ABSTRACT

Feasibility and Acceptability of a Brief Acceptance and Commitment Therapy (ACT) Intervention for Juvenile Offenders

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Juvenile offenders are consistently found to have higher rates of mental illness than non-justice involved adolescents, yet the psychological services offered to these youth tend to be minimal, underutilized and are rarely supported by research. Furthermore, research suggests that keeping juveniles incarcerated for longer periods of time is not associated with reduced recidivism. The current evidence-based treatments for incarcerated adolescents predominantly involve a systems-based approach requiring multiple individual therapy sessions a week for several months at minimum, or are typically conducted in a group format. While these treatments have shown improved rates of recidivism over time, they are time and resource intensive, limited in treatment format, and lack applicability for briefly detained youth. A growing base of research supports the use of Acceptance and Commitment Therapy (ACT) for adolescents, which utilizes a transdiagnostic approach to help individuals be more open to experience, stay present,

and engage in value-oriented action. While flexible in format, session-length, and implementation, no study to date has evaluated the feasibility or acceptability of utilizing ACT for juvenile offenders. The current study aimed to investigate 1) the feasibility and 2) the acceptability of conducting a brief ACT intervention for incarcerated adolescents in a short-term juvenile justice center who were awaiting adjudication. Additionally, the study evaluated the intervention's effect on quality of life after a short follow-up period. Thirty-five of 38 (92.1%) juvenile offenders completed the two-session treatment protocol and 21 of the 38 (55.3%) completed the full study through follow-up. Participant ratings and open responses widely supported the intervention as helpful and enjoyable. Ratings from facility staff also broadly supported the research as feasible to adopt as part of the facility's psychological services. Additionally, participants reported a significant increase in quality of life between pre-treatment and follow-up ($t_{(20)} = 3.03$, $p = .007$). While the results of this study provide preliminary support for the use of a brief ACT-informed intervention for juvenile offenders, a randomized controlled trial with a larger sample is needed to evaluate how brief ACT compares to other brief interventions for improving quality of life and rates of recidivism in juvenile offenders.

Feasibility and Acceptability of a Brief Acceptance and Commitment Therapy (ACT) Intervention for Juvenile Offenders

by

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A Dissertation

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CHAPTER ONE

Introduction

According to the most recent juvenile arrest statistics, the FBI database estimates that over 1.3 million arrests were made for juveniles ages 10-17 in 2012 (United States Department of Justice, 2012). While this number is nearly one million fewer than the estimated number ten years prior, working with these adolescents to provide them with beneficial treatment and rehabilitative services remains a challenging goal. Incarcerated youth exhibit a great deal of risk factors for mental illness, demonstrate a wide variety of psychological problems and tend to receive inconsistent clinical services while detained (Underwood, Philips, von Dresner, & Knight, 2006). Despite decades of research on the development and implementation of psychological care within juvenile correctional facilities, brief psychotherapy interventions have scarcely been investigated for this population. Given its comprehensive theoretical model and growing research base as a promising psychological intervention for adults and adolescents experiencing a range of medical and mental health issues, Acceptance and Commitment Therapy (ACT; Hayes, Wilson, & Strosahl, 1999; Hayes et al., 2006) appears well-suited to address the unique needs of juvenile offenders. Since ACT has yet to be utilized with an adolescent criminal offender population, the current study aims to investigate the feasibility of implementing a brief ACT intervention with pre-adjudicated adolescents.

Juvenile Offender Demographics and Utilization of Psychological Services

Research focused on juvenile delinquency has consistently found that a relationship exists between the development of psychopathology and involvement in the juvenile justice system (Cauffman, et al., 2007; Ford, Chapman, Mack, & Pearson, 2006; Vincent, Grisso, Terry, & Banks, 2008), such that adolescents in adjudicated settings experience significantly higher rates of mental health and substance use disorders compared with their non-involved peers. Studies evaluating the prevalence of mental disorders among juvenile offenders have found that between 40% and 78% of these adolescents meet criteria for at least one diagnosable mental health disorder, a stark contrast to a prevalence range of 17% to 22% of adolescents not involved in juvenile justice systems (Abram et al., 2003; Cauffman & Grisso, 2005; Lederman, 2004; Teplin et al., 2002). Common psychopathological conditions in juvenile offenders include forms of depression and anxiety, obsessive-compulsive disorder, post-traumatic stress disorder, disruptive behavior disorders, and substance use disorders (Grisso, 2008; Teplin et al., 2002). Additionally, adolescents who meet criteria for externalizing psychopathology, including disruptive behavior disorders and substance use disorders, are at a particularly high risk for both entering the juvenile justice system and recidivating at increased rates as they get older (McReynolds, Schwalbe, & Wasserman, 2010; Wasserman et al., 2010).

According to a national report of 2014 census data describing over 1800 juvenile residential facilities (United States Department of Justice, 2016), publicly-operated facilities (vs. privately-operated) held just over 70% of the justice-involved youth nation-wide, even though they make up only 54% of existing residential facilities. These publicly-operated facilities included detention centers, shelters, diagnostic centers, group

homes, wilderness camps, training centers, and residential treatment centers. Almost all facilities provided individual therapy (over 95%), about 85% percent of facilities offered group therapy or counseling, and about 47% of facilities offered family therapy or counseling. With respect to statistics on assessment and treatment of substance abuse, 74% of facilities screened all youth, 14% screen some youth and 13% did not screen any youth, highlighting that a significant minority of adolescents are not thoroughly assessed. While the literature documenting the types of services received within juvenile justice systems is sparse, an earlier nation-wide study of 141 juvenile institutional facilities (Young, Dembo, & Henderson, 2007) found that GED programming and drug and alcohol education were the most common types of services provided for juvenile offenders. Substance abuse treatment was most prevalent in state-funded residential settings (66%), followed by community corrections facilities and local detention centers (20%). Furthermore, it was reported that very few residents attended the services, such that only 15% of residents were actually receiving the help offered. Taken together, this research suggests that youth involved in the juvenile justice system tend to be located in publicly-operated facilities, which offer a limited range of psychological services that may not even be utilized by incarcerated youth. Further, the services provided are rarely evidence-based (Greenwood, 2008; Henggeler & Schoenwald, 2011).

Although detained youth may not receive the most comprehensive services, the Pathways to Desistance study (2011) provides several insightful findings regarding longitudinal outcomes of serious adolescent offenders. Data suggested that a length of stay between 3 and 13 months did not affect future rates of arrest, but factors such as quality of services, degree to which services were matched with needs, and positive

institutional experience were identified as important elements of care that may be more likely to reduce re-arrest. Additionally, the presence and severity of substance use disorder (SUD) were correlated with self-reports of arrests that are non-substance related, thus targeting SUDs helps reduce both types of offending. The most notable reductions in offenses and substance use came from 90-day treatment programs with significant family involvement, although such programs only made up one quarter of surveyed treatments options.

In sum, this brief review indicates that incarcerated adolescents have higher rates of mental health issues compared to the general population and there is variability in the amount and type of psychological services provided in juvenile justice systems. Additionally, utilization of services tends to be low, suggesting that an even smaller percentage of adolescents actually benefit from the help provided. Further, research suggests that only 5-9% of juveniles eligible for psychological services receive evidence-based treatment (Greenwood, 2008; Henggeler & Schoenwald, 2011). Since keeping juveniles incarcerated longer does not appear to reduce recidivism, there exists a need for a brief, systematically-implemented, standardized treatment within juvenile justice systems to address the diversity of mental health issues in this challenging logistical context.

Brief Psychotherapy Interventions for Adolescents

Given the prevalence of psychopathology in juvenile offenders (Grisso, 2008; Teplin et al., 2002) and the need for brief, evidence-based treatments for this population, the extant literature for non-justice involved youth with similar presenting psychopathology (primary mood disorders, substance use, etc.) serves as the foreground

from which to consider applicable psychotherapy modalities and formats. Review of this literature suggests that a range of individual and group cognitive-behavioral approaches ranging from three to eight sessions (30 minutes to one hour each) have been shown to significantly decrease self-reported depression and anxiety (Bella-Awusah, Ani, Ajuwon, & Omigbodun, 2016; Crawley et al., 2013; Kristjansdottir et al., 2019; Lusk & Melnyk, 2011). Brief cognitive- behavioral interventions have also been shown to reduce frequency of substance use and drug use behavior (Ogel & Coskun, 2011; Patton, Connor, Sheffield, Wood, & Gullo, 2019; Winters, Fahnhorst, Botzet, Lee, & Lalone, 2012). These studies demonstrated small to medium effect sizes using a combination of psychoeducation, cognitive restructuring, behavioral activation, mindfulness, mood monitoring and coping skill practice. Treatment settings included schools, outpatient clinics and residential settings, highlighting that brief psychotherapy interventions are of clinical interest across treatment environments. Review of these interventions suggests a lack of consistency in defining session frequency and in utilization of therapy components. Additionally, the range of treatment settings used in these studies reduces generalizability of the nature and size of cognitive-behavioral treatment effects. Based on the small sample sizes and outcome measurement of these studies, research assessing brief cognitive-behavioral therapy for mood disorders continues to work on establishing feasibility and efficacy across diverse study samples.

Brief interventions (BIs) for substance abuse as defined by the Center for Substance Abuse Treatment (1999) are typically between one and four session in length and may be stand-alone treatments or used in conjunction with ongoing care. Using this framework, the most consistently research brief interventions for adolescent substance

abuse are motivational interviewing (MI: Miller & Rollnick, 2013) and motivational enhancement therapy (MET), a four-session brief intervention original designed to treat alcohol abuse. Brief MI and MET are thought to be particularly useful for adolescents due to a nonconfrontational style, an ability to normalize ambivalence toward change, and respect for the client's values and choices (Mehlenbeck & Wember, 2009; Naar-King, 2011). These interventions aim to elicit intrinsic motivation and commitment to a specific goal through core MI skills (partnerships, acceptance, compassion and evocation) and processes (engaging, focusing, evoking and planning). Recent meta-analyses of motivational interventions for substance abusing adolescents using alcohol, marijuana and tobacco have found mixed results. MI was found to be 10-20% more effective than no treatment (Lundahl & Burker, 2009), and MI showed a small effect of behavioral change across MI interventions (Jensen et al., 2011), yet one review found that only two-thirds of 39 reviewed MI studies had statistically improved outcomes (Barnett, Sussman, Smith, & Rohrbach, 2012),. The most recent systematic review of MI interventions addressing illicit drug use found a significant effect on improving attitude change but failed to find a statistically significant effect on reducing drug use behaviors in a sample of ten high quality MI studies (Li, Zhu, Tse, Tse, & Wong, 2016). Thus, while motivational interviewing interventions have been thoroughly researched with substance abusing adolescent populations, brief MI has not consistently demonstrated reductions in drug use behavior.

Developing evidence-based brief interventions for adolescents remains an ongoing area of research development. While some support exists for treating depression, anxiety, and substance use using cognitive-behavioral and motivational interventions,

these treatments are challenged to simultaneously address diverse psychopathology, treatment settings, cultural factors and ethical issues (among many other considerations) using a standardized approach. Based on the interventions reviewed here, brief interventions for juvenile offenders would benefit from a standardized treatment approach utilizing a blend of cognitive-behavioral and motivational interviewing techniques aimed at collaboratively working with the adolescents to develop self-determined areas of change. The present study aims to examine the feasibility and acceptability of a brief third-wave cognitive behavioral intervention, based on Acceptance and Commitment Therapy, in a juvenile justice-involved population.

Existing Treatment for Juvenile Offenders

Over the last several decades, many studies, literature reviews and meta-analyses of psychological treatment for juvenile offenders have been published in an effort to provide the most current research findings, often focusing on the extent to which treatment reduces rate of recidivism. For the purpose of the current study, a brief history of established treatments for incarcerated juveniles will be reviewed, beginning with treatments with the largest base of empirical support and working through the existing research evidence for newer modalities.

A recent review (Leve, Chamberlain, & Kim, 2015) of psychological treatments for adolescents detained within the juvenile justice system indicates that there are several family and system-oriented evidence-based practice (EBPs) therapies found to be efficacious: Functional Family Therapy (FFT), Multidimensional Family Therapy (MDFT) and Multisystemtic Therapy (MST). Functional Family Therapy (FFT: Alexander & Parsons, 1982) is a family-based prevention and intervention program that

often targets substance use, behavioral problems and violence. Individual treatment (8-12 sessions) and family-involved treatment for less severe cases (up to 30 sessions) typically occurs over a 3-month period or longer. Studies of FFT in juvenile offender samples suggests that youth tend to show decreases in anti-social behavior (Waldron et al. 2001) and both felony (35%) and violent crime (31%) at 12-month follow-up when treated by highly-adherent FFT therapists (Sexton & Turner, 2011). Multidimensional Family Therapy (MDFT; Liddle et al., 2004) also involves multiple systems (adolescent, parents, family, and extrafamilial), targets similar issues to FFT, (e.g. substance abuse, behavior problems, etc.) and varies in session length and frequency (1-3 sessions a week for 3-6 months) depending on the treatment setting of the adolescent (outpatient, residential, correctional, in-home, etc.). Outcomes from MDFT studies indicate that adolescent substance abusers showed reductions in substance use and self-reported internalizing and externalizing problems (Dakof et al., 2015; Liddle et al., 2001, 2004, 2008, 2009; Rigter et al., 2013). In one study comparing MDFT to CBT-based group therapy for adolescent substance abuse over 12-16 weeks, both treatment conditions were effective although those treated with MDFT self-reported fewer delinquent behaviors (d = .31), lower general mental distress (d = .54), and were less likely to be arrested (23% vs. 44%) or placed on probation (10% vs. 30%) at 12-month follow-up (Liddle, Rowe, Dakof, Henderson, & Greenbaum, 2009). Originally designed for the treatment of incarcerated youth with antisocial behavior and children who are risk for out-of-home placement, Multisystemic Therapy (MST: Henggeler et al., 1996) is yet another systems-centered approach that targets multiple life domains (school, peers, family, environment) and is often implemented over a 3-6 month (or longer) time line with multiple therapists, often

reaching 60 to 100 hours of direct client and family contact (Henggeler & Schaefer, 2016; Leve, Chamberlain, & Kim, 2015). As reviewed by Leve et al. (2015), MST possesses a solid research base of RCTs that demonstrate various positive outcomes, such as reducing rates of juvenile offending, rates of substance use, out of home placements, and mental health problems.

