

A Clinical Trial of Motivation-Adaptive Skills-Trauma Resolution (MASTR) Therapy  
with Conduct Disordered Adolescent Boys

by

Mirosław Grygo

A dissertation

presented to the University of Manitoba

in partial fulfillment of

the requirements for the degree of

Doctor of Philosophy

in

Department of Psychology

**THE UNIVERSITY OF MANITOBA**  
**FACULTY OF GRADUATE STUDIES**  
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**A clinical Trial of Motivation-Adaptive Skills-Trauma Resolution (MASTR) Therapy  
with Conduct Disordered Adolescent Boys**

**BY**

**Mirosław Grygo**

**A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University of  
Manitoba in partial fulfillment of the requirement of the degree**

**DOCTOR OF PHILOSOPHY**

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## ABSTRACT

Conduct disorder and other disruptive behaviours represent the most common form of child and adolescent psychopathology referred for treatment by parents and teachers. A number of studies conducted in university research centers have demonstrated meaningful treatment gains, especially with preadolescents with conduct disorder. However, studies conducted with older adolescents, especially those with comorbid disorders, as well as studies conducted in community-based clinic settings have been mostly unsuccessful. With a few exceptions, the extant treatments have not made any special effort to address effects of traumatic experiences that research has demonstrated to be very prevalent among conduct disordered children and adolescents. Motivation-Adaptive Skills-Trauma Resolution (MASTR) therapy developed by Ricky Greenwald (2002a) has shown promising results in his open trial study. MASTR is a complex treatment approach which addresses several key areas crucial in treating adolescents with conduct disorder: development/enhancement of motivation for treatment, development/enhancement of anger management and problem solving skills, and treatment of past trauma effects. The present study evaluated the effectiveness of MASTR therapy with 10 adolescent boys with conduct disorder placed in a residential treatment facility. This study combined single subject and qualitative research methodologies to offer a detailed look into the implementation and evaluation of MASTR therapy in a residential treatment centre. Foremost, this study demonstrates the formidable problems of conducting treatment research with this population in this kind of setting. Results suggested that, when it can be sufficiently implemented, MASTR therapy may be an effective treatment method producing some meaningful changes in behaviour for some severely disturbed

adolescents with conduct problem. The study also demonstrated that EMDR may be an effective treatment for reducing emotional distress associated with past trauma in adolescents with conduct disorder. Factors associated with the limited success of this treatment study are identified and discussed.

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## INTRODUCTION

What used to be more commonly called juvenile delinquency, now called conduct disorder, is a huge problem for both the teenagers so diagnosed and society and, it too often portends even greater future problems for those with the disorder, those affected by their behavior and society more generally. It appears that effective treatments to deflect those teenagers with conduct disorder from this dire path are largely lacking. Beyond the traumas large and small that conduct disordered youth may visit upon themselves and others, research has made it clear how often these youth have themselves had very traumatic lives. This dissertation focuses on the effectiveness of a therapy protocol whose central component is the use of eye movement desensitization and reprocessing (EMDR), a procedure originally intended for the treatment of trauma, with conduct disorder.

A review of the literature on conduct disorder in a broader context of conduct problems will start this introduction and will include diagnostic criteria and issues and information about prevalence and etiology of conduct problems. These will be followed by the review of literature on childhood trauma including the empirical evidence for the presence of trauma in the histories of conduct disordered children and its likely role in the development and/or maintenance of conduct problems. Since trauma is one of many factors contributing to the development and maintenance of conduct problems that researchers have focused on, its exact role in the development of conduct disorder is not yet fully understood. Some conceptual frameworks have been offered and they will be reviewed briefly. A general review of treatment studies will be presented next, followed by a review of the literature dealing with the use of EMDR to treat conduct-disordered

children. Since this dissertation concerns the evaluation of the treatment package that includes EMDR, the review of literature relating to EMDR will be more extensive than for other treatments. Unless specifically indicated, the term children will be used to refer to both children and adolescents.

## Conduct Problems in Children

### *An Overview*

A number of terms have been used in the literature to refer to childhood conduct problems--just some of the terms that have been used are externalizing behaviour, disruptive behaviour, delinquent behaviour, antisocial behaviour, disruptive behaviour disorders, oppositional defiant disorder, and conduct disorder. Weisz (2004) posited that "given their diversity of forms and likely origins, it certainly is not surprising that problems of conduct have been construed and studied in diverse ways by various investigators" (p.253). For present purposes, the term conduct disorder (CD) will refer to the formal diagnostic category with this name in the Diagnostic and Statistical Manual, 4<sup>th</sup> Edition (DSM-IV) published by the American Psychiatric Association (1994). CD represents one of four diagnostic subtypes of disruptive behaviour disorders in DSM-IV. Disruptive behaviour disorders (DBD) includes four separate diagnostic categories: attention deficit hyperactivity disorder (ADHD), conduct disorder (CD), oppositional defiant disorder (ODD)<sup>1</sup>, and disruptive behavior disorder not otherwise specified (DBD-NOS; American Psychiatric Association, 1994). The diagnosis of conduct disorder (CD) is applied to children who exhibit a persistent pattern of repetitive behaviour that violates basic rights of other people, or violates major age-appropriate

---

<sup>1</sup> Empirical support for distinction between CD and ODD, their stability, and prognostic value are still debated by some researchers; for more information see Loeber et al. (2000) and Sonuga-Barke (1998).

societal rules and norms and causes or threatens harm to other people, animals, or property loss or damage. The diagnostic criteria for CD require that the disturbance in behaviour be of a long duration (12 months for at least three target behaviours and 6 months for at least one target behaviour) and causing significant impairment in academic, occupational, and social functioning.

Oppositional defiant disorder (ODD) represents a milder form of behavioural disturbance and refers to a persistent pattern of frequently occurring negativistic, defiant, disobedient, and hostile behaviour towards authority figures. Typical expressions of ODD include losing one's temper, arguing with adults, defying or not complying with adult rules or requests, deliberately engaging in behaviour that annoys others, being angry, vindictive, spiteful, and other similar behaviours. Some authors have argued that ODD and CD do not represent separate entities and that either ODD is an earlier manifestation of CD or CD is a complicated ODD (Keller et al., 1992). Children displaying disruptive behaviours that do not meet the criteria for Conduct Disorder or Oppositional Defiant Disorder can be diagnosed with Disruptive Behavior Disorder Not Otherwise Specified. DSM-IV diagnostic criteria for ADHD require the presence of either a persistent pattern (at least 6 months) of inattention or hyperactivity/impulsivity that are maladaptive and not consistent with the child's developmental level, that some of the symptoms were present before the age of seven years, that the symptoms are present in two or more settings, and that they cause clinically significant level of disturbance in social, academic, or occupational functioning. Typical difficulties of children afflicted with ADHD include (1) poor sustained attention, (2) excessive or unrelated activities to the task at hand, which is inappropriate or intrusive to others, (3)



poor inhibition of impulses during social behaviour and cognitive tasks, (4) problems relating to others (Rube, 1998). Children with ADHD symptoms and comorbid conduct problems are at significant risk for maladjustment in social and academic areas (Gresham, MacMillan, Bocian, & Ward, 1998). While hyperactive/impulsive behaviours tend to decline with age, inattentive behaviours tend to persist into adolescence and even adulthood (Lahey et al., 1999a). One of the important aspects of disruptive behaviour disorders is that adults are significantly more distressed by them than the children who exhibit them, which often makes the task of getting the children with conduct disorder to cooperate with the treatment very difficult (Hardy & Steiner, 1998).

One consistent research finding is that early onset conduct disorder represents a more severe form of pathology than adolescent onset conduct disorder, shows a significant level of stability over time (Campbell, 1995; Heller, Baker, Henker, & Hinshaw, 1996; Speltz, McClellan, DeKlyen, & Jones, 1999), and usually has a more severe course (Lahey et al., 1999a)<sup>2</sup>. Children with early onset conduct disorder frequently present with a number of other problems, such as attentional problems, lower IQ, and serious academic problems that persist into adolescence (Tolman & Thomas, 1995). They are often placed in special classrooms, fail a grade, and drop out of school (Ledingham, 1999). They frequently lack age-appropriate social knowledge, show maladaptive social information processing, show deficits in executive functions, and have trouble with self-regulation (Hogan, 1999). There is also a very significant degree of comorbidity among disruptive behaviour disorders and between disruptive behaviour

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<sup>2</sup> Lahey et al. (1999a) found that children who developed conduct problems before the age of 8 years displayed 2 to 3 times as many conduct problems as children whose conduct problems started after the age of 12 years. The younger onset group also engaged in more aggressive acts than the older onset group.

disorders and other psychiatric disorders (Biederman et al., 1996). For example, Biederman, Faraone, Chu, and Wozniak (1999) found a significant comorbidity of CD and Juvenile Mania. One of the shortcomings of the extant research on conduct disorder, including this study, is that it has focused mainly on male subjects (Angold & Costello, 2001; Ledingham, 1999). Perhaps most alarming is the research indicating significant persistence of childhood conduct problems into adolescence (Broidy et al., 2003) and adulthood (Maughan & Rutter, 2001, Pakiz, Reinherz, & Giaconia, 1997). Blumstein et al. (1986 as cited in Maughan & Rutter, 2001) reported that in US samples 31% to 71% of juvenile offenders experienced subsequent arrests as adults. Research indicates that aggressiveness, one of troubling features of conduct disorder, tends to be a very stable characteristic (Frick & Dantagnan, 2005; Lochman & Wells, 1996; Widom, 1989).

#### *Prevalence of Conduct Problems*

Disruptive behavior disorders represent the most common form of child psychopathology referred for treatment (Frauenglass & Routh, 1999). A large general population study (Nolan, Gadow, & Sprafkin, 2001) conducted recently in the USA determined that in the sample of 3,006 children, age ranging from preschool through high school, 16%-19% met DSM-IV diagnostic criteria for ADHD, 5%-9% met diagnostic criteria for ODD, and 1-2% met diagnostic criteria for CD. Other studies have indicated even higher prevalence rates for conduct disorder, estimating that it afflicts approximately 2% to 7% of the general population (Lewinsohn, Rodhe, & Farrington, 2000). A Canadian study estimated that approximately 5.5% children in the Province of Ontario met the diagnostic criteria for conduct disorder (Waddell, Lomas, Giacomini, & Offord, 1998). To place this statistic in a context, it is estimated that approximately 12%

to 22% of all children suffer from some kind of mental, emotional, or behavioral disorder (Lonigan, Elbert, & Johnson, 1998).

### *Etiology of Conduct Disorder*

Clinicians and researchers have identified a long list of factors contributing to the development and maintenance of conduct disorder, many of them falling into one of the three main categories: the child, the parent and family, and the environment (Kazdin, 1995). On the individual level, the temperament trait of impulsivity was shown to be associated with the conduct problems (Lengua, West, & Sandler, 1998; Olsen, Schilling, & Bates, 1999). Christian, Frick, Hill, Tyler, and Frazer (1997) proposed that impulsivity leads to one type of conduct problem characterized by poor anger control and acting without thinking, which is distinct from another type that is characterized by a callous-unemotional (CU) interpersonal style that lacks guilt, shows no empathy, does not show emotions, and seems unrelated to family disturbance (see also Wootton, Frick, Shelton, & Silvethorn, 1997). However, a later study by Frick and Dantagnan (2005) indicated that “the group high on CU traits, those with more stable conduct problems experienced more life stressors, both overall, and when it was limited to only more severe stressors (e.g. parental divorce or death of a parent)” (p. 482). Furthermore, Frick and Dantagnan (2005) posited that children with callous-unemotional traits might experience the effects of stress more severely, because their emotional detachment could interfere with their ability to obtain social support.

A number of family related factors have been demonstrated to contribute to the development of conduct problems in children (Taylor, McGue, & Iacono, 2000). Webster-Stratton and Hammond (1999) found that parents’ inability to resolve marital conflicts and a critical style of parenting involving expression of negative feelings and

lack of expression of positive feelings towards the child, contribute to the development of conduct problems in children four to seven years of age. Parental depression, substance abuse, and antisocial behaviour were found to be associated with disruptive behaviour disorders (Carlson, Tamm, & Hogan, 1999; Lahey, et al., 1999a). Shaw et al. (1998) found that strong maternal rejection of very young children combined with children's noncompliance was predictive of later externalizing behaviour problems for both sexes. The lack of financial and social support for the family was also found to exacerbate the negative impact on children of other family problems (Webster-Stratton, 1985). Patterson, DeBaryshe, & Ramsey (1989) proposed that ineffective parenting in early childhood consisting of harsh and inconsistent discipline, minimal positive parental involvement, and poor monitoring and supervision of child's activities lays the foundation for later conduct problems. According to Patterson et al. (1989) ineffective parenting involves systematic failure to reinforce prosocial behaviour or to effectively punish deviant behaviour. Patterson at all argued that "The effects of the inept parenting practices is to permit dozens of daily interactions with family members in which coercive child behaviours are reinforced...In this training, the child eventually learns to control other family members through coercive means"(p. 330). The academic failure and peer rejection that children with early conduct problems tend to experience most severely in middle childhood, often leads to an involvement with deviant peers and delinquency in late childhood and adolescence (Patterson et al., 1989).

Kiesner, Dishion, and Paulin (2001) theorized that maltreatment of children in the family can lead to conduct disorder by contributing to deficits in social and academic skills, consequently limiting children's opportunities for positive peer associations and pushing them towards a delinquent peer group, which then provides them with a steady

positive reinforcement for delinquent behaviour. However, some studies found that progression to be true only for children with conduct disorder (Ferguson, Woodward, & Horwood, 1999).

Dodge and Pettit (2003) criticized the extant research for producing “a loose array of diverse predictors of antisocial development, without integration or understanding of how these predictors operate together” (p. 349). Dodge and Pettit proposed a biopsychosocial model of the development of conduct disorder, positing that “a variety of heterogeneous predisposition, context, and life-experience factors in early life represent modest risk factors for chronic adolescent conduct problems. No single factor predicts a high proportion of the variance in outcomes” (p. 354). A similar view was expressed by Garbarino (2001). Biological predispositions, including both genetic factors and “toxic or diseased prenatal environment” are conceptualized by Dodge and Pettit (p. 351) as having an indirect rather than direct influence. Aspects of child’s sociocultural context such as economical and social disadvantage, crowding of the neighbourhood, and community violence provide conditions conducive to the development of conduct problems. Within the sociocultural context “experiences that involve harsh treatment, rejection of the self and failure place a child at probabilistic risk for conduct problems” (Dodge and Pettit, p. 352). Those involve neglect, harsh parenting and physical abuse, contact with aggressive peers, and peer rejection at school. Also a child’s early negative experiences with social institutions such as daycare and school, including initial experiences of academic failure, were found to contribute to the development of conduct disorder. Some studies show that an early exposure to the violence on television is associated with conduct disorder (Dodge & Pettit). Child’s emotional and cognitive processes, including knowledge acquisition and patterns of

social information processing, are hypothesized to mediate the relation between life experiences and the development of conduct problems.

Lahey, Waldman, & McBurnett (1999c) proposed that the latent construct of antisocial propensity, understood as enduring propensity to engage in antisocial behaviour, was the key factor in the development of conduct disorder. Lahey et al. (1999c) defined the antisocial propensity as a complex construct incorporating both genetic and environmental influences in varied degrees; for example, in early onset conduct disorder temperamental factors and cognitive abilities would be the main contributors, while in an adolescent onset conduct disorder environmental factors would play a more significant role. Children with a higher level of antisocial propensity were hypothesized to be more likely to have an early onset and more persistent type of conduct disorder with a greater variety of antisocial behaviour. Lahey et al.'s (1999c) model appears to be narrower in its scope than Dodge and Pettit's (2003) model and gives a significant weight to one factor of antisocial propensity, especially for early onset conduct disorder. It also has less room than Dodge and Pettit's model for the role of trauma in the development and maintenance of conduct disorder. A number of studies reviewed in the next section made a strong connection between childhood trauma and emergence of conduct problems.

### Childhood Trauma and Conduct Disorder

#### *Childhood Trauma and Its Effects: An Overview*

The research indicates that in the last few decades there was a significant increase in numbers of reported cases of trauma including cases of multiple traumatizations (Garbarino, 1999; Thompson & Cui, 2000). Examples of childhood

trauma include physical maltreatment, sexual assault or molestation, life-threatening accidents, unexpected death of close friends or family members, life-threatening illness, disaster, domestic violence, community violence (Ford, Racusin, Ellis, & Daviss, 2000). Scheeringa, Wright, Hunt, and Zeanah (2006) reported that witnessing a threat to a care giver can have a significant traumatizing impact on both children and adolescents, especially those who exhibited pre-trauma externalizing behaviour problems. Various forms of maltreatment by parents including parental rejection, emotional unresponsiveness, and degrading comments were found to have a significant traumatizing impact on children (Hart, Germain, & Brassard, 1987; Teicher, Samson, Polcari, & McGreenery, 2006). A large study comparing 676 adults (average age 28.72) abused as children to 520 matched individuals without a history of maltreatment found high rates of lifetime PTSD among maltreated group including 37.5% for sexually abused group, 32.7% for physically abused group, and 30.6% for neglected group as compared to 20.4% of lifetime PTSD for the comparison group (Widom, 1999). Widom concluded that childhood abuse and neglect significantly increases individuals' risk for life time PTSD.

Teicher et al. (2006) in their study of 554 subjects, 18–22 years of age (68% female), found that parental verbal aggression represented a very impactful form of maltreatment and that an exposure to multiple forms of abuse was associated with very large effect sizes. Also physical and verbal abuse by peers has been found to have serious traumatizing impact on children (Garbarino, 2002). Injuries and hospitalizations were found to be very traumatizing to children, especially when they already have a higher level of prior psychopathology, trauma, or parental acute distress (Daviss et al.,

2000). Daviss et al. found that from their research pool of 48 children (aged 7-17 years) hospitalized for pediatric injuries 12.5% had the full syndrome of PTSD at one-month follow-up and an additional 16.7% had partial (subsyndromal) PTSD. Winston et al. (2002) found in a prospective cohort study of traffic-injured children, aged 5-17 years, that one month after the accident 88% of children reported at least one clinically significant symptom and 28% of those children reported a range of symptoms sufficient for diagnosis of acute stress disorder. Schreier, Ladakakos, Morabito, Chapman, and Knudson (2005) found in their study of 83 children aged 7 to 17 hospitalized for a mild to moderate physical injury that 69% of them presented with at least mild PTSD symptoms at the start of their hospitalization, 57% at one month, 59% at six months, and 38% at 18 months post injury. Both Winston et al. (2002) and Schreier et al. (2005) also found comparable rates of distress among parents of the injured children and proposed that distressed parents could have further negative effect on children's recovery from the trauma of their accidents.

Psychological effects of trauma could include feelings of extreme fear, helplessness, or horror that overwhelm a person's normal coping and defense mechanisms (Solomon & Heide, 1999), leading to a long lasting severe effects including posttraumatic stress disorder (PTSD) (American Academy of Child and Adolescent Psychiatry, 1998). Some researchers proposed the term Complex PTSD (CP) to account for the profound impact of trauma on self-regulation, self-definition, interpersonal functioning, and adaptational style that was not fully reflected by PTSD diagnosis (Neuman, 2002). Terr (1999) suggested that childhood trauma contributes to a number of psychiatric disorders, including conduct disorder, in various degrees like childhood



rheumatic fever contributes to an array of medical conditions. Terr posited that children are seriously traumatized not only by a sudden and unexpected blow that results in extreme fright<sup>3</sup>, which she called type I trauma, but also by long-standing and anticipated ordeals, such as abuse, which she called type II trauma. Terr grouped long lasting effects of childhood traumas into four categories: (1) recurring memories and visualizations of traumatic event(s); (2) repetitious behaviours and bodily responses; (3) trauma specific fears; and (4) pessimistic view of people, life, and the future. Building on Terr's work, Solomon and Heide (1999) proposed type III trauma, which occurs as a result of exposure to multiple and pervasive violent events that start at an early age and continue over a long period of time. Outcomes of type III trauma include changes in memory and consciousness, including dissociation; emotional numbing; developmental deficits; poor sense of self including a pervasive belief that one is flawed and does not deserve to be alive; no concept of a future; sense of helplessness and shame; and relationship problems resulting from difficulties trusting (Solomon & Heide, 1999).

#### *Role of Childhood Trauma in Conduct Disorder*

The negative outcomes of psychological maltreatment of children reported in the literature include functional or social retardation, inability to form trusting and mutual relationships, low self-esteem, impaired memory, difficulty concentrating, mental confusion and disorientation, psychological numbing, poor school performance, runaway behaviour, stubborn or defiant activity, poor peer relationships, extensive denial, property destruction, and violent behaviour towards others (Hart et al., 1987), problems with affect regulation, age-inappropriate sexual interest, impulse control

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<sup>3</sup> The diagnosis of PTSD, as defined in DSM IV, applies only to those who experienced what Terr (1999) defined as Type I trauma, even if all other symptoms are present.

problems, and risk taking (Spinazzola et al., 2005). Many of the above characteristics and behaviours either are a part of the definition of disruptive behaviour disorders or are associated with them. Research indicates that aggressive and delinquent behaviours are among the most frequent outcomes of physical abuse (Jaffe, Wolfe, Wilson, & Zak, 1986; Kaplan, Pelcovitz, & Labruna, 1999; Kaufman & Widom, 1999; Kinard, 1980; Shields & Cicchetti, 1998). Chang, Dodge, Schwartz, and McBride-Chang (2003) concluded from their research with the sample of 325 Chinese children and their parents that harsh parenting can lead to child's aggressive behaviour through two paths: directly through behavioural modeling and indirectly via emotional dysregulation. The effects of physical maltreatment experienced in early childhood are long lasting and could further become exacerbated by association with antisocial peers (Lansford et al., 2002; Lansford, Criss, Pettit, Dodge, & Bates, 2003).

A number of researchers reported that exposure to parental violence can have as strong a negative effect as physical abuse and is associated with conduct problems (Hershorn & Rosenbaum, 1985; Hughes, 1988; Jaffe et al., 1986). Physical abuse was found by some researchers to be as traumatizing as sexual abuse (Stevenson, 1999). Dubow, Edwards, & Ippolito (1997)<sup>4</sup> reported that relatively common stressful life events, such as a family member being ill or dying, parental separation or divorce, changing residences, changing schools, parental unemployment, and residential burglary accounted for as much as 16% of the variance of antisocial behaviour. Garnefski and Diekstra (1997) found from their large study of secondary school students in the Netherlands that sexual and physical abuse in childhood were correlated with aggressive and criminal behaviour in both sexes. An association between childhood trauma and

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<sup>4</sup>The study investigated grade 4, 5, and 6 inner-city children living in a midsize city in the US Midwest.

later aggressive behaviour was also reported by Lochman and Wells (1996). Wood, Foy, Layne, Pynoos, and James (2002) found in their study that incarcerated youth reported a significantly higher rate of sexual abuse/violence and exposure to violent crime than matched high school sample. Wood et al. (2002) also found a high rate of PTSD in their sample of incarcerated youth, however, due to the cross-sectional nature of their study, they were unable to exclude the possibility of PTSD symptoms being related to the experience of incarceration. Lipschitz, Rasmusson, Anyan, Cromwell, and Southwick (2000) posited that children traumatized by violence often develop aggressive ways of coping because they allow them to regain the sense of control over their lives. Some authors also reported that neglect and abuse play an especially significant role in the development of violent behaviour in those children who are already compromised by other factors, such as psychobiological vulnerabilities and intellectual deficits (Lewis, 1992). It is possible that in some of those cases compromised intellectual functioning might also be an effect of trauma (Cook et al., 2005; Hart et al., 1987). Newman, Riggs, and Roth (1997, p. 198) reported that trauma “can challenge existing adaptive themes, foster development of maladaptive themes, or prevent adaptive themes from emerging.”

Reebye, Moretti, Wiebe, and Lessard (2000) reported that in the sample of 76 youth admitted to a provincial mental health institution, 56% of the 65 youth who met the criteria for conduct disorder reported experiencing trauma and 17% of them met the criteria for PTSD (10% of the males and 28% of the females). A greater number of females reported experiencing sexual assaults, while males more frequently reported experiencing motor vehicle accidents, physical assaults, dangerous falls, suicide attempts, and witnessing death. Although smaller than in other studies, the occurrence of PTSD in youth diagnosed with CD was still four times higher than that for any other

disorder in that sample. The authors also reported that everybody in their sample who met the criteria for PTSD also met the criteria for conduct disorder. According to Reebye et al. (2000), the average number of reported PTSD symptoms was similar for both sexes, but females reported significantly more severe PTSD symptoms. Ford et al. (2000) investigated the role of PTSD in disruptive behaviour disorders in a mixed gender sample of consecutive admissions to an outpatient psychiatric clinic and found that the comorbid ADHD/ODD group had very high rates of physical maltreatment (73% to 90%) and sexual maltreatment (31% to 40%). Cauffman, Feldman, Waterman, and Steiner (1998) reported that in their sample of 96 female juvenile offenders, 70% of the subjects were exposed to some kind of trauma (most often sexual and physical maltreatment), 65.3% of them experienced full PTSD and an additional 9.5% experienced some of PTSD symptoms at one point in their lives. Cauffman et al. (1998) indicated that female offenders were approximately 50% more likely to be suffering from PTSD than the equivalent male population, which still indicates that a significant percentage of male juvenile offenders could be suffering from PTSD. Erwin, Newman, McMackin, Morrissey, and Kaloupek (2000) assessed a sample of 51 incarcerated male adolescents and found that 18% of them met diagnostic criteria for PTSD. The subjects in Erwin et al.'s (2000) study reported witnessing and experiencing multiple traumatic events. Schuck and Widom (2005) reported, based on a large study of 908 maltreated children and 667 matched controls, that the relationship between child maltreatment and criminal behaviour in adolescence was moderated by two environmental factors: neighbourhood disadvantage and neighbourhood stability, defined as limited number of people moving in and out of the neighbourhood.

