

# An Independent Evaluation of Mode Deactivation Therapy for Juvenile Offenders

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Juveniles who commit crimes are likely to exhibit conduct problems in their youth. Persistent and long-term antisocial behavior can be seen in very young children. To treat these children, programs must be designed to meet the needs of them on an individualized basis. Residential treatment, typically, is the answer, but research has shown its ineffectiveness. Longitudinal studies and meta-analyses have shown cognitive behavioral therapy (CBT) to be effective. Mode deactivation therapy (MDT) is a form of CBT based on the theory of a network of cognitive, affective, motivational, and behavioral components that create a personality – “modes.” Modes are activated and create emotional dysregulation and behavioral disorders. In MDT, using a manualized treatment, the therapist reduces symptoms of behavior disorder, physical and sexual aggression, anxiety, and traumatic stress while keeping the juvenile offenders out of long-term, out-of-home placements. This present study examines 39 adjudicated Pennsylvania males (ages ranging from 14 to 17). Using baseline scores and comparing them to post-treatment scores, outcomes are measure and the effectiveness of MDT can be observed. It is important to note that all measures of the DSMD, the CBCL, the Beliefs about Victims, the Beliefs about Aggression, and the JSOP-A show a significant decreases in antisocial behaviors. Additionally, at the one year mark, recidivism rates were 7% and none were personal or sexual offenses.

*Keywords:* Juvenile offenders, Mode Deactivation therapy, recidivism

About 5% of juvenile offenders are responsible for the majority of crimes committed by juveniles (Moffitt, 1993; Mulder, Brand, Bullens, & Van Marle, 2010; Schumacher & Kurz, 2000). This group continues with their criminal careers into adulthood and evolves into committing more serious offenses (Mulder et al., 2010; Moffitt & Caspi, 2001).

Conduct problems are observed early in this group of adolescents (Patterson, 2002). In fact, some of the initial behavioral difficulties are manifested and observed in children as young as two or three years of age (Keenan, 2001; Loeber and Farrington, 2000; Nee & Ellis, 2005). The peer groups of these children are exposed to their deviant attitudes and behaviors and can show a related increase in their own deviancy. Deviancy training often occurs through deviant talk and the bonding and reinforcement of such talk in other children (Snyder, Stoolmiller, Patterson, Schrepferman, Oeser, Johnson, & Soetaert, 2003).

Nee and Ellis (2005) purported that for treatment to be effective, it needs to be responsive to the evolving needs of the child and, later, the adolescent. It is important that interventions for antisocial behavior be dictated by the needs of the clients and be provided at a level of intensity corresponding to the level of disruptive behaviors present. As the problems are solidified, later programs need to target the function of

the antisocial behavior and often can be very intensive (e.g., Thoder, Hesky, & Cautilli, 2010).

Often, the youth with more ingrained antisocial thoughts and behaviors are placed in residential treatment programs by adolescents (Barker, 1998; Underwood, Baggett-Talbott, Mosholder, & Von Dresner, 2008 ). Many of the evidenced based treatments that exist in Residential Treatment Centers (RTC) have been normed on groups with less intense problems than residential youth (Underwood, Baggett-Talbott, Mosholder, & Von Dresner, 2008). In addition, the opportunities for youth in residential facilities to learn inappropriate behavior is high (Barker, 1998). These factors may contribute to why overall, the U.S. Surgeon General Report (1999) residential programs to be ineffective.

Non-behaviorally based residential programs have shown a failure to reduce aggressive and antisocial behavior (Joshi & Rosenberg, 1997). In longitudinal study, by year seven, children discharged from publicly funded RTCs in six states in the United States were either readmitted to mental health facilities (about 45%) or incarcerated in a correctional setting (about 30%) (Greenbaum et al., 1998). That makes the rate of failure approximately 75%. The need for effective residential treatment is critical.

The use of behavioral principles in more intensive programs have been found to reduce aggressive and disruptive behavior (Chen & Ma, 2007). When taken into a psychologically informed context, contingency management systems can have a powerful effect (Andrew, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990). Residential programs based on behavioral principles have had mixed results, but recent re-

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Special thanks to Jack Apsche for his support in providing the data from his work at the Pines Treatment Center. This data is provided one year after Dr. Apsche's leaving the center.

search suggests that they may be helpful in breaking the cycle of violence both in the program and after discharge (Kingsley, 2006). However, the mechanism for change and which adolescents will respond remain unclear (Kingsley, Ringle, Thompson, Chmelka, & Ingram, 2008).