Several meta-analyses have suggested that group cognitive behavior therapy (CBT) for juvenile offenders is also an effective treatment and has been found to reduce rates of recidivism about 20 to 30% compared to control groups (Lipsey et al., 2001; Pearson et al., 2002; Wilson et al., 2005), across a breadth of offender types, outcome variables, and study designs. As distorted cognitions are highly characteristic of chronic criminal offenders (Beck, 1999), especially in areas such as misinterpretation of social cues, schemas of dominance and self-entitlement and deficient moral thinking (Lipsey, Chapman, & Landenberger, 2001), CBT aims to help offenders identify and challenge maladaptive thoughts that trigger problematic behavior so that they can engage in healthier, safer actions. In an effort to examine moderators of treatment outcomes for incarcerated youth, Landenberger and Lipsey (2005) conducted a more recent meta-analysis which ultimately concluded that a general CBT approach (vs. a specific "brand name" CBT program) is responsible for overall positive effects on recidivism. More specifically, programs that targeted anger control and interpersonal problem solving enhanced treatment effects, while inclusion of victim impact and behavior modification elements reduced treatment effects. In a meta-analysis of 20 studies of varying methodological rigor looking at the effects of group CBT treatment for adult and juvenile offenders versus untreated controls, the CBT group participants were less likely to

recidivate by 16% (Wilson, Bouffard, & Mackenzie, 2005). Overall, the meta-analysis suggested that CBT-oriented groups that focused on cognitive restructuring and moral reasoning showed positive reductions in recidivism.

A review of cognitive-behaviorally based programs for offenders suggests that these therapeutic interventions tend to be implemented in a group format and use recidivism (type, frequency, etc.) as the predominant outcome measure. However, there is much room for individual psychotherapy in the juvenile justice system. In a small pilot RCT comparing individual CBT to treatment-as-usual for juvenile offenders with a range of mental health issues, Mitchell and colleagues (2011) found that those treated with CBT demonstrated marginally greater reductions in self-reported externalizing problems. This study indicates promise for individual psychotherapeutic approaches to treating juvenile offenders. Future studies employing cognitive-behavioral programs on a larger scale with individual clients may yield further support, particularly in settings where offenders may not have access to systematic group treatment. Additionally, several authors have criticized the use of recidivism as the main variable by which progress is measured in studies with incarcerated populations (Currie, 2012, Losel, 2001, & Serin, 2009). These researchers highlight that recidivism is a limited measure of improvement and progress should be measured more comprehensively by assessing treatment program targets such as anger management, social competence, and quality of life, among others. Additional focus on and publication of these outcome measures in meta-analyses for the cognitive-behavioral treatment of incarcerated populations would serve to elucidate the treatment components that are important for predicting recidivism.

Among other cognitive-behavioral therapies, Dialectical Behavior Therapy (DBT: Linehan, 1993) has shown some initial promise as a treatment for juvenile offenders. Several literature reviews support the applicability of DBT for incarcerated adolescents, touting its components of emotion regulation, interpersonal effectiveness, distress tolerance and mindfulness as fitting modules for the various presenting issues displayed in juvenile corrections (Berzins & Trestman, 2004; Quinn & Sera, 2009; Rotter & Carr, 2011). Early studies of DBT with justice-involved adolescents found that the treatment was feasible and effective in reducing some problem behaviors yet did not significantly reduce suicidal acts, aggression, or noncompliance in females over a 10-month period (Trupin, Stewart, Beach, & Boesky, 2002). A small pilot study of DBT for incarcerated male adolescents found that DBT was effective in reducing anger and violence compared to a Treatment-As-Usual control group over the course of 18 months (Evershed et al., 2003). A residential DBT program for mentally ill incarcerated youth was piloted for several years, yielding a 14% decrease in felony recidivism after 36 months compared to previous residential youth who were not systematically treated (Drake & Barnoski, 2006). While the recidivism decrease was not significant at the .05 level, the authors noted that a larger sample size may yield more conclusive results. Most recently, a 16-session DBT-CM (corrections modified) treatment specifically modified for incarcerated adolescents found reductions in aggressive and impulsive behavior, consistent with previous findings (Shelton, Kesten, Zhang, & Trestman, 2011). The authors noted that all DBT skills taught in the intervention had to be extensively adapted to fit the needs of the sample and increase the likelihood of receiving benefit, suggesting that future intervention revisions would help establish a more structured protocol to which study

therapists could adhere and increase the validity of the results. Overall, Dialectical Behavior Therapy varies in length of treatment and demonstrates preliminary support as a treatment option for juvenile offenders, yet more research is needed to explore its fidelity and longer-term outcomes.

While the vast majority of research on effective interventions for juveniles involved in the justice system has been reported via individual treatment studies and summaries of work on specific interventions, Lipsey (2009) argues that previous meta-analyses of interventions have not systematically analyzed general factors associated with treatment program effects, nor have they provided a balanced and well-controlled analysis of differential effectiveness for different intervention modalities. In an updated comprehensive meta-analysis of over 500 independent study samples, Lipsey reviewed interventions based on characteristics of study methods, characteristics of juvenile samples, level of juvenile justice supervision and treatment philosophy using a multiple regression analysis to assess variance explained in recidivism effect sizes. Of note, the main three categories of interventions were comprised of general counseling (n = 185), skill building programs, which include CBT (n = 169) and multiple-coordinated services (n = 138). The results indicated that therapeutic philosophies such as skills-training (CBT, behavior training, etc.), especially in highly delinquent youth, and interventions that are skillfully implemented are most effective with incarcerated adolescents. Interestingly, other factors such as level of juvenile justice supervision, demographic factors and variation in the duration and total number of hours these interventions were not generally related to recidivism.

Given Lipsey's (2009) review, it is worth considering the logistical challenges of treating juvenile offenders who are incarcerated only for a brief period of time. While there are several evidence-based practices and other treatments seeking to build further positive results, the vast bulk of treatment for incarcerated adolescents involves multiple treatment systems and multiple sessions a week for several months at minimum. Considering the diverse needs of youth in juvenile justice systems, especially those who are pre-adjudication, a great need remains for a flexible and time-sensitive therapeutic intervention to begin working with youth to address their presenting issues prior to their release or placement. Based on Lipsey's (2009) finding that intervention quality is statistically more important than intervention quantity and previous work (Lipsey, 1999) indicating that the mean recidivism effect size for routine practice programs is about half that of research programs, it appears that a shorter, high-quality and consistently implemented intervention may be most effective for incarcerated adolescents.

Theoretical Model of Acceptance and Commitment Therapy

Research evaluating the theoretical model and the implementation of Acceptance and Commitment Therapy (ACT; Hayes, Wilson, & Strosahl, 1999) has increased almost exponentially in the past couple decades. Acceptance and Commitment Therapy is grounded in functional contextualism, which views psychological events as ongoing actions of the whole organism interacting in and with historically and situationally defined contexts (Hayes et al., 2006). At its roots, ACT is based on Relational Frame Theory (RFT), a concept that emphasizes the strong relationship between language and derived stimulus reactions. Relation Frame Theory comprises the multiple layers of relational learning that humans use to understand the world around them. A central tenet

to RFT is that language, a human construction, is the vehicle by which we develop cognition as a learned behavior, which alters the effects of behavioral processes and is regulated by the different contextual features of a situation. Without language, this would not be possible. However, RFT recognizes that the verbal processing and reasoning that we derive from language can also lead to unhelpful thought patterns and even psychopathology. While thought patterns cannot be "unlearned," new learning can occur to modify the problematic relational frame (or frames) by highlighting its functional importance and altering one's relationship to the negative condition by focusing on contextual features instead of the content itself (Hayes et al., 2006). Thus, while language allows us to make sense of the world, it also provides us with a medium to develop maladaptive tendencies through interaction with cognition that ACT refers to as psychological inflexibility.

The ACT model of psychological inflexibility takes form as a "hexaflex" or hexagonal diagram that illustrates the six different yet interconnected components: cognitive fusion, experiential avoidance, dominance of the conceptualized past and feared future, attachment to the conceptualized self, lack of clear values and inaction, impulsivity or avoidant persistence. Each construct also has a term to describe its psychologically flexible inverse: defusion, acceptance, contact with the present moment, self as context, values, and committed action, respectively. When combined, these functionally adaptive components of the hexaflex comprise psychological flexibility, which is the ability to fully contact the present moment and the thoughts and feelings it contains without needless defense, and, depending upon what the situation affords,

persisting or changing in behavior in the pursuit of goals and values (Hayes, Luoma, Bond, Masuda, & Lillis, 2006).

Experiential avoidance occurs when an individual is unwilling to stay in the present moment with an uncomfortable experience and takes steps to alter the form or the frequency of an event, even at the cost of personal (physical or psychological) harm (Hayes et al., 1996). Among the population of interest, ACT theory would suggest that incarcerated adolescents engage in drug and alcohol abuse as a form of experiential avoidance, ultimately contributing to their own detriment as they turn to substances as a way to avoid emotional suffering. The antithesis to experiential avoidance is acceptance, which involves an active and conscious effort to embrace the difficult experiences without trying to change their frequency or form. The goal here is to acknowledge the struggle for what it is as a means to let go of the resulting discomfort and move toward flexible, value-based action (Hayes et al., 2012).

Cognitive fusion refers to the development of rigid relational frames through language and cognition, which contribute to maladaptive behavior (Hayes et al., 2006). In connection to behavioral issues, incarcerated adolescents may have very strong beliefs about how they are supposed to act in certain situations, such as thinking that physical aggression is required when threats are made. This rigid thinking style has been associated with mental health problems in children and adolescents (Greco, Lambert, & Baer, 2008). The approach to counteracting cognitive fusion is called "defusion," which is a process that aims to begin changing the way one interacts with or relates to his or her thoughts. This can be implemented by engaging in exercises that reduce the literal quality

of the thought in order to reduce one's believability in or attachment to unhelpful thoughts versus trying to reduce their frequency (Hayes et al., 2012).

Dominance of the conceptualized past and feared future refers to tendency for humans to focus so much on past or future experiences (often accompanied by strong judgments) that they lose touch with the present (Hayes et. al, 2006). To address this issue, ACT proposes that individuals attempt to purposefully make non-judgmental contact with the present moment by being mindful of themselves and their surrounding environment. By being present, individuals will be able to experience the world more directly and with flexible behavior that is more consistent with their values.

Attachment to the conceptualized self, also known as "self as content," refers to how individuals use particular language to shape their perception of themselves, such as by evaluating their demographics, occupation or position in a family (etc.) with or without emotional judgment (Hayes et al., 2006). For example, an incarcerated adolescent may think "I'm a bad person and I always will be" and experience many related painful thoughts and feelings, even acting in a manner consistent with these thoughts and feelings. The core process used to address this form of inflexibility emphasizes the self as a context, or vessel, through which experiences, thoughts, feelings and behaviors occur as compared with being the sum of those elements.

According to ACT, engaging in the four previously noted psychologically inflexible processes contributes to losing sight of what's important and becoming less likely to pursue goals as a means to live out one's values. Thus, when a lack of clear values is intertwined with inaction, impulsivity, or avoidance persistence, individuals will retain their problematic thoughts and behavior patterns. ACT first addresses these

inflexible components by providing education on the nature of values, which are qualities that consist of deliberate, consistent actions that are lived out, not obtained. Beyond value identification, ACT works to help individuals develop more adaptive patterns of behavior in pursuit of their values by identifying specific and concrete short, medium and long-term goals (Hayes et al., 2006). In developing an understanding of psychological inflexibility and the core processes that are used to address them, it is important to remember that these processes largely overlap and do so purposefully for the sake of achieving more comprehensive, longer-lasting change.

Relevant Acceptance and Commitment Therapy Research

As the model of psychological inflexibility has developed, researchers have developed more than fifty measures to assess the constructs of the hexaflex and provide quantitative data to support the need for and use of Acceptance and Commitment Therapy (Batink, Jansen, & Peters, 2015). Measures of psychological inflexibility have been found predict a wide-range of quality of life outcomes in adults, such as general mental health, job satisfaction and job performance, among others (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). Psychological inflexibility has also been found to mediate cognitive coping processes (Kashdan, Barrios, Forsyth, & Steger, 2006) and mediate the effect of ACT interventions (Bond & Bunce, 2000; Flaxman & Bond, 2010). Treatment studies evaluating ACT for adults have been many and far-reaching, as documented in a recent meta-analysis of randomized controlled trials by Ost (2014) which provides support for Acceptance and Commitment Therapy as a probably efficacious treatment for certain medical conditions (chronic pain and tinnitus) and possibly efficacious for multiple forms of psychopathology (depression, psychosis, OCD, mixed anxiety, drug

abuse and work stress) according to the author's application of the criteria for evidence based treatments defined by the APA Division 12 Task Force (Chambless et al., 1996; 1998).

Research utilizing ACT with adolescents, while still very much in a growth stage, continues to expand each year in an effort to catch up to the vast adult ACT literature. As with adults, researchers have developed several measures which assess psychological inflexibility in children and adolescents (i.e. Action and Fusion Questionnaire for Youth; AFQ-Y; Child Acceptance and Mindfulness Measure; CAMM). Unsurprisingly, the CAMM and AFQ-Y are theoretically consistent with adult measures and correlate positively with anxiety, somatization and behavior problems, and negatively correlate with quality of life, social skills and academic competence (Greco, Baer, & Smith, 2008; Greco, Lambert, & Baer, 2011). Murrell's (2006, 2011) reviews of ACT treatment for children highlight an initial handful of theoretical, case and pilot studies which provide frameworks and support for further ACT intervention research for the treatment of anorexia, anxiety, chronic pain, sexual risk behavior and general medical conditions. Hayes and colleagues (2010) also provide an overview of adolescent research, supporting the use of ACT for depression based on a study in which adolescents with chronic pain reported less catastrophizing and lower perceived pain levels (Wicksell, Melin, Leander, & Olsson, 2009).

