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Impact of a Dialectic Behavior Therapy - Corrections Modified (DBT-CM) Upon Behaviorally Challenged Incarcerated Male Adolescents

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Abstract

Purpose—This article reports the findings of a Dialectical Behavioral Therapy- Corrections Modified (DBT-CM) intervention upon difficult to manage, impulsive and/or aggressive incarcerated male adolescents.

Methods—A secondary analysis of a sub-sample of 38 male adolescents who participated in the study was conducted. A one-group pretest-posttest design was used; descriptive statistics and t-tests were conducted.

Results—Significant changes were found in physical aggression, distancing coping methods and number of disciplinary tickets for behavior.

Conclusion—The study supports the value of DBT-CM for management of incarcerated male adolescents with difficult to manage aggressive behaviors.

Introduction

According to a December 2009 Bureau of Justice Statistics report, there were 92,854 youth held in juvenile facilities as of the 2006 Census of Juveniles in Residential Placement, conducted by the Office of Juvenile Justice and Delinquency Prevention (Sabol, West & Cooper, 2009; Sickmund, Sladky, Kang & Puzzanchera, 2008). Of these, approximately 40% are held for violent crimes (criminal homicide, violent sexual assault, robbery, and aggravated assault) and 51% report symptoms of depression and anxiety (Sedlak & McPhersen, 2010).

Increasingly, over the past twenty years, youth exhibiting significant mental health and behavioral problems have come into contact with juvenile justice systems. Studies have

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shown that at least 20% of youth entering the justice system have a mental health problem, with a majority also experiencing a co-occurring substance abuse disorder (Skowyra & Cocozza, 2007; Trupin, Stewart, Beach & Boesky, 2002; Shelton, 2001). These youth pose particular management challenges, as these offenders have particular difficulty adjusting to the rules and routines and are more likely to incur violations and accumulate disciplinary consequences while incarcerated. These youth frequently receive behavioral tickets for how they act including verbal threats, self-harm, refusing to follow directions, disorderly conduct, destruction of property, at times assault; and when placed in segregation cells, will often regress to smearing feces or throwing urine (Quinn & Shera, 2009). Such reported violations are indicative of their emotional, behavioral, and cognitive difficulties. Authors and clinicians agree, that without appropriate treatment, these behaviors are likely to persist, causing distress to the adolescent and adding stress to the correctional environment (Fazel, Doll, & Langsrom, 2008; Berzins & Trestman, 2004).

This paper presents adolescent data from a larger study of adults and youth designed to test the implementation of a dialectic behavior therapy modified for a state correctional system. It was important to examine the data on the youth separately, based upon the belief that youth are different than the adult population and has unique developmental needs. Presented here is the limited literature regarding use of dialectic approaches with incarcerated youth, a description of the intervention, methods and the findings of this secondary data study.

Background

The use of cognitive-behavioral approaches with youth who have challenging behaviors and who have become involved with juvenile justice systems is well supported (Quinn & Shera, 2009; Trupin, et.al., 2002; Skowyra & Cocozza, 2007). Among cognitive-behavioral approaches, dialectic behavior therapy (DBT), designed by Linehan (1993), has shown particular promise for application to corrections populations.

While similar to Cognitive-behavioral Therapy (CBT) with its use of core therapeutic procedures such as problem solving, exposure, skill training, contingency management and behavior therapy, DBT departs from standard CBT in a number of ways. It begins by emphasizing a “dialectical” approach to behavior change, encouraging an individual to accept his or herself as they are in the present within the context of reshaping their cognitions and changing their future behavior (Linehan, 1993). As a general therapeutic framework, DBT attempts to address maladaptive behaviors by teaching emotional regulation, interpersonal effectiveness, distress tolerance, core mindfulness and self-management skills. The application of these skills are coached, encouraged and reinforced. DBT also attempts to engage the individual in therapy, providing motivation and support for change by emphasizing the management of therapy-interfering behaviors and the relationship between the therapist and the client. DBT has been shown to significantly reshape maladaptive cognitions and reduce the incidence of self-destructive behaviors (i.e., self-mutilation, suicide and parasuicidal behaviors), and has become the first empirically supported treatment for borderline personality disorder (Linehan, Armstrong, Suarez, Allmon, & Heard,, 1991; Linehan, Tutek, Heard, & Armstrong, 1994; Rathus & Miller, 2000).