The studies presented so far imply that various forms of trauma contribute to the development of conduct disorder; however, since most of the research is correlational, attempts to develop causal models of antisocial behaviour have not been very fruitful (Lahey et al., 1999b). Some authors questioned the direction of the influence (Kunston, 1995) and, while some suggested bi-directional effect between parental discipline practices and the child's antisocial behaviour (Borduin, Henggeler, & Manley, 1995), others argued that conduct disorder is biologically based and is the major contributor to both family dysfunction and abusive parental behaviour (Campbell, 1995). Harrington, Black, Starr, and Dubowitz (1998) reported that the child's difficult temperament was predictive of emotional neglect by the mother. However, the results of a 10-year longitudinal study by Bates, Dodge, Pettit, and Ridge (1998) qualify conclusions reached by Campbell (1995) and Harrington et al. (1998). Bates et al. (1998) found that a consistent and highly controlling parenting style can mitigate the child's early unmanageability. Similar conclusion was reached by Ford (2002), who argued that "if parents are able to help the child to redirect oppositionality and avoidance toward more prosocial forms of assertion, and to develop empathy for and interest in others, these temperamental traits need not become severe problems" (p. 35). Herrenkohl, Egolf, and Herrenkohl (1997) conducted longitudinal study that followed 457 preschool maltreated and nonmaltreated children (54.3% males) for 16-years. Herrenkohl et al. (1997) found a strong statistically significant relationship between adolescent assaultive behaviour and the severity of parental physical discipline, negative interactions with mothers, and the experience of sexual abuse.

Ford et al. (1999) suggested that relationships linking childhood maltreatment and trauma with disruptive behaviour disorders are likely bidirectional or interactive.

Borduin, Henggeler, and Manley (1995) argued that there is a bidirectional effect between parental discipline practices and children's antisocial behaviour. First, interpersonal and self-regulatory problems exhibited by children with ADHD and ODD place them at increased risk for various forms of abuse. Second, maltreatment and its sequelae, including PTSD, may contribute to or increase severity of ADHD or ODD. Ford et al. posited that "even if etiologically not related, trauma and PTSD could exacerbate ADHD's attention, impulse regulation, and physiological hyperactivity symptoms or ODD's problems with aggression and oppositionality" (p. 207). Third, PTSD, ODD, or ADHD may co-occur because of shared risk factors involved in either etiology or syndromal maintenance.

Shields & Cicchetti (1998) posited that maltreatment leads to aggression and disruptive behaviour problems in children through the mechanism of emotional dysregulation that is demonstrated as affective lability, negativity, and socially inappropriate expression of emotions. Emotion dysregulation coupled with poor attention modulation (atypical patterns of attention shifting and focusing, scanning the environment for cues of a threat) constitute the mechanism that leads from maltreatment to reactive aggression and disruptive behaviour problems (Shields & Cicchetti, 1998). Based on a 12-year longitudinal study of a randomly selected sample of 585 children, Lansford, Dodge, Pettit, Bates, Crozier, and Kaplow (2002) concluded that the effects of physical maltreatment experienced in early childhood on both externalizing and internalizing problems are long lasting. Greenwald (2000) argued that trauma contributes to the development and maintenance of conduct disorder by (1) disrupting attachments and interfering with the development of empathy and, as a result, removing inhibitions against hurting others; (2) creating a perpetual state of vigilance and

sensitivity to a potential threat, which leads to a hostile attributional style, aggressive reactions towards others, and compromised social functioning; (3) producing intense negative emotions (fear, sadness, and anger) that conduct-disordered adolescents attempt to manage through substance abuse, distracting high-risk activities, and violent destructive acting out; and (4) diminishing the sense of future. Trauma's contribution to substance use problems, a significant comorbid problem in conduct disordered youth, was also reported by Newman and Kaloupek (2003).

Kerig (1998) posited that the child's attributional processes mediate the effects stressful life events have on conduct problems. The negative effects of child maltreatment can also be buffered by positive coping strategies and the presence of social support (Lewis, 1992; Runtz & Schallow, 1997), including positive peer associations (Lansford et al., 2002).

#### Treatments for Conduct Disorder

A multitude of methods has been applied to treating conduct disorders, many of them promising, but very few have produced improvements that were very significant, generalizable over multiple domains, and maintained over a long period of time (Kazdin, 1997). Furthermore, treatments that showed promise during efficacy trials at university centers have generally been less successful when delivered in community settings (Schoenwald & Henggeler, 1999; Weisz, Donenberg, Han, & Weiss, 1995). Weisz et al. (1995), based on meta-analysis of both lab and clinic studies identified three factors associated with better outcomes of lab studies. First, participants in lab-studies are usually recruited, screened, and on the average less disturbed. Second, lab settings generally provide conditions more appealing and conducive to therapeutic change. Third, lab studies used mainly behavioural or cognitive-behavioural techniques, which

seem to be more effective with children. Conversely, the factors associated with the poorer results of the clinic-based treatments identified by researchers included less trained treatment providers, larger caseloads, and a more heterogeneous client population with a larger number of more severe presenting problems (Schoenwald & Henggeler, 1999). Frick (1998) argued that interventions delivered in clinic settings rarely produce significant improvements in behaviour evident across different settings because they target only a limited number of presenting symptoms. Luk et al. (2001) also reported that some treatment programs that managed to obtain statistically significant change in targeted variables, still found them to be within a clinical range. The above reports are consistent with Weiss et al.'s (2000) assertion that there is still no strong evidence that therapeutic interventions that children have been receiving for any kind of presenting problems have produced significant and long lasting effects.

Somewhat more optimistic findings were found in Brestan and Eyberg's (1998) review of 82 treatment studies using the criteria developed by Division 12 of the American Psychological Association (Clinical Psychology) for determining whether an intervention can be recognized as either a well-established treatment or a probably efficacious treatment<sup>5</sup>. Twenty of the 82 treatments met the criteria for probably efficacious treatment and only 2 of those 82 treatments met the stringent criteria for well-established treatments including (1) parent-training program using videotape modeling and (2) a parent-training program called Living with Children. One of the probably efficacious treatments, Multisystemic Therapy, has been extensively

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<sup>5</sup> An overview of some of the issues involved in determining empirical support for the psychosocial interventions for children can be found in Kazdin & Kendall (1998) and Lonigan et al. (1988). A broader critique of the present approach to identifying empirically validated/supported treatments can be found in Wampold (1997).



researched (Henggeler, Schoenwald, Borduin, Rowland, and Cunningham, 1998). A recently published treatment manual (Henggeler et al., 1998) presents Multisystemic Therapy as a comprehensive treatment program targeting a wide range of strengths and weaknesses displayed by children and families in their social ecology. This treatment is unique among manualized treatments because it does not require the therapist to follow sets of prepared tasks in a fixed sequence but, instead, proposes a set of nine principles that guide treatment while allowing the therapist the flexibility needed to treat complex cases. The principles are formulated as broad statements directing the therapist to focus on increasing responsible behaviour and decreasing irresponsible behaviour, be mindful of developmental characteristics of children and families, be present oriented, and require treatment participants to carry out daily and weekly tasks. It emphasizes strengths as a way to promote change, aspires to promote treatment generalization and long-term maintenance, and calls for an ongoing evaluation of the intervention's effectiveness in order to detect and overcome barriers to successful treatment. Its delivery in the youth's natural environments is intended to increase family cooperation, enhance the accuracy of the assessment of both family problems and treatment outcomes, and promote the long-term maintenance of treatment gains (Borduin, 1998).

Positive results were obtained with much less extensive treatment programs involving a combination of parent training and child training (Webster-Stratton & Hammond, 1997). Webster-Stratton and Hammond (1997) studied a treatment design that matched the type of intervention to the type of risk factor for conduct problems. Their results indicated that parent training resulted in improvement in parents' behaviour and parents' reports of child behaviour; child training resulted in greater improvements in children's social problem-solving and conflict-management skills; and the results of

the combined treatment were superior to either intervention alone. These results seem to indicate that matching treatment strategy to risk factor can lead to positive treatment outcomes, and that targeting parent and child variables can enhance treatment outcomes. Some studies of psychodynamic approaches focusing on a broader spectrum of issues, consistent with psychodynamic theory, reported some successes with children with disruptive behaviours, especially those with ODD (Fonagy & Target, 1994; Hardy & Steiner, 1998). Fonagy and Target (1994) used a broad approach that targeted personality characteristics rather than presenting symptoms and achieved significant improvement in 51% of children with ODD, 36% of children with ADHD, and 23% of children with CD. An important indication of this study is that positive outcomes with disruptive behaviours, especially their milder forms, can be achieved without a direct focus on presenting problems. A recently published study by Kazdin (2006) reported obtaining positive treatment results with conduct disordered children presenting with other comorbid disorders, however, the participants in his study were relatively young (mean ages were 7.9 for ODD and 10.1 for CD).

#### *Cognitive Behavioural Approaches*

Kazdin, Mazurick, and Siegel (1994) compared the outcomes of 50 children with externalizing disorders who completed the clinic based treatment consisting of cognitive problem-solving skills training (20 to 25 one-hour sessions) and parent management training (16 one- to two-hour sessions) with the outcomes of 25 children who failed to complete treatment. Both the treatment dropouts and treatment completers showed improvement on the measures used and, as expected, the improvement in those who completed the treatment was significantly greater. The treatment dropouts, however, showed greater disturbance at the pre-treatment assessment and when that was factored

in, the post treatment difference between the two groups was no longer statistically significant (Kazdin et al. 1994).

A flexible form of short-term individual cognitive-behaviour therapy (adjusted for age) was used in a study of 205 children with oppositional, aggressive, and antisocial behaviours (Kazdin & Wassell, 2000). Kazdin and Wassell reported that the treatment produced significant positive changes not only in treated individuals but also in their families. These findings appear more optimistic than most of the research on brief approaches to conduct problems and might be, at least in part, related to the young age of treated children (2 to 14 years, mean = 7.8, SD = 2.7—Kazdin & Wassell, 2000). Some researchers posited that, in order to be effective, the treatment of children with conduct problems needs to be longer in duration and focused much more broadly than just on the core symptoms (Altepeter & Korger, 1999; Kazdin, 2001). Greenwald (1999, 2000, 2006a) also posited that treatment for adolescents with conduct problems needs to be broader in scope and include the treatment of past trauma effects. His approach will be discussed in the next section.

One of the consistent research findings is that early interventions and prevention-oriented programs produce the most significant and lasting effects (Tremblay et al., 1992), however, since this thesis is focused on treating well-established conduct problems, those approaches will not be reviewed here.

### *EMDR*

#### *EMDR: Basic Concepts*

EMDR was initially proposed by its founder Francine Shapiro (1989) as a behavioural technique for reducing anxiety of traumatic memories and was taught and practiced under the name of eye movement desensitization (EMD). Based on the

information obtained from trainees and clients, Shapiro (1995) realized that a clinically significant level of adaptive processing of disturbing memories is more easily achieved by combining simultaneous desensitization and cognitive restructuring of memories and personal attributions, so by 1990 the name had been changed to eye movement desensitization and reprocessing (EMDR). Later, Shapiro (1995) hypothesized that: a) trauma is at the root of most of psychological disorders, b) each human organism possesses a healing mechanism capable of restoring mental health and balance, c) EMDR unblocks the neural pathways in the brain allowing for adaptive information processing to take place, and d) eye movements increase the speed of the healing process by stimulating neural centers in right and left hemispheres (Accelerated Information Processing Model). To achieve the task of successful processing of traumatic memory (desensitization), EMDR requires the client to focus on (a) an image representing traumatic memory, (b) negative self-referential statement associated with that memory, and (c) emotion(s) and physical sensations associated with the memory, and perform tracking eye movements by following the therapist's hand moving in her/his visual field (Shapiro, 1995 & 1996a). After each set of eye movements (10 to 60 sec.), the client is asked to relate to the therapist everything that they experienced (image, thought, emotion, or physical sensation) during the eye movements. The client's report determines the focus of the next set. The desensitization phase continues until the client's report indicates that the recall of the traumatic memory is no longer disturbing, at which point it is assumed that the reprocessing (working through) is completed. Next part of the EMDR protocol focuses on installation of positive cognition, followed by body scan, and closure. The next session starts with the reevaluation involving reassessment of previously processed material. While reprocessing of a disturbing

memory is expected to lead to a reduction or elimination of the disturbing affect associated with that memory, other disturbing memories that are thematically or functionally related to that memory frequently emerge. For the maximum effect of the EMDR treatment, those associated memories must also be processed (Greenwald, 1996; Shapiro, 1995).

The treatment is preceded by an assessment during which the client's traumatic memories are identified and their level of emotional disturbance is assessed using the 10-point Subjective Units of Disturbance (SUD) Scale developed by Wolpe (1990, as cited in Shapiro, 1995). Clients are also asked to verbalize a positive self-statement that they would like to have about themselves and the strength of their belief in that statement is rated on a 7-point Validity of Cognition (VoC) Scale (Shapiro, 1995). Generally VoC is much lower than 7 and is targeted for strengthening with short sets of eye movements until it becomes well established (VoC=7). This procedure is implemented after the client reports that the emotional disturbance associated with the target memory is eliminated (SUD rating brought down to 0 or 1), which means that the desensitization of the traumatic memory is achieved. The full description of the general EMDR procedure can be found in Shapiro (1995, 2001).

#### *Empirical Evidence for the Effectiveness of EMDR*

In its relatively short existence, EMD and EMDR have generated a large amount of publications, including a number of controlled studies that demonstrate its efficacy and clinical effectiveness (Greenwald, 1996, 2006a). A multitude of published case studies describe successful use of EMDR to treat PTSD (Kartazias et al. 2006; Kleinknecht & Morgan, 1992; McCann, 1992; Rothbaum, Astin, & Marsteller, 2005; Spates & Burnette, 1995; Wolpe & Abrams, 1991) phobias (Kleinknecht, 1993),

depression (Puk, 1991), and various other clinical problems (Marquis, 1991; Shapiro, 1995). L'Abatte, Cummings, and Hoyt (1999) placed EMDR on their list of five promising treatments that also included (1) psychoeducational skills training; (2) computer assisted interventions; (3) manualized therapies; and (4) program distance writing (e.g. mental health workbooks).

S. Wilson, Becker, and Tinker (1995) obtained positive results treating 80 people with three 90-minute sessions targeting traumatic memories. The treatment gains were maintained at 15-months follow-up (S. Wilson, Becker, & Tinker, 1997). S. Wilson et al.'s (1995) design included a random assignment of 80 participants into treatment or delayed treatment conditions, which allowed for between group comparisons at the end of treatment of the first group. The disadvantage of this design was the elimination of the possibility of between group comparisons at the follow up. Lazrove, Triffleman, Kite, McGlashan, and Rounsaville (1998), in an open clinical trial of seven chronic PTSD cases, obtained significant resolution of posttraumatic symptoms and the treatment gains were maintained at two months follow up. Carlson, Chetomb, Rusnak, Hedlund, and Muraoka (1998) treated a group of Vietnam veterans suffering from chronic PTSD with 12 sessions of EMDR, achieving a significant reduction of posttraumatic symptoms including a decrease in physiological arousal. Seventy eight percent of treated veterans no longer met the diagnostic criteria for PTSD and the treatment effects were maintained at three months follow up. However, after a review of published studies Feske (1998) concluded that EMDR is an effective treatment for civilian but not combat PTSD. Similar conclusion, that EMDR is a potentially effective treatment for non-combat PTSD, was also reached by Davidson & Parker (2001) who conducted meta-analysis of 34 EMDR studies. The Division 12 Task Force on

Psychological Interventions recognized EMDR as probably efficacious treatment for civilian PTSD (Chambless et al., 1998). Feske (1998) also noted the low dropout rate in EMDR studies (from 0% to 12.5% with an average of 7.8%), which could either mean that EMDR treatment is well tolerated by the clients or that it reflects a small number of sessions offered in most of the treatment studies<sup>6</sup>. Based on 18-months follow up to the randomized experimental study of EMDR treatment of female survivors of childhood sexual abuse, Edmond and Rubin (2004) reported that EMDR was effective in resolving the traumatic effects of childhood sexual abuse and that the positive outcomes were maintained at 18-months follow up. A more recent controlled study by Rothbaum et al. (2005) compared the relative efficacy of EMDR and Prolonged Exposure (PE) in treatment of PTSD in female rape victims to no-treatment waitlist. To make both treatment conditions equitable, both EMDR and PE treatments were delivered in nine, 90-min, twice weekly sessions. Both treatments resulted in clinically and statistically significant posttreatment improvements compared to waitlist. Rothbaum et al. reported that both PE and EMDR maintained their treatment gains at 6-months follow up and did not differ in terms of their PTSD diagnosis, however, PE group showed higher end-state functioning<sup>7</sup>. Marcus, Marquis, and Sakai (2004) conducted a controlled study on how well the effects of EMDR are maintained over time with a group of 53 women ranging in age from 18 to 73 years ( $M = 39.98$  years) and 14 men ranging in age from 23 to 67

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<sup>6</sup> A small number of sessions could play a positive role in reducing the drop out rate; by the same token, it likely limited the efficacy of EMDR with complex PTSD (i.e. combat), which requires longer treatment targeting various aspects of trauma (Greenwald, 1996).

<sup>7</sup> Good end-state functioning was defined as combined criteria on three measures: at least 50% decrease on Clinician Administered PTSD Scale, a score of 10 or less on Beck Depression Inventory, and a score of 40 or less on State part of the State-Trait Anxiety Inventory (Rothbaum et al., 2005, p. 612-3). Rothbaum et al. proposed that pretreatment differences on some of the measures used could have contributed to the difference in end-state functioning.

years ( $M = 44.78$  years), in an HMO setting. Marcus et al. (2004) concluded that individuals treated with EMDR improved with greater rapidity than those treated with standard care (SC) treatment: (1) the majority of the improvement from EMDR treatment occurred within the first three sessions: (2) individuals treated with EMDR utilized approximately half the number of total treatment sessions (mean of 6.5 vs. 11.8); and the gains were maintained over time. It is also noteworthy that Marcus et al. obtained their positive results utilizing 50-minute sessions, rather than 90-minute sessions as recommended by Shapiro (2001). Lee, Gavriel, Durmmond, Richards, Greenwald (2002) compared the effectiveness of EMDR with Stress Inoculation Training with Prolonged Exposure (SITPE) in a randomized study involving 24 adults ( $M=35.3$  years) meeting the diagnostic criteria for PTSD. Both groups that appeared very similar on key dimensions at pre-treatment, showed a significant and comparable rate of symptom reduction at the completions of treatment consisting of seven 90-minute session for each treatment condition. However, EMDR group showed additional improvement at the three months follow up, which was not shown by SITPE group. Ironson, Freund, Srauss, and Williams (2002) also achieved a significant and comparable reduction of PTSD symptoms in the group of 22 patients form university-based clinic, predominantly rape victims, treated with either EMDR or Prolonged Exposure (PE). Ironson et al. noted that EMDR seemed to produce significant reduction in PTSD symptoms much faster and appeared to be better tolerated (zero dropouts vs. three from PE group). At three-month follow up the treatment gains were maintained comparably by both groups, however, only six participants from each treatment condition were available for the follow up assessment.

Lansing, Amen, Hanks, and Rudy (2005) used, in addition to clinical



measures, SPECT (single photon emission computed tomography) brain imaging to evaluate the impact of EMDR treatment with six police officers who developed a delayed onset PTSD after being involved in on-duty shootings. Lansing et al. (2005) reported that all police officers showed clinical improvement and marked reductions in the Posttraumatic Stress Diagnostic Scale Score (PDS) and changes in the level of activation in several brain regions (decreases in the left and right occipital lobe, left parietal lobe, and right precentral frontal lobe and significant increased perfusion in the left inferior frontal gyrus).

### *Criticisms of EMDR*

Much debate has revolved around the role of eye movements in EMDR (Herbert, et al., 2000; Rosen, 1995, 1997; Welch, 1996). Some authors posited that eye movements and other kinds of bi-lateral stimulation do not contribute to the treatment's effect because in a number of studies similar therapeutic effects were obtained using EMDR protocols without bilateral stimulation (Cahill, Carrigan, & Frueh, 1999; Davidson & Parker, 2001; Devilly, 2005; Dunn, Schwartz, Hatfield, & Wiegele, 1996; Foley & Spates, 1995; Herbert et al., 2000; Renfrey & Spates, 1994). Some evidence that eye movements contribute to the treatment effect was reported by D. Wilson, Silver, Covi, and Foster (1996). They investigated the role of eye movements in EMDR in a controlled study using the Subjective Units of Distress Scale (SUDS) and several autonomic measures<sup>8</sup>. Their results indicated that one EMDR session resulted in desensitization in all treated subjects compared with only one subject in the control condition. D. Wilson et al. (1996) also reported that autonomic measures were correlated with subjective measures (SUDS) and subjects' self-reported symptomatology, and that

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<sup>8</sup> Respiratory rates, fingertip temperature, heart rates, galvanic skin response, & blood pressure.

the autonomic measures provided evidence that eye movements contribute to treatment outcome. They posited that eye movements were the source of relaxation response and that EMDR might be producing its positive effects, at least in part, by pairing distress with an internally generated relaxation response, possibly similar to reciprocal inhibition. A similar explanation was advanced by MacCulloch & Feldman (1996), who suggested that the classical conditioning, namely pairing of positive visceral sensations of the investigatory reflex with clinically-induced noxious memories serves to remove the negative affect of the latter and generates positive arousal. Servan-Schriber, Schooler, Dew, Carter, and Bartone (2006) investigated effects of three different kinds of auditory and kinesthetic stimulation (tones and vibrations presented simultaneously) including “intermittent alternating right-left (as commonly used in the standard EMDR protocol), intermittent simultaneous bilateral, and continuous bilateral” (p. 290). All 20 adults participating in the study, who met DSM-IV criteria for single-trauma civilian PTSD, received three 90-min EMDR treatments. Each session involved a different kind of stimulus type, in a randomized counterbalanced order, resulting in subjects serving as their own controls. Four therapists participating in this study, with levels I and II of EMDR training, had the control of the timing and duration of the stimuli with a turn of a switch, but were not aware of which of the three types of stimulation was delivered. Servan-Schriber et al. (2006) reported that EMDR procedure resulted in clinically significant results regardless of the type of stimulation, but the alternating stimulation appeared significantly more effective in reducing SUD levels. Servan-Schriber et al. posited that

There may be (at least) two components of the EMDR procedure that

contribute to the reduction of distress in PTSD. The overall effect of the procedure, regardless of the specific nature of stimulation, may be related to a number of aspects of the EMDR protocol that are common to several approaches to PTSD such as exposure therapy and cognitive-behavioural therapy or to some aspects of the EMDR procedure that appear to be distinctly different from other therapy approaches (p. 295).

A number of researchers concluded that EMDR was not an effective treatment (Devilley & Spence, 1999, Devilly, Spence, & Rapee, 1998), adding fuel to ongoing debate about the importance of treatment fidelity, including the use of correct treatment protocols (Beutler & Harwood, 2001; Greenwald, 1996, 1999b; Hertlein & Ricci, 2004; Lipke, 1997; McGlynn, 1997; McNally, 1999; Rosen, 1999; Shapiro, 1996b). Herbert et al. (2000) argued that, to be accepted as a valid form of therapy, EMDR was required by its critics to show itself to be superior to already established treatments (e.g. exposure therapies for PTSD); a much higher standard than what was required of the presently well established treatments that had to demonstrate that their benefits exceed those of the pill, psychological placebo, or some other treatment or are equivalent to an already established treatment.

A recent study by S. Taylor et al. (2003) examined the efficacy, speed, and rate of symptom worsening for three treatments of posttraumatic stress disorder (PTSD): prolonged exposure, EMDR and relaxation training. S. Taylor et al.'s results indicated that exposure therapy resulted in a significantly greater reduction in symptoms of avoidance and reexperiencing, tended to reduce avoidance faster than EMDR or relaxation training, and resulted in a greater proportion of participants who no longer met criteria for PTSD after treatment. S. Taylor et al. also reported that all three

treatments appeared equivalent in attrition, incidence of symptom worsening, or in their effects on numbing and hyperarousal symptoms and that EMDR and relaxation did not differ from one another in speed or efficacy. However, the participants receiving exposure treatment were asked to listen to the audio tapes of their sessions for an hour each day for the first 4 weeks of treatment, significantly increasing the intensity of treatment in that condition, therefore making it incompatible with the other two treatments evaluated in their study. Devilly (2005), argued that there is strong and consistent evidence that EMDR is better than no treatment and better than ineffective treatments, but only as good as any other treatment that uses some aspect of exposure therapy. Devilly (2005) also suggested that "there is growing evidence that a full, exposure-based, intervention package is superior to EMDR in the long term" (p. 444). However, Seidler, and Wagner (2006) who conducted meta-analysis of seven well controlled studies that directly compared EMDR and trauma-focused cognitive-behaviour therapy (CBT) concluded that EMDR and CBT tend to be equally efficacious. Seidler and Wagner also suggested that future research should attempt to establish which trauma patients are more likely to benefit from EMDR or trauma-focused CBT. Seidler and Wagner posited that the contribution of the eye movements to the outcome of EMDR treatment still remains unclear. Bradley, Greene, Russ, Dutra, and Westen (2005) performed meta-analysis of 26 studies involving 44 treatments, including 13 exposure-based therapies, five CBT, nine studies involving a combination of exposure-based therapies and CBT, 10 EMDR, and seven treatments classified as other. Bradley et al. "did not find support for differential efficacy across cognitive behavior treatments (e.g., those with and without exposure) or between cognitive behaviour therapy and eye movement desensitization and reprocessing" (p.225).