In the past few years, however, ACT researchers have begun to use methodologically stronger studies to assess treatment effectiveness for improving targeted disorders and mood symptoms. A small pilot RCT (ACT vs. TAU) for adolescents with depression in an outpatient setting found that participants showed

greater improvement in depressive symptoms (d = 0.38) at posttreatment and their global functioning scores favored the ACT condition as well (Hayes, Boyd, & Sewell, 2011) Another small pilot study of a ten session ACT protocol for adolescents experience posttraumatic stress (PTS) found that the treatment yielded large reductions in self-reported PTS and psychological inflexibility as measured by the AFQ-Y (Woidneck, Morrison, & Twohig, 2014). Another pilot study comparing an eight-session school-based group ACT intervention to treatment as usual (TAU) for adolescents screened for depression, anxiety and stress found significant reductions in each psychological construct between two different samples (Livheim et al., 2015). ACT for conduct disorder and impulsivity has also been investigated with adolescents; those who received four 90-minute sessions over two weeks showed reductions in disruptive classroom behavior and increases in desire behaviors during the intervention, as well as reductions in impulsivity and increases in self-control (Gomez et al., 2014). Additionally, these adolescents demonstrated other positive outcomes at the one year follow up, such as abstinence from previous substance use (alcohol, tobacco and marijuana) and any criminal behavior. The most recent reviews of intervention studies with children highlight that while ACT research continues to become methodologically stronger and there is support for its use as an efficacious and effective transdiagnostic treatment approach for various mental health issues with adolescents, more research is needed to assess other psychological problems in different populations with larger samples and even greater methodological rigor (Coyne, McHugh & Martinez, 2011; Swain, Hancock, Dixon, & Bowman, 2015).

In summary, Acceptance and Commitment therapy remains an understudied treatment for children and, to the best of the author's knowledge, no publications have explored the feasibility of conducting ACT with incarcerated adolescents. Two publications came from a study that compared a 16-week ACT group therapy protocol to CBT in drug-dependent incarcerated adult women, one reporting that ACT led to lower percentages of mental disorders post-treatment and higher abstinence rates at 18-month follow-up when compared to CBT (Gonzalez-Mendez, Fernandez, Rodriquez, & Villagra, 2013) and the other reporting that ACT was superior to CBT at 6-month follow-up in reducing drug use and improving overall mental health (Lanza, Garcia, Lamelas, & Gonzalez-Menendez, 2014). More recently, a pilot study comparing 10 sessions of group-based ACT versus treatment as usual in an incarcerated sample of adult males found that ACT administered by novice therapists did not reduce reported levels of psychological inflexibility or certain psychological symptoms (depression or anxiety) but did yield an increase in the Consistency scale from the Valued Living Questionnaire (Eisenbeck, Scheitz, & Szekeres, 2016). While these last two studies show some promise for ACT to feasibly be administered in a group format to a detained adult population and as a potentially superior treatment to CBT for reducing substance use, further research is needed to evaluate the reported findings and investigate if they can be obtained through individually-administered ACT for incarcerated samples. This proposal focuses on an underserved population of incarcerated adolescents, those in short-term detention. Due to the short length of stay, group interventions are not as feasible as individually-administered interventions for these adolescents.

As noted by Eisenbeck and colleagues (Eisenbeck, Scheitz, & Szekeres, 2016), ACT appears to be a fitting and appropriate model of psychotherapy for incarcerated individuals. Psychological issues (avoidance of emotional pain, attentional and focus problems, lack of value-oriented behavior) are both common in incarcerated individuals and are naturally targeted by ACT process (Amrod & Hayes, 2013). The transdiagnostic model of ACT and existing support for its effectiveness even as a brief intervention (Bach & Hayes, 2002) appear promising and adult ACT interventions are increasingly being effectively adapted to adolescent populations (Halliburton & Cooper, 2015) , yet ACT interventions with incarcerated adolescents have not been explored. Instead, some existing evidence-based therapies (FFT, MDFT, MST) for this population are highly time- and resource-consuming, while others have been predominantly administered in a group format (CBT) and require more research support. Another subset of this population is comprised of adolescents who are briefly detained after arrest and are awaiting adjudication or another determination meeting before they are released. The existing treatments do not fit the needs of these juveniles, who are much better positioned to receive brief psychological services while in short-term detention in order to prepare them for their aftercare transition. Similarly, while previous ACT interventions have been successful in group and individual sessions, a brief, individual ACT intervention would be well-suited to the psychological and time-sensitive needs of these detained adolescents. Thus, given the growing body of ACT research and the need for diagnostically flexible, brief and effective psychotherapeutic interventions for incarcerated adolescents, Acceptance and Commitment Therapy presents itself as a suitable treatment to further explore in this population.

Present Study

The overall aim of the current study is to assess the feasibility and acceptability of implementing a two session Acceptance and Commitment Therapy-based intervention for pre-adjudicated adolescents currently detained in a juvenile justice center. This study is the first, to the author's knowledge, to examine the feasibility of implementing brief individually-administered ACT with currently incarcerated adolescents.

Conducting psychotherapeutic interventions with justice-involved youth requires multiple logistical considerations, particularly as related to study recruitment, implementation and retention (Lane, Goldstein, Heilbrun, Cruise, & Pennacchia, 2012). While it is beyond the scope of this article to comprehensively review the range of obstacles encountered when researching delinquent youth, successfully retaining participants throughout treatment protocols and follow-up sessions remains an important focus for researchers given the variability of attrition rates in extant literature (Olver, Stockdale & Wormith, 2011). This issue is particularly problematic given the varied definitions of attrition, treatment dropout, and study noncompletion used in offender research (Nunes & Coronti, 2006; Wormith & Olver, 2002). Furthermore, treatment setting and length of incarceration provide unique logistical challenges for retention, regardless of the offender subpopulation (violent offenders, sexual offenders, etc.). Research evaluating cognitive-behavioral interventions and programs for justice-involved youth illustrates the inconsistent definitions and reporting of retention, especially as meta-analyses tend to focus on recidivism outcome data which often does not require further participant study involvement (Landenberg & Lipsey, 2005; Lipsey, 1999; Lipsey, 2009). In a comparison of CBT and MDFT for drug abusing juvenile offenders,

Liddle et al. (2008) reported consistently high levels of missing follow-up data at discharge (45%) 6-month follow-up (46%) and at 12-month follow-up (39%). A 16-week group format trial of corrections-modified DBT had 12 of 38 participants (31.5%) dropout of treatment due to reasons of being released, choosing to discontinue or transfer to another facility (Shelton, Kesten, Zhang, & Trestman, 2011). Among the two studies completed using ACT with incarcerated populations, the randomized controlled trial of a 16-week group treatment (ACT vs. CBT vs. Control Group) for drug-dependent incarcerated adult women had 23.3% attrition at 6-month follow up (Lanza, Garcia, Lamelas, & Gonzalez-Menendez, 2014) and the pilot study evaluating ten sessions of ACT with adult male criminal offenders showed attrition rates of 44.4% at post-test and 55.5% at three-month follow up (Eisenbeck, Scheitz, & Szekeres, 2016). Given the variability of participant retention rate and type across cognitive-behavior modalities, the current study draws on the results of previous findings in the context of the juvenile justice treatment setting and population characteristics.

As researchers have sought to better understand, organize and conduct behavioral research over the past two decades, it is relevant to clarify how the current study fits within the Stage Model of Behavior Therapies (Onken, Blaine & Battjes, 1997; Rounsaville, Carroll, & Onken, 2001), which was recently expanded by Onken and colleagues (2014). Stage 1 is generally defined by intervention generation and refinement and is comprised of Stage 1A, which includes all activities related to creating a new intervention (manual development, modification, adaptation, refinement, etc.) and Stage 1B, which includes feasibility and pilot testing. Overall, Stage I processes focus on testing the theory behind the intervention in order to understand the mechanism and

principles of behavior change (Onken et al., 2014). As this study's protocol was developed from ACT principles and existing protocols, the current study is classified as a Stage 1B design.

Hypotheses

Given the scope of this research study and the importance of evaluating a novel ACT intervention for juvenile offenders, it was predicted that the treatment protocol would be deemed acceptable by participants as rated by level of treatment satisfaction. Specifically, treatment acceptability and satisfaction were evaluated by two self-report questions, whose respective average ratings will be equal to or greater than a score of 3 on a scale of 1 to 4. Secondly, it was predicted that the treatment protocol would be feasible to complete as evaluated by treatment dropout rate, which was determined by the number of participants who were available to continue the protocol (e.g., still detained and available when the PI approached them to complete session #2) yet declined to complete session #2 or could not complete the second session for any reason), was expected to be less than 25%. In addition to participant-focused data evaluating acceptability and feasibility, an exploratory hypothesis predicted that facility staff ratings (using the same rating scale) and open-ended feedback regarding the research would support the treatment intervention as appropriate for the population and capable of feasibly being implemented in the facility. An exploratory hypothesis also predicted that participants' Total Score on the PedsQL 4.0 Teen Report would not significantly decrease between pre-treatment and follow-up.

CHAPTER TWO

Methods

Participants

Given the recruitment of a vulnerable population, data was only collected from participants for whom the researcher received both parental consent and participant assent. A total of 41 juvenile offenders provided assent and had consent provided from a parent or guardian. Three juveniles were discharged prior to beginning the study and 38 individuals participated in the study. The majority of participants identified as male (81.6%) and African-American/Black (31.3%), with an average age of 14.63 years (*SD* = 1.3 years). Additional demographic information collected showed that participants were, on average, in eighth grade, 34% had been in special education classes, 34% had been held back in school at least one year, 66% had worked with a counselor or therapist outside of the detention facility, and 29% had been told that they had some kind of mental health issue. See Table 1 for descriptive statistics of the juvenile offenders who were enrolled in the study compared with those who completed the entire study. See Table 2 for descriptive statistics characterized by demographic variables collected from the juvenile offender criminal records database.

Of the 38 initial participants, 17 did not complete the full study due to various reasons and thus were not included in the final analyses. Reasons for not completing all study sessions included discharge prior to completing the treatment protocol (n = 1), transfer to another facility prior to follow-up (n = 6), inability to reach participant or

schedule follow-up session by phone (n = 5), missed appointments within follow-up timeframe (n = 3) and lack of interest completing the study (n = 2). Of note, 35 participants (92%) successfully completed the treatment protocol, indicating that the remaining 14 juvenile offenders were lost to follow-up issues. This topic will be further explored in the discussion section with regard to study feasibility.

Measures

Quality of Life

The Pediatric Quality of Life Inventory™ 4.0 (PedsQL: Varni, Seid, & Kurtin, 2001) for ages 13-18 is a 23-item questionnaire was used to assess adolescent quality of living as measured by physical, emotional, social and school functioning. Items are rated on a 5-point Likert-type scale ranging from a score of 0 ("Never") to 4 ("Almost Always") are then transformed into a 0-100 scale to evaluate the total score for all items answered, with higher scores indicating better quality of life. The PedsQL 4.0 adolescent self-report total score has shown good internal consistency in adolescent samples (α = .88). In the current study, the PedsQL demonstrated good internal consistency at baseline (α = .89) and excellent internal consistency at follow-up (α = .92).

Intervention Acceptability

Treatment acceptability and satisfaction were measured by asking participants to rate their willingness to engage in the same type counseling in the future ("If the counseling I completed was offered again, I would be willing to try it") and their enjoyment of the intervention ("I enjoyed the task and activities that I completed during the counseling sessions"). Participants also rated the ease of the intervention ("The tasks

Table 1

Demographic characteristics of study participants

Variable	All Participants *n* = 38		Partial Completers *n* = 17		Completed FU *n* = 21	
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*
Age (years)	14.6	1.3	15.0	1.2	14.3	1.4
Gender	*N*	%	*N*	%	*N*	%
Male	31	81.6	12	70.6	19	90.5
Female	6	15.8	4	23.5	2	9.5
Gender Fluid	1	2.6	1	5.9	0	0
Race/Ethnicity	*N*	%	*N*	%	*N*	%
Caucasian/White	11	22.9	4	23.5	7	33.3
Af. American/Black	15	31.3	9	52.9	6	28.6
Asian/Asian-American	1	2.1	0	0	1	4.8
Hispanic/Latino	3	7.9	1	5.9	5	23.8
Native American	1	2.1	0	0	1	4.8
Bi-racial, multi-racial	4	8.3	3	17.6	1	4.8
Held Back in School	*N*	%	*N*	%	*N*	%
Yes	13	34.2	6	64.7	7	33.3
No	25	65.8	11	35.3	14	67.7
Hx of Special Education	*N*	%	*N*	%	*N*	%
Yes	9	23.7	3	17.6	15	71.4
No	20	76.3	14	82.4	6	28.6
Hx Counseling/Therapy	*N*	%	*N*	%	*N*	%
Yes	25	65.8	11	64.7	14	67.7
No	13	34.2	6	35.3	7	33.3
Hx of MH Diagnosis	*N*	%	*N*	%	*N*	%
Yes	24	63.2	11	64.7	13	61.9
No	14	36.8	6	35.3	8	38.1
Employed	*N*	%	*N*	%	*N*	%
Yes	3	7.9	1	5.9	2	9.5
No	35	92.1	16	94.1	19	90.5

Table 2

Study participants' criminal record demographics

Variable			Partial Completion *n* = 17		Completed FU *n* = 21	
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*
Times Detained	3.6	3.0	4.2	3.3	3.1	2.6
Criminal Offenses	7.3	8.7	9.7	11.4	5.5	5.4
Days detained at TOP	9.1	10.0	13.3	12.8	5.8	5.0
Lifetime days detained	39	45.7	40.8	46.4	37.5	46.2
Lifetime Placements	.34	.63	.41	.80	.30	.50
Days in placements	39.0	87.6	60.0	120.2	22	44.0

*TOP = Time of participation.

Intervention Acceptability

Treatment acceptability and satisfaction were measured by asking participants to rate their willingness to engage in the same type counseling in the future ("If the counseling I completed was offered again, I would be willing to try it") and their enjoyment of the intervention ("I enjoyed the task and activities that I completed during the counseling sessions"). Participants also rated the ease of the intervention ("The tasks and activities from the counseling sessions were easy to complete") and their experience with the study therapist (e.g. "The counselor helped me figure out what is important to me right now"). Responses were recorded using a scale ranging from 1 (Strongly Disagree) to 4 (Strongly Agree) with higher ratings indicating greater overall treatment satisfaction and acceptability. Qualitative data were recorded through participants' open-responses to one question about the purpose of the counseling sessions and one question eliciting feedback about their participation experience overall. The term "counselor"

was used in the follow-up questionnaires to be consistent with the title used in the facility to refer to a mental health provider.