With its clear hierarchy of treatment targets and behavior modification (through functional analysis), DBT is well suited for treatment of many problems characterized by behavior dyscontrol. Individuals with borderline personality disorder have characteristics similar to other difficult-to-treat populations, such as emotional instability, anger management problems, aversive affect, interpersonal dysregulation, self-damaging behavior, cognitive disturbances and rigidity, and self-dysfunction (Linehan, 1993). Because this particular

treatment modality uses a specialized behavioral skills package to target the cognitions behind these behaviors, DBT can and has been successfully modified and adapted to other treatment areas, such as suicidality in adolescents (Rathus & Miller, 2000), substance abuse (Dimeff, Rizvi, Brown, & Linehan, 2000), and forensic inpatients (McCann, Ball, & Ivanoff, 2000).

Berzins and Trestman (2004) describe the application of DBT in the correctional environment which is frequently cited. As with DBT, the aim is to teach a form of dialectical thinking that enables incarcerated persons to problem-solve when in conflict. This protocol typically includes four core modules: mindfulness, interpersonal effectiveness, distress tolerance, and emotion regulation. The protocol addresses the underlying impaired executive cognitive functioning known to play an important role in the etiology of violent and aggressive behaviors (Morgan, & Lilienfeld, 2000).

Yet, there are limited studies in the literature demonstrating the use of DBT with incarcerated adolescents. In a report by Drake and Barnoski (2006), they have shown a 14% reduction in recidivism for their 70% white and 79% female sample (63 youth with 65 youth in the comparison group). In a second study of the effectiveness of DBT upon the behaviors of 22 female (50% white) offenders, Trupin, Stewart, Beach & Boesky (2002) found a significant decrease in serious behavior problems during their 10-month intervention; but suicidal acts, aggressive behavior and class disruptions were not significantly reduced throughout the year when compared to the year prior to the intervention.

Despite the limitations of the published data regarding the application of DBT to the adolescent offender population, and the uneven findings which, at present are in part due to small sample sizes and the challenges of implementing research within secure environments; there is support from studies of use of DBT outside of corrections with the adolescent population that offers impetus to continue in replicating these efforts (Quinn & Shera, 2009). As an example, Nelson-Gray et al. (2006) report 71% of their sample of 32 outpatient adolescent program completers demonstrated clinically significant improvement following use of Linehan's (1993a) skills training manual for treating borderline personality disorder modules.

In a review of the literature conducted by Paschall and Fishbein (2002), these authors clearly demonstrate the relationships between impaired executive cognitive functioning and violent and aggressive behaviors. Because executive cognitive functioning is involved in the planning, initiation, and regulation of goal-directed behavior (Luria, 1980; Milner, 1995) deficits in its function often contribute to poor behavioral self-regulation, social skills, and judgment. Such a deficit or "clinical impairment" may be the result of an injury in the frontal lobes of the brain (Paschall & Fishbein, 2002). However, there are more problematic deficits, those referred to as "subclinical impairments" which are not readily observable or easily diagnosable. These less apparent deficits can be affected by a variety of hereditary, behavioral, and environmental factors such as poor nutrition, alcohol abuse, and exposure to violence which can impact youth physical and psychological development.

The Development Perspective. Several theories have emphasized a developmental trajectory of delinquency (Huizinga, Loeber, & Thornberry, 1993; Loeber et al., 1993; Elliot, Huizinga, & Ageton, 1985). Moffitt (1993) summarized two prototypes for the development of delinquency. The first, the life-course-persistent prototype, originates in childhood with neurodevelopmental variation manifested in cognitive deficits (difficult temperament and hyperactivity) and interact with inadequate parenting, poor family relations, and poverty. As the adolescent transitions to adulthood, the relationship between the individual and the environment gradually becomes characterized by aggression and antisocial behavior that

continues through midlife. The second type, adolescence-limited-offending originates in the social process, begins later in adolescence, and disappears in young adulthood (Moffitt, 2003). The main difference lies in the fact that the preadolescent development for this group was normal, reflecting psychological difficulties that arise from the gap between biological change and the lack of access to mature behavioral options.