*The Use of EMDR with Children*

Several published books offer detailed descriptions of various uses of EMDR with children (Greenwald, 1999a; Lovett, 1999; Tinker & Wilson, 1999). They provide references to research studies and clinical vignettes illustrating successful applications of EMDR to treat the effects of trauma as well as a variety of other childhood clinical problems. Tinker & Wilson (1999) asserted that EMDR is most effective in treating singular and simple acute traumas, and its effectiveness with complex and chronic traumas diminishes only marginally, however, the required treatment is much longer and multi-focused. Greenwald (1999a) argued that many childhood disorders are trauma based and that renders EMDR to be applicable to treating many kinds of childhood disorders. Cocco and Sharpe (1993) reported on the successful use of EMD (eye movement desensitization) to treat a four-year-nine-month old boy with a case of severe PTSD. They asked the child to draw one picture of the traumatic event and one picture of his super hero (for positive installation) and used finger clicking for bilateral stimulation, achieving a complete resolution of the presenting problems in one session. Some of the symptoms returned later and were treated. Cocco and Sharpe also reported that their child client did not seem to experience any distress during EMD treatment. Pellicer (1993) reported that one session of EMD treatment resulted in cessation of nightmares in a 10 year-old girl, who was problem free at 6-months follow up. Puffer, Greenwald, and Elrod (1998) treated 20 children for one traumatic memory with a single session of EMDR obtaining very positive results in 11 children and partial success in three children. Although this design used a small n, and all clients were treated and evaluated by the same experimenter, the results are still indicative of EMDR's

applicability to treating childhood trauma. Chemtob, Nakashima, and Carlson (2002) conducted a controlled study to evaluate the effectiveness of a brief intervention for disaster-related PTSD. Using a randomized lagged-groups (ABA) design Chemtob et al. (2002) provided three sessions of EMDR treatment to 32 children (ages 6-12,  $M=8.4$ ) meeting clinical criteria for PTSD and obtained substantial reductions in both groups' in Children's Reaction Inventory scores and significant, but more modest, reductions in Children's Manifest Anxiety Scale and Children's Depression Inventory scores. The gains were maintained at six-month follow-up.

More evidence indicating that EMDR could be effective in treating effects of childhood PTSD and other effects of trauma comes from the study by Oras, Cancela de Ezpeleta, and Ahmad (2004) conducted at a university clinic in Sweden with refugees awaiting governmental decision on the status of their refugee applications. Oras et al. (2004) treated 13 traumatized refugee children and adolescents (ages 8-16), who met DSM-IV criteria for PTSD, with a combination of EMDR and play therapy for children and EMDR and conversation therapy for adolescents. The treatment involved from five to 25 sessions and produced statistically and clinically significant improvement in an overall level of functioning, PTSD-related (mostly in re-experiencing and least in avoidance symptoms), PTSD-non-related, and depression symptoms. Interestingly, the improvement of functioning level was positively correlated with the decrease in PTSD-non-related and depression symptom scores, but not with that of PTSD-related symptoms indicating that children who showed a decrease in PTSD-related symptom scores did not necessarily improve in functioning level, and vice versa. Oras et al. reported that some children recovered rapidly while others improved gradually as

treatment progressed and that the best treatment effects were achieved by children with stable family situations. A small randomized study (Jaberghaderi, Greenwald, Rubin, Zand, & Dolatabadi, 2004) compared the effectiveness of EMDR and CBT with sexually abused Iranian girls ages 12-13. Jaberghaderi et al. (2004) obtained results indicating that both treatment methods were effective in alleviating the traumatic effects of abuse, however, EMDR did so significantly faster: the EMDR group had an average of 6.1 sessions and CBT group had an average of 11.6 sessions.

Some of the concerns about the use of EMDR with children included the dearth of controlled studies evaluating the efficacy and clinical effectiveness of EMDR with children (Tinker & Wilson, 1999) and over-reliance on Subjective Units of Discomfort Scale to obtain data used to evaluate the efficacy/effectiveness of EMDR (Arnold, 1995). Greenwald (1998, p. 285) asserted that clinicians who are adequately trained “may now legitimately try EMDR as a first-line treatment for children suffering from the effects of trauma”, but he also cautioned that “EMDR is not a stand-alone technique, but a tool judiciously used by a qualified clinician in the context of an overall treatment plan.” More recently, Greenwald (2006b) reiterated his position that adequate use of EMDR requires that clinicians be well versed in a trauma treatment model and be able to devise and implement trauma informed treatments.

#### *EMDR with Conduct Disorder*

The research data on the effectiveness of EMDR in treating conduct disorder is still very limited, however, the available literature appears promising (Greenwald, 1999, 2000; Soberman et al., 2002). One of two published attempts to apply EMDR to treating trauma in children and adolescents with conduct problems was Soberman et al.’s (2002) controlled study involving 29 boys (14 in experimental group) with conduct-problems,

aged 10-16, placed in either a residential or a day treatment program of the residential treatment facility. The boys in the experimental group received three sessions of EMDR treatment. The assessment measures included SUDS and five standardized self-report measures (Impact of Events Scale-8 Items; Child Report of Posttraumatic Symptoms [CROPS]; Parent Report of Posttraumatic Symptoms [PROPS]; Problem Rating Scale; and Behavioral Reward Scale). The experimental group showed both statistically and clinically significant reduction in reactivity to treated traumatic memories and reduced conduct problems, and both gains were maintained at the two months follow-up. The strengths of the Soberman et al. (2002) study included random assignment of subjects into experimental and control groups, a treatment provider trained and experienced in the use of EMDR, and the use of various assessment tools. The weaknesses included lack of independent assessment of treatment fidelity and self-report (paper and pencil) measures were administered by the therapist, who was also the principal investigator.

A more complex treatment approach has been proposed by Greenwald (1999, 2002a). When treating latency age children with disruptive behaviour disorder, Greenwald (1999) uses a comprehensive trauma-informed treatment approach comprised of combination of EMDR, family therapy, and working with teachers. Greenwald's strategy (1999; 2000) for treating adolescents with conduct disorder starts with simultaneous focus on the development of a treatment plan and enhancing clients' motivation to participate in treatment and to achieve their goals. Greenwald's approach is consistent with Prochaska, Johnson, and Lee's (1998) argument that behaviour change is a process that occurs in stages and each stage requires a different mechanism of change. Motivation for treatment has been considered by some writers to play a significant role in the progress and outcome of psychotherapy (Keijsers, Schaap,



Hoogduin, Hoogsteyns, & deKemp, 1999) and it is of vital importance in the treatment of conduct disorders (Greenwald, 2002a; Hardy & Steiner, 1998). A procedure called the Future Movies has been used by Greenwald (2000; 2002a) to help children with conduct disorder to identify both short- and long-term goals and develop or strengthen motivation to achieve them. The first part of this technique called Positive Future Movie involves the therapist guiding clients to develop an imaginal movie of the next ten years of their lives filling it with details of significant events and actions leading to the positive ending. As the detailed image of a positive outcome is created, the therapist asks the child to identify positive emotions associated with it and a positive cognition (e.g. I can do it). The next step in sequence follows the imaginal review of the positive movie, including its specific scenes and the final image, and eye movements are used to strengthen the images and clients' motivation to achieve identified goals. The second part of the Future Movies technique called Negative Future Movie involves imagining a negative outcome that could result if the child was to continue negative behaviour. Negative emotion and cognition (e.g. It's not worth it) are also identified and eye movements are used to strengthen the effect. The creation of positive and negative images of positive future outcomes orients the clients to the notion that they have a choice, which is further stressed when clients are asked to declare their investment in positive outcomes (Greenwald, 1999).

Greenwald (1999) designed Adaptive Skills Training as the next phase of treatment because it is less threatening than the trauma work and it can quickly produce some tangible results for the client (e.g. better anger management and problem solving), which may help maintain their motivation to remain in treatment. The Adaptive Skills phase of treatment consists of three cognitive-behavioural techniques, Early Warning

System, Choices Have Consequences, and Tease Proofing; however, eye movements are added during imaginal portions of each technique to enhance visualization and learning (Greenwald, 1999).

Greenwald (1999) recommends that the trauma work be approached with caution because youngsters with conduct disorder typically lack coping skills and can easily become overwhelmed by the trauma-related emotions, and as result withdraw from further treatment. Greenwald (1999) recommended that the standard adult protocol could be used for trauma-treatment phase of therapy with conduct disordered adolescents, but notes, however, that some adolescent clients may appear unable to generate positive and negative cognitions before the processing proper begins. So Greenwald recommends that the EMDR still be carried out and the cognitions that emerge during processing be integrated into the treatment.

### Summary

Conduct disorder is a multidimensional disorder with a number of likely causes and paths of development. There are already a significant number of research studies and clinical publications on the subject of conduct problems and conduct disorder, however, the field still appears to lack integration. Attempts to develop theoretical models of conduct disorder seem to focus on a limited number of factors and do not include the role of childhood trauma. The biopsychosocial model (Dodge & Pettit, 2003) appears sufficiently broad to incorporate many of the factors identified by researchers as associated with conduct problems, including trauma. Although not specifically stated by Dodge and Pettit, the model's mutually interacting elements including biological predisposition, parenting and peer influences, sociocultural context, and child's mental

processes could each be influenced by trauma. Attempts to explain conduct disorder in terms of one dominant factor, whether it be specific temperamental trait or trauma, would not be consistent with biopsychosocial model's main assumption that "no single factor predicts a high proportion of the variance in outcomes" (Dodge & Pettit, 2003, p.354).

The extant treatments seem to reflect the variety of existing conceptualizations and focus on the individual, the family, or a multisystemic approach. To date, family based approaches fared the best in the controlled studies. Possible mechanisms of their success are (1) reduction in the amount of stress and trauma experienced by the child; (2) increased support, which was consistently shown to mitigate the negative effects of trauma; and (3) development of more effective reinforcement strategies with increased reinforcement of adaptive behaviour and less reinforcement of maladaptive behaviour. Family oriented treatments appear to be treatments of choice for younger children and with less extensive psychopathology. Conduct-disordered adolescents, especially those with early childhood onset conduct disorder and other comorbid disorders, did not seem to benefit much from the extant treatments, especially those offered in community treatment settings.

The literature on the use of EMDR to treat PTSD and other disorders in adults is quite extensive. There have been several controlled studies in more recent years (e.g. Edmond & Rubin, 2004; Marcus et al., 2004; Rothbaum et al., 2005) that showed EMDR to be more effective than placebo or supportive therapies and at times as efficacious as exposure-based cognitive behavioural therapies in treatment of PTSD. Also two recent meta-analytic studies (Bradley et al. 2005; Seidler & Wagner, 2006) indicated that trauma-focused cognitive-behaviour therapy (CBT) and EMDR tend to be

equally efficacious. An earlier meta-analysis of 34 EMDR studies by Davidson & Parker (2001) showed EMDR to be an effective treatment for civilian but not combat PTSD, a finding consistent with the conclusion Feske (1998) reached after reviewing published EMDR studies. The Division 12 Task Force on Psychological Interventions recognized EMDR as probably efficacious treatment for civilian PTSD (Chambless et al., 1998). Despite the studies and reviews indicative of EMDR's efficacy and effectiveness and the recognition by Division 12 Task Force, there has been an ongoing effort to discredit EMDR by portraying it as a pseudoscience (e.g. Devilly, 2005). There have been, however, some controlled studies published (e.g. S. Taylor et al., 2003) showing exposure therapy to be more efficacious than EMDR. The extant research appears to support a number of conclusions including: 1) EMDR is efficacious and effective treatment method for PTSD resulting from a variety of traumatic events, both recent and historic; 2) At times EMDR fares as well as or better than exposure therapy; 3) At times exposure therapy fares better than EMDR. A more productive focus for the above debate could be research attempting to establish which trauma patients are more likely to benefit from EMDR or trauma-focused CBT (Seidler & Wagner, 2006).

The literature on the use of EMDR with children is still very limited, however, several published studies suggest that it can be a quick, well tolerated, and quite successful method for treating childhood PTSD and various other forms of childhood psychopathology. The only published controlled study using EMDR to treat effects of trauma in youth with conduct problems (Soberman et al., 2002) reported significant changes in the severity of the negative affect associated with targeted memories and only modest changes in behaviour. The above study, however, consisted only of three EMDR sessions, which is likely insufficient to affect a significant change in behaviour of

conduct-disordered youth. A significantly more comprehensive treatment model developed by Greenwald (1999), MASTR, incorporates an EMDR protocol to treat effects of past trauma and attempts to address other needs and deficits prevalent among conduct-disordered youth. First, it attempts to increase the motivation for treatment (an extremely important and difficult task with this population); second, it offers anger management and decision making tools; third, it teaches strategies for handling provocations; and fourth, it helps lessen or eliminate the contribution that trauma has been making into the maintenance of conduct disorder.

### PROPOSED RESEARCH

The current study investigated the effectiveness of a MASTR therapy approach developed by Greenwald (1999; 2000; 2002a) for treating adolescents with conduct disorder. This approach targets three factors viewed as contributing to poor outcomes in adolescents with conduct disorder: lack of motivation for and cooperation with treatment (Greenwald, 2000; 2002a; Hardy & Steiner, 1998); deficits in adaptive skills (Greenwald, 2000; 2002a Kendall, 1991); and contribution of trauma in the development and maintenance of conduct disorder (Greenwald, 2000; 2002a, 2002b; Shields & Cicchetti, 1998). Greenwald's treatment approach targets all three areas through specific interventions, which because of their distinctness are referred to as treatment phases (Motivation Enhancement, Adaptive Skills Training, and Past Trauma Treatment). Motivation Enhancement and Adaptive Skills Training phases consist of a combination of imaginal exercises practiced with eye movements, or another form of bilateral stimulation if eye movements are not tolerated, and the Past Trauma Treatment phase

uses a standard EMDR protocol with some age appropriate adjustments (Greenwald, 1999; 2000; 2002a).

## METHOD

The research was conducted at Knowles Centre (henceforth referred to as “the Centre”), a co-ed residential facility for older children and adolescents, located in Winnipeg, Manitoba, where the therapist/investigator had been employed full time for sixteen years as a clinical consultant/therapist. The treatment procedure investigated in this study was delivered in addition to the standard care that each of the Centre’s residents received, and which included milieu treatment, on grounds schooling, and various forms of supportive psychotherapy.

### Participants

Subject recruitment was limited to boys. Girls could not be included in this study due to my being male. To accommodate a variety of issues related to the fact that almost all female clients of the Centre present with histories of sexual abuse, the Centre’s policy is only to assign female clients to female therapists. Other therapists in the Centre were encouraged to refer their conduct-disordered clients, but only one student from the Day Treatment Program was referred.

Prior to their participation the potential candidates were interviewed by the Clinical Director of Knowles Centre, who explained to them the details of the study and obtained their written consent. This approach was stipulated by the Psychology/Sociology Research Ethics Board of the University of Manitoba to remove the influence of the therapist/researcher on the decision process of the prospective research participants. The Clinical Director informed each participant that their participation in

the study was completely voluntary and that they could withdraw at any time without consequence. Since all participants were under 18 years of age, written consent was also obtained from parents or legal guardians. There was one exception to that format of obtaining consent from prospective participants.

One of the participants was present at his case conference when I explained the study to his mother and social worker as possible part of his treatment plan. The mother asked him what he thought about the proposed study and he declared his interest in participating. I brought copies of the consent for the prospective participant, his mother, and his social worker to study and they all signed. It did not appear that the boy felt any pressure to consent to the treatment since he freely decided against being video- or audiotaped, and did not sign that part of the consent form. Some reassurance can also be derived from Kassam-Adams and Newman's (2005) study indicating that adolescents have a good capacity to understand their freedom to give consent to participate in research.

Initially, 14 boys agreed to participate, but four dropped out before the start of treatment, leaving 10 who stayed in the study long enough to start the treatment phase of the study. Of the four boys who dropped out early, one did not like the self-report measures, another dropped out of the day treatment program he was attending, and two had extensive substance abuse issues and were discharged from the Centre due to their extensive running away.

All of the boys eventually participating in this study were on the caseload of the therapist/investigator conducting this study and all met DSM-IV diagnostic criteria for conduct disorder. They also had documented histories of trauma, but it must be emphasized these had not been used as selection criteria for research participation. All

10 boys presented with an early childhood onset conduct disorder, nine out of 10 had significant academic problems, five had comorbid ADHD, five had drug and alcohol use problems, one presented with enuresis and encopresis, one with depression, and one with Tourette Syndrome. The average age of participants in this study was 14.5 and the age range was 13 to 16 years. Four of the treatment participants were Caucasian, three were of First Nations, and three were Métis<sup>9</sup>. Their histories and behaviour during treatment is discussed in detail for each treatment participant later in the Individual Treatment Implementation and Results chapter.

### Design and Procedures

A multiple baseline across subjects and responses design was initially chosen as the methodology for this study because of its applicability to clinical research conducted in a real clinical environment (Hayes, 1998), especially when the aim of the research is to answer the question whether particular treatment is effective or not (Graziano & Raulin, 1991). The single case designs, also referred to as the time series designs (Hayes, 1998) can be sensitive research tools, able to detect subtle changes that occur over a longer period of time (Rushe & Gottman, 1993). These characteristics of single case research design approach seemed to match well some of the characteristics of conduct disorder: its very stable and persistent course, relative unresponsiveness to treatment, and frequent loss of positive treatment gains over time (Frick, 1998; Kazdin, 1995). One of the advantages of the single case designs, in comparison to group designs, is that they give the investigator an opportunity to see how each individual responds to the treatment, who benefits, who does not benefit,

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<sup>9</sup> Métis – the offspring of a white person and an American Indian (Webster's Revised Unabridged Dictionary, 1996).



and who deteriorates during and/or after the treatment delivery (Graziano & Raulin, 1991). Since conduct disorder is heterogeneous in its etiology and presentation, differential responses to treatment, including lack of benefit or even deterioration are to be expected. Moreover, the research procedure that allows detecting and tracking all of the responses to treatment is particularly important when an evaluated treatment is relatively new. Unlike group designs that follow predetermined procedure, the single case designs are more dynamic and interactive, allowing the investigator flexibility to alter the procedure when significant questions arise in the process of research/treatment delivery (Hayes, 1998). Another advantage of the single case designs is related to the way the data is treated. Single case designs provide the investigator with the tools to track the therapeutic changes in a much finer detail than group designs because dependent measures are collected repeatedly over the course of the study and the data obtained for each individual is not combined to obtain averages (Morgan & Morgan, 2001). The single case design also seemed a more appropriate methodology for a small pool of participants available at the Centre, which serves approximately 30 residents at any given time and only one half of them are boys age 9 to 17, not all presenting with conduct disorder. The Centre also runs a coeducational day treatment program for 12 students, age 9 to 17, with various behaviour and academic problems, generally less severe than those of the residents. The completion of the study took one year, with participants starting at different times. The group that started first included boys who had already spent a significant amount of time in the institution while the boys who joined the study later had shorter periods separating their admission from their commencement of treatment.

*Baseline*

As in a typical multiple baseline design (Kazdin, 1998), the treatment was introduced at different points since the start of baseline data collection ranging from three to nine weeks. Some researchers stressed the importance of establishing a solid baseline over a longer period of time to establish more confidence in inferences about the treatment effectiveness (Kazdin, 1998). Others argued that longer baselines are not desirable from a clinical point of view (Hayes, 1998). Hayes (1998) pointed to the tension existing between the research and treatment sides of single case designs, namely that longer baselines are very useful from the research point of view, but not desirable from a clinical point of view because that means an unnecessary delay of treatment. Some likely disadvantages of prolonged baseline data collection including negative reactions of treatment/research participants to the multiple data collections required by this methodology (i.e. clients dropping out of treatment, teachers and residential staff becoming tired of filling out questionnaires and either refusing to continue or doing it haphazardly) are dealt with in the Discussion section of this dissertation. To minimize the negative consequences of prolonged baseline on participants' treatment and the negative impact of too short baseline on data gathering part of treatment, three, six, and nine week baselines were chosen. The length of the shortest baseline was set as three weeks based on Hayes' (1998) recommendation that the baseline should have at least three measurements. Hayes permitted shorter baselines in situations where there is archival information available or the condition has a known course or history, however, shorter baselines for this study appeared to be risky due to the volatility of the behaviour exhibited by the clients of the residential treatment centre who were participants of this study. Although extending the shortest length of baseline by one, two or even three

would bode well for increasing confidence in the inferences about the effectiveness of treatment (as recommended by Kazdin, 1998), it would also mean extending the duration of the middle and the longest baselines and risking the chances of a negative clinical impact of a long treatment delay (Hays, 1998).

### *Treatment*

The treatment protocol (Appendix A) includes three distinct phases, which were usually delivered in the order described below. Occasional departures from the structure described below were documented and explained in further sections of this dissertation.

#### *Phase One: Motivation Enhancement*

During this phase the therapist uses combination of an imaginal technique called Future Movies and eye movements to enhance clients' motivation for change. The Future Movies technique was used by Greenwald (1999, 2000, 2002a) to help children with conduct disorder to identify their short- and long-term goals and develop or strengthen their motivation to achieve these goals. The first aspect of this technique, called the Positive Future Movie, involves the therapist guiding the client to develop a positive ending to the imaginal movie about the next ten years of his/her live. As the detailed image of a positive outcome is created, the therapist asks the child to identify positive emotions associated with it and a positive cognition (e.g. "I can do it"). Following that step, the therapist encourages the client to fill in his Future Movie with details of significant events and actions leading to the already created happy ending. Next in sequence follows the imaginal review of the positive movie, including its specific scenes and the final image, and sets of eye movements are used with the intended effect of strengthening the images and clients' motivation to achieve identified goals. The second aspect of the Future Movies technique, called Negative Future Movie,

involves imagining negative outcome that could result if the child was to continue with his negative behaviour. Negative emotion and cognition (e.g. "It's not worth it") are also identified and eye movements are used with the intent to strengthen the effect. The creation of the positive and negative images of positive future outcomes orients the clients to the notion that they have a choice, which is further stressed when clients are asked to declare their degree of investment in positive outcomes (Greenwald, 1999).

### *Phase Two: Adaptive Skills Development*

Greenwald (1999) posited that Adaptive Skills development is best offered before the trauma work because it is less threatening than the trauma work and it can quickly produce some tangible results for the client, for example better anger management and problem solving result decreases the amount of trouble the child experiences, which may help maintain his motivation to remain in treatment. The adaptive skills that clients learn in this phase consist of cognitive-behavioural techniques with three components labelled the Early Warning System, Choices Have Consequences, and Tease-Proofing. Eye movements are used during the imaginal portions of each technique (Greenwald, 2002a).

*Early Warning System.* The Early Warning System helps the client become aware of the internal signals (e.g. angry thoughts, elevated heart rate, etc.) that precede escalation of anger and loss of control. The therapist helps the client to identify the steps leading to escalation and to review them imaginally. The process starts with the therapist asking the client to identify and describe in detail a recent event involving the client's angry response to some provocation. As the event is described in detail, the steps through which the client's anger escalation proceeds are identified and viewed with eye movements.

*Choices Have Consequences.* The Choices Have Consequences technique is employed to help the clients develop a strong sense of awareness of consequences of their choices and to increase their awareness of behavioural options. The therapist guides clients through the process of imaginably viewing movies about challenging situations, where positive choices lead to positive consequences and negative choices lead to negative consequences. The procedure used in this study was a two-step process of Choices Have Consequences instead of three step-process proposed by Greenwald (1999). The two-step process involved practicing with eye movements visualizations of positive choices resulting in positive consequences and negative choices resulting in negative consequences and pairing them with appropriate cognitions, for example “Way to go!” or “It’s not worth it!” In steps one and two, the sequence of events involving situation, internal response, choice, consequence, and cognition were first established with the client and then practiced with eye movements.

The third step proposed by Greenwald (1999) in Choices Have Consequences also starts with establishing the provoking situation and internal reaction to it, but then the client is instructed to “just see what happens next” (p. 100), so long as a bad choice leads to a bad consequence and a good choice leads to a good consequence. The reduction of steps to two was intended to avoid a spontaneous linking of negative choices with positive consequences, which participants of this study did consistently (e.g. selling drugs brings money, stealing and driving a car means fun, and so forth). I was concerned that the spontaneous linking of negative choices with positive consequences would reduce the positive impact of Choices Have Consequences, or even worse, reinforce delinquent type of thinking.

*Tease-Proofing.* The Tease-Proofing is intended for individuals with a strong tendency to overreact to teasing and provocations and uses several techniques, rehearsed imaginally with eye movements, to help them become less reactive. One Tease-Proofing technique involves the client creating an imaginal protective wall. Another technique involves the therapist guiding the client to imagine and describe somebody they consider a role model handling a particular provocation, and imaginally practice emulating the role model's adaptive behaviour. Tease-Proofing strategies may also incorporate practiced earlier elements of Choices Have Consequences and self-talk (e.g. "It's not worth it!" or "I'm in charge of myself!") (Greenwald, 1999, p. 107). Greenwald (1999) posited that effective handling of teasing and provocations may enhance clients' feeling of being in control and enhance a sense of safety, which is critical to trauma treatment.

#### *Phase Three: Trauma Treatment*

This phase addressed the effects of past trauma using the standard adult EMDR protocol adjusted to accommodate frequently encountered difficulties children and adolescents seemingly have with generating both positive and negative cognitions (Greenwald, 1999). Even though the clients may not be able to generate positive and negative cognitions, the treatment protocol is still carried out and the cognitions are integrated into the treatment when and if they emerge during processing. Greenwald (1999) urged caution during this phase of the treatment because youngsters with conduct disorder typically lack coping skills, can easily become overwhelmed by the trauma-related emotions, and, as a result, withdraw from further treatment. Greenwald (2000) suggested that a gradual introduction into this stage of treatment by starting with a recent and only mildly upsetting events, such as getting into trouble at school, might help the

client to have a positive first experience with trauma work and that way prevent a premature termination.

The above represents a description of the treatment that this study investigated. The treatment protocol, including specific steps involved in each treatment phase, is included in the Appendix A. In accordance with the spirit of single case designs (Hayes, 1998) the manual was adhered to whenever feasible, however, variations in the treatment procedures, as already indicated, were introduced to address participants' treatment needs. Hayes (1998) went as far as to state that "when unanticipated effects are seen, the clinician must be ready to abandon previous design decisions and to let the client's data be the guide" (p. 425).

#### Alteration of Research Design

Although this study was designed and conducted as a multiple baseline design, when the data collection was concluded there were an insufficient number of completers to support the original design intent to have six completers. The new format adopted for data analysis involved a combination of multiple baseline and qualitative research designs. Each participant is presented separately in a narrative format typical for qualitative designs and the data accumulated for the original design was incorporated into case descriptions to aid in interpreting the effects of treatment. The format in which the data was presented and analyzed was informed mainly by ideas of Mahrer (1998) and Heaton (2004). Mahrer's thoughts on discovery-oriented psychotherapy research validated the tremendous effort that was required to transcribe and summarize approximately sixty hours of psychotherapy tapes. Mahrer argued that discovery-oriented psychotherapy research can make a significant contribution to "the cumulative body of psychotherapeutic knowledge" (p.75). Mahrer described two approaches to

discovery-oriented research: “One consists of providing a closer, discovery-centered look into psychotherapeutic events and phenomena, and the other consists of the discovery of interconnections among psychotherapeutic conditions, operations, and consequences” (p.75). Heaton’s ideas for secondary qualitative data analysis have been helpful in working from detailed descriptions of psychotherapy process for each participant towards more generalized statements and observations about the treatment method investigated in this study.