Additionally, the feasibility and acceptability of the treatment protocol was further measured by asking detention center staff to rate six statements with regard to the study's implementation compliance with security regulations, scheduling and communication needs ("The researcher complied with the facility's security regulations"), suitability for the facility's psychological services ("I think the research treatment would be feasible to adopt as part of the facility's provided psychological services") and the study therapist's clinical etiquette with participants, as shown by proper care of juvenile offenders and attention to safety concerns ("The researcher demonstrated respect and proper care of juvenile offenders"). Responses were recorded using a scale ranging from 1 (Strongly Disagree) to 4 (Strongly Agree) with higher ratings on the questions indicated greater overall treatment satisfaction and acceptability. Qualitative data was recorded through staff participants' open-responses to one question about their experience collaborating with the study therapist and one question eliciting feedback about the study's integration with the facility structure and needs.

Procedure

The current study was approved by a university IRB and the state facility in which it was conducted. For an illustration of the study procedures, see Figure 1. The study therapist approached parents and guardians during the detention facility's visitation hours to gain consent for their child's participation in the study. Separately, juvenile offenders were approached while detained to gain their assent for the study. Both parties were clearly informed that the minor's participation would only take place if both consent and

assent were gained independently and without coercion. During the first session, participants completed baseline questionnaires (15 minutes) and one hour of Acceptance and Commitment Therapy-based tasks. At the end of the session, the study therapist discussed with the participant when he or she would be willing to meet for the next session, at minimum at least one full day later. In the second session, participants completed an additional one-hour session of ACT-based tasks and filled out a study acceptability questionnaire. Both treatment sessions were conducted in a supervised visitation room in the facility. Careful planning was involved to complete the first two sessions as quickly as possible to maximize the likelihood of completion given that these short-term detention juveniles were often released within two weeks of detainment, on average (Q. Baack, personal communication, June 16, 2017). Between two and four weeks after the second intervention session was been completed, participants were contacted via the information they provided during the consent process and asked to return to the facility to complete the follow-up questionnaires evaluating quality of life and study acceptability. The two-to-four week timeframe was used because it provided enough time for most juvenile offenders to be released from detention and return to the facility for an initial meeting with a probation officer or other service provider. All follow-up sessions were conducted in an office adjacent to the facility's counseling supervisor's office on the unsecured side of the detention center. Upon completion of the final session, participants were thanked for their time and encouraged to continue working on goals identified in prior sessions.

In addition to collecting feasibility and acceptability data from juvenile offenders, the study therapist gained consent from detention center staff members who were willing to complete a questionnaire to provide feedback.

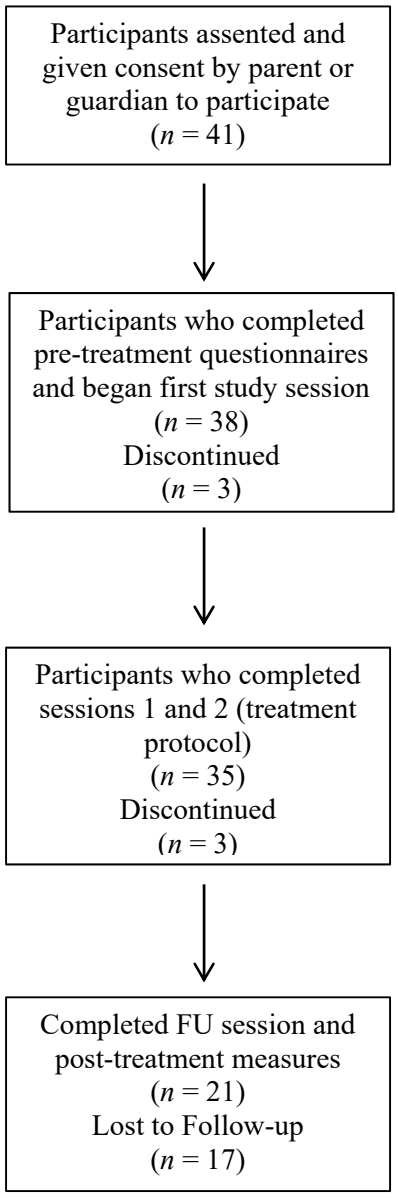

Figure 1. Participant flow diagram.

Data Analytic Strategy

Means were used to calculate average ratings of treatment satisfaction in the treatment sample. Participants' free responses regarding the purpose of the treatment protocol and their experience in the study were individually reviewed for further qualitative information about treatment satisfaction. Similarly, means were calculated for facility staff ratings of treatment acceptability and feasibility, and their open-responses were reviewed for further insight into their ratings. A percentage was calculated for treatment dropout rate, which was defined as participants who voluntarily chose to discontinue the treatment protocol during the intervention or before both sessions were completed. Overall participant attrition was also calculated using a percentage and defined as the participants who began the study but did not complete the follow-up session. A paired-sample *t*-test was used to examine the prediction that there would not be a significant reduction in participants' self-reported quality of life between pre-treatment and intervention follow-up.

CHAPTER THREE

Results

Sample Description

Of the thirty-seven juvenile offenders that completed both treatment sessions, the twenty-one who completed all study sessions (treatment protocol and follow-up session) were used in study analyses. Participants were male and female adolescents who had been arrested and were residing in a short-term juvenile justice center while they awaited adjudication. Criminal charges spanned offenses related to persons (i.e. assault), property (i.e. burglary), illicit substances (i.e. possession, distribution, etc.), public order (i.e. disorderly conduct), status (as due to being of minority age), and technical violations in accordance with the state's juvenile justice department. There were no differences in race ($\chi^2_{(6)} = 7.41$, $p = .284$), age ($t_{(36)} = 1.57$, $p = .683$), or grade in school ($\chi^2_{(5)} = 3.18$, $p = .672$) between full completers and partial completers. Full completers were also found to have a lower frequency across multiple collected incarceration demographic variables as compared to those that did not finish the study. More specifically, juvenile offenders that completed all study sessions had 26% fewer arrests (*ns*), 43% fewer total criminal charges (*ns*), 8% fewer days detained in their lifetime (*ns*), 27% fewer lifetime placements in residential treatment facilities (*ns*), 64% fewer days in placements (*ns*), and 56% fewer days detained at the time of their participation ($t_{(36)} = 2.47$, $p = .018$). See Table 2 for demographic variable means and standard deviations. Juveniles at the facility followed a weekday schedule that included taking online academic courses during school

hours and recreational activities (time in the gym and in the "day room" community area of their holding block) in the afternoon. The weekend schedule included visitation hours on Saturdays, at least one hour in the gym, and ample day room time. All interactions between the research therapist and participants were supervised by a juvenile security officer outside the therapy room.

Feasibility and Acceptability

The attrition rate for the overall study was 44.7%, indicating that just less than half of the participants who began the treatment protocol did not complete the follow-up session. Participants were primarily unable to complete the study due to being transferred to another facility prior to the completing the follow-up session or because they could not be reached by phone to schedule the follow-up session within the two-to-four week timeframe allotted. Reasons for participant discontinuation and corresponding percentages are shown in Table 3. Treatment dropout rate was 7.9% in the study, indicating that the vast majority of participants who began the study completed both treatment intervention sessions. All participants who completed both treatment sessions did so within six days and the majority (71.4%) completed treatment sessions on consecutive days. On average, participants who finished the study completed the follow-up session 22 days after the treatment protocol ($M = 21.9$, $SD = 6.4$).

Participants' ratings of the treatment, the study therapist and the study as whole (i.e. study acceptability) were averaged across treatment protocol completion and follow-up. These ratings are provided in Table 4. The hypothesized ratings of study acceptability evaluated willingness to complete the same treatment in the future and satisfaction with completed treatment activities and yielded average ratings of 3.7 ($SD = .46$) and 3.7 (*SD*

= .48), respectively, on rating a scale from 1 (Strongly Disagree) to 4 (Strongly Agree). Means of self-report responses ranged from 3.7 to 3.9, indicating an overall high level of agreement of study acceptability.

Table 3

Reasons for participant discontinuation

Variable	Participants without FU (n = 17)	
	N	%
Transfer to another facility prior to FU	6	35.3
Inability to schedule FU session by phone	5	29.4
Missed FU appointment within allotted timeframe	3	17.7
Lack of interest in completing study	2	11.8
Discharge from facility prior to treatment completion	1	5.8

All open-ended responses inquiring about the purpose of the treatment sessions and participants' overall experience were recorded and transcribed by the study therapist. Responses regarding the purpose of the treatment were individually evaluated for any language describing a therapeutic process at work and how those processes would benefit the participant. In other words, the questions aimed to elicit whether the juvenile offenders were able to recall aspects of the treatment rationale and the accuracy of their understanding, if present. Given the open-ended nature of the question, the study therapist used a conversational style to reflect answers and ask for elaboration without leading participants' responses.

Participant responses about the purpose of treatment session varied widely in length, depth and accuracy of ACT theory (if highlighted). Responses regarding participants' experience in the study often highlighted study task preference, ease of

completion, and level helpfulness. Qualitative review of participant responses to open-ended questions will be further elaborated upon in the discussion section. To demonstrate the variability in responses received, several answers from each question from different participants are paraphrased below.

Question 1: What was the purpose the counseling sessions you completed?

> Answer 1: Um, to figure out thoughts and feelings….and um, gather goals and how to complete them. Not just focus on just one thought, think about all the thoughts….to try and make better decisions.
>
> Answer 2: I don't know. Work on how to control my thoughts.
>
> Answer 3: To understand that everybody has feelings and emotions that come to them, bad or good. But it's best to think about them and not just push them about away. If you think about it, they'll just float away, they won't just linger in your mind and stay there forever. They might not even come back if it's one of those easy thoughts…just think about a better solution.
>
> Answer 4: For me to focus on my problems. Not to throw them away or nothing, but to think better about them.
>
> Answer 5: To help me get through the problems of me thinking of my family when I was in here.

Question 2: Tell me about your experience completing the two counseling sessions. Any information you are willing to share will be helpful.

> Answer 1: I'd say it was easy to complete. I'd recommend it to anybody who wants to figure out their thoughts a bit better and be able to able to gather them. It was really beneficial to me. That's about it. It was easy to imagine my environment and the stream and the room, having thoughts pass through, being able to recognize all of them and see which ones are the most important and which ones are least important.
>
> Answer 2: Nothing was really hard. I liked the mint, the finger trap and the thing with the cards. It was helpful to talk about it, you need to tell somebody this stuff.
>
> Answer 3: It was a good learning experience. You talked and made sure I understood everything. The only thing I disliked was how easy it was. The finger trap was good because I got to think about it, but some stuff like the mint was just boring. Just describing it, I get that it makes you think harder about something, but I think there are different things you can think harder about, not just describing a mint or a rubix cube or a table. When bad thoughts come to my mind,

I don't just need to think about something else, I might just think about them for a little a bit.

Answer 4: It was good, because it helped me get out of the problems that I had, helped me with the problems so I didn't have the problems no more. When we got comfortable in the chair and closed our eyes to think, I used to always think of my brother and it hurt me a lot because he got sent away. But when I started coming into the counseling, you helped me get over it because you helped me let them out.

Answer 5: The exercises were easy. But the feelings and thoughts that come with it, it's hard to overcome those and just let them flow by, to not stop thinking about them forever but just know that they exist and it happened. The Chinese finger trap was helpful because…I guess the moral is that you can get trapped in a hole on the outside and you just need help from yourself…you need to help yourself get out of your own hole that you might have put yourself in. Need to get yourself together and pull your way out. Everything made sense in the exercise, you actually have to think about the exercises and do the exercises to understand for it not to be difficult. I feel like no help is difficult…they are there to help, and if there are exercises then be open-minded about it.

Table 4

Average participant ratings of study acceptability

Variable	*Mean (SD)*
If the counseling I completed was offered again, I would be willing to try it	3.7 (.46)
I enjoyed the tasks and activities that I completed during the counseling sessions.	3.8 (.46)
I liked the counselor who led the counseling sessions.	3.9 (.32)
The tasks and activities from the counseling sessions were easy to complete.	3.7 (.48)
I feel like the counselor understood my thoughts and feelings.	3.7 (.51)
The counselor helped me figure out what is important to me right now.	3.7 (.46)
The counselor took his time to make sure I understood what he was saying.	3.9 (.30)

*$n = 21$

Facility staff average ratings of the study's feasibility and acceptability by question are shown in Table 5. Rating averages calculated for staff perspective on the

study ranged from 3.8 to 4.0 on rating a scale from 1 (Strongly Disagree) to 4 (Strongly Agree). Although only nine facility staff were interviewed, three questions received a unanimous rating of 4, indicating complete agreement that the researcher complied with security regulations, demonstrated proper care of participants and communicated any participant safety concerns.

Question 1: What was your experience collaborating with the researcher?

> Answer 1: I would say positive overall. You obviously spent a lot of time preparing for this and ensuring that everything would be as seamless as possible and it showed during the collaboration. There were only two occasions where I had to anything, and that was when probation officers came in asking who is that guy and why is he talking to my kid. I'm not saying this was the researcher's problem, it might have been as the collaborative effort between the researcher and the agency that we could have done better communicating with the probation officers. But for the most part, a very positive experience.
>
> Answer 2: It's been a great relationship. Having an understanding about what we're doing was very helpful. The researcher showed great respect for safety and security of clients. He followed the guidelines with staff and clients. I never saw any issues about when he was here working with clients. The researcher showed respect to both clients and staff, and the clients held him in high regard.
>
> Answer 3: The researcher was very forthcoming with information. He explained in detail what the study was for, what was needed and did a very thorough job with that. There were no complaints at all from youth. All in all, it's a very good thing to do and hopefully something that can continue.

Question 2A: What parts of the research study worked well within the facility? 2B: What parts of the research did not suit the facility's routines or needs? 2C: What parts of the study (methods, logistics, etc.) could be improved?