The Risk and Protective Factors Perspective. One of the more influential approaches in understanding the reasons for delinquency focuses on identifying which risk factors are associated with elevated levels of delinquent and antisocial behaviors (Herrenkohl, Maguin, Hill et al., 2000). Simply defined, risk factors are those factors that increase the likelihood of a negative outcome, and protective factors reduce negative outcome by means of interacting with risk factors and moderating their effects or by means of direct influence protective factors decreased likelihood of negative outcome (DeMatteo & Marczyk, 2005). The ratio of protective and risk factors changes with age. For example, growing up with a low socioeconomic status or in a dangerous or violent neighborhood is associated with higher rates of offenses and convictions (Farrington, 1998; Loeber & Farrington, 2000). Further, growing up in large aggressive families, with parents with poor parenting skills, exposed to maltreatment and emotional deprivation have all been associated with increased risk for antisocial and delinquent behavior (Kumpfer & Alvarado, 2003; Loeber & Farrington, 1998).

It is particularly important to note that developmental factors rarely operate alone and tend to interact with other environmental factors. Individual risk factors include prenatal and perinatal complications. Psychological and behavioral characteristics that have been identified as risk factors include low I.Q., delayed language development, hyperactivity, impulsivity, restlessness, risk taking, antisocial beliefs, greater negative emotionality, and substance abuse (DeMatteo & Marczyk, 2005; Hawkins et al., 1998; Kashani et al., 1999; Loeber & Farrington, 1998). Despite the importance of the risk and protective factors approach to identifying indicators of delinquency, Rutter (2006) maintains that risk factors and threats alone do not lead to dysfunction and negative outcomes. As an example, growing up with a low socioeconomic status can be related to increased risk for delinquency because of a lack of opportunities for a solid education; because it is associated with parental psychopathology and substance abuse; because of increased risk to exposure to criminal activities; or through its association with negative psychological factors such as low self-esteem and depression. But, for some youth, they seem to beat the odds in the face of adversity.

Social, environmental, and biological risk factors have been identified that help to explain demographic and geographic variation in the prevalence of violent and aggressive behaviors among adolescent youth. Kann et al (2000) found the highest prevalence rates for fighting and weapons among Hispanic and African American high school students and among urban students in a national study. Snyder and Sickmund (1999) report higher rates of violence among males and ethnic minority groups, as well as similar urban geographic variations for weapon carrying, with juvenile murders concentrated in urban areas.

Importance of Coping. There is consensus that adolescence is a significant and distinct period of human development marked by the transition from childhood to adulthood. Between the ages of 11 and 18 a rapid sequence of physical, cognitive, social, and behavioral transformations occur (Friedman, 2000). Coping behaviors are particularly important, given the variety of stressors that may be experienced with achieving these developmental tasks. In addition to the normative changes with which all adolescents need to cope, a large proportion of adolescents cope with serious stressors such as parental divorce, life in poverty, serious medical conditions, abuse and neglect, and parental

substance abuse (Sandler, Wolchik, Mackinnon, Ayers, & Rossa, 1997). Understanding how adolescents cope with serious stressors in their immediate environment is particularly important because adolescents are at an increased risk for negative psychological outcomes such as depression, anxiety, suicide, and other health problems (Boekaerts, 1996) including increased violent and aggressive behaviors.