### Measures

#### *Conners’ Parent Rating Scale – Revised/Short Form (CPRS-R: S)*

Conners’ Parent Rating Scale – Revised/Short Form (Conners, 1997--Appendix B) is a 27 item scale divided into four subscales: Oppositional Behaviour (OPP), Cognitive Problems/Inattention (COG-P), Hyperactivity (HYPER), and ADHD. CPRS-R: S uses parent-ratings to identify childhood and adolescent ADHD and behavioural and cognitive problems. The parent or guardian indicates whether the child exhibits any of a number of listed behaviour problems and rates their severity on a four point scale ranging from “not at all true” (0) to “very much true”(3). Internal Reliabilities for CPRS-R: S for males as measured by Cronbach’s alphas were estimated to be .88 for OPP, .93 for COG-P, .90, for HYPR, and .94 for ADHD subscales. Test-Retest Reliability (6-8 weeks) coefficients are .62 for OPP, .73 for COG-P, .85 for HYPER, and .72 for ADHD. The available data indicates that OPP, COG-P, HYPER, and ADHD discriminate significantly ( $p < .001$ ) non-clinical problems from ADHD, non-clinical from emotional problems, and ADHD from emotional problems (Conners, 1997).



*Conners' Teacher Rating Scale – Revised/Short Form (CTRS-R: S)*

Conners' Teacher Rating Scale – Revised/Short Form (Conners, 1997-- Appendix B) is a 28 item scale that, similarly to the parent version, is divided into four subscales intended to measure the same things: Oppositional Behaviour (OPP), Cognitive Problems/ Inattention (COG-P), Hyperactivity (HYPER), and ADHD. Internal reliability for the CTRS-R: S for males as measured by Cronbach's alpha was estimated, to be .90 for OPP; .94 for COG-P; .88 for HYPR; and .95 for ADHD. Test-retest reliability (6-8 weeks) coefficients are .84 for OPP; .92 for COG-P; .72 for HYPER; and .80 for ADHD. The available data indicates that CON-P, COG-P, and ADHD discriminate significantly ( $p < .001$ ) non-clinical problems from ADHD, non-clinical from emotional problems, and emotional problems from ADHD; HYPER discriminates significantly ADHD from emotional problems (Conners, 1997).

*Conners –Wells' Adolescent Self-Report Scale/Short Form (CASS: S)*

Conners –Wells' Adolescent Self-Report Scale/Short Form (Conners, 1997-- Appendix B) consists of 27 items and can be used with children between the ages of 12 and 17 years. It has the same four subscales as parent and teacher versions: Conduct Problems (CON-P), Cognitive Problems/ Inattention (COG-P), Hyperactivity (HYPER), and ADHD. Internal reliabilities for CASS:S, for males as measured by Cronbach's alphas were estimated to be .85 for CON-P, .79 for COG-P, .82 for HYPR, and .75 for ADHD. Test-retest reliability (6-8 weeks) coefficients are .72 for CON-P, .74 for COG-P, .76 for HYPER, and .87 for ADHD. The available data indicates that CON-P, COG-P, and HYPER discriminate significantly ( $p < .001$ ) non-clinical problems from ADHD, non-clinical from emotional problems, and ADHD from emotional problems; ADHD

discriminates significantly non-clinical problems from ADHD and non-clinical from emotional problems (Conners, 1997).

The short versions of Conners rating scales were selected for several reasons: a) they are relatively short; b) each scale has four subscales allowing the evaluation of four different dimensions of the client's functioning; c) adolescent, parent, and teacher versions of Conners' scales assess similar dimensions of behaviour, enabling the researcher to compare these three sources of data and; d) very significantly the Conners' scales have been used by the Centre for a number of years in the process of assessment and quarterly reassessments, therefore the clients, staff, and teachers were very familiar with them. Furthermore, Conners (1997) recommended the short versions for multiple testing. There were several shortcomings associated with the Conners' scales: a) some subscales are highly correlated, with correlations ranging from .32 to .89; b) lack of the total score for short versions of Conners' scales; c) small number of test items (helpful for repeated use, but testing fewer behaviours, thus limiting the range of potential changes they can detect).

#### *Child Report of Post-traumatic Symptoms (CROPS)*

Child Report of Post-traumatic Symptoms (CROPS; Greenwald & Rubin, 1999-- Appendix C) is a self-report questionnaire that contains 28 items corresponding to some aspect of posttraumatic reaction and is intended to be easily understood by children. Preliminary results indicate that CROPS is a reliable and valid measure of posttraumatic symptoms in children. It asks the child to rate a variety of symptom-endorsing statements for the period of past seven days on a 3-point scale: None (0), Some (1), and Lots (2). The overall score appears to change with the status of child's posttraumatic

stress (Greenwald & Rubin, 1999). The internal reliability coefficient alpha for CROPS was reported to be .91 in one USA study and .92 in another; test-retest reliability was .80 in one USA study and .70 in another. The criterion validity was reported to be .60 (one study only).

#### *Parent Report of Post-traumatic Symptoms (PROPS)*

Parent Report of Post-traumatic Symptoms (PROPS; Greenwald & Rubin, 1999-Appendix C) is a 30-item questionnaire containing items corresponding to some aspect of posttraumatic reaction that can be easily observed and understood by the parents. PROPS asks parents to rate the prevalence of various symptoms displayed by the child during the period of past seven days on a 3-point scale: Not True or Rarely True (0), Somewhat or Sometimes True (1), and Very True or Often True (2). The overall score appears to change with the status of child's posttraumatic stress (Greenwald & Rubin, 1999; Greenwald et al., 2002). Preliminary results indicate that PROPS is a reliable and valid measure of posttraumatic symptoms in children. The internal reliability coefficient alpha for PROPS was reported to be .93; test-retest reliability .79 at six weeks; and the criterion validity .56.

#### *Subjective Units of Disturbance Scale (SUDS)*

SUDS originally developed by Wolpe (1982) and adapted by Shapiro (1995) for use with EMDR treatment as a tool for assessing the intensity of disturbance caused by a specific traumatic memory. The SUDS relies on 11-point rating scale with 0 indicating no disturbance to thinking about the traumatic memory and 10 representing the highest level of disturbance.

*Validity of Cognition (VoC)*

VoC is a seven point rating scale used to rate the validity (truthfulness) of the positive cognition, where one is “completely false” and seven is “completely true” (Shapiro, 1995, p. 58). Once the positive cognition is identified the client is asked to rate its validity, that is to decide “how true and how believable the positive cognition feels to the client not on how true it is objectively” (Shapiro, 1995, p. 58-59).

*Behaviour Problems on the Unit*

This measure consisted to two separate scores, one representing weekly sums of aggressive behaviour problems and the other representing weekly sums of nonaggressive behaviour problems. The ratings were based on recordings in the clients’ unit chart made three times a day (once each shift) by clients’ key staff. Each entry in the clients’ charts included an overview of the client’s functioning and listed behaviour problems displayed by the client during the reporting period. The therapist/investigator reviewed clients’ charts weekly and extracted from them information about all occurrences of behaviour problems. The rating format used to extract the information from unit charts is placed in Appendix D.

**Research Questions**

It was hoped that this research would be able to answer these questions:

- (1) “Does the combination of adaptive skills training and eye movements result in the decrease of behaviour problems in conduct disorder children?”
- (2) “Does EMDR treatment reduce posttraumatic stress symptoms in conduct-disordered children?” and
- (3) “Does EMDR treatment of past trauma result in the reduction of conduct problems?”

## INDIVIDUAL TREATMENT IMPLEMENTATION AND RESULTS

The processes and outcomes of treatment implementation are presented individually by subject, each identified by a pseudonym. Also, to protect anonymity of this study's participants, individual and family related information that could make them identifiable was omitted from the individual descriptions. Each treatment participant is described including their general history, history of conduct and other problems, and their interactions with the components of the treatment protocol. The participant with the pseudonym Phillip presented first is described in significantly greater detail than remaining participants, as he was the only participant to complete both past trauma treatment and the follow up phase. There were two conflicting considerations that guided this choice. On one hand I hoped that a detailed description of one of the research participants and his treatment process would offer a reader some appreciation of the complexities of the treatment process generally. On the other hand, by describing in detail the treatment of one participant only and by providing more abbreviated descriptions for the others, I hoped to prevent an information overload for the reader. The data obtained for each participant through the use of questionnaires and examinations of unit charts were presented in a graph format to enable visual inspection.

## Phillip

*Background Information*

Phillip's parents separated when he was a few years old and he had no further contact with his biological father until age six. His mother remarried and had three more children. At six years of age, Phillip had several visits with his biological father followed by no further contact with him until he was fourteen. Phillip wet his bed until

the age of eight and his behaviour at home began to deteriorate when he was nine years of age. Phillip had been bullied until grade eight, when he began to bully other students.

Phillip's behaviour problems included stealing cigarettes from his parents, aggressive behaviour towards his siblings, and a variety of nuisance behaviours including rearranging objects in the house against his parents' wishes and turning the car lights on to drain the car battery. With time, Phillip's behaviour problems worsened including angry outbursts, intensification of aggressive behaviour towards his two half-brothers, refusal to eat or get out of bed, and refusal to do his chores and go on family outings. On one occasion his parents discovered that Phillip tied one of his half brothers with a rope and hanged him upside down. His parents also reported ongoing problems with Phillip lying and stealing. During a search of his room, they found alcohol, bullets, and pornographic material hidden in the ceiling of his basement room. At fourteen, Phillip began to smoke cigarettes regularly, drink alcohol on weekends, and smoke marijuana occasionally.

In response to an increase in Phillip's behaviour problems, two months prior to his fifteenth birthday, his mother had Phillip assessed by a psychiatrist. The psychiatrist diagnosed Phillip with Attention Deficit Disorder, Combined Type and prescribed an antidepressant medication Effexor (venlafaxine), supplementing it with Dexedrine several months later. His mother reported that after commencing his pharmacological treatment, Phillip presented with blunted affect. Two weeks before his fifteenth birthday, Phillip overdosed on Tylenol and was hospitalized for eight days at the Psychiatric Ward of the Health Sciences Centre in Winnipeg. Five weeks later, following an incident involving Phillip destroying the contents of his room including his computer, TV, and

his models, his parents placed him in foster care with the Child and Family Services (CFS). A few months later, Phillip engaged in a series of delinquent behaviours including arson, break and enter, impersonation and theft and was incarcerated at the Manitoba Youth Centre (MYC), a youth detention facility serving the Winnipeg metropolitan area. He failed his conditional release into the care of his foster parents and returned to MYC within one week for bail violation. While in custody, he was involved in a fistfight with another youth.

Upon his release from MYC, six weeks before his sixteenth birthday, Phillip was placed in a residential treatment at Knowles Centre. Following admission, Phillip presented as well controlled, assertive, and cooperative with staff, and friendly with peers, displaying only minor behaviour problems. He incurred two breaches of his probation order as result of hiding matches in his room, and becoming angry and leaving the unit without permission for several hours when the matches were discovered by the unit staff.

#### *Treatment Participation*

Phillip's participation in this treatment project began five weeks after his admission and two weeks past his 16<sup>th</sup> birthday. Phillip was five-feet-three-inches tall, his dark brown thick hair was cut very short and he wore eye glasses with midsize round lenses and thin wire frames. He consented to his participation in this treatment research project and to video- or audiotaping. He presented as cooperative throughout the entire treatment and reported feeling comfortable with eye movements. Phillip presented as a quiet, sad looking boy who very seldom smiled. The unit staff reported that he occasionally joked with them, but his jokes where often sexist or sexually explicit so

they would tell him to stop. He offered no information on his own and answered my questions with only a minimal amount of information, so our conversations had little spontaneity and mostly followed a question and answer pattern. His speech was slow and deliberate with long silent spaces between his sentences. During treatment there were usually very long silent pauses between my questions and his answers. Phillip's difficulties with identifying emotions appeared to be significantly stronger when discussing the incident with his teacher.

*Motivation Enhancement: Future Movies*

After being introduced to the idea of future movies, Phillip spontaneously listed several of his past behaviours for the bad movie, including his sexual offense, arson, thefts, fraud impersonation, leaving home, getting into trouble, and his incarceration at the MYC. For the positive movie, he suggested scenes showing him getting a job, graduating from high school, starting a family, staying out of trouble, and having fun. As he was able to provide a list of negative events in his life without any assistance, he needed prompts ("what else") to offer ideas for possible positive life events. The Motivation Enhancement part of the treatment was completed within the first session, which occurred in week five of Phillip's participation in this research project.

*Positive Future Movie.* Each detail listed below was elicited by asking Phillip a specific question, for example "Do you see yourself living in a house or an apartment?" and "A bungalow or a two-storey?" etc. Phillip envisioned that in ten years, at 26, he would be living on his own in a medium size bungalow, with a log-cabin style siding, in British Columbia "where it's warmer and closer to the ocean." When asked what kind of car he would be driving, Phillip took at least 10 seconds before replying with a smile



“One with four wheels, roof, something that runs.” When I rephrased his answer with “So you’re saying it’s something modest, something that just works,” he replied, “It depends if I won a lottery; if I won a lottery, I would be driving something expensive.” Aided with my questions, Phillip envisioned himself driving an older type, black, 1980s type half-ton Chevy truck. He thought that, after graduating from high school, he would work different jobs to discover his interests before choosing the direction of his career. To the question if he would live alone or with a family, Phillip replied, “I think, I’ll have more of a girlfriend than family, and five kids already.” After the above listed elements of Phillip’s Positive Future Movie were identified, I invited him to practice them with eye movements. First, I asked him (and every other participant) if he remembered the overview of the treatment, including the use of eye movements that he received from Knowles Centre Clinical Director at the time of signing treatment consent. Next in sequence, I practiced with Phillip three sets of four eye movements at different distances from his eyes to establish the most comfortable distance.

Phillip chose his graduation, although he could not decide if it would be from university or a college, as a way of showing in his future movie that he already made it. He reported being able to create a mental image of his graduation, and smiled when doing so. When I asked him how he felt, he replied “I can’t wait for it to happen.” He reported feeling proud and experiencing pleasant sensations in his entire body. Initially, he was unable to think about a phrase that would go with his positive image. His first choice was “I need a vacation,” but after being offered several options to choose from (“I’ve made it!”, “Way to go Phillip!”, “You’ve done well!”), he proposed his own idea “I’ve made it this far in life, I’m gonna make it the rest!” I stopped the eye movements

after approximately 60 sweeps to ask Phillip if he was still working on his exercise, as he gave no indication that he finished. Phillip reported being able to create in his mind visual images of graduating from college including “Everybody sitting up, a few people being called, and then gonna sit down, then me being called and gonna sit down. And then I sat down and as far as I got before I blanked out.” Phillip reported that the exercise was accompanied by feelings of pride. As he did not include his positive cognition (“I’ve made it this far in life, I’m gonna make it the rest!”) with the exercise, I asked him to focus again on the image of his graduation scene, feelings of pride and his positive cognition. Phillip completed this exercise with 15 sweeps of eye movements. Once Phillip finished visualizing his college graduation with eye movements, I suggested that in order to graduate from college, he needed to graduate from high school, therefore it might be helpful to visualize that event as well. Phillip agreed and practiced with 15 sweeps of eye movements the scene of his high school graduation and feeling “Proud I am getting this far.”

Another future movie scene visualized by Phillip involved his working in a computer shop, feeling happy and proud. Phillip appeared indecisive when choosing a positive cognition and required several minutes and several suggestions of different options before he suggested “I’m doing a good job, keep up the good work!” The scene was rehearsed with approximately 20 sweeps of eye movements. When asked “what did you get,” Phillip replied “This time I did it differently. I was working and the boss came up to me and said good work Phillip; keep up the good work Phillip.” The scene was practiced with another set of eye movements of same length. The final scene that he chose for his good movie depicted him standing in front of his house, getting ready to

drive his truck to work, and "having a conversation with a mailman." For the practice with eye movements, Phillip concentrated on the image, happy and excited feelings, and his positive cognition "I've made it!"

*Negative Future Movie.* For the negative movie he chose a scene of being locked up in a jail cell. The image included electric doors opening and closing, a lot of noise from closing of the bars, security guards everywhere, Phillip feeling sad, and thinking "It's not worth it." After the first set of approximately 15 eye movements, Phillip reported that during the visualization of being in jail, he felt "boring, lonely, no freedom." I instructed him to "go with that" and led him through another set of approximately 12 eye movements.

During session two, Phillip recalled that the previous session covered "the story about me, and good endings and bad endings and about graduating from high school or university or something," but stated that he did not remember any details. He did recall that the bad ending was about "being stuck in jail and having the loud buzz of doors opening and people walking around, boring." Due to his poor recall of the Positive Future Movies, I proposed to rehearse with eye movements two scenes: graduation from college and the final scene, descriptions of which I relayed to Phillip from previous session's notes. Phillip decided to use the positive cognition he used in the previous session with his college graduation scene, "I've made it this far in life, I'm gonna make it the rest," and practiced it with approximately 20 sweeps of eye movements. When focusing on the image of the final scene of his Positive Future Movie involving Phillip standing in front of his house before driving his truck to work and speaking with a mailman, and thinking "I've made it," Phillip reported feeling "happy and excited," and

added with a chuckle in his voice “and mad because the mail is probably bills.” The scene was practiced with 20 sweeps of eye movements.

When asked about his experience with future movies, Phillip stated “I enjoyed it” and “It was like daydreaming, except you’re moving your eyes while doing it.” He reported having difficulties with concentrating on the movie while performing eye movements, but did not experience any difficulties or discomfort associated with eye movements.

### *Adaptive Skills Training*

*Early Warning System.* This part of treatment started in session two and was completed in session three. In session two, I reviewed with Phillip in detail a situation that occurred while he was still living in the family home and culminated in him destroying his mother’s television remote control and some of his possessions. The first part of the process involved mapping the steps of his anger’s escalation completed in session two appeared to be difficult for Phillip, especially identifying his thoughts, as he felt that “everything happened at once.” The incident started when Phillip asked his mother to return his computer that she and her husband removed from his room one day earlier as a punishment for his refusal to clean his room and organize his closet. Phillip reported that when his parents told him to clean his room, he thought “they are expecting too much,” experienced slight anger (two on a ten point scale), which he suppressed. A thought that his parents also had messy rooms when they were fifteen helped him justify his decision to ignore their directive. Phillip reported that he had also been frustrated with his parents for their frequent searches of his room, because they suspected him of stealing. A few hours after telling Phillip to clean his room, his parents came back and

began unplugging his computer, which resulted in an increase in Phillip's anger (four on ten-point scale). After removing the computer, they told Phillip that they wanted him to help them in the barn, which he refused. He remained angry in his room until the next morning, when he decided to clean his room. This decreased his anger and resulted in the thought "That was not such a big deal."

After cleaning up his room and organizing the closet, Phillip approached his mother three times with the request to have his computer returned, each time receiving the same answer "I'm busy now." The third exchange occurred when she was watching a television show, resulting in Phillip thinking, "She is more interested in the television than in me." Phillip's anger increased significantly when his mother replied that she and her husband did not promise to return the computer after he cleaned his room, but only to talk about it. At that moment Phillip thought, "They lied to me again," and he experienced a rapid increase in his anger (eight on a ten-point scale) and felt "warm and sticky inside." He threw his mother's television remote control against the wall and went down to his room where he "started throwing things around and breaking things." The thought "they lied to me again" appeared to play a significant role in the escalation of Phillip's anger because he held a belief that his parents had been "lying to me all the time about small things and about big things." As he was walking to his room still feeling very angry, Phillip was thinking about his parents lying to him all the time and "I can't stand this anymore." As he looked at this computer monitor, he thought "I don't have a computer, I don't need a monitor" and threw it against the wall. Phillip acknowledged that, at that time, he did not care about the consequences of his behaviour and was mainly concerned about getting rid of his anger ("I was really mad and I needed

to get rid of the anger somehow"). He also destroyed his stereo by throwing it against the wall and car models that "took a long time to build." By Phillip's account, breaking objects in his room did not diminish his anger ("The anger did not go away, so I decided to suppress it"). He was lying on his bed when his stepfather came to ask him to help in the barn, which Phillip refused because "he is telling me to go to the barn after they just lied to me."

In session three I reviewed with Phillip all the steps of his anger escalation cycle that we mapped in session two, and then practiced each step with eye movements. The first step practiced with eye movements (15 sweeps) involved Phillip's parents telling him to clean his room, to which he responded with slight anger. Phillip decided that he was not going to let his parents' request bother him and suppressed the anger (20 sweeps) and also thought "they are expecting too much" (12 sweeps). Next step practiced with eye movements (12 sweeps) was the parents taking away Phillip's computer, which resulted in an increase in his anger arousal (12 sweeps). Phillip decided to control his anger, laid down on his bed, and silently refused to cooperate (12 sweeps). The next step practiced with eye movements was Phillip's decision, which he made the next day, to clean his room and a thought "this wasn't that hard" (12 sweeps). I asked Phillip if he was perhaps saying to himself "why did I make so much fuss about it" and he agreed, so I requested that he "go with that" and guided his eyes through a set of 12 sweeps. Phillip asking his mother to return his computer was practiced with 15 sweeps next, followed by her refusal (10 sweeps), Phillip throwing the remote against the wall and going to his room (12 sweeps). On the way to his room Phillip was thinking that his parents were "liars" (15 sweeps) and proceeded to destroy the contents of his room (15 sweeps). Following the destruction of his room Phillip adopted an "I don't care" attitude

(15 sweeps) and some time later became aware of still feeling angry and decided to suppress it (15 sweeps). I asked Phillip if the session was hard for him, he replied “not really.” During the next session (four), Phillip demonstrated a full recount of the entire sequence with minimal prompts from me.

*Choices Have Consequences.* This part of the treatment was completed in session three, which was extended to 75 minutes to accommodate finishing of the Early Warning System and Choices Have Consequences. As a first example of his bad choice, Phillip suggested his breaking into a store and stealing several cartons of cigarettes. His description of the situation indicates that he acted impulsively, without any concern for potential consequences. As he was “walking around” and “feeling a desire for a cigarette,” he noticed railroad ties lying by somebody’s garage, so he picked one up and carried it to the store. He threw it through the store’s glass door breaking it, entered the store, and loaded a cardboard box that he found there with cartons of cigarettes, left the store and returned to the campsite where he was camping with his foster parents. A few weeks later, Phillip was arrested and placed at MYC for an earlier offence and there, he was charged with breaking into the store and the theft of the cigarettes. Phillip reported believing that as result of those offences he would be required to pay restitution when he starts earning an income. For the purpose of treatment, Phillip visualized his break-in in the sequence described above while performing 24 sweeps of eye movements, and finished with thinking about having to pay the restitution and the words “It was not worth it.” After finishing the set, Phillip relayed all the details of his break in, but did not include his time at MYC and “It’s not worth it” words. At my request, Phillip visualized

the sequence of events again, including the missing elements, with the set of approximately 24 sweeps of eye movements.

As a first example of a positive choice, Phillip offered his handling of being approached by three young men appearing either drunk or stoned and asking him for money and cigarettes. Phillip defined his choice as needing to be assertive enough, because being too aggressive could result in harm to him and being too passive could lead to more demands (“I didn’t want to give him any money, because he would be asking for more”) and would also diminish his self-esteem, as he did not want to “cave in under the threat.” He defined the positive consequence of his choice as “still being here.” He visualized the above sequence of events with approximately 48 sweeps of eye movements and the words “good job.”

The second negative choice that Phillip chose to work with involved his breaking into a camping trailer in the park where he was camping with his foster family. He used a small brick “and hit the back window, enough to shatter it,” then reached through the broken window and unlocked the camper’s door from the inside. He then searched the camper for alcohol, but found only some cans of Coke in the fridge, which he drank. While sitting on the couch, inside the trailer, he began to think about the owners of the camper contacting police once they discovered that their camper was broken into. He thought that police could identify him by his fingerprints, so he decided to burn the camper. He was arrested several days later, charged with arson, and placed at MYC. With the first set of 40 sweeps of eye movements Phillip visualized the sequence of events up to the moment involving him sitting on the couch and thinking about the owners discovering the break in and contacting the RCMP. With another set of



approximately 20 sweeps, Phillip finished visualizing the rest of the situation including his being locked in a prison cell and thinking "It was not worth it."

The second positive choice involved Phillip's decision to get out of bed in the morning to attend school, when he felt very tired and wanted to stay in bed all day. The positive consequence of that choice that he visualized while performing eye movements included maintaining his privileges and getting extra money with his weekly allowance. After approximately 30 sweeps of eye movements, Phillip reported that he visualized a detailed step by step sequence of events involved in his decision to make it to school, including running to the bus stop. He also reported thinking "Hey, there is only three days [of school left that week]; if I go all three days I get extra two bucks for allowance," which was practiced with a short set of eye movements of approximately twelve sweeps as an example of Phillip trying to use self-talk to motivate himself.

When the choices and their consequences covered in session three were reviewed with Phillip in session four, he recalled only one of them, namely his breaking into the camper and setting it on fire. To compensate for his lack of recall of positive choices, Phillip was asked to generate an additional example of a positive choice to practice with eye movements. Phillip visualized steps involved in his decision to decline an invitation from other residents to run away and viewed maintaining his privileges as a positive consequence of his choice. He reported feeling good about his choice, "because I did not lose my status [privileges] and did not get into trouble or anything," and words "I've made the right decision" to go with the image. After approximately 30 sweeps of eye movements, Phillip relayed in detail the invitation to run away including the process of

considering the consequences of his decision, which I asked Phillip to focus on (“just focus on that”) and perform a set of 12 eye movements.