> Answer 1: A) I can't identify anything that didn't work well. The plan was so thorough, all the t's were crossed and the I's were dotted before the study ever began. I feel like it was a really seamless process. I hardly ever heard anything about the study from other staff members and in my opinion that means that everything was running exactly as it should. You were in, you were out, did exactly what you needed to do and did not cause any disruption in the facility. It worked exactly as it should have. B) No, absolutely not. C) Any time you're working with kids on an outpatient basis, the logistical question is always going to be 'are they going to follow through and is the parent going to allow them to do so?' Either, by taking time out of their day to provide the transportation or

actually having the transportation. Getting kids into the facility when they are not being detained will always be the question, no matter what we're doing. No issues getting kids in from what he heard, never brought to my attention, therefore I can only ascertain that no one had a problem with it. I think the fact that you were able to get so many kids in for the FU sessions was a testament to the work you were doing, because if the kids or the parents didn't believe in it or feel like it was helpful or useful or didn't trust you, I guarantee they wouldn't have come back in. So whatever you were doing with those kids and families obviously left an impression on them because you were able to get the numbers.

Answer 2: A) The researcher showed active participation with clients. The kids can come to booking (location of sessions) to open up, and I saw kids involved. The kids' attitudes were much different when they left sessions. The researcher served kids well, served facility well. He also carried himself well, came with honesty and understanding of kids. He was upfront, caring, and gave them an understanding to benefit from therapy. B) I don't think so. It's not often we have somebody present frequently enough to give counseling. C) I couldn't see anything that should be changed. The researcher followed all safety and security guidelines. The researcher's understanding of protocol was key. A quieter environment would have given a more private environment for therapy sessions to improve focus and participation.

Answer 3: A) The one on one with the youth was most important, them willing to open up about different facets of their lives, provide some unmet needs, and discuss it with relatives. I saw that the youth were very open and comfortable with the researcher. B) Everything was done accordingly. The research did not interfere with any routines at all. The kids were looking forward to meeting with researcher. C) I don't think any improvements are needed based on how well the interactions went with the kids. If anything, it should be a regular part of the programming. The weekends were conducive because it's quieter on Friday, Saturday and Sunday.

Quality of Life

For participants who completed all study sessions (n = 21), a paired-sample t-test and descriptive statistics for self-reported quality of life scores for session one and follow-up are shown in Table 7. There was a significant difference between self-reported overall quality of life between session one and follow up with participants rating their quality of life as higher at follow-up than at the conclusion of session one. A power

Table 5

Facility staff ratings of study feasibility and acceptability

Variable	*Mean (SD)*
The researcher complied with the facility's security regulations.	4.0 (.00)
The research study did not interfere with the daily routine of the facility.	3.9 (.32)
The researcher demonstrated respect and proper care of juvenile offenders.	4.0 (.00)
I think the research treatment would be feasible to adopt as part of the facility's provided psychological services.	3.8 (.42)
The researcher informed appropriate staff of any safety concern as indicated by self-report forms or verbal self-report.	4.0 (.00)
The researcher collaborated effectively with facility staff to conduct the study according to protocol.	3.9 (.32)

*$n = 9$

analysis revealed that there was adequate power (.82) to detect the medium effect size (d = .66) associated with the PedsQL increase. Review of means for PedsQL individual scale scores revealed that no scales were lower at follow-up than at the end of session one. Additional paired-sample t-tests for the individual scale scores within the PedsQL revealed that the significant increases were in the Emotional Functioning (p = .002) and Physical functioning scales (p = .017), yielding medium and small effect sizes, respectively. Analyses of the differences in individual PedsQL subscales between session 1 and follow-up are provided in Table 6. The sample was then stratified by follow-up completion status for further analysis, as about half the sample (n = 11) completed the follow-up session after being discharged from the facility and the remaining half completed follow-up while still incarcerated. Paired-sample t-test revealed that participants who completed follow-up after being discharged reported a significant increase in quality of life ($t_{(10)} = 2.65$, p = .024) while those still incarcerated did not ($t_{(9)}$

= 1.56, p = .154). A post-hoc power analysis using the G*Power program (Faul & Erdfelder, 1998) found, however, that both subsets of the participants who completed follow-up had insufficient power (less than 80%) to meaningfully detect differences in quality of life. For individual PedsQL subscale score changes respective to participants' follow-up completion status, see Tables 7 and 8.

Table 6

Analysis of quality of life between Session 1 and FU (full sample)

Variable	Session 1	Follow-up	
	Mean (SD)	*Mean (SD)*	*Statistics*
PedsQL – Total Score	1765.5 (347.5)	1941.7 (332.7)	$t_{(20)} = 3.03$, $p = .007$
PedsQL – Physical Functioning	676.2 (131.5)	728.6 (124.6)	$t_{(20)} = 2.61$, $p = .017$
PedsQL – Emotional Functioning	354.8 (109.1)	419.0 (87.3)	$t_{(20)} = 3.61$, $p = .002$
PedsQL – Social Functioning	406.0 (103.4)	441.7 (73.9)	$t_{(20)} = 2.02$, $p = .056$
PedsQL – School Functioning	328.6 (112.2)	352.4 (125.0)	$t_{(20)} = 1.14$, $p = .278$

*n = 21.

Table 7

Analysis of quality of life between Session 1 and FU (discharged participants)

Variable	Session 1	Follow-up	
	Mean (SD)	*Mean (SD)*	*Statistics*
PedsQL – Total Score	1659.1 (395.8)	1900.0 (378.3)	$t_{(10)} = 2.65$, $p = .024$
PedsQL – Physical Functioning	640.9 (155.4)	700.0 (150.4)	$t_{(10)} = 1.73$, $p = .114$
PedsQL – Emotional Functioning	315.9 (114.7)	409.1 (91.7)	$t_{(10)} = 5.04$, $p = .001$
PedsQL – Social Functioning	390.9 (112.0)	438.6 (82.4)	$t_{(10)} = 1.63$, $p = .134$
PedsQL – School Functioning	311.4 (130.1)	352.3 (108.1)	$t_{(10)} = 1.20$, $p = .258$

*n = 11.

Table 8

Analysis of quality of life between Session 1 and FU (incarcerated participants)

Variable	Session 1	Follow-up	
	Mean (SD)	*Mean (SD)*	*Statistics*
PedsQL – Total Score	1882.5 (255.5)	1987.5 (287.3)	$t_{(9)} = 1.56$, $p = .154$
PedsQL – Physical Functioning	715.0 (91.4)	760 (85.1)	$t_{(9)} = 2.11$, $p = .064$
PedsQL – Emotional Functioning	397.5 (89.3)	430.0 (85.6)	$t_{(9)} = 1.12$, $p = .293$
PedsQL – Social Functioning	422.5 (96.1)	445.0 (67.5)	$t_{(9)} = 1.17$, $p = .271$
PedsQL – School Functioning	347.5 (91.6)	352.5 (147.4)	$t_{(9)} = 0.20$, $p = .847$

*$n = 10$.

CHAPTER FOUR

Discussion

Overview

The present study aimed to evaluate the feasibility and acceptability of conducting a brief, novel Acceptance and Commitment Therapy-based intervention for juvenile offenders in detention. It was predicted that participants would fully engage in the treatment intervention with a treatment dropout rate less than 25%. Additionally, this study investigated the acceptability of the intervention as measured by self-reported satisfaction with the study sessions. Further data collected from the detention facility staff provided information of their views on the study's implementation and compliance with facility regulations and needs. An exploratory aim postulated that participants' quality of life would not significantly decrease between the completion of the treatment protocol and the follow up session. Given the vulnerable population participating in this study, great care was taken to adequately characterize the participant demographics in order to lend context to analyses.

Feasibility and Acceptability

As predicted, the treatment dropout rate for the brief ACT intervention was not greater than 25%. The overwhelming majority (92.1%) of participants who began the treatment protocol successfully completed both sessions, suggesting that participants were both able and willing to engage in the intervention. Furthermore, participants

averaged just 1.5 days between treatment sessions and most completed their sessions on successive days, often over the course of a weekend. Weekend access to the participants contributed to the likelihood of participants completing the treatment protocol as court adjudications occurred on Thursdays and Mondays and thus posed a risk to participants becoming discharged before intervention completion during the weekend time frame. Additionally, juvenile offenders did not have a set academic or recreational schedule on the weekend, allowing the researcher greater flexibility in approaching participants to complete sessions. In addition to noting participants' preferences for the timing of session completion, communication with facility staff in also helped maximize the participants' willingness to engage in the second treatment session, as staff routinely provided information about the facility's schedule for recreational time in the afternoons. While some participants verbalized a preference for when they would complete the second session (i.e. not during recreational times), other participants stated that they thought the sessions were a better use of their time than their alternative activities.

While the treatment dropout rate in this study was quite low, 44.7% of participants did not complete the follow-up data collection sessions. The primary reason for study attrition (not completing follow-up) was due to participants (n = 6) being transferred to another facility prior to the follow-up time frame and the study protocol did not designate procedures to reach these participants. Additionally, one participant was discharged from the facility prior to the second treatment session. Considering the nature of the population and the treatment setting, this form of attrition was expected and highlights a need to incorporate study parameters for collecting follow-up data from research participants transferred from short-term detention. The second most frequent

reason for participants not completing follow-up was due to difficulty communicating with participants and parents (or guardians) to schedule the session. Although the research therapist had two primary avenues of reaching participants who had been discharged from the facility (calling provided telephone numbers or communicating with probation officers if given permission), neither were very effective methods of communicating with participants. Provided phone numbers were either inactive or had full voicemail boxes, or multiple voicemails were left without receiving a response. Messages left with probation officers with the intent to learn when a participant would return for the first monthly appointment post-discharge were also unsuccessful. Similar to the issue of communication, three participants missed their scheduled follow-up appointment and subsequently fell outside the allotted follow-up time window. Collectively, study attrition due to participant contact and appointment compliance issues comprised the largest percentage (47%) of participants that did not complete follow-up and should be a focus for future research considerations. Only two participants (11.8%) voluntarily ended their participation prior to completion of the second session (and thus were ineligible for the follow-up session), one of whom articulated a lack of interest committing time to the second session and one of whom voiced discomfort with answering the questionnaires during the first session. Despite the varying reasons why participants did not compete follow-up, the literature suggests that an attrition rate of 20% - 55% is not uncommon in working with juvenile offenders (Eisenbeck, Scheitz, & Szekeres, 2016; Lanza, Garcia, Lamelas, & Gonzalez-Menendez, 2014; Liddle et al., 2008; Shelton, Kesten, Zhang, & Trestman, 2011). Taken together, the treatment dropout and attrition data in this study show that participants overwhelmingly completed the

treatment protocol without issue and primarily did not complete follow-up due to scheduling issues or being removed from the facility, which supports the feasibility of completing the intervention and points to specific focus areas for improving follow-up data collection.

Beyond gaining an understanding of whether the treatment protocol was a feasible intervention, this study sought to evaluate if the intervention would be favorably evaluated by participants. The average ratings participants gave for their satisfaction with the treatment protocol exceeded the prediction (Mildly Agree or higher) and were closer to the top of the scale (Strongly Agree), indicating a high level of treatment acceptability. Furthermore, participants' responses also indicated a high level of agreement with respect to the ease of completing the research tasks and having an overall positive experience with the research therapist. Although participant ratings provided statistical support for the study's hypothesis regarding treatment acceptability, the open response questions lend a much deeper level to the participants' understanding of the sessions and their experience completing the study. In the spirit of gaining comprehensive information, participants were prompted to elaborate on their responses, yielding diverse answers that varied widely in length and depth. Several participants gave cursory "I don't know" responses to the question of purpose. Many participants' responses, however, included language descriptive of cognitive and behavioral theory, specifically highlighting components psychological flexibility from the ACT hexaflex. Some participant responses highlighted aspects of a general cognitive behavioral framework, evidenced by answers about controlling or challenging one's thoughts, while others described a supportive purpose of helping one "be strong" and "get through problems" during their

incarceration. Many participants touched on ACT concepts in their answers, such as acknowledging thoughts and feelings without pushing them away, willingness to open up about difficult experiences (acceptance), the need to take time to pay attention to one's difficult experiences and do so by using mindfulness exercises (contact with the present moment). Additionally, responses described being able to watch one's thoughts float through one's mind and away from oneself (self as context) and identify values and related goals (values and committed action). As seen in the responses quoted previously, some participants' descriptions were quite detailed and consistent with ACT concepts despite receiving just two treatment sessions, suggesting that the content and implementation of the intervention tasks was developmentally appropriate and memorable.

Qualitative responses about the participants' overall experience also highlighted their understanding of the treatment sessions and yielded additional fruitful information about task preference, difficulty and utility. Many participants reported that the sessions were generally helpful and assisted them broadly in areas such as talking about how they thought and felt and learning new coping skills. Some participants identified that certain tasks were challenging (self-as-context exercises, card-sorting task) yet broadly denied that any tasks were too hard to complete, which was consistent with the fact that only a single task ("leaves on a stream") was purposefully skipped by one participant out of all participants who completed both sessions. Despite some participants' feedback that the self-as-context exercises were challenging, those tasks were also frequently selected as ones to practice between sessions and were later identified as being spontaneously used to manage emotional or cognitive distress. The Chinese handcuffs exercise was also

noted as a favorite amongst participants, who described the task as fun challenge to find other ways to get out of being stuck. The quotes listed below provide support for these findings.

> "I actually liked that thing with the two doors, the blank room. I still do it. Sometimes I just get mad and then I think about the thoughts going in one door and out the other. I also liked writing those letters. It was just nice that I did something and when I gave them to my girlfriend and little brother, they were emotionally happy. It made me feel better as a person."

> "It was helpful with the breathing thing…it helped me a lot. I tried it yesterday when I was upset and it helped. I liked when we did the river floating task…the thoughts in my head, put them on the leaf, let them float."

> "With the meditation…I could do the one with the leaves and the river because it had a flow to it. I actually did that meditation when I got out of here like three times 'cause I was worried about so much stuff and took a deep breath and chilled out and watched everything just flow. Afterwards it was still there but I didn't mind it too much mind after twenty minutes."

> "For me, this was to help me express myself in a different way than how I express myself now. What I did with you, I didn't do that with my last counselor. I had my thing, I bottled it in…but you go from the outer core to the inner core, he went straight to the inner core. You can't just do that with me, just come to my demons. You gotta work your way in, I'm not just going to tell you."