Like other psychological qualities, coping strategies follow a developmental trajectory (Eisenberg, Fabes, & Guthrie, 1997). Some indicators of coping, such as reactivity and inhibition control are present at birth (Davis & Emory, 1995) and shaped by learning. Learning strategies in adolescence include previous personal experience, peer modeling, perception of personal vulnerability, and social persuasion by others (Ireland, Boustead, & Ireland, 2005). Aldridge and Roesch (2008) developed a typology of minority adolescent coping, and found that three types of coping existed. The first group (44.6%) was those who minimally employed coping strategies and were referred to as low generic copers. Overall, these minority adolescents were psychologically healthy, and although they used their coping strategies sparingly, they were effective at reducing their stress. The second group (48.3%) was those who use active strategies such as planning and were labeled as active copers. Considered the most adaptive of the three groups, these adolescents primarily used acceptance, religion and humor as strategies which would lead to adaptive outcomes. The third group (7.3%) was those who were avoidant or used passive strategies most frequently and are labeled avoidant copers. Interestingly, adolescents within the avoidant coping typology were maladjusted in comparison to the other two groups, characteristically preferring to focus on and vent their emotions and engage is substance use. Although this could be considered adaptive in some circumstances, it is generally considered to result in worse adjustment outcomes and, when combined with substance use, likely to lead to negative health outcomes and risky consequences (Hofstein, 2009). These authors found adolescent avoidant copers engaged in more denial and behavioral disengagement, strategies that have been linked to maladjustment. Aldridge and Roesch (2008) found that the poor conditions of their communities and limitations within their families further supported the use of more avoidant/disengaging strategies relative to the other coping strategies.

Development of interventions for delinquent youth, then, shares the underlying assumption that because at-risk adolescents demonstrate certain less adaptive coping skills, they revert to aggressive or delinquent behaviors and exhibit other emotional and behavioral problems. Traditionally, coping is considered a mediator in the relationship between stressors and physiological and psychological outcomes (Carver et al., 1989). How stressors in the environment influence psychological functioning may depend on the interpretations and reactions of the individual to the stressors, environment or situation. DBT then, focuses onchanging the thoughts and emotions that precede problem behaviors, as well as solving the problems that contribute to problematic thoughts, feelings and behaviors.

Longitudinal studies examining the developmental pathways of youthful offenders have demonstrated that the behavioral manifestations of these exposures are unfortunately seen particularly among males (Hawkins et al., 2000), yet the literature found on use of DBT with incarcerated youth focus primarily upon female incarcerated offenders. This secondary data analysis examines the application of a corrections modified- dialectic behavior therapy among incarcerated adolescent males of mixed races and ethnicities. The need for mental health treatment in corrections for this population is very well documented (Fazel, et al., 2008; Rosenblatt, Rosenblatt, & Biggs, 2000).

Methods

A secondary data analysis was conducted on a subsample of 38 adolescent males to test the hypothesis that participants will show reduced aggression, impulsivity, and improved coping after completing the Dialectic Behavior Therapy-Corrections Modified (DBT-CM) groups. A pretest-posttest one-group design was used. Descriptive analyses were conducted using SPSS version 15.0. A paired sample t-test was utilized to test for mean differences before and after the 16 week intervention with alpha set at p=.05. A chi-square analysis was conducted to assess whether there were any differences between those who completed the intervention (n=26) and those who did not (n=12) based on demographic variables. IRB approval was obtained through the University of Connecticut (IRB # 04-156-2).

Sample

Participants with impulsive behavior problems were recruited for participation from the one facility in the state that holds male adolescent youth committed to the state Department of Correction. Youth were referred as potential participants by correctional facility unit majors and correctional mental health personnel. Those youth referred were those youth perceived by corrections staff to be unpredictable and were those inmates who were difficult to manage as indicated by the high number of behavioral tickets they received. Once voluntary participants were identified, a screening visit was conducted to discuss eligibility for participation in the study protocol. Individuals were excluded from participation if any of the following factors were evidenced: presence of any unstable medical or neurological disorder that would interfere with participation in the protocol or cause additional risk; non-English speaking; less than one year from end of sentence; appearing not to understand the procedures and aims of the study as described on the informed consent form; screening positive for psychopathy, as evidenced by a score of more than 30 on the Hare Psychopathy Checklist-Screening Version (PCL-SV) (Hare, 1991). An individual had the choice to drop out of DBT-CM and/or the interview sessions at any point without penalty or effect on their current status within the state Department of Correction or the care received in that facility. Prior to participation in the DBT-CM intervention, a psychological assessment of the participant's current mental, physical, and emotional state was conducted.