*Tease Proofing.* Selecting appropriate targets for Tease Proofing in session five appeared to be challenging for Phillip, as the first two situations he suggested were very complex and involved being attacked by other youths. Phillip reported believing that he used excessive force to defend himself; however, those examples did not fit the concept of excessive reacting to teasing, so I asked him to recall other examples of teasing. Phillip’s next example was his aggressive reactions to his parents when he felt ignored by them. When asked about the relevance of those situations to teasing, Phillip explained that he experienced being ignored by his parents as a kind of teasing. Phillip chose to work with a situation that he already reviewed with eye movements during the Early Warning System phase of treatment involving his mother declining to return his computer that she and her husband removed from his room after he refused to clean it. Phillip visualized himself asking his mother for his computer, her ignoring him, him feeling angry about being ignored and thinking, “They always lie to me.” Phillip chose to go for a walk instead of expressing his anger by throwing his mother’s television remote control against the wall. Phillip performed approximately 50 eye movements while visualizing the situation with his mother and reported in small details what he viewed during the exercise. During the next session (five), Phillip had no spontaneous recall on the content of the Tease Proofing session, but was able to do so with cuing. In order to have a sufficient amount of time for the past trauma work, I decided not to spend more time on the tease proofing. Furthermore, one of the memories of past trauma

to be processed during the next phase of treatment was the teasing that he experienced during his elementary and middle school years.

### *Past Trauma Treatment*

This phase of therapy started in session five (week nine of the research) with a situation involving bullying that Phillip had experienced at school for a number of years. The specific example that Phillip chose to represent the teasing involved several male students calling him a skinhead because he shaved his head. The negative belief about himself that Phillip identified, when thinking about the incident, was "I have to be perfect to please everyone." As a positive cognition, Phillip chose the statement "I'm okay the way I am." Phillip reported that his belief in the positive cognition was five on a seven-point VoC scale. According to his parents and his social worker, Phillip experienced severe teasing throughout elementary and middle schools; however, he reported only a minimal level of disturbance when focusing on those events during therapy (two on ten-point SUDS). He identified anger as the emotion associated with the memory and the physical sensations were located in his throat, which he described as a "feeling of wanting to yell at them." After the first set of eye movements for approximately 40 sweeps, Phillip reported that he reviewed the teasing incident in detail in his imagination, but did not notice anything else. After the second set of approximately 30 sweeps he reported "feeling kind of mad, because they are laughing at me because of something that I did." Phillip was instructed to "go with that" and after a set of approximately 20 eye movements he reported that he was recalling his peers "looking at me and laughing at me and talking about me." He reported his level of disturbance remain the same (SUDS=2). After the instruction to "go with that" and

another set of approximately 24 eye movements, Phillip reported “being mad at them and just basically being mad at them.” After another set of approximately 40 eye movements, Phillip reported that he was “just thinking that I can make my own choices and if they shaved their heads, I would not laugh at them.” He was asked to “go with that” and after a set of approximately 30 eye movements he reported “not [getting] really anything,” but when asked if he continued to feel anger, Phillip replied “not that I think about it, it’s just a waste of my time for getting mad at them too.” After additional set of approximately 36 eye movements, Phillip said “It was just a waste of my time.”

Following the set of approximately 24 eye movements, Phillip reported, “After a while I ignored them and told them to leave me alone and they did.” He was instructed to “go with that” for approximately 30 sweeps of eye movements, after which he stated “that’s all opinions I have” meaning that nothing new emerged during the last set. Phillip was instructed to focus on the initial image and the negative cognition and reported that the level of disturbance that he felt increased slightly (SUDS=2 to 3).

Responding to my question about what changed Phillip noticed that his anger was replaced by hurt. I asked him to review the list of negative cognitions to see if a different cognition would better fit with his newly emerged feelings of hurt and he chose “I am a bad person.” Puzzled by his choice, I reviewed with him the entire list of negative cognitions, but Phillip insisted that his choice was most fitting. After a set of 24 eye movements and a focus on the image of teasing, feelings of hurt, and the words “I’m a bad person,” Phillip reported “I’m being a bad person because I’m letting them do this to me. I am not standing up for myself.” After another set of 24 eye movements Phillip reported feeling angry with himself for not telling anybody about the teasing and for not

getting somebody to help him with the situation. Phillip performed another set of 24 eye movements and stated "I could have gone and told somebody or told them to leave me alone." After 24 eye movements, Phillip concluded "not much I can do anymore to change that," which was treated with a set of 24 eye movements. Phillip reported thinking "I can't think of any ways I could change that; can't change the past," which was followed with a set of approximately 40 eye movements, after which Phillip said "I'm fine the way I am." After a set of approximately 20 eye movements, Phillip reported that he did not get anything, but reported still experiencing disturbing feelings when focusing on his memory of teasing (SUDS=1-2). To my question what he needed to further reduce his emotional disturbance, Phillip replied "to not care what they say," which was followed with a set of approximately 30 eye movements. Phillip reported imagining himself "just walking off and leaving them alone and they are not following me or bugging me anymore." At this point Phillip reported that his emotional disturbance decreased (SUDS=1), but his belief in the positive cognition, "I'm okay the way I am" remained unchanged (VOC=5).

Phillip was instructed to focus on his positive cognition and perform a set of approximately 20 eye movements, after which he reported "I'm happy the way I am. I don't care what people think." After another set of approximately 24 eye movements, Phillip stated "I am a good person," which was followed with a set of approximately 15 eye movements. Phillip reported thinking "just because I shaved my head, or decided to shave my head, doesn't make me a bad person," which was followed with a set of approximately 20 eye movements. Phillip reported that the last set of eye movements did not result in anything new and rated his belief in his positive cognition as unchanged

(VOC=5). When asked what else he needed to increase his belief in the thought “I’m good the way I am,” Phillip replied “I would need to be six-feet-tall [he was five-feet-three-inches tall].” I asked Phillip to perform a body scan, which is typically done after the VoC of the Positive Cognition had risen to six or seven, however, I hoped that any physical discomfort detected by Phillip could help identify remnants of trauma not yet addressed and possibly interfering with the strength of Phillip’s belief in his Positive Cognition “I’m good the way I am.” Phillip reported that he did not detect any signs of tension or disturbance in his body and stated that he was feeling good, so I ended the session.

During the following session (six), Phillip reported that he did not remember much from the previous session, only that he discussed being teased at school. He also denied having any thoughts or emotions associated with the teasing incident between the sessions. As Phillip focused on the teasing incident again, he reported feeling “frustrated a bit, because that’s the only thing they could do, or that’s the best they could do with their time,” but rated his feelings of disturbance as very low (SUDS=1) and also expressed a stronger belief in his positive cognition, “I’m okay the way I am” (VOC=6). When asked what was interfering with him having a full belief in the statement “I’m okay the way I am,” Phillip said that it was his acne, with a large number of small pimples and the redness of the skin on his face.

The remainder of session six focused on the second traumatic incident reported by Phillip involving his teacher grabbing him by his right arm in front of other students. The negative cognition that Phillip associated with that event was “I cannot protect myself, I’m worthless.” He chose “I did the best I could” as his positive cognition and

rated his belief in validity of that statement as low (VoC=3). Phillip experienced significant difficulties in identifying his emotions associated with focusing on that incident. At first he stated "I don't really feel mad at him, everybody has good and bad days." I asked Phillip again to focus on the image of the teacher grabbing him by the arm and the words "I cannot protect myself," which Phillip did for several minutes and said "I guess maybe I am bit happy that it happened, as maybe he was trying like [sic] put me in the right direction or something, and maybe he learned from his mistake." I said to Phillip:

It looks like a complex kind of situation, like him trying to point you in the right direction, but I guess there was also a hurtful element to that, right? Some of the thoughts that you're getting that go with that are I'm worthless, I cannot protect myself.

I also praised Phillip for working very hard to turn his life into a positive experience and for trying to learn from his mistakes, but I also suggested that focusing on his negative feelings would be more challenging for him. I also reminded Phillip that he was able to stay focused on the negative aspects of teasing and that his emotions associated with that experience become stronger at first, but decreased as we continued working with them. Phillip focused on the incident again and reported thinking "Maybe I'm a bad person" and described his feelings as "both sad and happy; or sad and glad." Felling glad because the teacher was trying to point him in the right direction and sad because "it happened and it had to be me; sad and mad I guess." He reported feeling the negative sensations in his head and rated the disturbance as two on the ten point scale (SUDS=2). After a set of approximately 50 eye movements Phillip reported that he reviewed the

entire situation in his mind including him talking to another student at which time the teacher grabbed him by the arm and said "I told you guys to be quiet!" Phillip also reported feeling weak "because I couldn't do anything about it." Phillip was instructed to "go with that" and after approximately 36 eye movements reported feeling embarrassed. That was processed with another set of approximately 30 eye movements, after which Phillip reported "not getting really anything, just being mad at myself and embarrassed for not doing anything or stopping him." After approximately 60 eye movements Phillip reported feeling "maybe a bit happy; maybe there is a reason it happened." After a set of approximately 55 eye movements Phillip said "maybe he was caught by surprise; maybe he was not expecting it." After another set of 60 eye movements Phillip stated "I'm a good person." Next set of eye movements of a similar length resulted in a comment "can't really think of anything." In reassessment before the end of the session, Phillip indicated that his level of disturbance associated with the incident remain unchanged (SUDS=2) and added that the incident "it's not really disturbing, just there is more disturbing things about it than good things about it." Phillip agreed with my observation that he was guarding against negative emotions. I ended that session with the exercise of putting all disturbing thoughts, images, and emotions into a safe container while performing eye movements.

The seventh session started with reviewing with Phillip whether anything related to the incident with the teacher had come up for him since the last session. He denied experiencing any thoughts, feelings, or memories associated with the incident with his teacher. I directed the conversation to the subject of Phillip suppressing anger and Phillip revealed that he had been suppressing anger due to fear that otherwise he could



act aggressively towards others. He agreed that expressing anger in therapy was safe and that it could help him “not having any to carry around.” With the understanding that it would be helpful to allow an expression of anger in therapy, I asked Phillip to focus on the image of the teacher grabbing him by the arm and examine the list of negative cognitions. Phillip chose “I cannot protect myself,” which was a part of the negative cognition he selected in the previous week “I cannot protect myself; I’m worthless.” He chose “I can get what I want” as his new positive cognition and reported a strong belief in the validity of that cognition (VOC=6). I suggested that he retain his previous cognition, “I did the best I could,” because his belief in it was still low (VOC=3), and he agreed. Phillip reported feeling “mad” when focusing on the incident and his negative cognition and rated his level of disturbance as three on the ten-point scale (SUDS=3) and reported feeling the disturbance in his stomach and the sensations were “just moving around.” After approximately 50 eye movements Phillip reported feeling “mad at myself for not doing anything.” After a set of 30 eye movements Phillip reported feeling “happy because I didn’t let him get away with it.” After another set of 20 sweeps Phillip reported not getting anything. He paired the image of the incident and the negative cognition and reported unchanged level of disturbance (SUDS=3). After focusing on the image of the teacher grabbing him, on his the negative cognition, and his emotion and after performing approximately 50 eye movements Phillip reported “I’m in control.” After another 40 sweeps Phillip reported thinking “I’m a good person,” which became the focus for the next set of eye movements of approximately 15 sweeps. At this point Phillip reported not having any negative feelings. When asked what changed, Phillip reported that he recalled that he did take action some time after the incident and told his parents and they told the principal. However, Phillip still rated his level of disturbance

associated with the incident as unchanged (SUDS=3), but reported an increase in the strength of his belief in his positive cognition (VOC=6). After a set of approximately 16 sweeps while focusing on "I did the best I could" Phillip stated "I'm intelligent and I'm smart." After I said "Go with that" and another set of approximately 15 eye movements, Phillip reported getting "really nothing." He still reported some level of disturbance (SUDS=2), which he linked with his thinking that he "should have told somebody sooner." I asked him to think about some reasons that could have delayed his telling his parents about the incident and he recalled that he was concerned about "making things worse" and also wondering "will anyone believe me?" After focusing on the above concerns and performing eye movements, Phillip reported a decrease in his level of disturbance (SUDS=1). He explained that remembering why he did not tell any adults about the incident immediately challenged his belief that he was at fault for not reporting the incident earlier.

I asked Phillip to focus on his positive cognition "I did the best I could" and to consider a possibility that he indeed did the best he could in the incident with the teacher, because he was two years younger and less experienced. After a set of 16 eye movements Phillip reported "I am a good person," but still indicated no change in the strength of his belief in positive cognition (VOC=5). He suggested that "knowing that I could have done something different" was holding him back, but after a set of approximately 30 eye movements and a focus on that thought, Phillip reported feeling "happy that I did something after." That was processed with another set of 24 eye movements leading Phillip to state "It's over; I'm safe now." After another 24 sweeps Phillip said "I don't get anything." He reported a complete belief in "It's over; I'm safe

now" (VOC=7) and the same level of belief in "I did the best I could." The session ended with Phillip performing eye movements and visualizing locking all potentially disturbing memories, thoughts, and feelings in his safe.

At the start of the next session (session eight), I invited Phillip to comment on his experience with the treatment, which prompted him to ask about the role of eye movements in the treatment package. He reported feeling that the eye movements were not making any difference for him, but accepted the explanation that they were part of the treatment package, the evaluation of which he was participating in. When asked to recall the traumatic experiences that were already processed, Phillip reported a noticeable reduction in the sense of disturbance he felt when focusing on each of those incidents (SUDS=0 for the incident with teasing and SUDS=1 for the incident with the teacher). When asked to focus on his positive cognition "I did the best I could" and on the incident of the teacher grabbing him, Phillip reported VoC to equal six. Two sets of eye movements with the positive cognition did not produce any change in Phillip's belief in its validity, as he continued to believe that he could have done something different, namely tell others. I explained to Phillip fight, flight, or freeze as typical responses to being frightened. After a set of approximately 12 eye movements Phillip said that freeze was more appropriate to the situation with the teacher than fight or flight would be. He focused on that and performed another set of eye movements after which he reported his belief in "I did the best I could" to increase (VOC=7). He was asked to focus on the incident and his positive cognition to which he responded with "If [I] did something different, I probably would [have] got in trouble." After approximately 15

eye movements Phillip reported nothing new and a full belief in "I did the best I could." The body scan did not reveal any tension, so the work on this incident was concluded.

Phillip reported another negative incident with the same teacher involving him and a few other students being instructed to get on their hands and knees and beg for the extension on their homework deadline. Phillip reported no negative reaction to the memory of the incident and said "it's pretty funny to think that I did it." Session eight concluded after 40 minutes, as there was not enough time to work with another traumatic incident.

The situation that Phillip chose to focus on in session nine (week 13 of his participation in this research) was the sudden discontinuation of his father's visiting when he was six years old. Phillip was unable to identify any image representing the experience, or the worst part of the experience, or the negative cognition, but reported feeling confused, sad, depressed, lonely, and experiencing physical sensations in his eyes. Phillip reported feeling a moderate level of disturbance (SUDS=4) and after approximately 60 eye movements he said "It wasn't all my fault." Phillip disagreed with both my suggestion that it looked like he was blaming himself and my observation that he appeared to be deep in thought following the eye movements. I asked him to focus on the emotions that he reported earlier and the areas in his body where he felt physical sensations and disturbance and follow my fingers with his eyes. After approximately 50 eye movements Phillip reported that he did not get anything. I suggested that Phillip focus on each feeling separately, starting with him feeling confused. After 30 eye movements Phillip reported wondering "if I did something wrong?" After the next set of approximately 20 sweeps Phillip reported "not really [getting] anything." I suggested

that he focus on feeling sad and after approximately 40 sweeps Phillip reported feeling sad and added "I could not see him, he was brought into my life then taken away." As after next 20 eye movements he reported getting nothing, I asked him who brought his father into his life and then took him away. Phillip replied "my mom" and I asked him to "Go with that," however, after 30 eye movements he reported "not [getting] really anything." I asked Phillip to focus on his father coming into his life then disappearing and after approximately 30 eye movements he reported feeling confused and sad and thinking, "Why he didn't wanna see me?" After my "go with that" and 40 eye movements, Phillip said "What did I do? Did I do something wrong?" He was asked to "Go with that" and after approximately 40 eye movements reported "not [getting] really anything." Next Phillip focused on feeling lonely and associated it with sensations in his eyes, but after 30 eye movements reported "not [getting] really anything." At that point, as the session was nearing completion, I asked Phillip to focus again on his experience with his father being absent in his life and he reported some decrease in his subjective level of disturbance (SUDS=3). As usual, the session ended with me asking Phillip to put all disturbing memories, thoughts, and feelings into his imaginary safe. During the next session, Phillip reported diminished feelings of disturbance associated with his father's absence in his life (SUDS =1), therefore no further work with that memory was done.

In session 10 (week 14) Phillip chose to work with his memory of being frequently ignored by his mother and he chose the image of her watching television and telling him "I'm too busy." The above situation precipitated his aggressive acting out that was detailed in the Early Warning System. Phillip identified "I cannot get what I

want” as his negative cognition and “I can get what I want” as his positive cognition. He estimated the validity of his positive cognition as six (VoC=6) and explained “There are few things I can’t get; I can’t get [a] million dollars.” Phillip followed my request and examined the list of Positive Cognitions again but did not find another example of what he would like to believe about himself when thinking about being ignored by his mother. When Phillip stated that he could not experience any negative emotions when focusing on the scene representing being ignored by his mother, I reminded him that he previously identified that situation as disturbing. Phillip explained that “just thinking about it” was producing some sense of disturbance (SUDS=2) and identified the disturbing thought as “Maybe I didn’t handle it [the confrontation with his mother] right.” I suggested that the situation with his mother was complex involving a chain of interactions between him and his mother. I added that we had already addressed his behaviour during earlier stages of treatment and that presently we were addressing the impact that negative live events, including what happened with his mother, had on him. Phillip followed my direction to focus on the image of his mother sitting in front of the television and ignoring him and reported that he did not feel any disturbance (SUDS=0).

I asked Phillip if there were other memories of past events that created a sense of disturbance for him, but he was unable to identify any. Next, I reviewed with Phillip each traumatic incident that we addressed during the Past Trauma Treatment and he reported zero disturbance (SUDS=0) associated with all of them. However, when I asked him if he experienced that Past Trauma Treatment as helpful he replied that he did not know. In response to my question about possible reasons for him not feeling any disturbance now that he had felt before treatment, Phillip offered that his thinking about those events changed. For example, his new thinking about teasing was “It’s normal for

people to get teased. These guys were probably teased and they were very angry too.”

Phillip also reported a reduction in the number of angry and retaliatory thoughts. Phillip still thought that teasing was not fair and that he did not deserve to be grabbed by the teacher, but added that those thoughts did not elicit any emotional reaction.

In response to my questions about his experience with Future Movies, Early Warning System, Choices Have Consequences, and Tease Proofing Phillip replied that they were probably helpful, but could not offer specific examples to illustrate that. However, he volunteered a description of a situation with a staff member, where he felt disrespected and very angry. Upon reflecting on his handling of the situation, Phillip concluded that he managed his anger well. He agreed to imagine the above situation and his handling of it as an example of a positive choice and performed a set of approximately 12 eye movements. He reported experiencing positive feelings associated with his choice and agreed to complete another set of eye movements. That concluded Phillip's treatment participation.

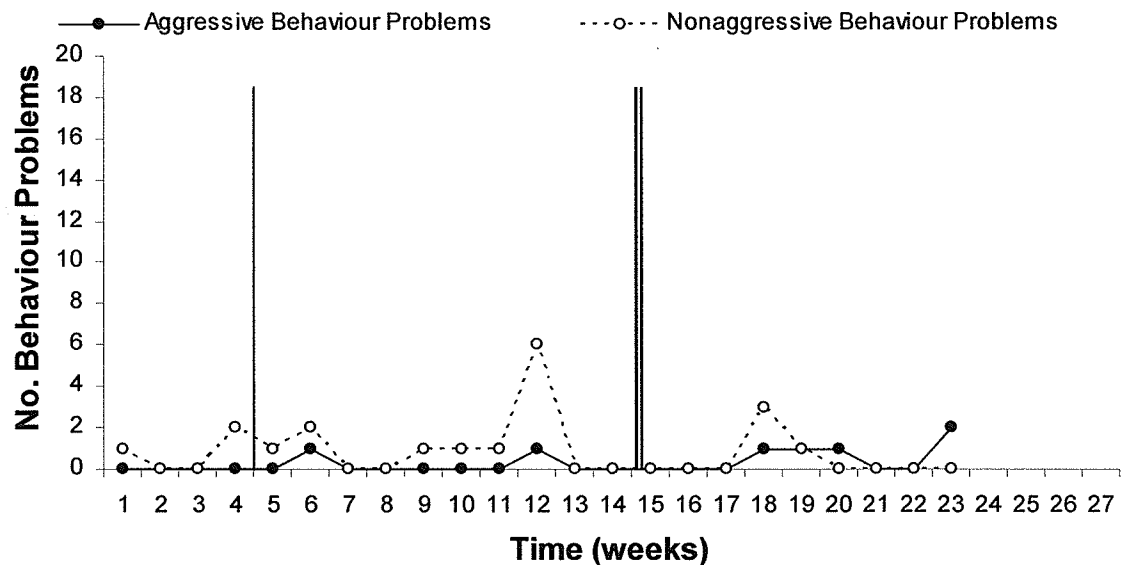
During the second week of the follow up, Phillip discontinued, in consultation with Knowles Centre Consulting Psychiatrist and his family physician, his medication (Effexor and Dexedrine), showing no significant increase in behaviour problems.

Phillip remained at Knowles Centre until the age of seventeen and a half, at which time he transitioned to independent living arrangement with CFS. According to the school liaison worker, Phillip has managed well living on his own and graduated from high school at the age eighteen.

## Results

*Behaviour problems on the unit.* Phillip's behaviour problems noted on the unit charts are shown in Figure 1. The single vertical line (after week four) marks the beginning of the treatment phase and the double vertical line (after week 14) marks the end of the treatment phase and the beginning of the follow up phase. The baseline phase for Phillip was extended by one week because he did not complete his self-report measures (Conners-Wells' Adolescent Self-Report Scale and CROPS) for week three. The baseline phase

Figure 1. Phillip's Behaviour Problems Reported in Unit Chart.



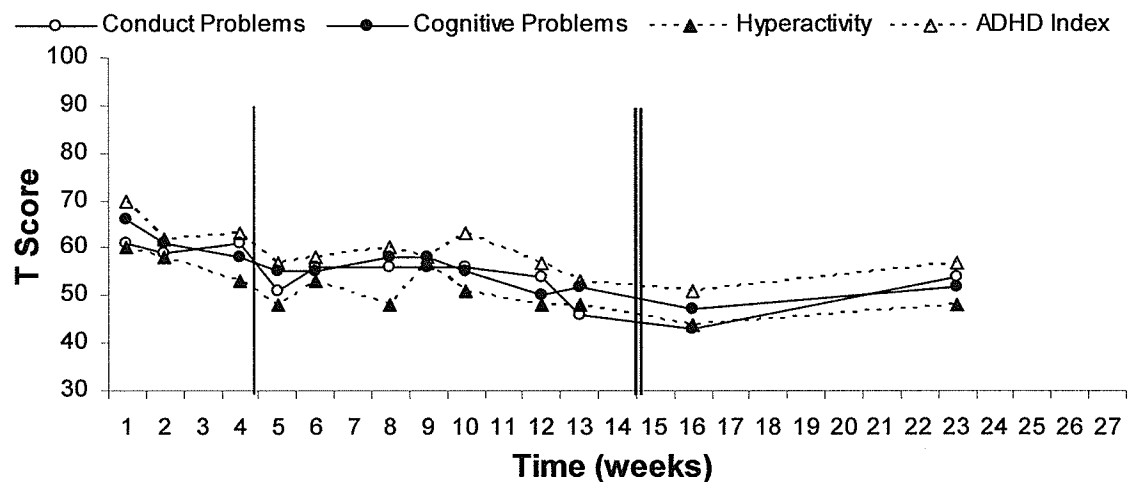
The visual inspection indicates that Phillip displayed relatively few behaviour problems in all three phases of research. Due to the fact that very few behaviour problems were recorded in the unit chart during the four-week baseline, this measure could only show deterioration in Phillip's behaviour during the course of treatment and followup, but could not show any degree of a positive treatment effect. The spike in the number of reported nonaggressive behaviour problems in week 12 (past trauma phase of treatment) included Phillip refusing to follow staff directions, swearing at staff, and



running away twice for short periods of time after he lost privileges for smoking cigarettes in his room.

*Conners-Wells' Adolescent Self-Report Scale.* Phillip's self-report data on the Connors scale are shown in Figure 2. The visual inspection indicates a positive change of approximately one standard deviation evident at the end of the treatment phase and during follow up

Figure 2. Connors-Wells' Adolescent Self-Report Scale Scores for Phillip.

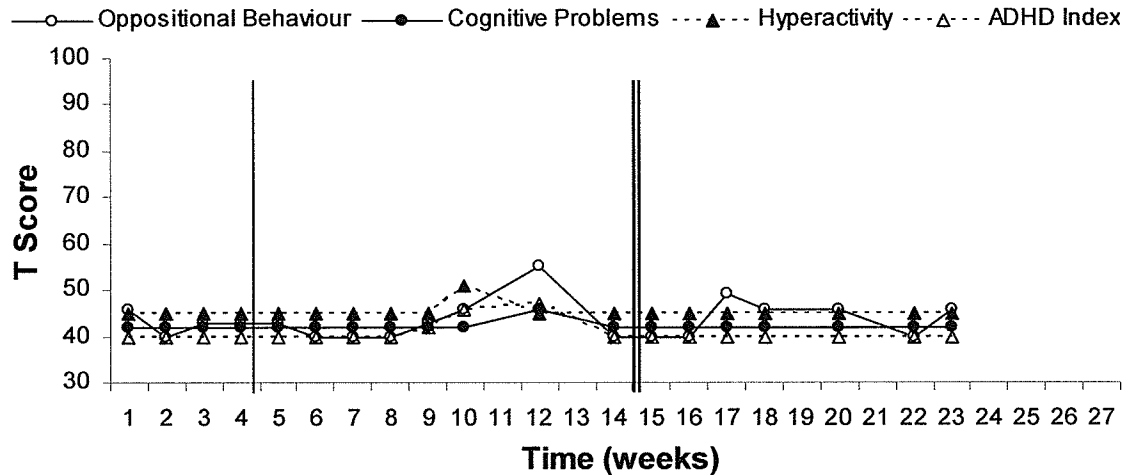


relative to the baseline, except for Hyperactivity. Unfortunately, the follow up occurred during the summer vacation and Phillip did not feel motivated to fill out and return the self report measures that were handed to him by the unit staff, hence the gaps in data between Weeks 16 and 23. Nonetheless, these data seem to suggest a maintenance of the gains subsequent to treatment.

