similar to their thoughts and feelings, and we will focus on those thoughts and feelings that present barriers to effective parenting.

4. **Chapter 5, “Being Mindful: Appreciating Your Child” (2 hours)**

4.1. **Didactic:** The facilitator will give a brief overview of mindfulness and its role in parenting.

4.2. **Exercise:** Awareness of the Smallest sounds. For 5 minutes, parents will be asked to direct their awareness to the smallest sounds in the room, as an introduction to contacting the present moment.

4.3. **Exercise:** Notice the words. Parents will be presented with the sentence, “My child is perfect, and I am an extraordinary parent,” with the purpose of developing the ability to recognize thoughts as merely thoughts, rather than focusing on their content. Were they able to read the sentence without judgment? What thoughts and feelings came up for them?

4.4. **Story:** The just-so pizza. The facilitator will share a story about a mother whose child throws a tantrum at the pizza joint. Initially, the mother responds to her own thoughts
and feelings. When she is able to contact the present moment, she responds to her child.

4.5. Didactic: Parents are introduced to the idea that their children are whole, complete, and perfect, and two new ways of interacting with their child are presented: Simply Being, and Mindful praise.

4.6. Exercise: Parents will again return to the horizon metaphor and be asked to envision their thoughts written out on each of the clouds. This is a somewhat lengthy guided meditation, as parents are asked to imagine that the clouds are getting in the way of their ability to contact the present moment. I think I want to make this active, somehow integrated with taking your mind for a walk.

Day Two (4 Hours)

1. Chapter 6, “Doing What Works, Not What’s Easy: Standing for Your Child” (1.5 hours)

   1.1. Didactic: Easier said than done. Parents are reminded that, in their actual lives, these techniques will be difficult to employ. A brief reminder of the desert island metaphor illustrates the comfort inherent in familiar patterns of behavior.

   1.2. Exercise: As a group, parents will be asked to identify contexts that affect their willingness to respond appropriately in difficult moments. These will be listed on the white board.

   1.3. Story: Looking willing versus being willing. The facilitator tells the story of Joyce, who appears willing to help her child, but whose actions only have the short-term effect of reducing her own and her daughter’s painful feelings.

   1.4. Didactic: Barriers to committed action. These will be presented according to the FEAR acronym (fusion, evaluation of self/experiences, avoidance of experiences, and reason-giving for behavior).

   1.5. Exercise: Whatever it takes. This exercise will lead into a discussion on the importance of consistency. Parents will be asked to consider whether they would second guess their instincts when responding to a truly dangerous situation (e.g., child walking into traffic).

   1.6. Didactic: Consistency is important, in big and small situations. We will discuss planned ignoring and the related concept of observing without reacting.

   1.7. Exercise: Forgiving yourself, forgiving a friend. This exercise will be used to illustrate the importance of forgiving oneself, as mistakes will inevitably be made along the way. Parents will constantly be making choices to guide them in their valued direction as parents.

2. Chapter 7, Building Your Relationship and Encouraging Good Behavior (1.5 hours). This part of the workshop is heavily focused on particular parenting skills, and is therefore a didactic piece. Handouts with this information will be provided. The following parenting skills are introduced:

   2.1 Antecedent control
   2.2 Giving Directions effectively
   2.3 Using reinforcers
   2.3.1 Labeled, specific verbal praise
2.3.2 Other types of rewards
2.3.3 What behaviors should be rewarded
2.3.4 Telling your child what you are up to

2.4 Shaping
2.4.1 Being attuned to your child’s abilities
2.4.2 Shaping your parenting skills

2.5 Consequences
2.5.1 Using contingency statements
2.5.2 Consistency and flexibility

3. Conclusion (1 hour). COMMITMENT, or Standing for your child. Parents are asked at this time to consider their own commitment to their child. This involves identifying their hopes and dreams for their children, and the specific actions that they need to take to move in that valued direction. They will write letters to their children, expressing their hopes and dreams for their children.
APPENDIX E

VISUAL INSPECTION CRITERIA FOR ACT DAILY DIARY RATINGS
<table>
<thead>
<tr>
<th></th>
<th>Expected change in mean level line</th>
<th>Stability of baseline data (around the mean line)</th>
<th>Expected change in level at intervention</th>
<th>No trend during baseline (slope &lt; .10)</th>
<th>Post-intervention trends in expected direction</th>
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REFERENCES