The adolescent sample enrolled during the study period (2004–2006) included 38 adolescent males. Twelve participants were lost to the study. Reasons for attrition were: four withdrew from the group on their own; one was transferred to a different facility, and seven youth were released. A chi-square analysis was conducted to assess whether there were any differences between those who remained in the study. There were no significant differences based on race (χ^2 =5.336, df =4, p=.255), age (χ^2 =3.057, df=4, p=.548), or education level (χ^2 = 4.752, df=4, p=.314).

DBT-CM Intervention

Extensive adaptations to the vocabulary and examples included in the DBT-CM treatment manual were required to increase the likelihood that participants would benefit from DBT (Trestman, Gonillo, & Davis, 2004). Given the higher incidence of reading and learning problems among incarcerated individuals (Samuelsson, Herkner, & Lundberg, 2003; Slaughter, Fann, & Ehde, 2003), the DBT vocabulary was adapted to make it easier to understand, and many pictures were added to increase iconic learning. Numerous examples were changed and added, to reflect the types of situations incarcerated individuals face. In addition to modifying the 'content' of clinical materials to make them appropriate for forensic settings, it was also necessary to tailor the 'form' of clinical materials. For example, participant workbooks were thermal bound, rather than being bound with any metal materials that participants could use to injure themselves or others. Additionally, whenever

the research clinicians required use of some type of object (such as pencils), that object had to be acceptable (approved) according to that correctional facility's safety and security protocol.

The skills training group includes four core modules: mindfulness, interpersonal effectiveness, distress tolerance, and emotion regulation. The mindfulness module focuses on giving attention to the present moment and targets self dysregulation and identity confusion by emphasizing self-awareness. The interpersonal effectiveness module teaches assertiveness, interpersonal skills and conflict resolution. The distress tolerance module focuses on using strategies to tolerate distress, without making it worse by engaging in old impulsive and self-destructive behaviors by teaching distraction and self-soothing techniques. And, the emotion regulation module assists participants in identifying and describing their emotions, accepting their trauma experiences and focusing on being less reactive to them, and then how to increase positive emotions. These four skills modules are designed to increase adaptive behaviors and cognitive abilities while decreasing maladaptive behaviors and cognitions (Berzins & Trestman, 2004).

In teaching each of the DBT-CM skills to incarcerated participants, examples relevant to participants' daily experiences in their correctional facility are used. DBT-CM skills are projected with plans for release to anticipate applications of the skills in their outside lives. The teaching of almost every skill was modified with examples and subtle adjustments to correspond to the correctional setting.

Highly structured DBT-CM groups (16 weeks) were co-led by a team of two research clinicians. If an individual discontinued participation in the DBT-CM protocol for any reason, they could still choose to continue with the research interview sessions (posttest). Prior to participation in the 16-week DBT-CM intervention, a study research assistant met with the participant to conduct an interview using a battery of psychological assessment tools that assessed the participant's current mental, physical and emotional state.

Instruments

The primary outcome was to measure a reduction in aggressive and impulsive behavior and improve coping as measured by pretest-posttest rating collected through semi-structured interview assessments (to eliminate literacy issues and security with pencils) to measure impulsive aggression: (1) the Buss–Perry Aggression Questionnaire (BPAQ), a 29-item, 5 point Likert scale designed to assess four dimensions including physical aggression, verbal aggression, anger, and hostility (Buss & Perry, 1992). Internal consistency for the four subscales and total score range from .72 for Verbal Aggression to .89 for the Total score. Retest reliability over nine weeks ranged from .72 for the Anger subscale to .80 for the Physical Aggression subscale and Total score. (2) Overt Aggression Scale-Modified (OAS-M), a 25-item to assess the severity, type, and frequency of aggressive behavior weighted by severity and frequency. Subtypes include: verbal aggression, physical aggression against objects, and physical aggression against self and physical aggression against others (Coccaro, Harvey, Kupsaw-Lawrence, Herbert, & Bernstein, 1991). Interrater reliability has been demonstrated to be .91 for ratings by two clinical raters for OAS–M Aggression and Irritability. Test-retest reliability within a 1 to 2 week period has been shown to have an intraclass correlation for aggression on Time 1 and Time 2 of .46 and .54, respectively (Suris, Lind, Kashner, Bernstein, Young & Worchel 2005). (3) Brief Psychiatric Rating Scale (BPRS), the Total Score and item 5 (Hostility) were used from this 18-item rating scale designed to assess in severity of psychopathology. Items address somatic concern, anxiety, emotional withdrawal, conceptual disorganization, guilt, tension, mannerisms and posturing, grandiosity, depressive mood, hostility, suspiciousness, hallucinatory behaviors, motor retardation, uncooperativeness, unusual thought content, blunted affect, excitement