The third and fourth quotes above highlight important conceptual components of the treatment that are worth exploring in this qualitative study. In the third response, the participant describes his or her use of the "leaves on a stream" exercise in response to a stressor. First, this signifies that the participant possessed awareness of the distress and the ability to cognitively access a healthy coping skill experience. The participant describes proper use of the skill and indicates further awareness of the continued presence of the thoughts with reduced distress about them. This concise sequence exemplifies at minimum this participant's engagement with acceptance, contact with the present moment and self-as-context, culminating in positioning him or her to take value-

based actions. In the fourth quote, the participant informs the research therapist that he or she was more open in the sessions because of the process of moving from the "outer core" to the "inner core" without trying to immediately address the latter. The participant adds that such a direct approach will not be successful and iterates that work is required to discuss his or her "demons." From a broad therapeutic perspective, it appears that the participant may be attributing his openness to the degree of the alliance with the research therapist and the way in which it was built in sessions. From an ACT perspective, this author would argue that the task type, sequence and implementation provided a foundation and context for this alliance to grow and enable participants to benefit. Although the scope of this study was limited to primary analyses of feasibility and acceptability, this participant's response underscores the potential for ACT-oriented language and tasks to facilitate the critical need of building rapport with a vulnerable population who are generally thought to be treatment resistant. Collectively, participants' responses about their experience completing the treatment protocol suggested that tasks were easy to complete, were generally (and highly, in some cases) enjoyed by the participants and facilitated learning memorable skills and engaging in value-based actions that provided benefit beyond completion of the treatment protocol.

Facility staff ratings of the research study's feasibility were overwhelmingly high, supporting the administrative perspective that the brief intervention was properly implemented according to facility regulations, respect and care of participants were treated as paramount, and a brief, standardized intervention could be incorporated as part of the facility's routine psychological care. Responses to open-ended questions about staff experience collaborating with the researcher further supported the self-report

ratings, highlighting the researcher's preparation, communication, and collaboration as characteristics that allowed the research to be successfully implemented without disruption to the facility. Staff specifically called attention to the flexibility of the research to accommodate staff and participant schedules, inform all essential parties (staff, participants, parents/guardians, etc.) of logistics, and address any issues (safety, etc.) that arouse during sessions. Responses from staff unanimously denied that the research interfered with the facility's routines or needs and staff presented several ideas for improving the research going forward. Suggestions for improvement included using enhanced methods for informing the entire facility about the ongoing research activities, incentivizing discharged participants to return for follow-up and utilizing a quieter and less public space for therapy sessions.

Perhaps of equal or even greater importance than staff perceptions of study feasibility, however, were the staff observations that the juvenile offenders actively participated in the treatment sessions and demonstrated an improved attitude afterward. As one staff member stated about the research, "It helped us with different clients, especially with clients we couldn't work with. They had a better outlook…kids who you met with responded better afterward." Another response captured a similar perspective: "Whatever it is, it seems you came at an appropriate time. It helped challenging clients calm down … they do better after your sessions." These responses lend further support to the hypothesis that a brief, standardized intervention would not only be feasibly conducted with juvenile offenders in short-term detention, but that these adolescents would willingly participate and benefit from the treatment sessions.

Understanding which interventions are both feasible and acceptable for use with juvenile offenders serves a crucial role in developing a base of evidence for brief treatments that can be used in short-term correctional facilities, especially when considering the limited services and resources available for the juvenile offender population as a whole (Greenwood, 2008; Henggeler & Schoenwald, 2011; Young, Dembo, & Henderson, 2007). While briefly detained adolescents present a unique opportunity for effective intervention, a paucity of research establishing viable treatment options plagues the extant literature in this field. The data reviewed here suggest that completing two sessions of Acceptance and Commitment Therapy exercises was logistically feasible for juvenile offenders in short-term detention. Ratings and interviews with facility staff also conveyed broad support for the feasibility of conducting a brief, standardized intervention in accordance with facility rules and regulations. Despite high rates of treatment protocol completion, there were significant issues in collecting follow-up data from participants discharged from the facility. Suggestions for improving study methodology were provided by the facility staff and additional considerations reducing study attrition rate will be addressed with the study limitations. The data also support the intervention as acceptable to participants, indicated by a combination of participant ratings and open responses, follow-through with the treatment protocol, and observations from facility staff.

Quality of Life

Commensurate with the scope of this study, it was predicted that there would not be a decrease in quality of life between treatment completion and follow up. Analysis of the PedsQL data concluded support for this hypothesis and also showed that no element

of quality of life was reduced at all, regardless of whether the participants completed their follow-up session after they had been discharged or if they remained incarcerated. To the contrary, quality of life demonstrated improvement by the follow-up session. A closer look at the data revealed that Emotional Functioning and Physical Functioning accounted for most of the improvement, however, only participants who completed follow-up after discharge reported improved Emotional Functioning while those who remained detained at follow-up did not show statistically significant improvements in any category. This finding raises the question of whether the increase in quality of life was due to the treatment, discharge from the facility, or any combination of additional spurious influences not quantified in this study. Review of the mean scaled scores revealed that participants detained at follow-up reported a higher level of quality of life (across scales) at baseline than those who were ultimately discharged, although it is unclear whether demographics, situational factors (e.g. recency of incarceration, nature of pending adjudication, etc.) or other variables account for this difference. Ultimately, this study would have needed a larger sample size to detect meaningful distinctions to help explain this phenomenon. Based on the results from this study, an a-priori power analysis using the G*Power program (Faul & Erdfelder, 1998) indicated that samples of 35 and 15 participants would be needed to detect a medium (d = .5) and large (d = .8) effect sizes, respectively, using a t-test with alpha set to .05 and adequate power of .80.

Limitations and Considerations for Future Research

Research focused on evaluating feasibility and acceptability is methodologically designed to include and frame conclusions in the context of study limitations. It is important to note at the outset of this discussion that juvenile offenders are a vulnerable

population and this study's participants resided in a treatment setting with very limited privacy and resources. Treatment sessions took place in a small room with locked doors and large windows that allowed anyone passing by to witness the participants during sessions. Loud noises commonly echoed throughout the room from activities nearby and voices of staff or other juvenile offenders being booked into the facility, which often required the study therapist to repeat himself. At times, the study therapist paused the session to ask staff to be quieter in order for the participant to engage in treatment appropriately and maintain focus during mindfulness exercises. On other occasions, participants engaged in sessions while eating a meal or needed to briefly speak with a probation officer, thus occasionally requiring breaks from the treatment. As facility staff noted during their interviews, a quieter and more private space may have facilitated greater attention and comprehension of the sessions. Future research must consider how to balance the implementation of research therapy sessions in correctional facilities in order to adhere to regulations and while simultaneously offering a conducive atmosphere for treatment.

Although the vast majority of participants who began the study ultimately completed both treatment sessions, almost half of the participants did not complete the follow-up session. Given the scope of this study, the primary effect of study attrition was the loss of valuable quantitative and qualitative data that could provide insight to study acceptability were lost. Additionally, the study's feasibility must also consider how attrition may have impacted the final sample and thus affected analyses. For example, about one-third of non-completers in this study were transferred to another facility due to the severity of their criminal offenses or to address acute psychological needs. As the

literature has identified racial or ethnic minority status, persistent criminal history, severe psychopathology and substance abuse as predictors of attrition and recidivism (Daly & Pelowski, 2001; Nunes & Cortoni, 2008 ; Olver, Stockdale, & Wormith, 2011), the exclusion of transferred participants from analyses may have resulted in a more treatment-adherent and treatment-response sample. More broadly,, the collected follow-up data cannot be generalized to participants who completed the treatment protocol but not follow-up. Missing follow-up data, though common in working with incarcerated populations, reduces the power needed to detect treatment effects and thus represents an important area of focus for future research. Revised study procedures could first target participant recruitment to obtain a larger initial sample by presenting the research as a treatment option upon entering a detention facility. Regarding follow up data collection, future research may consider incentivizing participation for discharged juveniles, such as by providing credit to community service probation requirements. Incentives may prompt participants and parents to be more responsive to phone calls from researchers, particularly if follow-up appointments can be coordinated with regular probation appointments. For participants who are discharged to other correctional facilities, developing a protocol to send and receive follow-up materials by mail would also minimize attrition. Although other avenues of reaching out to families and juveniles offenders exist (i.e. via a participant's probation officer), researchers must carefully consider how to maximize the autonomy of participants to engage in treatment (independent of parent or guardian consent) so as not to exploit the vulnerability of the population.

There were several other limitations pertinent to study methodology. Outcome measures were solely based on self-report in this study and acceptability measures did not quantify additional content areas such as task difficulty and preference, which could lend insight into which ACT components are perceived to have the most benefit. Additionally, this study's feasibility and acceptability design included a short follow-up window, thus the data do not reflect long-term effects the treatment. Finally, and as an overlying context for discussion, a sole researcher completed the treatment intervention, data collection, data analysis and interpretation of results. Thus, a more methodologically rigorous study design would be needed in future research to manage potential experimenter bias.

Considerations for future research take into account the results of the current study in the context of a Stage 1B model as described in Onken and colleagues' (2014) expanded position on the Stage Model of Behavior Therapies (Onken, Blaine & Battjes, 1997; Rounsaville, Carroll, & Onken, 2001). Per the authors, Stage 1 research includes (but is not limited to) refining and standardizing principle-driven interventions to boost effects and facilitate real-world implementation, culminating in pilot testing to test the theory underpinning the intervention. In order to move to Stage 2 research, promising feasibility and outcome data must exist to support utilizing more advanced study methodology (i.e. a randomized controlled trial or other design) to further test mechanisms, components and theory-derived moderators. A brief summary of the data reveals partial support for feasibility as indicated by a low percentage of treatment dropout and high percentage of overall study attrition, strong acceptability as measured by self-report ratings and responses of participants and facility staff, and support for

increased overall quality of life between session one and follow-up. Collectively, these results suggest that overall feasibility should be established prior to utilizing an advanced the stage model of research. Methodological changes could include bolstering recruitment, implementation and retention efforts, especially considering that the current study's results were obtained by a sole researcher conducting the study sessions and follow-up for the current study within a six-month period. Diversified recruitment efforts on behalf of a research team and the correctional facility (including incentives for participation) would help generate larger treatment samples and lower overall study attrition.

In order to evaluate this study's ACT-informed treatment protocol more comprehensively, a logical methodological next step would be to utilize an RCT design to compare the ACT protocol with an active control condition (i.e. any treatment received by a counselor while detained) and another evidence-based intervention used in juvenile correctional settings, such as cognitive-behavioral therapies emphasizing cognitive restructuring (Chapman & Landenberger, 2001; Lipsey & Landenberger, 2005). For generalizability, the research would need to be conducted with juveniles in short-term detention, although additional Stage 1 designs could be developed from the existing protocol to test dose-response in adolescents residing for longer periods in juvenile correctional facilities. Utilizing methods that have established improved study completion, obtaining a larger sample (35 participants per condition, minimum) would lend sufficient statistical power needed to detect a medium effect size of the treatment on outcome measures and would allow more robust analysis of objective follow-up data across multiple areas such as recidivism (i.e., rates of re-arrest and re-offense, etc.)

academic performance, engagement in recreational activities (sports, volunteering, youth groups, etc.), and completion of probation requirements to help quantify the range and depth of intervention effects. Furthermore, using multiple follow-up time points to track both subjective and objective follow-up data would lend support the reliability and validity of intervention effects.

In the context of the limitations described above, the current study was the first to explore and find support for the feasibility and acceptability of a novel, brief ACT-informed intervention for juvenile offenders. The treatment protocol was built upon the ACT hexaflex and tailored to fit the time constraints of working with briefly detained adolescents in order to provide standardized care to a population which tends to receive limited psychological services that are seldom evidence-based (Greenwood, 2008; Henggeler & Schoenwald, 2011; Young, Dembo, & Henderson, 2007). Brief interventions are an increasing area of research with justice-involved youth (Dembo et al., 2016; Tripodi, Springer, & Corcoran, 2007, Winters & Schiller, 2015) and are essential for juvenile offenders who may only have days within a facility before they are adjudicated (discharged to parents or guardians, released into protective custody, or transferred to another correctional facility or residential treatment center, etc.). As Acceptance and Commitment Therapy is theoretically supported as a transdiagnostic model (Bach & Hayes, 2002) suited to incarcerated populations (Amrod & Hayes, 2013; Eisenbeck, Scheitz, & Szekeres, 2016), this study's positive preliminary feasibility and acceptability results support further, more comprehensive evaluation of brief ACT-informed interventions with juvenile offenders. Future research would do well to expand the study sample size and incorporate the methodological considerations described

previously in an effort to develop an effective ACT-informed treatment aimed at improving the functioning of incarcerated adolescents and ultimately reduce recidivism.

APPENDICES

APPENDIX A

Follow-up Questionnaire

Please circle one number as your response for the following statements about your experience during the two counseling sessions.

Statements	Strongly Disagree	Mildly Disagree	Mildly Agree	Strongly Agree
1. If the counseling I completed was offered again, I would be willing to try it.	1	2	3	4
2. I enjoyed the tasks and activities that I completed during the counseling sessions.	1	2	3	4
3. I liked the counselor who led the counseling sessions.	1	2	3	4
4. The tasks and activities from the counseling sessions were easy to complete.	1	2	3	4
5. I feel like the counselor understood my thoughts and feelings.	1	2	3	4
6. The counselor helped me figure out what is important to me right now.	1	2	3	4
7. The counselor took his time to make sure I understood what he was saying.	1	2	3	4

*Please give this paper back to the counselor for the last questions.

8. What was the purpose of the counseling sessions you completed?

9. Tell me about your experience completing the two counseling sessions. Any information you are willing to share will be helpful.

APPENDIX B

Staff Questionnaire

Please circle one number as your response for the following statements about your experience of the research that was conducted at your facility.

	Strongly Disagree	Mildly Disagree	Mildly Agree	Strongly Agree
1. The researcher complied with the facility's security regulations.	1	2	3	4
2. The research study did not interfere with the daily routine of the facility.	1	2	3	4
3. The researcher demonstrated respect and proper care of juvenile offenders.	1	2	3	4
4. I think the research treatment would be feasible to adopt as part of the facility's provided psychological services.	1	2	3	4
5. The researcher informed appropriate staff of any safety concern as indicated by self-report forms or verbal self-report.	1	2	3	4
6. The researcher collaborated effectively with facility staff to conduct the study according to protocol.	1	2	3	4

*Please give this paper back to the researcher for the last questions.