Overall, behavioral and cognitive behavioral programs have been successful in reducing recidivism (Redondo Illescas, Sánchez-Meca and Garrido Genovés & 2001) and misconduct in correctional settings (French & Gendreau, 2006). Several well-conducted meta-analyses have identified cognitive behavioral therapy (CBT) as a particularly effective intervention for reducing recidivism (Landenberger & Lipsey, 2005). Specifically with adolescents, CBT has been identified as an effective approach to treating juvenile delinquency and reducing recidivism (Latessa, 2006; Lipsey, 1999; Pealer & Latessa, 2004; Roush, 2008).

Mode deactivation therapy (MDT) is offshoot of CBT that examines aspects of personality that lead to criminality and delinquency and, ultimately, remediate problematic schemas. MDT is based on the work of Aaron Beck, M.D. Beck (1996) suggests that the model of individual schemas do not adequately address a number of psychological problems. Incorporating this premise, MDT addresses a more global methodology (Apsche & Ward, 2002; Beck, 1996). The concept of modes is defined as a network of cognitive, affective, motivational, and behavioral components that integrate sections of a personality (Beck, 1996). Modes consist of beliefs that contain the specific memories, the system on solving specific problems, and the experiences that produce memories, images, and language that form perspectives (Apsche & Ward, 2002).

These modes can be charged – or activated – to explain the fluctuations in the intensity gradients of cognitive structures. According to Apsche and Ward (2002), “modes are activated by charges that are related to danger in the fear [F0E0?] avoids paradigm” and “the understanding of conscious and unconscious fears being charged and activating the mode explains the level of emotional dysregulation and impulse control” in the targeted population (p. 461). To return these modes to the unexcited phase is the goal of the treatment. MDT has been shown to be an effective treatment for emotional and behavioral disorders, physical aggression, sexual aggression, anxiety, and traumatic stress (Apsche, Bass, & Siv, 2006; Apsche & Ward-Bailey, 2004; Apsche, Bass, Murphy, 2006; Apsche, Bass, & Houston, 2007a; Apsche, Bass, Jennings, Murphy, Hunter, & Siv, 2005; Apsche & Bass, 2006). MDT has shown to be more effective than treatment as usual (TAU) in reducing arguments between family members, displays of anger, and physical and sexual aggression while keeping adolescents out of restrictive, long-term, out of home settings, all the while reducing recidivism (Apsche, Bass, & Houston, 2007). MDT has also been shown to be more effective in treating delinquent children and adolescents that CBT, especially with regards to internal distress, critical pathology, and externalizing aberrant behaviors (Apsche & Ward, 2002).

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## METHOD

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### Participants

The population assessed is a high-risk population and are adjudicated Pennsylvania residents. This population consisted of 39 males between the ages of 14-17 years old.

### Description of Personnel and Staff Training

### Interventions

According to Apsche, Bass, and Houston (2007), MDT “is an individual and family manualized treatment that incorporates treatment strategies from behavioral, cognitive, dialectical, and other supportive psychotherapy approaches” (p. 364). It includes weekly individual or group therapy session. MDT begins with an exhaustive case conceptualization that includes a diagnostic interview, a comprehensive behavioral history and a complete family history. A battery of assessments, dictated by the needs of the individual, are scored and used in the development of the conceptualization. A functional behavior assessment is also included (Apsche, Bass, & Houston, 2007). According to Apsche and Ward (2002), the “case conceptualization helps the clinician examine the underlying fears of the resident” (p. 462). MDT involves imagery and relaxation to enhance cognitive thinking. Balance training follows and the adolescent’s perception and interpretation of informational and internal stimuli are taught. Initially, the imagery is used to reduce external emotional dysregulation. Also important to MDT is the concept of validation, clarification, and redirection (VCR). Validation, defined by Linehan (1993), is the therapist’s ability to uncover the validity within the client’s beliefs; clarification refers to the ability to understand and agree with the truths; and it is important to redirect responses to other, pro-social possibilities on the continuum of truths (Apsche & Ward, 2002).

### Procedure

Staff administered the instruments to the adolescents and their families upon entry. In addition, the families and adolescent were re-assessed at time of discharge.

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## RESULTS

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### Descriptive Statistics

The Behavior Support Program (BSP) at the Pines Treatment Center, uses several assessments to measure the outcomes of their residents. These include the Child Behavior Checklist (CBCL), the Youth Self-Report (YSR), the Devereux Scales of Mental Disorders (DSMD), the Fear Assessment [which is a measure of post traumatic stress disorder (PTSD)], the Beliefs Analysis of Aggression, the Beliefs Analysis of Victims, the Beliefs Analysis of Intimacy, the Beliefs Analysis of Control, the Juvenile Sex Offender Protocol – Adolescent

(JSOP-A), and a reading test. Found below is an abbreviated report of five of the assessments (the CBCL, the DSMD, the Beliefs Analysis of Aggression, the Beliefs Analysis of Victims, and the JSOAP). These results are intended to demonstrate preliminary outcome measures data.