and disorientation (Overall & Gorham, 1962). Interrater reliabilities ranged from .82 to .93 with the highest agreement on somatic concern and unusual thought content subscales. (Ligon & Thyer, 2000). (4) Disciplinary ticket information collected from records on participants 12 months prior to starting groups and six months after completing groups (disciplinary tickets are given to inmates when a behavioral offense has been made within the prison facility).

Additionally, a self-report basic demographic questionnaire designed for this study containing questions about age, ethnicity, and socio-economic status was collected. The Ways of Coping Checklist (WCCL), a 33 item Likert scale self-report checklist measures eight different coping styles-confrontational coping, seeking social support, planful problem solving, self-control, distancing, positive reappraisal, accepting responsibility, and escape/avoidance (Folkman & Lazarus, 1988). The typical reliability across subscale scores ranges from .60 to .75 (Rexrode, Petersen & O'Toole, 2008). Lastly, the Positive and Negative Affect Scales (PANAS) were used to measure general positive and negative affect states (Watson, Clark, & Tellegen, 1988). This 20-item scale requires a self-report across five criterion measures: calmness, temperance, two scales of tolerance, and emotionality on a Likert scale. Watson, Clark, & Tellegen (1988) report internal consistency reliability for scales from .86 to .90 for positive affect and .84 to .87 for negative affect. Correlations between the two scales range from −.12 to −.23 indicating independence of the two factors (Huebner & Dew, 1995).

Results

Thirty-eight participants agreed to volunteer and were consented, 12 were lost to the study. Of the 26 participants who remained in the study, all were male with their ages between 16 and 19 years (*M*=17.92, *SD*= .796). Participants' self-reported races included African-American (38.5%), Hispanic (34.6%), Caucasian (23.10%), and other (3.8%); and their education level ranged from grade 8 to 12 (*M*=10.36, *SD*=1.254). Eighty-five percent of these youth reported that they were not married and the remaining 15% reported that they were cohabitating. The family and social networks of these youth were reported by these youth as having up to 7 relatives living in their homes (*M*=3.23, SD=1.728) and 2 friends (*M*=.23, SD=.587), and had up to 40 relatives within a 20 mile radius of where they lived. Sixty-one percent of youth were unemployed, 30.8% employed part-time, and the remaining worked 35 hours a week or more. Eighty-eight percent of youth claimed some religious connection.

Overall health, education and rehabilitation needs as measured by the state Department of Correction risk scores found almost all youth to have some need: 20% of youth with serious treatment need and highest level of supervision; 44% with moderate treatment needs; 32% with mild treatment need, and the remaining 4% with minimal or no needs. Six youth (23.1%) were referred for sex offense treatment. The breakout across needs categories is included in Table 1.

The primary types of crime (offense classification) with which participants were charged were violent, 60% (e.g., use of weapon, physical or sexual assault, manslaughter, or murder) with the remaining charged with nonviolent offenses (e.g., drug possession, larceny, probation violation, or breach of peace). Twenty-three youth (88.5%) were sentenced to less than 5 years, and the others sentenced between 5 to 10 years. None of the participants had a history of escape.