*Conners Parent Rating Scale.* Phillip's parent rating scale data, which was completed by the unit staff, are shown in Figure 3. Staff ratings on this scale indicate consistently low frequency (average and slightly below average range) of all behaviour problems measured by this scale. There is one slight increase in oppositional behaviour during week 12 (past trauma treatment), but even that remains within normal range. Because of

the consistent absence of behaviour problems from the start of the research, no treatment effect could be demonstrated by the data obtained from this measure.

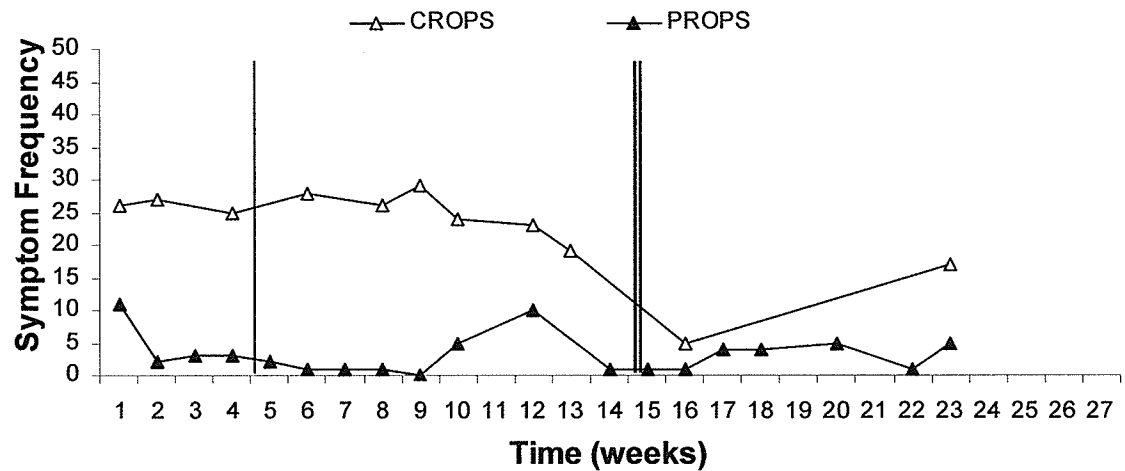
Figure 3. Conners Parent Rating Scale Scores for Phillip.



*Posttraumatic symptoms.* Phillip's self-reported (CROPS) and staff-rated

(PROPS) posttraumatic symptoms are reported in Figure 4.

Figure 4. Phillip's Posttraumatic Symptoms.



The frequency of posttraumatic symptoms reported by staff (PROPS) is low during the baseline phase, shows an increase in the latter part of the treatment phase, drops to zero initially in the followup and increases slightly during the follow up phase, thus indicating no positive treatment effect. The frequency of symptoms reported by Phillip (CROPS) is high during the baseline and more than half of the treatment phase and

decreases during the latter part of treatment indicating a positive treatment effect. Phillip reported a very low level of posttraumatic symptoms at the very start of the follow up phase, but significantly increased reports of posttraumatic symptoms at the end of the follow up phase. Unfortunately, in that period of time, Phillip filled out only two forms, one at the beginning and one at the end of the follow up phase.

### *Summary*

Phillip's attitude towards his participation in treatment appeared to be consistently positive as he readily consented to treatment and always presented as cooperative. Phillip's joking style of responding to my questions at the beginning of the Positive Future Movie, a likely indication that he did not take the task seriously, disappeared quickly and he seemed to become fully engaged in performing treatment tasks. Overall, Phillip responded well to this treatment package and his tendency to answer questions with brief single sentences seemed to work well with this treatment.

Phillip reported feeling uncertain about the benefit of Future Movies, Early Warning System, Choices Have Consequences, and Tease Proofing, however, he provided an example of effective handling of intense anger in response to feeling disrespected by a staff member. The Past Trauma Treatment apparently allowed Phillip to identify his emotions and negative self-referential cognitions associated with several of his memories of past trauma and resolve the emotional impact of those events as evidenced by a decrease in his SUDS ratings for all of the traumatic memories that were targeted. In the last session, Phillip reported an absence of disturbance (SUDS=0) associated with each traumatic incident addressed in treatment. Although Phillip was not certain if the Past Trauma Treatment was helpful to him, he attributed the decrease in SUDS to change in his thinking about the past events targeted by the treatment. Phillip

also reported increases in VoC ratings of his positive cognitions about himself in relation to every traumatic memory treated.

The visual inspection of data obtained thorough the use of rating scales indicates a positive treatment effect of approximately one standard deviation on three of the four subscales of the Conners-Wells' Adolescent Self-Report Scale: Conduct Problems, Cognitive Problems, and ADHD Index. No positive treatment effects were demonstrated by neither the Conners' Parent Rating Scale nor rating of the behaviour problems reported in unit chart mainly due consistent absence of behaviour problems observed by the unit staff, from the start of the baseline. No positive effect was evident in staff-reported frequency of posttraumatic symptoms by (PROPS), however, the frequency of symptoms reported by Phillip (CROPS) indicated a positive treatment effect that was not fully maintained during the follow up phase.

Wesley

### *Background Information*

Wesley is the second youngest of six children born to First Nations couple who has had a volatile on-again-off-again relationship. According to the social history compiled by the CFS worker, Wesley's family experienced multiple problems including alcohol and drug abuse, violence, and family break ups. The family relocated a number of times between reserves in Manitoba, a small town in Saskatchewan and a small city in Manitoba. Wesley's two older brothers and two older sisters dropped out of high school and developed substance abuse problems. His father and two older brothers served prison terms. Wesley had displayed behaviour problems at school and in the community since he entered elementary school, which significantly intensified in the few years leading to his admission to residential treatment at Knowles Centre in August 2002. He

was involved in regular physical fights at school and in the community, skipped classes frequently, and threatened teachers with physical harm. He was involved in several break and enters, stole a number of cars, some of which he destroyed by smashing them into buildings as a part of a game he played with other youngsters, slashed tires of a semi trailer, and was involved in arson. He also smoked cigarettes and marijuana, used alcohol and other illicit drugs. He had been living with his mother and younger brother, not respecting any house rules or curfew, threatening both his mother and brother, and hitting his brother. Shortly before his admission to Knowles Centre, he attended court where he threatened his lawyer in front of a judge. While residing in a locked unit of the Knowles Centre, Wesley presented as cooperative with staff, maintained excellent attendance in his classes, interacted positively with his teachers and other students, and completed his assignments. His teacher reported that Wesley lacked confidence in his abilities and tended to avoid assignments he considered too difficult; however, when prompted by the teacher to start working, he managed to complete them.

#### *Treatment Participation*

##### *Motivation Enhancement: Future Movies*

Wesley presented as a five-foot-ten-inches tall, trim but muscular looking boy with shortly cut dark thick hair. He was admitted to Knowles Centre three and a half months prior to starting his baseline data collection, during which time he had regular weekly sessions with me. Wesley presented as tense and insecure, shy and reserved, and smiled frequently. During interviews he presented as very guarded and not willing to discuss his past or any family related issues and frequently expressed anger with his social worker and his mother for being placed at Knowles Centre. I witnessed one of his angry outbursts in the unit when staff denied his request for unsupervised outing and he

appeared quite intimidating (hyperventilating, screaming and swearing, and hitting walls with his fists). Wesley consented to his participation in this treatment research project including video- or audiotaping of the sessions. The Motivation Enhancement was completed within an hour of the first session, which was week seven of Wesley's participation in this research project.

*Positive Future Movie.* For his Positive Future Movie, Wesley imagined that in 10 years he would be 24 years old, working as a roofer, living with his mother so he could take care of her. He also imagined himself having completed high school, working towards owning his own roofing company, and having a girlfriend "but no children until the age of 25." He envisioned owning a Ford Mustang for his own personal use and a truck for his business. When imagining himself graduating from high school, Wesley reported getting an "adrenaline rush" and experiencing a "happy feeling" in his whole body. Wesley stated that graduating from high school would be a significant accomplishment for him and his family because he would be only the second person in his extended family to complete high school. Wesley was smiling and his voice sounded excited when he stated "I wanted to do that [finish high school] ever since they [siblings] dropped out of school." He reported having no problems with concentrating on the image of his graduation, the emotion, the words "I've made it," and simultaneously performing approximately 18 sweeps of eye movements. His smile and his soft tone of voice indicated that he experienced visualizing his graduation with eye movements as pleasant. The graduation scene was practiced with eye movements twice. Another sequence of scenes practiced with eye movements (approximately 24 sweeps) involved Wesley holding a roofing job and taking care of his mother by giving her money and driving her to her appointments. The Positive Future Movie ended with Wesley

imagining owning his own roofing company, feeling happy, thinking, "I'm all the way there," and performing approximately 36 eye movements.

*Negative Future Movie.* When the idea of Negative Future Movie was introduced to Wesley, he stated that he would not get into trouble any longer because "I don't want to end up in a place like this [a residential treatment centre] again." He added that he could get into trouble unintentionally, however, and stated that he would prefer to avoid that. He acknowledged that continuation of his delinquent behaviour could lead to his incarceration, "cops roughing me up, having a record when I get older, people won't respect me," but stated that he did not want to think about that because thinking about being in jail resulted in angry feelings. Wesley performed approximately 20 sweeps of eye movements while focusing on his angry feelings and thinking "It's not worth it." After the exercise he answered my question "What do you get?" with "I'm not going to jail. That's what I thought."

Wesley was initially unable to identify any strengths he possessed that could help him achieve a better future, but with my help he was eventually able to identify that he had a strong sense of caring for his family, an ability to take advice from other people, being a hard worker and having some roofing experience, and physical strength. Wesley appeared reluctant to focus on factors that could interfere with his plans, but with encouragement and prompting, he stated that resuming his past behavior of swearing at teachers and "getting mad at teachers for no reason" would sabotage his plan of graduating from high school. At first, Wesley stated that 100% of him was motivated towards the good future, but after some discussion he stated that approximately 20% of him was still motivated to engage in negative activities that could lead towards the bad

future. During this stage Wesley displayed some signs of denial, as evidenced by such comments as “I will never get frustrated” and “I will never get into trouble again.”

At the start of session two, Wesley was able to recall in significant detail his graduation scene and giggled when describing it. This scene and the scene of him standing between his Ford Mustang and his work truck were practiced with eye movements of approximately 20 and 15 sweeps respectively. Following the second scene, Wesley stated “I think I’ll make it but I don’t know. I’m not too sure; it’s a guess.” I used that as segue to reintroduce the subject of negative future outcomes if he continues with his acting out behaviors, and he agreed to imagine himself being in jail thinking “It’s not worth it” while performing eye movements, which he stopped after approximately 8 sweeps. Following this scene, Wesley stated “I know I’m not going to do that.” I asked Wesley to “go with that, which did for the duration of six sweeps of eye movements.

### *Adaptive Skills Training*

*Early Warning System.* The remainder of the second session was used to discuss Wesley’s anger escalation cycle. When discussing his behaviour when angry, Wesley stated “When I get angry I feel like I’m in my own world and I can say and do whatever I want to.” He also added that when his anger subsides, he feels “kind of bad because of the things I say to other people.” He said that he thinks about apologizing but does not follow through on those thoughts because “I’m not good with that.” He tries to resolve his discomfort by deciding to “forget about what happened and start all over again” and becomes angry when others remind him about the incident that he is trying to forget. As an example, Wesley described a recent situation involving him getting angry and punching a hole in the wall after the unit staff denied his request to visit with his aunt.



Wesley added that his anger was partly related to his feeling not wanted by his mother, and visiting with his aunt regularly was helping him with that feeling. He also added that he changed his mind about taking care of his mother, which he pledged during his Positive Future Movie, because he was angry at her for placing him in residential treatment. It was challenging for Wesley to fully focus on his angry feelings towards his mother and he stated "I don't even want to think about it." Despite that statement, Wesley continued with the discussion and acknowledged that, when feeling angry, he does not explode right away but his "mind gets confused" and he starts saying and doing whatever he wants to. He described this process as "everything starts popping into my head and that's when I explode" and added "I just try to get it all out and after a while I cool down and it all just goes away." Wesley reported that after an angry explosion he would "go back to feeling normal," would usually think that his angry outburst was stupid, and would decide to forget about it. He agreed with my suggestion that what he described as him feeling stupid were actually his feelings of embarrassment. He also acknowledged feeling sorry about saying mean things to people when angry, but also added that he did not think that he should learn to apologize because people who know him well already know when he is sorry. Interestingly, he added that he always apologizes to his grandparents and to his mother. Wesley acknowledged that when angry, he thinks "I don't care for anything," which helps him overcome inhibition to acting out his anger ("I say and do whatever I want to!").

Wesley's angry outburst on the unit started with his request to visit his aunt being denied. He immediately experienced an intense anger arousal and felt shaky inside. This was followed by thoughts "Nobody wants me" and "I don't care for anything," however, Wesley was not able to determine which one occurred first. These

thoughts were followed by a further increase of his anger arousal and, at approximately the same time, experiencing the thought "I can do whatever I want." This thought was followed by an outwardly aggressive behavior including swearing, threatening, and verbal insults directed at the unit staff, which Wesley stated is typical for him. This reduced Wesley's anger arousal, however, he continued to swear for some time longer ("I am swearing and it's all coming out until it's all gone."). Once Wesley stopped his verbal aggression, he felt embarrassed and sorry for insulting others, wished that he could apologize, but, as usual, he decided not to worry about it. He asserted that he is able to forget everything once he makes that decision ("That's the way I am!"). Contrary to his initial resistance, Wesley presented as very cooperative with the process and did not display any obvious signs of frustration or disinterest. He required approximately 30 hand sweeps to review imaginally the above situation and was able to report back all of the above components. Contrary to his initial resistance, Wesley presented as very cooperative with the process and did not display any obvious signs of frustration or disinterest. Wesley agreed to try again and after approximately 36 eye movements he reported a successful completion of the exercise, which concluded session two.

At the start of the third session, Wesley demonstrated good recall of the sequence of events involved in his anger escalation, except the parts involving emotions, namely feeling shaky inside and feeling as though nobody cares about him. Wesley stated that when he becomes angry he also becomes confused, which he explained as having a flood of angry thoughts leading him to make random angry comments. He agreed to view with eye movements the entire sequence of steps involved in anger escalation cycle. To offer Wesley more practice and to ensure that Wesley is aware of all the steps,

I asked him review in his imagination several steps at a time while performing eye movements. The first group practiced with approximately 10 eye movements included staff denying Wesley's request, Wesley getting very angry, feeling shaky inside, clenching his fists, and feeling alone. The second group practiced with approximately 24 eye movements included exploding with words, saying insults, feeling confused, and arguing. The third group included Wesley feeling stupid and sorry for things he said, feeling like wanting to apologize but not being able to, and saying to himself "Just forget about it," but Wesley chose to view the entire sequence, which he did with approximately 40 eye movements. During that part of the session Wesley presented as very cooperative and even did not object to including his earlier comments about his inability to apologize, which he did not want to do in the previous session. As the review of the previous session took only fifteen minutes, the rest of the session was used to introduce Wesley to Choices Have Consequences.

*Choices Have Consequences.* During the introduction to Choices Have Consequences, Wesley stated "I am not good with talking to people." As a first example of a negative choice, Wesley mentioned when he was seven or eight years old hitting his mother because he was angry with her. He reported that in the past few years that he would leave the house when feeling angry with his mother. Wesley described a situation which led to criminal charges for his aggressive behavior that involved shoving his teacher in front of his classmates because the teacher stood in his way when he tried to leave the classroom. Wesley reported feeling that his aggressive behaviour towards the teacher was justified, but agreed to view imaginally the situation with eye movements, ending the sequence of events with the statement "It was not worth it." As a positive choice, Wesley reported a situation that occurred when he was in an elementary school

and involved him changing his decision to walk out of the school in anger and returning to class. He also added that he still walked out of school later that day, but for the purpose of the treatment, only his positive choice was processed. Another positive choice that was practiced with eye movements concerned Wesley asking the teacher for permission to leave the classroom for a short period due to his feeling angry instead of his usual storming out.

During the fourth session (week 10 of research), Wesley claimed not to remember anything from the previous session, even with some general cuing. During this session, Wesley presented as withdrawn and guarded, offering only brief answers without much detail. I decided to practice more examples of Choices Have Consequences with Wesley, hoping that he could remember them and the accompanying belief that positive choices lead to positive and negative choices lead to negative consequences. For a positive choice, Wesley suggested a situation that occurred during his past weekend home visit, where he got angry with his younger brother and choose to leave the house instead of hitting him as he used to do. When asked to think about positive consequences of his choice, Wesley stated that he did not care about those and that his brother was lucky that he did not hit him. This suggested that the previous session had not had much impact on Wesley's thinking about his choices and their consequences. As an example of a negative choice, Wesley described a situation involving his arrest for shooting his pellet gun at houses and moving cars. When discussing this event, Wesley changed the story from it being an example of his negative choices to an example of police racism. He also reported that, during his arrest for shooting his pellet gun he swore at arresting police officers and did not think that his behaviour could result in undesirable consequences. However, further discussion

resulted in Wesley stating that taking his gun with him, instead of leaving it at home, was a mistake, and he agreed to process it with eye movements finishing the sequence with the statement "It was not worth it."

*Tease Proofing.* The fifth session, which focused on Tease Proofing, appeared to be particularly difficult for Wesley and he presented as only marginally cooperative, frequently saying "I don't know," or "I don't care." The first situation reported by Wesley, showing his aggressive reaction to teasing, involved him hitting and choking an adolescent girl for making negative remarks about his family. During a discussion of that incident, Wesley indicated that he was teased frequently and that he considered his aggressive response to the teasing to be appropriate. Attempts to help Wesley identify negative consequences of aggressive responding to teasing failed as he continued to assert that he would not hesitate to respond aggressively to other people teasing or making fun of his family. Another group of situations described by Wesley involved his aggressive responses to his younger brother's teasing. Once again, during the discussion of the subject, Wesley made numerous statements indicating that he considered his aggressive responses to his brother's teasing as appropriate. Wesley also made statements indicating that occasionally he was able to ignore his brother's teasing, but refused to see that as a better choice to hitting his brother. During this process, he also made numerous comments indicating that he considered "taking off" as the best way to handle his family-related problems. Wesley also argued that his brother's teasing would not be a problem any longer because after his discharge from Knowles Centre he would be living with his father. He also reported that when he will turn 18, he will "take off and live my own life." He also added that he wanted to finish school and that "before I could not even stand school but now I can." Wesley agreed to finish the session with

imagining ignoring his brother's teasing and going to his room, instead of "taking off," but changed his mind. Due to strong unwillingness to seriously engage in this section of treatment and in order to avoid setting power struggles with Wesley, I decided to proceed to the next section.

#### *Past Trauma Treatment*

Session six was used entirely for listing Wesley's traumatic events. Wesley reported being involved in a large number of accidents, including broken limbs requiring casts on two occasions, two recent deaths of family members, a history of family violence including witnessing his father hitting his mother (giving her black eyes), numerous incarcerations of his father and older brothers, and a history of being teased at school and in the community. During the process of listing the above events Wesley stated "I have had a pretty crazy life." Wesley declined the invitation to imagine a container into which he could put memories of the traumatic events that occurred in his life, stating "That stuff does not bother me, the only stuff that bothers me was what my father did to my mother." He also stated that he thinks about these events frequently and laughs at those memories.

At the start of session seven I complimented Wesley for his effort shown in the last session focused on listing his past traumatic experiences and acknowledged him for his courage. Next I asked him to select a traumatic event to start working with, but he kept answering me with "It does not matter" or "I don't care." I read Wesley the list that he helped create in the previous session, but he continued his unwavering stance that none of those events bothered him and that everything made him laugh. He also stated at the beginning of the session that he did not want to talk about "anything that happened between mom and dad," referring to his earlier disclosures of family violence. Search for

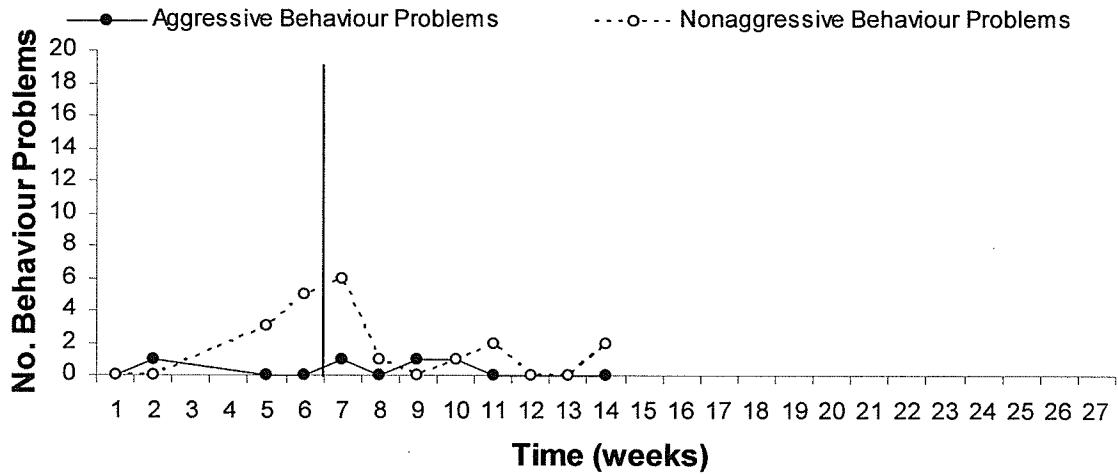
past traumatic events that Wesley would be willing to address in therapy led Wesley to talk about his aggressive behaviour towards others. He said with a smile, "I used to be really bad when I was younger . . . they called me the baddest [sic] kid in the whole town" and added "everybody knows me in that town and they say, there is Wesley, he is gonna burn down your house [chuckle]." Our one-hour discussion focused on selecting targets for trauma treatment proved unsuccessful as Wesley kept claiming "nothing bothers me" and "everything makes me laugh."

Wesley started the eighth session with a statement that he had decided to withdraw from the treatment project. I asked if he was willing to discuss his decision, but he said that he already decided and did not want to talk about it and left my office.

### *Results*

*Behaviour problems on the unit.* Wesley's behaviour problems noted in the unit charts are shown in figure 5. The vertical line after week six marks the beginning of the treatment phase. The visual inspection indicates a consistent, albeit small, increase in the number of nonaggressive behaviour problems during the baseline stage, achieving the peak during first week of treatment, and then remaining at the low level for the duration of Wesley's participation in the treatment. There were only single sporadic incidents of aggressive behaviour, with no incidence of aggressive behaviour during the past four weeks of Wesley's participation in treatment. The elevation in nonaggressive behaviours occurred after Christmas break, during which Wesley had almost two-week-long home visit with his mother. The behaviour problems displayed by Wesley included swearing and noncompliance in week five; noncompliance, running away and skipping a class in week six; and running away, noncompliance, and smoking marijuana in week seven. As the frequencies of recorded behaviour problems were low, they could support only a

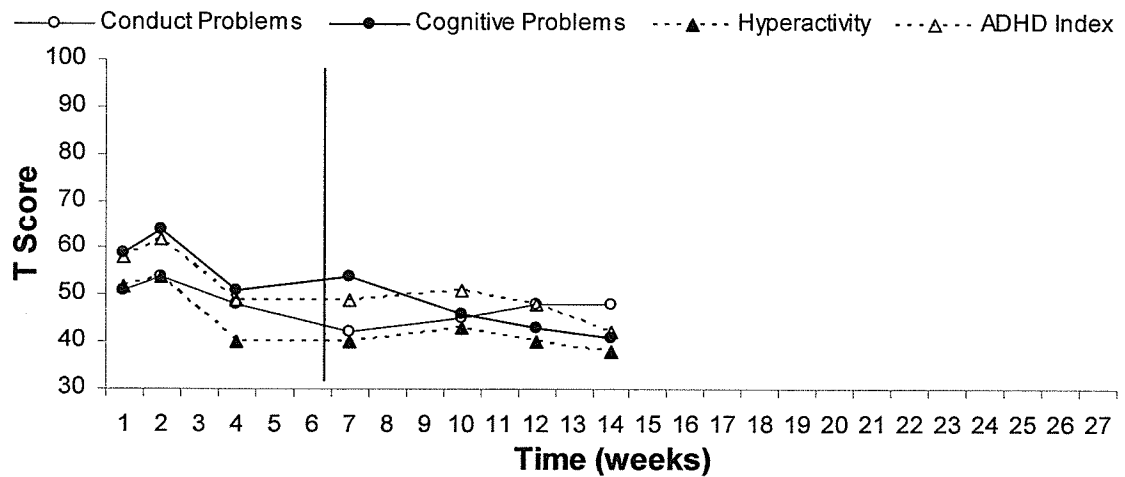
Figure 5. Wesley's Behaviour Problems Reported in Unit Chart.



tentative observation that there was some decrease in the frequency of Wesley's nonaggressive behaviour problems during his participation in treatment.

*Conners-Wells' Adolescent Self-Report Scale.* Wesley's self-report data on the Conners-Wells' Adolescent Self-Report Scale are shown in Figure 6. The visual inspection does not indicate that treatment was associated with a meaningful decrease in Conduct Problems and Hyperactivity subscales of the Conners-Wells' Adolescent Self-Report Measure. However Cognitive Problems and ADHD Index show at least one standard deviation difference between the baseline and the latter part of treatment phase,

Figure 6. Conners-Wells' Adolescent Self-Report Scale Scores for Wesley.