The DSMD has a mean score of 50 and a standard deviation (SD) of 10. It is important to note that any score of 60 is considered significant. Externalizing scores indicate the prevalence of negative overt behaviors or symptoms. Internalizing scores measure negative internal moods, cognitions, and attitudes. Critical pathology is behavior that represents severe disturbances of children and adolescents. The total scale, or T-Score, indicates a conglomerate of all scores. These include general Axis I pathology, delusions, psychotic symptoms, and hallucinations.

All DSMD scores were significantly decreased. Additionally, scores were reduced by or near one Standard Deviation. Specifically, results related to the DSMD Externalizing scores indicate a slight, but negligible, increase in overt behaviors at six months. This might suggest the initial period of adjustment to group living in a residential program. By the 12 month mark, these behaviors were reduced from 54.4 to 48. With regards to internalizing problems, scores, at the six month mark, suggest that many internal symptoms, moods, cognitions, and attitudes were beginning to be aggressed and remediated. This reduction continued to the 12 months mark. Representing a reduction of internal symptoms of one SD from the mean, the score was reduced to 51.8. Examining the DSMD critical pathology scales, scores showed significant improvement with a decrease in scores from 55.9 to 46.4 at the 12 month timeline. These results suggest that the most serious of symptoms were reduced significantly in MDT treatment. The DSMD T-Score represents the composite of the sums of all the aforementioned scores. The total score mean for the BSP was 58.6 prior to the MDT implementation. This score is of a higher value, indicating significant pathology. The reduction of the DSMD total score to 48.5 represents a significant reduction of one Standard Deviation and it reduced to 1.5 under the DSMD mean for the total score.

The CBCL Means and Standard Deviations are divided into three categories. These include internalizing behaviors that measure withdrawn, somatic complaints, and anxiety and depression, externalizing behaviors that measure delinquent and aggressive behavior, and total problems that represent the conglomerate of total problems and symptoms (both internal and external).

All CBCL scores of the BSP residents were reduced by more than one SD from the mean. The significance of the total score being reduced by more than one SD suggests that the residents participating in the BSP. MDT improved to the level of the sample that did not need treatment in the CBCL sample of non-referred children and adolescents. This suggests that the BSP residents significantly improved during their participation in Thought Change. Specifically, the CBCL internalizing problems mean score was 63 on the pre-test. It was 64 at the six month re-test and 53 at the one year re-test time. This represents a significant reduction of internal symptoms

for the residents at 12 months. The CBCL externalizing problems mean score at baseline was 63. It was reduced to a mean of 61 at six months and significantly reduced to 42 at the 12 months. This represents a significant reduction in aggression and delinquent behavior at the 12-month participation period in the Thought Change System program. CBCL total scores were reduced from a mean score of 63 to 47 at the 12-month score. Interestingly, the total score increased from a mean of 63 to a mean of 64 at the six month period. The actual reduction in the score occurred at the 12-month period of the resident's participation in MDT.

The Beliefs about Victims is a 20 question belief assessment based on faulty beliefs about victims of sexual offenses. It represents a measure of cognitive distortions that sex offenders endorse. The Belief Analysis is based on a Likert-like scale of seven items, ranging from totally disagree to totally agree. Baseline scores were 41.32 with a range of 20 to 140. The reduction of more than 50% of these beliefs is significant and helps reduce overall risk. If the child/adolescent can identify, change, and remediate their distorted thinking, they lower their risk of sexual offending.

The Beliefs about Aggression is a 25 question assessment that measures dysfunctional beliefs/cognitive distortions about aggression. The scores ranged from a low of 25 to a high of 175. The reduction from a mean of 69.81 to 31 represents a 44.4% reduction of aggressive beliefs. This is significant in reducing the beliefs and cognitions about aggression which also resulted in a reduction of aggressive behaviors in these individuals.

The JSOP-A is a 23 question risk assessment designed to measure risk factors of adolescent sexual offenders. With a maximum total score of 46 points possible, 1-12 is considered a low risk, 13-27 is considered a moderate risk, and 28+ represents a high risk for re-offending. The reduction of risk, as measured by the JSOP-A, is significant. It is an overall reduction of risk from 28.48 (high risk) to 22.22 (mild-moderate risk). Questions 1 to 13 on the JSOP-A do not change, as they are historical in nature and remain static. Questions 14-23 are risk factors to be remediable to treatment. The BSP mean score was 10.25 on the pre-treatment assessment. This score deduced nearly 60% to 4.86 in the 12-month follow-up assessment.