7. What was your experience collaborating with the researcher?

8. What parts of the research study worked well within the facility? What parts of the research did not suit the facility's routines or needs? What parts of the study (methods, logistics, etc.) could be improved?

APPENDIX C

PedsQL™ – Version 4.0

Directions: On the following page is a list of things that might be a problem for you. Please tell us how much of a problem each one has been for you during the past ONE month.

About My Health and Activities (problems with…)	Never	Almost Never	Sometimes	Often	Almost Always
1. It is hard for me to walk more than one block	0	1	2	3	4
2. It is hard for me to run	0	1	2	3	4
3. It is hard for me to do sports activity or exercise	0	1	2	3	4
4. It is hard for me to lift something heavy	0	1	2	3	4
5. It is hard for me to take a bath or shower by myself.	0	1	2	3	4
6. It is hard for me to do chores around the house	0	1	2	3	4
7. I hurt or ache	0	1	2	3	4
8. I have low energy	0	1	2	3	4
About My Feelings (problems with…)	Never	Almost Never	Sometimes	Often	Almost Always
1. I feel afraid or scared	0	1	2	3	4
2. I feel sad or blue	0	1	2	3	4
3. I feel angry	0	1	2	3	4
4. I have trouble sleeping	0	1	2	3	4
5. I worry about what will happen to me	0	1	2	3	4
How I Get Along With Others (problems with…)	Never	Almost Never	Sometimes	Often	Almost Always
1. I have trouble getting along with other teens	0	1	2	3	4
2. Other teens do not want to be my friend	0	1	2	3	4
3. Other teens tease me	0	1	2	3	4
4. I cannot do things that other teens my age can do	0	1	2	3	4
5. It is hard to keep up with my peers	0	1	2	3	4
About School (problems with…)	Never	Almost Never	Sometimes	Often	Almost Always
1. It is hard to pay attention in class	0	1	2	3	4
2. I forget things	0	1	2	3	4
3. I have trouble keeping up with my schoolwork	0	1	2	3	4
4. I miss school because of not feeling well	0	1	2	3	4
5. I miss school to go to the doctor or hospital	0	1	2	3	4

Citation: Varni, J. W., Seid, M., & Kurtin, P. S. (2001). PedsQL 4.0TM: Reliability and validity of the pediatric quality of life inventory TM version 4.0 Generic Core Scales in healthy and patient populations. *Medical Care, 39*, 800–812

REFERENCES

Abram, K. M., Teplin, L. A., McClelland, G. M., & Dulcan, M. K. (2003). Comorbid psychiatric disorders in youth in juvenile detention. *Archives of General Psychiatry, 60*, 1097–1108. doi: 10.1001/archpsyc.60.11.1097

Amrod, J., & Hayes, S. C. (2013). Act for the Incarcerated. *Forensic CBT* (pp. 43-65): John Wiley & Sons.

Bach, P., & Hayes, S. C. (2002). The use of acceptance and commitment therapy to prevent the rehospitalization of psychotic patients: a randomized controlled trial. *Journal of Consulting and Clinical Psychology, 70*(5), 1129-1139. doi: 10.1037/0022-006X.70.5.1129

Barnett E., Sussman S., Smith C., Rohrbach L.A., & Spruijt-Metz D. (2012). Motivational Interviewing for adolescent substance use: A review of the literature. *Addiction and Behavior, 37*, 1325–1334.

Beck, Aaron. 1999. *Prisoners of Hate: The Cognitive Basis of Anger, Hostility, and Violence.* New York, N.Y.: HarperCollins Publishers, Inc.

Batink, T., Jansen, G., & Peeters, F. (2015). Nieuwe generatie gedragstherapie, nieuwe generatie meetinstrumenten; een overzicht van beschikbare ACT-meetinstrumenten [New generation behaviour therapy; new generation assessment measures; a review of currently available assessment measures]. *Tijdschrift voor Psychiatrie*, *57*, 739-748.

Bella-Awusah, T., Ani, C., Ajuwon, A., & Omiqbodun, O. (2016). Effectiveness of brief school-based, group cognitive behavioural therapy for depressed adolescents in south west Nigeria. *Child and Adolescent Mental Health, 21*(1), 44-50. doi: 10.1111/camh.12104

Berzins, L. G., Trestman, R. L. (2004). The development and implementation of dialectical behavior therapy in forensic settings. *International Journal of Forensic Mental Health 3*, 93–103. doi: 10.1080/14999013.2004.10471199

Bond, F. W. & Bunce, D. (2000). Mediators of change in emotion-focused and problem-focused worksite stress management interventions. *Journal of Occupational Health Psychology, 5,* 156 – 163. doi: 10.1037/1076-8998.5.1.156

Butler, S., Baruch, G., Hickey, N., & Fonagy, P. (2011). A randomized controlled trial of multisystemic therapy and a statutory therapeutic intervention for young offenders. Journal of the American Academy of Child and Adolescent Psychiatry, 50(12), 1220–1235. doi: 10.1016/j.jaac.2011.09.017

Cauffman, E., & Grisso, T. (2005). Mental health issues among minority offenders in the juvenile justice system. In D. F. Hawkins & K. Kempf-Leonard (Eds.), *Our children, their children: Confronting racial and ethnic difference in American juvenile justice* (pp. 390-412). Chicago, IL: The University of Chicago Press. doi: 10.7208/chicago/9780226319919.003.0012

Cauffman, E., Piquero, A. R., Kimonis, E., Steinberg, L., Chassin, L., & Fagan, J. (2007). Legal, individual, and environmental predictors of court disposition in a sample of serious adolescent offenders. *Law and Human Behavior*, *31*, 519-535. doi: 10.1007/s10979-006-9076-2

Center for Substance Abuse Treatment. (1999). Treatment of adolescents with substance use disorders. Treatment Improvement Protocol (TIP) Series, Number 32. DHHS Pub. No. (SMA) 99-3283. Washington, DC: U.S. Government Printing Office

Chambless, D. L., Baker, M. J., Baucom, D. H., Beutler, L. E., Calhoun, K. S., Crits-Christoph, P., et al. (1998). Update on empirically validated therapies, II. *The Clinical Psychologist, 51*, 3-16.

Chambless, D. L., Sanderson, W. C., Shoham, V., Johnson, S. B., Pope, K. S., Crits-Christoph, P., et al. (1996). An update on empirically validated therapies. *The Clinical Psychologist, 49*, 5-18.

Coyne, L. W., McHugh, L. & Martinez, E. R. (2011). Acceptance and Commitment Therapy (ACT): Advance and applications with children, adolescents, and families. *Child and Adolescent Psychiatric Clinics of North America, 20*(2), 379-399. doi: 10.1016/j.chc.2011.01.010

Crawley, S. A., Kendall, P. C., Benjamin, C. L., Brodman, D. M., Wei, C., Beidas, R. S., Podell, J. L., & Mauro, C. (2013). Brief cognitive-behavioral therapy for anxious youth: Feasibility and initial outcomes. *Cognitive and Behavioral Practice, 20*(2), 123-133. doi: 10.1016/j.cbpra.2012.07.003

Dakof, G. A., Henderson, C. E., Rowe, C. L., Boustani, M., Greenbaum, P. E., Wang, W., et al. (2015). A randomized clinical trial of family therapy in juvenile drug court. *Journal of Family Psychology, 29*(2), 232–241. doi: 10.1037/fam0000053

Dembo, R. Schmeidler, J., Wareham, J., Briones-Robinson, R., Winters, K. C., & Ungaro, R. (2016). Impact of brief intervention services on drug-using truant youths' self-reported delinquency and arrest charges: A longitudinal study. *Journal of Child and Adolescent Substance Abuse, 25*(5), 458-479.

Bolton, B., Williams, T., Perrin, S., Atkinson, L., Gallop, C., Waite, P., & Salkovskis, P. (2011). Randomized controlled trial of full and brief cognitive-behavioral therapy and waitlist for paedriatric obsessive-compulsive disorder. *Journal of Child Psychology and Psychiatry, 52*(12), 1269-1278. doi: 10.1111/j.14691469-7610.2011.02419.x

Drake, E. K. & Barnoski, R. (2006). Recidivism findings for the juvenile rehabilitation administration's Dialectic Behavior Therapy program: Final report. Washington State Institute for Public Policy; Olympia, WA.

Evershed, S., Tennant, A., Boomer, D., Rees, A., Barkham, M., & Watsons, A. (2003). Practice-based outcomes of Dialectical Behavior Therapy (DBT) targeting anger and violence, with male forensic patients: a pragmatic and non-contemporaneous comparison. *Criminal Behavior and Mental Health, 13*(3), 198-213. doi: 10.1002/cbm.542

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*, 175-191.

Ford, J. D., Chapman, J., Mack, M., & Pearson, G. (2006). Pathways from traumatic child victimization to delinquency: Implications for juvenile and permanency court proceedings and decisions. *Juvenile & Family Court Journal*, *57*, 13-28. doi: 0.1111/j.1755-6988.2006.tb00111.x

Flaxman, P. E., & Bond, F. W. (2010). A randomised worksite comparison of acceptance commitment therapy and stress inoculation training. *Behaviour Research and Therapy, 48,* 816-820. doi: 10.1016/j.brat.2010.05.004

Gomez, M. J., Luciano, C., Paez-Blarrina, M., Ruiz, F. J., Valdivia-Salas, S., & Gil-Luciano, B. (2014). Brief ACT Protocol in At-risk Adolescents with Conduct Disorder and Impulsivity. *International Journal of Psychology and Psychological Therapy, 14*(3), 307-332.

Gonzalez-Mendez, A., Fernandez, P., Rodriguez, F., & Villagra, P. (2013). Long term outcomes of acceptance and commitment therapy in drug-dependent female inmates: A randomized controlled trial. *International Journal of Clinical Health Psychology, 14*, 18-27. doi: 10.1016/S1697-2600(14)70033-X

Greco, L. A., Baer, R. A., & Smith, G. T. (2011). Assessing mindfulness in children and adolescents: Development and validation of the child and adolescent mindfulness measure (CAMM). *Psychological Assessment, 23*(3), 606-614. doi: 10.1037/a0022819

Greco, L. A., Lambert, W., & Baer, R. A. (2008). Psychological inflexibility in childhood and adolescence: Development and evaluation of the Avoidance and Fusion Questionnaire for Youth. *Psychological Assessment, 20*(2), 93-102. doi: 10.1037/1040-3590.20.2.93

Greenwood, P. (2008). Prevention and intervention programs for juvenile offenders. *The Future of Children, 18*, 185–210. doi: 10.1353/foc.0.0018

Grisso, T. (2008). Adolescent offenders with mental disorders. *Future Child, 18*, 143–164. doi: 10.1353/foc.0.0016

Halliburton, A., & Cooper, L. (2015). Applications and adaptations of acceptance and commitment therapy (ACT) for adolescents. (2015). *Journal of Contextual Behavioral Science, 4*(1), 1-11. doi: 10.1016/j.jcbs.2015.01.002

Hayes, L., Bach, P. A., & Boyd, C. P. (2010). Psychological Treatment for Adolescent Depression: Perspectives on the Past, Present, and Future. *Behavior Change, 27*(1), 1-18. doi: 10.1375/bech.27.1.1

Hayes, L., Boyd, C. P., & Sewell, J. (2011). Acceptance and commitment therapy for the treatment of adolescent depression: A pilot study in a psychiatric outpatient setting. *Mindfulness*, *2*, 86-94. doi: 10.1007/s12671-011-0046-5

Hayes, S. C., Wilson, K. W., Gifford, E. V., Follette, V. M., & Strosahl, K. (1996). Experiential avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology, 64*, 1152-1168. doi: 10.1037/0022-006X.64.6.1152

Henggeler, S. W., Cunningham, P. B., Pickrel, S. G., Schoenwald, S. K., & Brondino, M. J. (1996). Multisystemic therapy: an effective violence prevention approach for serious juvenile offenders. *Journal of Adolescence, 19,* 47-61. doi: 10.1006/jado.1996.0005

Henggeler, S. W. & Schaeffer, C. M. (2016). Multisystemic Therapy: Clinical overview, outcomes and implementation research. (2016). *Family Process, 55*, 514-528. doi: 10.1111/famp.12232

Henggeler, S. W., & Schoenwald, S. K. (2011). Evidence-based interventions for juvenile offenders and juvenile justice policies that support them. *Society for Research in Child Development: Social Policy Report, 25*, 1–20.

Jensen C. D., Cushing C. C., Aylward B. S., Craig J. T., Sorell D. M., Steele R. G. (2011). Effectiveness of motivational interviewing interventions for adolescent substance use behavior change: a meta-analytic review. *Journal of Consulting and Clinical Psychology, 79*, 433–40.