To test the hypothesis that participants will show reduced aggression, impulsivity, and improved coping, after completing the DBT-CM groups: physical aggression as measured

by BPAQ (*t*= 7.576, df=21, *p*=.000) and using distancing (WCCL subscale) as a coping strategy (*t*=2.529, df=9, *p*=.032) showed statistical differences at post-test. There was a significant change in disciplinary tickets from pre to posttest *(t*=2.753, df =24, *p* =.011), indicating that correctional officers observed an improvement in aggressive and impulsive behavior following the intervention. Improved scores, although not significant were found on PANAS Negative Affect, and the Self-Control subscale on the WCCL. Although not significant, these are worth exploring with a larger sample and more rigorous design.

Discussion

As a result of the DBT-CM intervention, a reduction in aggression and a reduction in the number of disciplinary tickets received indicated improved adolescent behavior. The design of the corrections modified modules were designed to be relevant to the participants' daily experiences in their correctional facility. The teaching of almost every skill was modified with examples and subtle adjustments to correspond to the correctional setting. At the same time, youth were helped with projected plans for release to anticipate applications of DBT-CM skills in their outside lives. This finding is similar to other studies of DBT in correctional environments with adolescent populations (Drake & Barnoski, 2006; Trupin et al, 2002). Aggressive and impulsive behaviors were the primary target behaviors for the intervention, and their reduction improves the safety of both the youth and staff and ultimately reduces cost to the system.

The use of distancing as a coping strategy was an interesting finding, particularly as coping strategies had been described in the literature as consisting of behaviors such as distraction, self criticism, substance abuse, blaming others, denial, and wishful thinking (Aldridge & Roesch, 2008). In thinking about the relationship between the high stress environments of the prison, however, the need to distance oneself from the pressure of a stressful situation may take on an adaptive function and may be effective in dealing with short-term stressors. Similarly, within the context of an extremely violent neighborhood; mental and behavioral disengagement coping may be particularly important in maintaining psychological and physical health (Grant et al., 2000). While the complexity of the relationship between the high stress environment, coping and outcome for youth at high risk is debated, the use of substances is not; nor are the effects of chronic exposure to violent environments toward development of negative coping strategies such as blaming others or self, doing nothing, or avoiding others, which act as a conduit to poor psychological outcomes such PTSD, anxiety, depression, and conduct disorder (Dempsey, 2002). Further, Kliewer, Lepore, Oskin, and Johnson (1998) suggested that the use of avoidant coping behaviors at a young age may influence and prevent youth from engaging in positive coping behaviors.

The lack of significant finding for self-control and accepting as ways of coping, and negative symptoms are of interest, as it would be expected that youth would feel better as a result of the intervention. Adolescence under the best of circumstances is a stressful life event, as their biologic and psychological selves attempt to integrate into the whole adult person they are to become. Added to the cumulative effects of the stressors leading to adolescent incarceration, the measures and secondary analytic design may not have been sufficient to detect change on all the variables of interest in this study.

Conclusion

The preliminary results of this study provide support for the continued study of DBT-CM skills training for aggressive and impulsive male adolescent offenders. The improvement seen in physical aggression, distancing coping style and disciplinary tickets are a positive

indication that the 16-week skills training groups continue to be implemented as the evidence based is developed to support the intervention.

Given the limitations of this study, the small sample size, the lack of control group and there is a need to consider use of instruments designed specifically for adolescent populations. Such modifications are likely to increase sensitivity and yield stronger results. Despite these limitations, these findings were encouraging and suggest that program implementation would contribute to a decrease in problematic behavior and improvement in quality of life for participants. Decreasing impulsive and aggressive behavior clearly has indications for youth behavior management within the prison and reduced injury to the workforce. Further, implications for post-incarceration self-management of behavior are long-term outcomes of interest.

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Table 1

Risk Scores for Treatment Planning Needs

Risk Score	Medical	Mental Health	Substance Abuse	Safety/ Violence	Education	Vocational
Minimal/none	42.3% N=11	3.8% N=4	11.5% N=3			
Mild	53.8% N=14	3.8% N=4	23.1% N=6	84.6 N=22	38.5% N=10	23.1% N=6
Moderate		80.8% N=21	34.6% N=9	15.3% N=4	53.8% N=14	65.3% N=17
Serious		11.5% N=3	30.8% N=8		7.6% N=2	11.5% N=3

N=26