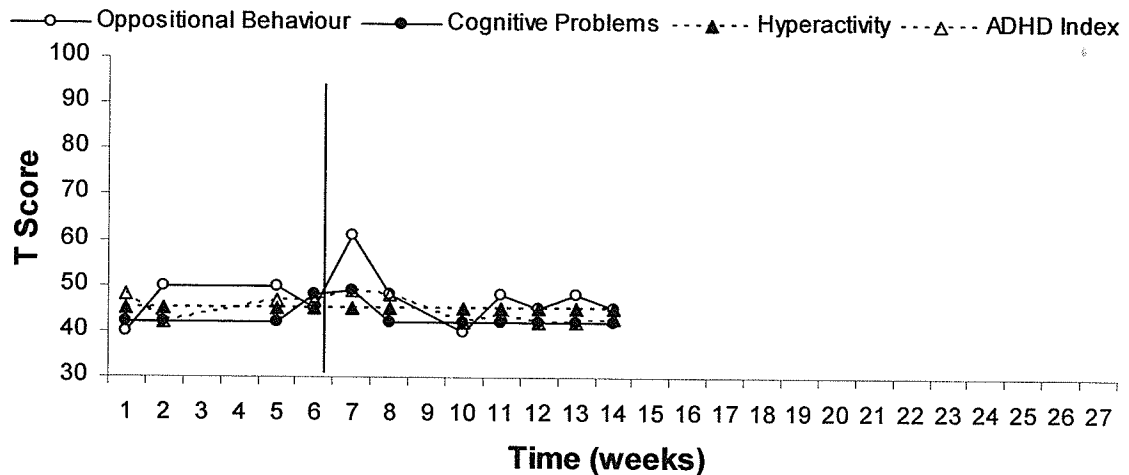




indicating a small positive change. The strength of that observation is undermined by Wesley failing to return his self-report measures in weeks five and six.

*Conners' Parent Rating Scale.* Wesley's parent rating scale data, which was completed by the unit staff, are shown in Figure 7.

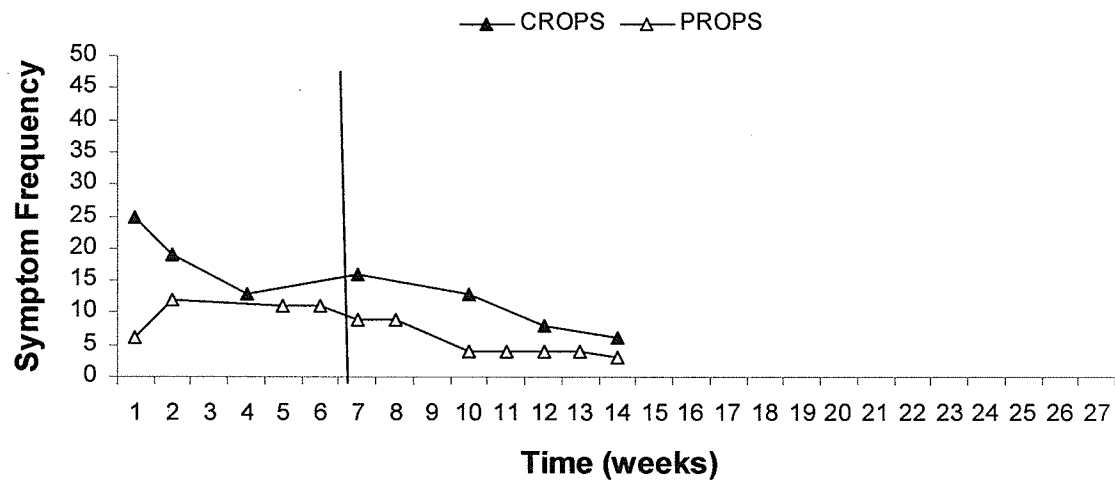
Figure 7. Conners' Parent Rating Scale Scores for Wesley.



Staff ratings on this scale indicate consistently normal range of oppositional and hyperactive/impulsive behaviour during the baseline phase and no discernable positive effect during Wesley's participation in treatment. The increased rating of oppositional behaviour in week seven is associated with his angry outburst, threatening staff, and punching a hole in the wall of his room.

*Posttraumatic symptoms.* Wesley's self-reported (CROPS) and staff-rated (PROPS) posttraumatic symptoms are reported in Figure 8. The frequency of self-reported posttraumatic symptoms (CROPS) shows a decreasing trend during most of the baseline, a small increase at the start of the treatment phase, followed by another steady decrease during the remainder of Wesley's participation in treatment. Missing data points for weeks five and six of baseline, the evidence of a decreasing trend during baseline, and Wesley not participating in the Past Trauma part of treatment undermine

Figure 8. Wesley's Posttraumatic Symptoms.



the possibility of the treatment having a definite role in reduction of CROPS. The frequency of staff-rated posttraumatic symptoms (PROPS) shows a relatively stable level during the baseline and initially small, followed by bigger decrease at the beginning of treatment phase, and maintained at the low level during past five weeks of Wesley's participation in treatment. Since Wesley did not participate in the Past Trauma part of treatment, the lowering of staff-rated posttraumatic symptoms might be reflecting an improvement in his adjustment to the Centre, to which the other parts of treatment might have contributed somewhat.

#### *Summary*

Wesley's initial attitude towards treatment was positive and he appeared to enjoy the Positive Future Movie and reported that the image of his high school graduation was very meaningful to him and evoked feelings of intense joy and excitement. Wesley's participation in the Early Warning System also appeared to be beneficial as, after overcoming his initial resistance, he was able to identify and practice with eye movements a sequence of thoughts, feelings, and behaviours involved in his anger escalation cycle. The Negative Future Movie, Choices Have Consequences, and Tease

Proofing appeared to be difficult and likely not beneficial to Wesley due to his very limited ability to manage negative emotions or contemplate negative consequences of his choices. The treatment did not seem to diminish Wesley's pervasive belief that his aggressive and delinquent behaviour was justified by what others did to him or his family. Wesley's withdrawing from treatment after the session involving listing of his traumatic experiences was likely related to his low tolerance for negative emotions and a challenge to his sense of loyalty to his family, especially his father. The immediate effect of this failed attempt to engage Wesley in the Past Trauma Treatment seemed to be an increase in his denial and minimization of the negative effects his past traumatic experiences have had on him, however, the long term effect is difficult to predict.

The visual inspection of data obtained thorough the use of rating scales indicates at least one standard deviation difference between the baseline and the latter part of treatment phase on two of the four subscales of the Conners-Wells' Adolescent Self-Report Scale, Cognitive Problems and ADHD Index, indicating a possible positive treatment effect. However, the strength of that observation is undermined by Wesley failing to return his self-report measures in weeks five and six of baseline. Staff ratings of Wesley's behaviour on Conners' Parent-Rating Scale fell consistently in the normal range during both the baseline and treatment phase, reflecting Wesley's controlled and cooperative style of functioning on the unit. Consistent normal range ratings of Wesley's behaviour by staff during baseline left insufficient space in the range of scores of Conners' Parent-Rating Scale to demonstrate positive treatment effect, should there be one. Similarly, low frequencies of recorded behaviour problems in the unit chart left no room to show any significant treatment gain. Although there was no trauma treatment per se, Wesley's scores on CROPS and PROPS showed a decline, which is consistent

with Greenwald's (1999) assertion that the Motivation Enhancement as well as Adaptive Skills Training may mitigate the negative effects of past trauma by decreasing client's emotional reactivity and increasing his capacity to problem solve and obtain support.

Nathan

*Background Information*

Nathan's father committed suicide when Nathan was two years of age. His mother subsequently entered a relationship with a man who abused her both physically and emotionally, which Nathan frequently witnessed. Nathan's relationship with his stepfather has been strained and Nathan reported being physically abused by him.

Nathan has displayed behaviour problems at school since grade one. These problems included aggressive behaviour towards other students and staff, temper tantrums, throwing objects, and refusing to follow directions or do assigned work. Different resources were put in place to help Nathan function better at school, but to no avail. In March 2001 when he was 13 years old, Nathan was indefinitely suspended from school for hitting another boy in the face.

Prior to being admitted to residential treatment, Nathan was placed in foster care, as he was out of his mother's control and had been acting out in the community. He was getting into fights with other youngsters from his reserve and was charged with an assault on a younger child. While in care, Nathan was charged with a sexual assault on a female staff (grabbed her crotch). Nathan also had a history of substance abuse, including drinking alcohol and smoking marijuana daily since age twelve. He has also been smoking cigarettes since age eleven.

Nathan, 14 at the time of his commencing treatment, had been in Knowles Centre for 14 months. The Centre's staff described his behaviour as volatile and unpredictable.

His mood had shown significant variability and, according to the unit staff, could easily shift from happy to angry, helpless, or sad with tearfulness. During periods of increased acting out behaviour, he presented as irritable, uncooperative, angry, and aggressive. Nathan being six-feet tall and of average build was seen as intimidating by some female staff. Nathan engaged in several physical fights with other residents and committed several assaults (e.g., threw a dinner plate into the face of a female resident, spat into the face of a female staff) for which he was legally charged. Due to those charges as well as charges resulting from breaches of his bail orders, Nathan had been incarcerated at MYC twice for four and five weeks respectively. On one occasion, he took a swing at a male staff who attempted to prevent him from leaving the Centre without permission. He ran away from the centre on several occasions during which time he engaged in drug and alcohol use. The consulting psychiatrist diagnosed him with depression and prescribed an antidepressant medication, Wellbutrin (bupropion), which Nathan took for several months and then refused. In the two months preceding the research treatment, Nathan continued to exhibit serious behaviour problems including physical altercations with peers, threats of physical violence against peers and staff, property damage (threw objects and hit or kicked walls, doors, and furniture). The unit staff reported that Nathan frequently refused to attend school and was often suspended from classes for misbehaviour.

#### *Treatment Participation*

At the start of Nathan's participation in this treatment project, I have had slightly over one year of involvement with him as his therapist at Knowles Centre. During that time Nathan presented as a detached individual with a mildly depressed mood, easily frustrated, and unwilling to discuss his behaviour or family related issues. He willingly

attended his individual therapy, but attempted to control the sessions by telling a variety of stories from his life that he considered funny. Nathan presented as self-centred and most of the stories were about him doing something remarkable such as fighting, breaking rules, or doing something very daring. He also appeared unwilling to acknowledge his behaviour problems and unable to appreciate the effects of his behaviour on others, and when I attempted to discuss with him his behaviour problems in the unit or at school, he either refused to talk about them or blamed others. He also presented as callous and unempathic showing no concern about the feelings or wellbeing of others. He frequently told stories about people and animals being hurt, laughing and stating that it was funny. His mother reported that Nathan had displayed that behaviour for a number of years.

*Motivation Enhancement: Future Movies*

Nathan readily consented to his participation in this treatment research project, but did not consent to either video- or audiotaping. The first session, was in Week 10 of his participation in this research project.

*Positive Future Movie.* For the Positive Movie, he created an image involving his living in Winnipeg with a friend in a house downtown, driving an old Ford Mustang painted black and yellow while listening to music. He reported feeling excited when imagining himself cruising with his friends in his Ford Mustang. The image, the emotion of excitement, and the statement "I've made it" were followed twice with sets of approximately 15 eye movements. He reported, when queried, that he felt no discomfort with the eye movements. He was reminded about his right to stop at any time by either saying stop or raising his hand. He stated that he understood. Another image practiced twice with eye movements (approximately 24 swipes) was Nathan's high school

graduation, which elicited feelings of pride and a thought "I've made it." The third positive movie scene that Nathan practiced with eye movements was his return home after a successful completion of his treatment at Knowles Centre. Nathan imagined being in his room, playing video games, feeling good and thinking "I've made it." Nathan also visualized himself working, probably in construction, which was practiced with two sets of approximately 12 eye movements each.

*Negative Future Movie.* For the Negative Future Movie, Nathan chose a scene of "walking into jail with handcuffs," seeing metal bars in front of him and feeling "a little sad." The image, the emotion, and the statement "It's not worth it" were followed twice with eye movements.

Nathan declared that he was 75% motivated towards his positive future and listed several factors that could help him achieve it including doing well in a group home, no criminal charges in five months, supportive family, involvement in positive activities and working out, being "stubborn in a good way," and feeling excited about doing well. Nathan also identified several factors that could interfere with his positive future including running away from group home, skipping school, not listening, and his rudeness. Nathan ran away from the centre for several days during the next week and missed his session. Two weeks later he demonstrated good recall of both his future movies. Before moving the next part of the treatment, he practiced with eye movements the scene showing his return home after successful completion of treatment and the scene showing him "walking into jail with handcuffs" and thinking "It's not worth it."

#### *Adaptive Skills Training*

*Early Warning System.* The Early Warning System required two sessions to complete because Nathan left the first session after twenty minutes due to a school

activity. Because ten minutes of the second session was used to review his recall of his Future Movies, in the remaining 10 minutes Nathan acknowledged having problems with anger management (“If I did not have anger problems I wouldn’t be on probation right now”) and identified a recent situation involving an escalation of his anger. The specific steps were identified and practiced with eye movements during session three, which lasted two hours.

As an example of his problem with anger management, he used a situation that started when a unit staff told him to go to his room for a time out for “joking around” instead of doing his chore. Nathan reported that he said “no” to a male staff reminding him to do his chore as his way of joking, but the staff took that as a refusal and told him to go to his room for a time out. When Nathan refused, the staff told him that he would be grounded for refusing to take a time out. Nathan again refused to go to his room, asking “How long am I grounded?” Nathan remembers that he repeated this question several times and, without getting any answer from staff, he went to his room. On the way to his room, he began to feel very angry, swore, kicked some objects, and slammed his bedroom door. In his room, he started to think “I hate it!” and “You’re not gonna boss me around!” so he left his room and went to sit on the stairs. While sitting on the stairs and thinking “I do whatever I want,” he was confronted by the staff who informed Nathan that he would report to the probation officer Nathan’s refusal to maintain peace, which was one of the conditions of his probation. Nathan felt scared and went to his room where he started to think “I don’t care.” He again left his room swearing, kicking objects, walls, and doors, and slamming doors. For a brief moment, he thought, “What did I do?” and experienced another bout of anxiety, but again he started to think “I don’t care,” felt angrier, continued to swear, and kicked and threw objects. The staff informed



Nathan that he was going to call Winnipeg Police and ask them to charge him with a violation of his probation order and place him at MYC. Nathan reported that he felt scared and did not want to be sent to MYC, so he ran away for several hours.

This incident described above was used to create a map of Nathan's anger escalation pattern, which usually starts with him doing something he is "not supposed to do" such as "joking around" or talking in class instead of working on his assignment. To a question of what percentage of his problems start with him joking around, he replied "one hundred." He usually ignores the early reminders from teachers, centre staff, parents, or other authority figures until he is threatened with some kind of consequence, to which he responds with a thought "It's not fair!" At this point, he feels some level of anger arousal, which he identified as being "ticked off," or "a little bit mad." Next in the sequence thoughts appear about being "bossed around" followed by "I hate it." These result in an increase in his anger arousal as he starts "feeling heated inside" and thinking "You're not gonna boss me around!" and "I'll do whatever I want." His behaviour becomes more overtly aggressive as he starts to swear, kicks objects, and refuses cooperation as this would equal allowing adults "to boss him around." There is a brief moment of Nathan becoming aware that his acting out will result in consequences and experiencing a burst of anxiety ("I felt scared"), which he neutralizes with "I don't care" thinking. This seems to lead to an increase in the intensity of his anger and acting out behaviour. Another moment of insight that his acting out behaviour is making his situation worse ("What did I do?") is neutralized again by an "I don't care" self-statement, leading to further increase in intensity of his anger and aggressive acting out. Initially, each step was practiced with eye movements separately, when it was identified, then Nathan was asked to visualize all the steps in a sequence like a slow motion movie

while performing eye movements. His verbal report indicated that he visualized all behavioural steps as previously rehearsed, but omitted all cognitions. These cognitions included "I hate it [being bossed around]," "You're not gonna boss me around," "I can do whatever I want," and "I don't care." The role of these cognitions in his anger escalation cycle was reviewed with Nathan, following which he was able to visualize the entire cycle including behaviours, cognitions, and emotions, while performing eye movements.

During the process of mapping his anger escalation pattern, Nathan remained fully focussed and cooperative. This represented a significant increase in his level of participation in therapy as, prior to his involvement in this treatment project, he had not been willing to discuss any subjects related to his family or his behaviour problems. Due to his limited vocabulary and awareness of his internal processes, Nathan experienced difficulties with verbal reporting of his thoughts, feelings, and reactions. I helped him by providing a menu of options to choose from, which created a possibility of Nathan choosing answers that were not fully reflective of his own thinking. However, Nathan's tendency to rephrase in his own words each verbal expression he chose from provided options seemed to indicate that he was choosing options that made sense to him and that he was incorporating them into his own frame of reference. For example, Nathan was given several examples of thoughts people have before they get angry including, "I'm being screwed," "People are not fair," "It's not fair; I don't deserve this" to which he offered his own statement "I don't want to be kicked out for [a] dumb reason." He agreed that it meant, "It's not fair," a statement with a broader meaning, thus applicable to other situations where Nathan becomes angry. At the end of the session, he thanked me for the positive feedback about his effort during the session. The next day, during a

case conference, Nathan's mother reported that in a telephone conversation he relayed to her what he had learned about his anger escalation pattern. The above appeared very encouraging, but one week later (session four) Nathan could not recall any of the elements of his anger escalation pattern, even with cuing. The session was used to review with Nathan all the steps, as recorded in therapy notes, and practice them with eye movements. Nathan missed the next session due a brief incarceration at MYC, following an incident of drinking alcohol.

*Choices Have Consequences.* For the Choices Have Consequences segment of the treatment (session five, week 16 of his research participation) Nathan chose a situation involving his consuming alcohol while on the outing to the mall with another resident from his group home. Nathan was arrested and detained at MYC for five days, as the intoxication incident constituted a breach of his probation order. He could easily visualize the entire incident, including the sense of excitement when he and another resident made to plan to "get drunk," negative consequences of his choice to drink, and worry about being caught. The execution of the plan included finding another person to buy them liquor, drinking it at the mall, returning to the group home, acting aggressively, which resulted in staff phoning police, their being arrested, and spending several days at MYC. Nathan seemed to easily accept the statement "It's not worth it" as he visualized himself locked-up in jail while performing approximately 55 sweeps of eye movements. Nathan reported that he visualized all the steps except the sense of excitement he felt about the prospect of getting drunk. He complied with my request to visualize the sequence again, including the feelings of excitement about his plans to get drunk, while performing another set of approximately 55 eye movements.

Another bad choice that Nathan presented was an incident involving his running away and committing a break and enter, which resulted in an arrest and time at MYC. Nathan visualized the entire incident as a slow motion movie (without prompts from me), including being locked up at the MYC and thinking "It's not worth it" while performing approximately 24 eye movements. As his positive choice, Nathan reported that he refused to run away when asked to by a peer and was rewarded for his choice with more privileges. He immediately volunteered that a few days later he went AWOL and lost his privileges. For the sake of reinforcing a positive choice, Nathan was asked to concentrate only on the positive choice and its positive consequences. He was able to visualize the opportunity and the temptation, his choice not to run away, the positive consequence of more privileges while performing approximately 40 sweeps of eye movements. After completing the eye movements Nathan volunteered that he remembered that the above event occurred on Thursday, because he had his allowance with him. Nathan was unable to remember another recent example of a positive choice, but stated that he decided to make the right choice of returning to the group home on time that afternoon. Nathan created a mental image of being greeted by staff upon his return to his group home on time, which he practiced with approximately 24 eye movements. Nathan reported experiencing a positive feeling ("feels good") associated with his choice and envisioned that consistent returning to the group home on time would result in an increase in his privileges. As another example of a positive choice, Nathan visualized refusing to fight with another resident from his group home after he hit Nathan first. In the actual situation Nathan became involved in fist fight and consequently lost his privileges. Nathan performed eye movements while visualizing himself refusing to fight and informing staff about his peer's attack on him, and the peer

losing his privileges. However, after the exercise Nathan stated that the staff would not believe him. This led to our discussing and me reminding Nathan about situations when adults believed him over others who tried to set him up.

In session six, which occurred two weeks later because of Christmas break, Nathan reported remembering the negative choices from the Choices Have Consequences session. I asked Nathan to view with eye movements two of previously identified positive choices: returning to the group home on time and his refusal to fight with another resident from his group home after being hit by him. Nathan also performed two sets of approximately 24 eye movements while visualizing his cooperating with his mother during the Christmas break and her being happy with him. During visualizations he was thinking "Way to go!"

*Tease Proofing.* Following the review of Choices Have Consequences I introduced Nathan to Tease Proofing. From the start of our discussion about teasing, Nathan insisted that it has not been his problem and I was not aware of any recent staff or teachers' reports contradicting his claim. Nathan backed up his claim with a statement that "In Jim's [homeroom teacher] classes we tease each other a lot and I don't do nothing (sic). Now I know we're just joking around."

#### *Past Trauma Treatment*

The remainder of session six was used to create a list of past traumatic events as targets for trauma treatment. Nathan identified several events including physical abuse by his stepfather, a bicycle accident at the age of four that resulted in a bloody face and four stitches without anaesthetic, a snowmobile accident, and "being stomped" by two youngsters when he was eleven.

Nathan had a two week break between sessions due to extended family visit. During session seven (week 20 of his research participation) Nathan chose the incident of "being stomped" as the first one for targeting by standard EMDR treatment. He reported that he was attacked from behind by two unknown youths while walking alone at night on his reserve, suffering "two black ears." Nathan claimed that he did not care about the incident and could not produce any image, identify negative cognition, and did not have any feelings related to that incident. He was asked to focus on the memory of the attack, including the memory of his ears being bruised and very sore while performing a set of approximately 20 eye movements. As Nathan reported that the first set of eye movements did not elicit any emotion, cognition, or image another set of 30 eye movements was performed. Following the second set of eye movements, Nathan again reported no change therefore no further attention was given to that incident. Nathan missed the next session due to pre-discharge family visit.

Nathan's memories of physical abuse by his stepfather were chosen by Nathan to be the next target in session seven and Nathan agreed that those were the most impactful of the negative events that he had listed earlier. To represent that abuse, Nathan chose an incident that occurred after he was suspended from school for misbehaviour. Nathan remembered that his grandmother drove him home from school and as he entered his house, he noticed his stepfather with a red willow rod. Nathan ran through the back door into the bush to keep himself safe and his stepfather chased him to the bushes "whipping me with [the] red willow rod." For the image representing the worse part of the incident, Nathan chose his trying to run away through the back door and the stepfather chasing and hitting him with the rod. Nathan chose "I cannot stand it" as his negative cognition and "I'm safe now" for his positive cognition. Since he stated that "I'm safe now" felt

completely true to him (VoC = 7), he was asked to select another positive statement that he would like to believe about himself. He chose "I can succeed now" (VoC = 4) and explained "I don't know if I can succeed, not crime wise, but at school." When Nathan imagined the scene of being chased and hit with a rod by his stepfather, together with "I cannot stand it!" he reported feeling scared and a moderate level of disturbance (SUDS = 4). He identified his chest as a location of his disturbing sensations.

Following the first set of eye movements, Nathan remarked that the negative cognition felt valid ("It's the right one; that's how I felt"). He also agreed that the same cognition was present when staff tried to consequence him and that his strong response to staff was related to his stepfather's abuse. Following another set of eye movements, Nathan reported strong sensations in his chest including pounding of his heart (SUDS = 8). The sensations resolved after two additional sets (SUDS=0). The positive cognition "I can succeed" was practiced with eye movements next. After two sets of eye movements Nathan reported no change in the strength of positive cognition, but stated that he was tired and wanted to stop. That session was closed with an exercise involving Nathan putting all of his disturbing memories and feelings into a container and locking it until the next session, while performing eye movements. During session nine (week 21 of his research participation), Nathan reported an absence of negative emotions or body sensations (SUDS=0) when focusing on the image of his stepfather chasing him with a rod. The positive cognition "I can succeed" was practiced with eye movements three times and Nathan reported an increase in his belief in that statement (VOC = 5). A discussion of barriers to Nathan having a stronger belief in his ability to succeed revealed that Nathan was concerned about his difficulties with written assignments. He reported experiencing a "sickening" feeling whenever having to do a school assignment

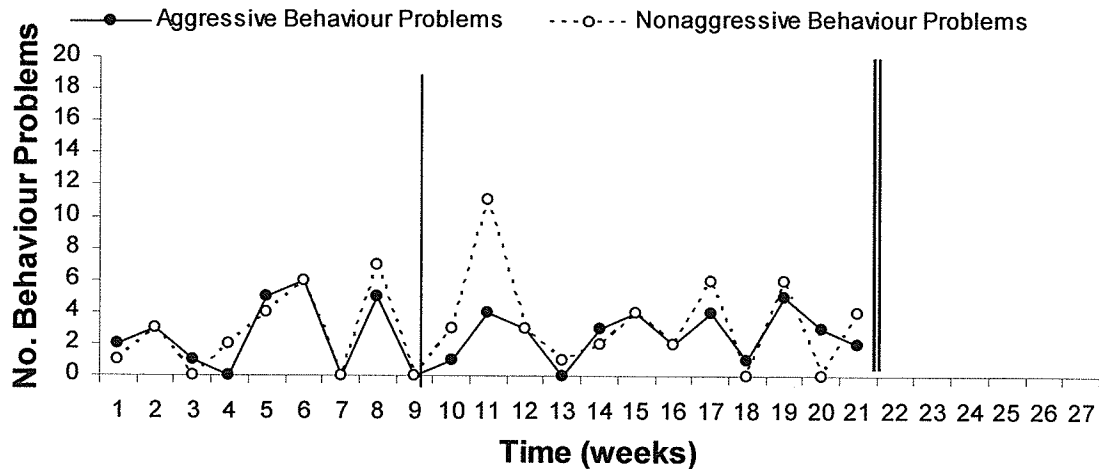
involving writing, which he related to his very slow writing speed and problems with concentration. He reported that he has been refusing written assignments on regular basis and has not completed any written assignments in two months. He also reported that he did not care if that affected his marks or future schooling, but agreed to work on it as it could help him in the school that he would be attending after discharge from Knowles Centre. He required several minutes and much encouragement from me to recall a time when he wrote a two page essay and received a good mark for it. At first when asked how he felt about getting a good mark for his essay he stated that he did not care. When asked to visualize giving his teacher a two page essay, however, he reported experiencing a "happy feeling." The image, the happy feeling in his chest and a statement "Good job!" were followed with a set of eye movements. This example was practiced with eye movements two more times because Nathan was unable to recall another example of his successful writing. That exercise concluded his last session as he was discharged to the care of his mother. A few more sessions would have allowed for additional trauma work and reinforcement of the positive cognition "I can succeed," however, the discharge date was set to occur at the start of the second semester to allow Nathan a chance to start the new school term with other students from his new school. The discharge at the turn of semesters was requested by Nathan's mother following his successful home visit during the Christmas Break.