Kashdan, T. B., Barrios, V., Forsyth, J. P., & Steger, M. F. (2006). Experiential avoidance as a generalized psychological vulnerability: Comparisons with coping and emotion regulation strategies. *Behavior Research and Therapy, 9,* 1301-1320. doi: 10.1016/j.brat.2005.10.003

Kristjansdottir, H., Sigurosson, B. H., Salkovskis, P., Sigurosson E., Sighvatsson, M. B., & Sigurosson, J. F.(2019). Effects of a brief transdiagnostic cognitive behavioral group therapy on disorder specific symptoms. *Behavioural and Cognitive Psychotherapy, 47*(1), 1-15. doi: 10.1017/S1352465818000450

Lane, C., Goldstein, N. E. S., Heilbrun, K., Cruise, K. R., & Pennacchia, D. (2012). Obstacles to research in residential juvenile justice facilities: Recommendations for researchers. *Behavioral Sciences and the Law, 30*, 49-68. doi: 10.1002/bsl.1991

Lanza, P. V., Garcia, P. F., Lamelas, F. R., & Gonzalez-Menendez, A. (2014). Acceptance and commitment therapy versus cognitive behavioral therapy in the treatment of substance use disorder with incarcerated women. *Journal of Clinical Psychology, 70*(7), 644-657. doi: 10.1002/jclp.22060

Lederman, C. S., Dakof, G. A., Larrea, M. A., & Li, H. (2004). Characteristics of adolescent females in juvenile detention. *International Journal of Law and Psychiatry, 27*, 321–337. doi: 10.1016/j.ijlp.2004.03.009

Letourneau, E. J., Henggeler, S. W., Schewe, P. A., Borduin, C. M., McCart, M. R., Chapman, J. E., & Saldana, L. (2009). Multisytemic therapy for juvenile sexual offenders: 1-Year results from a randomized effectiveness trial. *Journal of Family Psychology, 23*, 89–102. doi: 10.1037/a0014352

Leve, L. D., Chamberlain, P., & Kim, H. K. (2015). Risks, Outcomes, and Evidence-Based Interventions for Girls in the US Juvenile Justice System. *Clinical Child and Family Psychological Review, 18*, 252-279. doi: 10.1007/s10567-015-0186-6

Li, L., Zhu, S., Tse, N., Tse, S., & Wong, P. (2016). Effectiveness of motivational interviewing to reduce illicit substance use in adolescents: A systematic review and meta-analysis. *Addiction, 111*(5), 795-805. doi: 10.1111/add.13285

Liddle, H. A., Dakof, G. A., Parker, K., Diamond, G. S., Barrett, K., & Tejada, M. (2001). Multidimensional Family Therapy for adolescent drug abuse: Results of a randomized clinical trial. *American Journal of Drug and Alcohol Abuse, 27*, 651–688. doi: 10.1081/ADA-100107661

Liddle, H. A., Dakof, G. A., Turner, R. M., Henderson, C. E., & Greenbaum, P. E. (2008). Treating adolescent drug abuse: A randomized trial comparing multidimensional family therapy and cognitive behavioral therapy. *Addiction, 103*, 1660–1670. doi: 10.1111/j.1360-0443.2008.02274.x

Liddle, H. A., Rodriguez, R. A., Dakof, G. A., Kanzki, E., & Marvel, F. A. (2005). Multidimensional Family Therapy: A science based treatment for adolescent drug abuse. In J. L. Lebow (Ed.), Handbook of clinical family therapy (pp. 128–163). New York, NY: Wiley.

Liddle, H. A., Rowe, C. L., Dakof, G. A., Henderson, C. E., & Greenbaum, P. E. (2009). Multidimensional Family Therapy for young adolescent substance abuse: Twelve-month outcomes of a randomized controlled trial. *Journal of Consulting and Clinical Psychology,* 77, 12–25. doi: 10.1037/a0014160

Liddle, H. A., Rowe, C. L., Dakof, G. A., Ungaro, R. A., & Henderson, C. E. (2004). Early intervention for adolescent substance abuse: Pretreatment to posttreatment outcomes of a randomized trial comparing Multidimensional Family Therapy and Peer Group Treatment. *Journal of Psychoactive Drugs, 36*, 49–63. doi: 10.1080/02791072.2004.10399723

Linehan, M. M. (1993). *Cognitive–behavioral treatment of borderline personality disorder*. New York: Guilford Press.

Lipsey, M. W. (1999). Can rehabilitative programs reduce the recidivism of juvenile offenders? *Virginia Journal of Social Policy & the Law, 6*, 611-641.

Lipsey, M. W. (2009). The primary factors that characterize effective interventions with juvenile offenders: A meta-analytic overview. *Victims and Offenders, 4*, 124-147. doi: 10.1080/15564880802612573

Lipsey, M. W., Chapman, G. & Landenberger, N. A. (2001). Cognitive-behavioral programs for offenders. *The Annals of the American Academy of Political and Social Science, 578*, 144-157.

Livheim, F. Hayes, L., Ghaderi, A., Magnusdottir, T., Hogfeldt, A., Rowse, J. …Tengstrom, A., (2015). The effectiveness of acceptance and commitment therapy for adolescent mental health: Swedish and Australian pilot outcomes. *Journal of Child and Family Studies, 24*, 1016-1030. doi: 10.1007/s10826-014-9912-9

Loughran, T., Mulvey, E.P., Schubert, C.A., Fagan, J., Losoya, S.H., and Piquero, A.R. (2009). Estimating a dose response relationship between length of stay and future recidivism in serious juvenile offenders. *Criminology, 47*(3), 699–740. doi: 10.1111/j.1745-9125.2009.00165.x

Lusk, P., & Melnyk, B. M. (2011). The brief cognitive-behavioral COPE intervention for depressed adolescents: Outcomes and feasibility of delivery in 30 minute outpatient visits. *Journal of The American Psychiatric Nurses Association, 17*(3), 226-236. doi: 10.1177/1078390311404067

McReynolds, L. S., Schwalbe, C. S., & Wasserman, G. A. (2010). The contribution of psychiatric disorder to juvenile recidivism. *Criminal Justice and Behavior, 2*, 204-216. doi: 10.1177/0093854809354961

Mehlenbeck R. S., Wember Y. M. Motivational interviewing and pediatric obesity. In: Handbook of Childhood and Adolescent Obesity. Issues in Clinical Child Psychology. New York, NY: Springer Science and Business Media; 2008, pp. 405–24.

Mitchell, P. Smedley, K., Kenning, C., McKee, A., Woods, D., Rennie, C. E., … Dolan, M. (2011). Cognitive behaviour therapy for adolescent offenders with mental health problems in custody. *Journal of Adolescence, 34*, 433-443. doi: 10.1016/j.adolescence.2010.06.009

W.R. Miller, S. Rollnick, Motivational Interviewing: Helping People Change, third ed., Guilford Press, New York, 2013.

Murrell, A. R., & Scherbarth, A. J. (2006). State of the research and literature address: ACT with children, adolescents, and parents. *International Journal of Behavioral Consultation and Therapy*, *2*, 531-543. doi: 10.1037/h0101005

Murrell, A. R., & Scherbarth, A. J. (2011). State of the research and literature address: ACT with children, adolescents, and parents. *International Journal of Behavioral Consultation and Therapy*, *7*(1), 15-22. doi: 10.1037/h0100921

Naar-King S. Motivational interviewing with adolescents and young adults. New York: Guilford Press; 2011.

Nunes, K. L., & Coronti, F. (2006). *Estimating risk of dropout and expulsion from correctional programs*. (Research Report No. R-177). Ottawa, Ontario, Canada. Correctional Service of Canada.

Ogel, K., & Coskun, S. (2011). Cognitive behavioral therapy-based brief intervention for volatile substance misusers during adolescence: A follow-up study. *Substance Use & Misuse, 46*, 128-133. doi: 10.3109/10826084.2011.580233

Olver, M. E., Stockdale, K. C., & Wormith, J. S. (2011). A meta-analysis of predictors of offender treatment attrition and its relationship to recidivism. *Journal of Consulting and Clinical Psychology, 79*(1), 6-21. doi: 10.1037/a0022200

Onken, L., Blaine, J. D., & Battjes, R. J. (1997). Behavioral therapy research: A conceptualization of a process. In S. W. Hennggeler, A. B. Santos (Eds.), *Innovative approaches for difficult-to-treat populations* (pp. 477–485). Arlington, VA US: American Psychiatric Association.

Onken, L. S., Carroll, K. M., Shoham, V., Cuthbert, B. N., & Riddle, M. (2014). Reenvisioning Clinical Science: Unifying the Discipline to Improve Public Health. *Clinical Psychological Science, 2*(1), 22-34. doi: 10.1177/2167702613497932

Ost, L. (2014). The efficacy of Acceptance and Commitment Therapy: An Updated systematic review and meta-analysis. *Behaviour Research and Therapy, 61,* 105-121. doi: 10.1016/j.brat.2014.07.018

Patton, K., Connor, J., P., Sheffield, J., Wood, A., & Gullo, M. J. (2019). Additive effects of mindfulness meditation to a school-based cognitive-behavioral alcohol intervention for adolescents. *Journal of Consulting and Clinical Psychology, 87*(5), 407-421. doi: 10.1037/ccp0000382

Pearson, F. S., Lipton, D. S., Cleland, C. M. & Yee, D. S. (2002). The effects of behavioral/ cognitive-behavioral programs on recidivism. *Crime and Delinquency 48*(3), 476-496. doi: 10.1177/0011128702048003006

Quinn, A. & Shera, W. (2009). Evidence-based practice in group work with incarcerated youth. *International Journal of Law and Psychiatry. 32*, 288–293. doi: 10.1016/j.ijlp.2009.06.002

Rounsaville, B. J., Carroll, K. M., & Onken, L. S. (2001). A stage model of behavioral therapies: Getting started and moving on from stage 1. *Clinical Psychology: Science and Practice, 8*, 133-142. doi: 10.1093/clipsy/8.2.133

Sexton, T., & Turner, C. W. (2011). The effectiveness of Functional Family Therapy for youth with behavioral problems in a community practice setting. *Couple and Family Psychology: Research and Practice, 1*, 3–15. doi: 10.1037/2160-4096.1.S.3

Shelton, D., Kesten, K., Zhang, W., & Trestman, R. (2009). Impact of a Dialectical Behavior Therapy – Corrections Modified (DBT-CM) Upon Behaviorally Challenged Incarcerated Male Adolescents. *Journal of Adolescent Psychiatry and Nursing, 24*(2), 105-113. doi: 10.1111/j.1744-6171.2011.00275.x

Stout, B. D., & Holleran, D. (2013). The impact of evidence-based practices on requests for out-of-home placements in the context of system reform. *Journal of Child and Family Studies, 22*, 311–321. doi: 10.1007/s10826-012-9580-6

Swain, J., Hancock, K., Dixon, A., & Bowman, J. (2015). Acceptance and commitment therapy for children: A systematic review of intervention studies. *Journal of Contextual Behavioral Science, 4*, 73-85. doi: 10.1016/j.jcbs.2015.02.001

Teplin, L. A., Abram, K. M., McClelland, G. M., Dulcan, M. K., & Mericle, A. A. (2002). Psychiatric disorders in youth in juvenile detention. *Archives of General Psychiatry, 59*, 1133–1143. doi: 10.1001/archpsyc.59.12.1133

Tripodi, S. J., Springer, D. W., & Corcoran, K. (2007). Determinants of substance abuse among incarcerated adolescents: Implications for brief treatment and crisis intervention. *Brief Treatment and Crisis Intervention, 7*(1), 34-39. doi: 10.1093/brief-treatment/mhl017

Trupin, E. W., Stewart, D. G., Beach B., & Boesky L. (2002). Effectiveness of a Dialectic Behavior Therapy program for incarcerated juvenile female offenders. *Child and Adolescent Mental Health, 3*, 121– 127. doi: 10.1111/1475-3588.00022

Underwood, L. A., Phillips, A., von Dresner, K., Knight, P. D. (2006). Critical factors in mental health programming for juveniles in correctional facilities. *International Journal of Behavioral Consultation and Therapy, 2*(1), 107-140. doi: 10.1037/h0100771

United States. Department of Justice. Office of Justice Programs. Office of Juvenile Justice and Delinquency Prevention. (2011). *Highlights from pathways to desistance: A longitudinal study of serious adolescent offenders* by E. P. Mulvey. Washington DC: Government Printing Office. (NCJ 230971)

United States. Department of Justice. Office of Justice Programs. Office of Juvenile Justice and Delinquency Prevention. (2016). *Juvenile residential facility census, 2014: Selected findings* by S. Hockenberry, A. Wachter, and A. Sladky. Washington DC: Government Printing Office. (NCJ 250123)

Varni, J. W., Seid, M., & Kurtin, P. S. (2001). PedsQL 4.0TM: Reliability and validity of the pediatric quality of life inventory TM version 4.0 Generic Core Scales in healthy and patient populations. *Medical Care, 39*, 800–812. doi: 10.1097/00005650-200108000-00006

Vincent G. M., Grisso T., Terry A., & Banks S. (2008). Sex and race differences in mental health symptoms in juvenile justice: The MAYSI-2 national meta-analysis. *Journal of American Academy of Child & Adolescent Psychiatry, 47*, 282-290. doi: 10.1097/CHI.0b013e318160d516.

Waldron, H. B., Slesnick, N., Brody, J. L., Turner, C. W., & Peterson, T. R. (2001). Treatment outcomes for adolescent substance abuse at 4- and 7-month assessments. *Journal of Consulting and Clinical Psychology, 69*, 800–813. doi: 10.1037/0022-006X.69.5.802

Wasserman, G. A., McReynolds, L. S., Schwalbe, C. S., Keating, J. M., & Jones, S. A. (2010). Psychiatric disorder, comorbidity, and suicidal behavior in juvenile justice youth. *Criminal Justice and Behavior, 12*, 1361-1376. doi: 10.1177/0093854810382751

Wicksell, R., Melin, L., Leander, M., & Olsson, G. (2009). Evaluating the effectiveness of exposure and acceptance strategies to improve functioning and quality of life in longstanding paediatric pain – A randomized controlled trial. *Pain, 141*, 248-257. doi: 10.1016/j.pain.2008.11.006

Wilson, D. B., Bouffard, L. A. & MacKenzie, D. L. (2005). A quantitative review of structured, group-oriented, cognitive-behavioral programs for offenders. *Journal of Criminal Justice and Behavior 32*(2), 172-204. doi: 10.1177/0093854804272889

Winters, K. C., Fahnhorst, T., Botzet, A., Lee, S., & Lalone, B. (2012). Brief intervention for drug-using adolescents in a school setting: Outcomes and mediating factors. *Journal of Substance Abuse Treatment, 42*(3), 279-288. doi: 10.1016/j.jsat.2011.08.005

Woidneck, M. R., Morrison, K. L., & Twohig, M. P. (2014). Acceptance and commitment therapy for the treatment of posttraumatic stress among adolescents. *Behavior Modification, 38*(4), 451-476. doi: 10.1177/0145445513510527

Wormith, J. S., & Olver, M. E. (2002). Offender treatment attrition and its relationship with risk, responsivity, and recidivism. *Criminal Justice and Behavior, 29,* 447–471. doi:10.1177/0093854802029004006

Young, D. W., Dembo, R., & Henderson, C. (2007). A national survey of substance abuse treatment for juvenile offenders. *Journal of Substance Abuse Treatment, 32*, 255-266. doi: 10.1016/j.jsat.2006.12.018