In regards to Recidivism, at the intake, 60% of the residents displayed anti-social values. Over a four year period, the youth in this study had no felony arrests. Only two (5.13%) had criminal charges during the first six months following their discharge. The overall recidivism rate was 7%. Four of the seven new offenses were drug-related charges. It is important to note that none of the offenses were personal offenses and the sexual offense recidivism rate was 0%.

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## DISCUSSION

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Historically, the first CBT program used in the treatment of juvenile offenders was implemented by the Tennessee Department of Corrections' Intensive Treatment Unit (ITU) (Glick, 2006; Roush, 2008). Largely, practitioners sensed

Table 1  
Mean scores of the CBCL

Scales	Mean	SD	1 <sup>st</sup> Period	2 <sup>nd</sup> Period	3 <sup>rd</sup> Period
Internalizing Problems	62	11.4	63	64	53
Externalizing Problems	62.6	12.0	63	61	42
Total Problems	63.8	11.5	63	64	47

the ineffectiveness of non-directive, individual centered, and psychoanalytic models (Roush, 2008). Lipsey (1999) would later show the ineffectiveness of such programs in his meta analysis of nondirective intervention. Thus, newer, more novel treatments, such as the positive peer culture program, evidenced-based behavior therapy, and cognitive-behavior therapy, emerged (Roush, 2008). Roush (2008) remarks that CBT provided staff, clinicians, and practitioners with an understandable and more effective way of building relationships, managing behavior, and increasing safety. Additionally, CBT provides youth with a positive behavior change in very short periods of time and successfully teaches cognitive, behavioral, and interpersonal skills that result in a reduction in recidivism (Roush, 2008; Nee & Ellis, 2005; Gillis, Gass, & Russell, 2008). Research reports that the odds of success, defined as no recidivism in a post-intervention interval of approximately 12 months, is more than one and a half times as great for those receiving CBT (Landenberger & Lipsey, 2005).

Over the last ten years, considerable research has been conducted on what leads to re-offense. A substantial amount of research that identifies risk factors for recidivism that include family background measures and peer group factors (Benda & Tollet, 1999; Conger, Neppel, Kim, & Scaramella, 2003; Barnow, Luncht, & Freyberger, 2005; Hoeve, Blokland, Dubas, Loeber, Gerris, & van der Laan, 2008;). There is also research that places an emphasis on the personality characteristics and modifying these malleable risk factors (Carcach & Leverett, 1999; Loeber & Farrington, 2000; Cottle, Lee, & Heilbrun, 2001; Duncan, Duncan, & Strycker, 2001; Huang, White, Kosterman, Catalano, & Hawkins, 2001; Vermeiren, de Clippele, Schwab-Stone, Ruchkin, & Deboutte, 2002; Chang, Chen, & Brownson, 2003; van Dam, Janssens, De Bruyn, 2004; Lattimore, Macdonald, Piquero, Linster, & Visser, 2004; Lipsey, 2009). Overtime, both behavioral and cognitive programs like MDT have begun to target factors known to be associated with risk.

MDT is a third generation cognitive behavior therapy. This study adds to the growing body of literature that supports the use of MDT in the treatment of adolescents with conduct difficulties (Apsche, Bass, & Siv, 2006; Apsche & Ward-Bailey, 2004; Apsche, Bass, Murphy, 2006; Apsche, Bass, & Houston, 2007a; Apsche, Bass, Jennings, Murphy, Hunter, & Siv, 2005; Apsche & Bass, 2006). In this study, it appears that considerable reduction in the overall symptomology, as measured by the DSMD and the CBCL occurred. Reduction in symptomology is associated with decreased

risk of re-offending. In this study specifically, this reduction related to the reduction of aggressive and sex offending cognitions in those measures. All of these significant reductions may account for the significant reduction in the JSOP-A as a measure of risk assessment of juvenile sexually based offenders.

Core to the MDT approach is the use of case conceptualization (Apsche, & Bass, 2006). Case conceptualization also offers the opportunity for integrating risk assessment information into treatment (see Vess, Ward, and Collie, 2008; Collie, Ward, & Vess, 2008 ). In addition, the MDT model makes use of family involvement. Underwood, et al (2008) has suggested that family involvement will help skills learned in the residential program to generalize to the home environment. .

Replication of effective interventions is of critical importance in residential treatment (see Fixsen Blasé, Timbers, and Wolf, 2007). The fact that this data was assessed after the formal program discontinued its ongoing relationship with the developer is a testament to the maintenance of the skills learned by the staff.

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