### *Results*

*Behaviour Problems on the Unit.* Nathan's behaviour problems noted in the unit charts are shown in Figure 9. The spike in reported nonaggressive behaviour problems in week 11 included noncompliance with staff expectations, swearing, running away, and smoking cigarettes. Nathan's treatment terminated with his planned discharge from



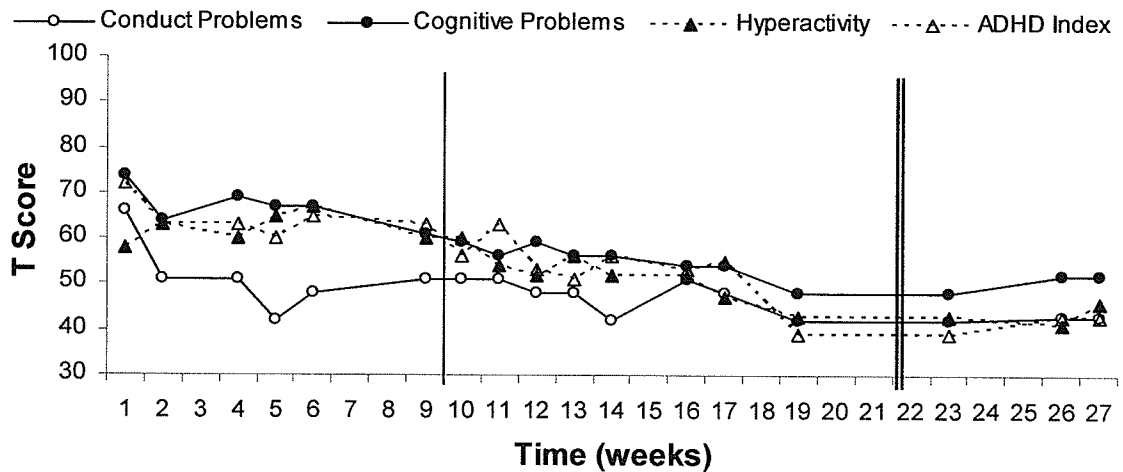
Figure 9. Nathan's Behaviour Problems Reported in Unit Chart.



the centre at the end of the first school term; hence no unit chart recordings were available for the posttreatment phase of research. The visual inspection indicates no treatment effect evident in these ratings.

*Conners-Wells' Self-Report Scale.* Nathan's self-report data on the Conners-Wells' Self-Report Scale are shown in Figure 10.

Figure 10. Conners Self-Report Scale Scores for Nathan.

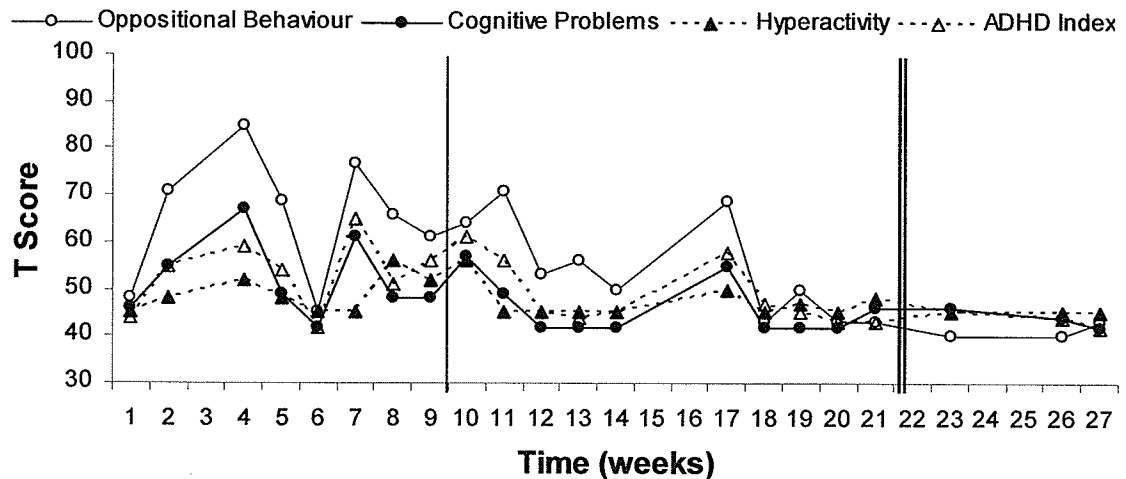


Visual inspection indicates that Cognitive Problems decreased by one standard deviation towards the end of the treatment phase and were mostly maintained during follow up. Hyperactivity and ADHD Index show a decrease of approximately one and one half standard deviation that is maintained during follow up. During the baseline

phase these three subscales remain above the T-score of 60, a mildly atypical range indicating a possibly significant problem and at the end of the treatment they drop into the lower end of the average range. Also a variable pattern of data during the baseline phase and most of treatment phase appears to stabilize at the end of the treatment phase and remains stable during the follow up phase. Unfortunately, followup data is confounded with his being in a different environment.

*Conners Parent Rating Scale.* Nathan's parent rating scale data, which was completed by the unit staff during baseline and treatment phases and by his mother during follow up, are shown in Figure 11.

Figure 11. Conners Parent Rating Scale Scores for Nathan.

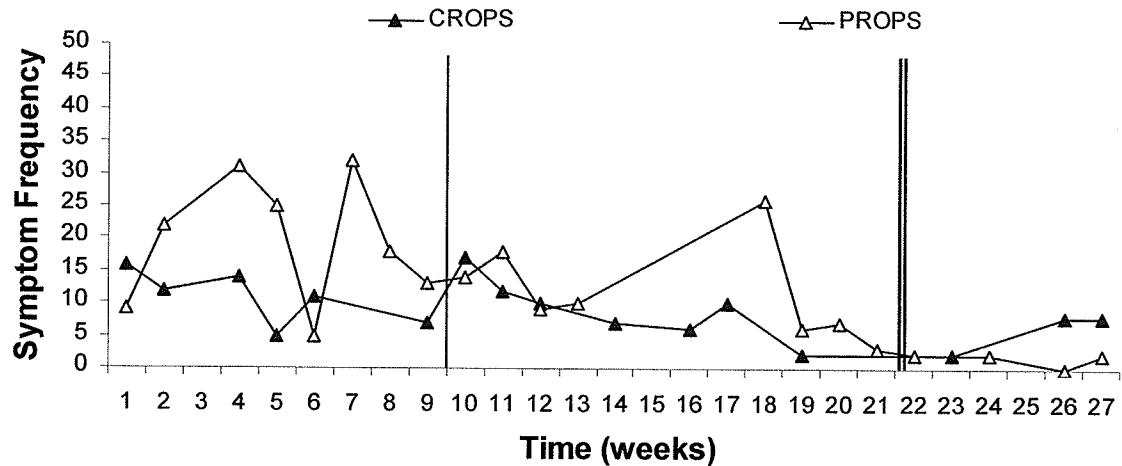


Visual inspection indicates that Oppositional Behaviour subscale shows a significant decrease during treatment phase, especially last four weeks of the treatment phase (at least two standard deviations relative to baseline), which was maintained during the follow up phase. Unfortunately, followup data is confounded with his being in a different environment with a different rater. Hyperactivity and ADHD Index remained in a normal range, with a few exceptions, throughout all three stages, thus indicating no

treatment related change in those indexes. Cognitive Problems subscale shows variability, but does not indicate clear positive treatment effect.

*Posttraumatic Symptoms.* Nathan's self-reported (CROPS) and staff-rated for baseline and treatment phases and mother-rated for follow up phase (PROPS) posttraumatic symptoms are reported in Figure 12.

Figure 12. Nathan's Posttraumatic Symptoms.



Visual inspection indicates a significant decrease in self-reported (CROPS) and staff rated (PROPS) posttraumatic symptoms during the treatment phase, which was maintained during the follow up phase. CROPS indicates a significant decrease in trauma related symptoms during the treatment phase, but some increase during past two weeks of the follow up phase indicating either the gradual loss of the positive treatment effect or a possible increase in emotional difficulties related to challenges associated with the transition back to his home environment where he experienced a long stretch of serious behaviour and emotional problems.

### Summary

Nathan readily consented to his participation in this treatment research project, and remained cooperative throughout his entire participation. He missed several sessions

when he ran away, but while at the Centre, he attended his sessions and presented with a positive attitude towards the treatment. He responded well to Motivation Enhancement, Early Warning System, and Choices Have Consequences. Nathan's inability to recall any aspect of the Early Warning System session one week later raises concerns about his long term retention of treatment effects. The treatment appeared to engage Nathan emotionally, as indicated by his visible expression of positive emotions when practicing with eye movements his images of positive future outcomes and positive choices.

Unfortunately, the Past Trauma Treatment received only limited attention due to Nathan's discharge plan and a loss of a number of sessions due to his running away from the Centre. Nathan's verbal reports indicated a significant reduction in feelings of subjective disturbance associated with past physical abuse that was addressed in treatment (SUDS reduced from 8 to 0), and some increase in VoC (from 4 to 5). Furthermore, Nathan was able to identify problems with writing as contributing to his diminished belief in his positive cognition "I can succeed." His self-limiting beliefs associated with his writing difficulties were addressed using Choices Have Consequences format, hopefully helping him to approach his writing difficulties in a more productive way. During this treatment project Nathan remained fully engaged and cooperative, which was significantly more productive than his previous pattern of refusal to discuss any subjects related to his family or his behaviour problems.

The visual inspection of data obtained thorough the use of rating scales indicates a significant change in three of four subscales of the Conners-Wells' Adolescent Self-Report Scale between baseline and the latter part of treatment phase and maintained during followup. There was at least one standard deviation decrease in scores on

Cognitive Problems subscale, and one and one half standard deviation decrease in scores on Hyperactivity and ADHD Index, indicating a possible positive treatment effect.

Oppositional Behaviour subscale of the Conners' Parent-Rating Scale shows a significant decrease during treatment phase of at least two standard deviations relative to baseline, maintained during the followup phase, indicating a relatively strong positive treatment effect. Unfortunately, followup data is confounded with his being in a different environment with a different rater.

Visual inspection also indicates a significant decrease in staff-rated posttraumatic symptoms (PROPS) during the treatment phase, which was maintained during the followup phase. The significant decrease in self-reported posttraumatic symptoms (CROPS) began to diminish during the followup phase.

### Johnny

#### *Background Information*

Johnny's mother abused alcohol during her pregnancy and neglected him when she cared for him in his early years and his biological father had not maintained any contact with him. Johnny was never formally assessed for Foetal Alcohol Spectrum Disorder, but his prenatal exposure to alcohol might have been contributing to his behaviour problems. Johnny became a Permanent Ward of CFS at the age of four and was placed in a long-term foster care when he was five. Johnny has had no contact with his biological mother and only sporadic short visits with his younger brother, who was placed in a separate foster home in rural Manitoba. The referral information indicated that Johnny displayed an escalating pattern of acting out. In the year preceding his admission to Knowles Centre, his aggressive behaviour became more frequent and more intense, resulting in one to two angry "blow ups" per week that involved yelling,

swearing, destroying property, and threatening others. At school, Johnny displayed frequent temper tantrums, destroyed school property, and engaged in physical fights with other students, often in response to teasing. Some of the more serious incidents of aggressive behaviour at school included threatening another boy with a pair of scissors and kicking another boy in the head during an altercation and knocking him unconscious. Johnny was diagnosed with Attention Deficit Hyperactivity Disorder and was treated with several pharmacological agents including, Ritalin (methylphenidate), Risperdal (Risperidone), and Dexedrine (dextroamphetamine). Johnny also displayed serious behaviour problems at home and in the community. On one occasion, he threw stones at a neighbour and on another, he threatened to kill his foster mother. The latter incident resulted in criminal charges and removal of Johnny from his foster home of 11 years. The CFS file contains information that on two occasions Johnny engaged in sexually inappropriate behaviour and was charged under the Young Offender's Act for one of those incidents.

Two months before his fifteenth birthday, Johnny was admitted into residential treatment where he has displayed continuous behaviour problems including refusing to follow directions, frequent and intense angry outbursts, swearing, threatening, and hitting people (two assaults in three months). Johnny's teacher and the unit staff reported feeling unsafe when around him because of his tendency to throw objects when angry. The residential assessment indicated Johnny's aggressive behaviour was related to at least three factors including a poor frustration tolerance, a tendency to perceive others as hostile or being against him, and a need to establish a dominant position with others and not appear as "being a pushover." The unit staff reported that other boys in the unit would occasionally try to intimidate Johnny; however, he regularly made mean or

provocative comments towards them. The unit staff reported that Johnny did not appear to learn from his mistakes, perhaps an indication of neurological damage related to mother's alcohol use during pregnancy. Johnny presented as unwilling to discuss his behaviour problems with the staff, stating that they occurred in the past and should remain there, and became angry whenever they attempted to discuss his acting out behaviour with him.

### *Treatment Participation*

#### *Motivation Enhancement: Future Movies*

Johnny presented as a tense, small built, five-foot-four-inches tall, youngster with short black hair and small round eye glasses. He spoke in a high pitched monotone voice that sounded whiny. He seldom smiled and almost constantly complained about staff, teachers, and peers. Johnny consented to his participation in this treatment research project and to video- or audiotaping of sessions. Johnny started his baseline data collection three months after his admission to Knowles Centre.

*Positive Future Movie.* This part of treatment filled the entire first session (week 4 of his participation in this research project), as Johnny required much time to offer ideas for his Positive Future Movie. When introduced to the idea of a Positive Future Movie, Johnny stated that learning to handle his temper would turn his life in a positive direction. He also added that he could benefit from thinking about consequences of his choices prior to acting, for example asking himself "Is this one going to help me or is it going to bring me down"? Johnny imagined that in ten years he would be 25 years old, living with his friends and possibly a girlfriend in a house in Alberta, attending university or college, and driving a [Volkswagen] Jetta because "they are good on gas." For the opening scene of his Positive Future Movie, Johnny chose a scene from his

wedding involving him kissing his bride, which evoked a happy feeling in his “head, heart, and over [his] whole body.” The above scene and a thought “I made it” were practiced with eye movements. The second scene practiced with eye movements represented Johnny’s high school graduation. Johnny imagined hearing his name being called, people clapping, and him thinking about all the people who had helped him get there. He stated that the image felt nice but he was unable to name the feeling. Another scene practiced with eye movements chosen by Johnny to represent his future success was his first day at a university as a student, which evoked positive feelings that he described as “wow.” Johnny proposed that improving his anger management skills, especially in situations involving teasing, would help him achieve his positive future. He visualized successfully ignoring teasing and practiced it with approximately 12 eye movements while thinking “Way to go!” Johnny agreed to practice that visualization twice as ignoring teasing represented a significant challenge for him. During the next session, Johnny was able to remember all of his positive movie scenes except for ignoring teasing. The graduation scene was reviewed and practiced with a set of 12 eye movements and the scene of walking away from provocation was reviewed and practiced twice with sets of approximately twelve eye movements.

*Negative Future Movie.* This part of treatment occurred in the second session, following a brief review of the Positive Future Movies. When asked what could happen if things did not go well for him, Johnny immediately replied that he would end up in jail and added that “Everybody had been telling me that.” However, when I asked him to visualize being in jail, he appeared uncomfortable and reported feeling “horrible” in his entire body. The image, the emotion, and the words “It’s not worth it” were practiced



with approximately 16 eye movements. Johnny refused to visualize again the scene of being locked up in jail.

Johnny identified his intelligence and academic skills as his strengths that could help him reach a positive future and “I don’t care” attitude and overreaction to teasing as barriers. Johnny found it extremely difficult to decide what percent he was motivated toward his positive future and kept replying “I don’t know” to different options suggested to him. Eventually, he agreed that most of the time, approximately 60% of the time, he has been trying to do well.

### *Adaptive Skills Training*

*Early Warning System.* For this part of the treatment, which started in session three, Johnny chose to review a recent incident involving a confrontation between him and his group home staff. It started with Johnny and other group home residents watching a show and making rude comments about a female singer. The unit staff told him that his remarks were inappropriate and for a consequence, Johnny had to go to his room. Johnny thought that he was singled out, because other residents have made similar remarks and he was the only one sent to his room, and became angry. At first, he did not want to discuss the incident claiming that it was resulting in him re-experiencing the same intense frustration he felt when it occurred. He accepted an explanation that treatment could help him manage similar situations in the future and agreed to participate, but continued to have problems discerning specific elements of his anger escalation pattern. I attempted to help Johnny with questions and a menu of suggestions to help identify and name the elements of his anger escalation, but he continued to say “no” to suggestions and answered questions with “I don’t know” or “I just got mad! I don’t know any more; there was no warning!” in a frustrated tone of voice. When asked

how he could tell when he was mad, he replied, "I don't know when I get mad and that's it; I get no warning!" He was able to answer some specific questions, for example to the question is your body loose or tense when you think about the incident, he replied tense. Johnny remained frustrated throughout that session, his tone of voice raised, his answers short, and when asked to imagine the incident as a slow motion movie, he stated that it was too hard to do and asked to discontinue the session, but agreed to continue with the treatment. Prior to asking for the session to end, Johnny identified that he gets frustrated, then tense, and then mad. Johnny stated, "When mad, I lose it!" which leads to swearing and "slamming stuff."

In session four (week seven), Johnny appeared ready to talk about his angry incident attributing his readiness to two prior attempts to discuss it, first in the previous session and second with the unit staff. Johnny also stated that the attempt to discuss the incident in a previous session enabled him to discuss it with his group home staff. Johnny agreed to view imaginally each step with a set of eye movements. The first step that Johnny identified in his anger escalation cycle was the frustration he experienced when staff told him that he did something wrong. His feelings of frustration followed a thought that he was in trouble, resulting in a high-pitched voice, a first sign, according to Johnny, of him becoming frustrated. He then attempted to get himself out of trouble by explaining the situation to staff and, when he realized that his strategy did not work and he was still required to go to his room, he thought "It's not fair!" which resulted in a significant increase in his anger arousal and escalation in behavior including swearing and throwing objects. The last step identified by Johnny involved him still feeling angry but regaining control over his behavior ("still mad but not doing anything"). Johnny seemed to struggle more with this treatment component than other research participants

did and produced less detailed description of his anger escalation pattern, raising a question of how much he could have benefited from it. There was, however, a potential benefit stemming from a detailed discussion of the incident, namely some cognitive restructuring; when his statements were repeated to him, Johnny changed them from very definite to more tentative. For example, he changed his statement "staff did not care" to "It seemed like they did not care." The second type of statement might be less likely to evoke an angry response. In session five, Johnny demonstrated a good recall of his anger escalation cycle and agreed to view all the steps twice with sets of approximately 24 eye movements.

The next two sessions did not occur (weeks eight and nine of his research participation) as Johnny spent that time either running from the Centre or at MYC, where he was detained briefly twice.

*Choices Have Consequences.* This section of treatment started in session five (week ten) and extended to session six. I offered Johnny a choice of starting with either examples of good or bad choices and he chose bad choices. The first bad choice Johnny reported involved him running away and stealing a bicycle, for which he was arrested and placed at MYC. He also identified that "feeling fed up" was a trigger for his running away and that he felt bored and upset while at MYC. Johnny viewed the sequence of events involved in the above choice starting with him feeling bored and ending with incarceration at MYC and the words "It was not worth it" while performing a set of approximately 16 eye movements. He agreed to repeat the exercise, but did not want to work with more examples of either good or bad choices. Following that session, Johnny missed three consecutive sessions due to running away and brief incarceration at MYC.

The first example of his bad choice was leaving the group home without permission because he was angry with the staff. He met a peer who had alcohol, of which he drank some. Johnny got grounded for these bad choices. First, Johnny imaginably reviewed his choice to consume alcohol, the consequence of being grounded and words "It's not worth it" with approximately 16 sweeps of eye movements. Then, Johnny viewed with approximately 20 sweeps his choice of leaving the group home without staff permission, starting with feeling bored, deciding to run, drinking, being grounded, and thinking "It's not worth it." Next, I enquired about examples of good choices and Johnny asked to postpone that till next session. He agreed to work with one example of a good choice, his decision to return to the group home several hours after running away, to avoid getting into trouble with the law. He said that he was happy about his choice and thought "Good job!" and practiced it with a set of approximately 12 eye movements.

One week later, in session six, Johnny practiced with eye movements two more examples of good choices. His example of a good choice was not acting out when he learned that he would have deductions from his allowance for the damage he caused to the unit. Johnny became angry when he was told about the deductions, but chose to go to his room to cool off, and then returned downstairs to play video games. He performed approximately 30 eye movements while viewing the entire sequence of events and finishing with the words "good job!" Johnny resisted my attempt to start the Tease Proofing part of the treatment and after several minutes of trying to recall examples of him overacting to teasing, he decided that he could not remember any and did not want to do that. He agreed to work with another example of a good choice, which was his decision to stay in the group home, despite wanting to run away after his request to go

fishing was denied. Thinking about being locked up at MYC helped him decide against running away. Johnny chose words “well done” to go with his choice, which he reviewed in his imagination with approximately 16 eye movement sweeps.

Johnny missed the next session (Week 12) due to being on the run from the Centre.

*Tease Proofing.* This was session seven (Week 13) and I made a second attempt at engaging Johnny in Tease Proofing exercises. He was again resistant to the idea of reviewing instances of teasing, claiming that he was not aware of any, and if he was to be teased, he would be able to block it. He agreed to practice with eye movements (15 sweeps) imagining using a protective shield, like the *Enterprise* from *Star Trek*. He reported that he imagined a specific example of teasing, but declined to discuss details.

#### *Past Trauma Treatment*

Session eight (week 14) started with making a list of Johnny’s memories of past traumatic events, which included “moving from house to house” 12 times before the age of four, being left in the basement by himself “rolled up in a mattress,” seeing his mother being beaten up by his father, being left home alone and hungry when his mother went out, having his leg cut by a piece of glass at the age of four, and the severe bleeding from his lacerated wrists he sustained as a teenager from punching a window in anger.

The first incident Johnny chose to address was him cutting his leg on a piece of glass at the age of four. This occurred when he slid his leg under the sofa to retrieve a toy that rolled there. The worst part of the experience for him was represented by an image of blood coming from the cut on his foot. He chose “I cannot trust my judgment” as the corresponding negative cognition and “I’ve learned from it” as a positive

cognition. Johnny reported that he already had a strong belief in the cognition "I've learned from it" (VoC=6) and was asked to consider another cognition from the list of possible positive cognitions and selected "It's over and I'm safe now." He rated his belief in that cognition as neutral (VoC= 4). Johnny reported that the level of disturbance associated with the incident was moderately high (SUDS=7) and that he felt disturbing sensations in his entire body "from head to toe." When asked to hold together in his mind the image and the words "I cannot trust my judgment," Johnny decided that his negative cognition was inappropriate because he was four when the incident occurred. However, after considering other possibilities, he decided "I cannot trust my judgment" was still appropriate and relevant. He described the emotion evoked by his image as "a shattered feeling," which he felt "all over my body." After the first set of eye movements consisting of approximately 30 sweeps, Johnny reported getting an image of his mother tending to his cut leg, which he interpreted as an indication that she cared for him a lot. Johnny interrupted the second set of eye movements after 12 sweeps with a question "I don't know what I am supposed to get?" He was offered an explanation that he did not need to make anything happen, but just to report whatever he become aware of during or after the eye movements. Johnny was asked to focus again on the image of his bleeding leg, his negative cognition, the feeling, and to perform eye movements. Johnny stopped after approximately 15 sweeps and reported thinking about not being able to trust his judgment and experiencing the shattered feeling. He stopped the next set of eye movements after approximately 12 sweeps and reported no longer having the shattered feeling. He also stated "I don't even care about that anymore [the memory of the incident]" and agreed to focus on that thought and perform the eye movements. He stopped after approximately six sweeps and stated that he did not have any significant

feelings of disturbance when focusing on the image (SUDS = 1), indicating the resolution of the trauma. At that point, the validity of his positive cognition was assessed again and Johnny reported it to be seven. As it was practiced with eye movements, Johnny reported feeling glad and repeated spontaneously "It's over and I'm safe now" with a strong sense of confidence. The positive cognition was practiced with another set of eye movements, which Johnny stopped after six sweeps. Next, Johnny performed approximately 12 sweeps of eye movements while concentrating on the image representing his traumatic experience and the positive cognition and reported feeling "I'm glad it's over, I'm safe now." After the body scan, he reported feeling tired but not detecting any tension or disturbing sensations. At the start of session nine, one week later, Johnny reported remembering in detail the content of that session. He also reported that focusing on the image of his leg being cut did not evoke any disturbing reaction.

The memory that Johnny chose for processing in session nine involved him punching the window and cutting his wrist in the process. He reported that the worst part of the incident was represented by the image of "the blood going everywhere." For a negative cognition Johnny chose "I cannot trust my judgment" and for the positive cognition he chose "I was worth saving," which he reworded with my help to "I'm worthy." He reported the full belief in this statement (VoC = 7). At my request Johnny identified another positive cognition, "It's over, I'm safe now" and again reported fully believing in that statement (VoC = 7). He was unable to choose another positive cognition from the list, so the process of trauma processing started without a positive cognition that could be strengthened. When pairing the image of his bleeding hand with the words "I cannot trust my judgment," Johnny reported experiencing "shattered feeling" and "shivering" sensations around his spine affecting his entire body. He rated

the level of disturbance (SUD) as seven. After first set of eye movements of approximately 24 sweeps, Johnny reported being aware of the blood being everywhere, the broken window, him yelling and feeling scared, which he was asked to focus on ("Go with that.") for the next set of eye movements. Johnny stopped after approximately 16 sweeps and reported being aware of feeling scared and the image of "blood everywhere." After the next set of eye movements of approximately 16 sweeps Johnny reported that he saw an image of blood everywhere and him "calming down in hospital." After the next set of eye movements of approximately 16 sweeps, Johnny reported getting an image of leaving hospital and feeling "I'm safe now." Johnny interrupted the next set of eye movements after approximately 12 sweeps with "I'm safe now." When asked to "Go with that," Johnny replied that he did not want to, because "It was over and I'm safe now," and he did not want to think about it anymore. His wish to stop the focusing on his past trauma was respected and the session ended. As there was still ten minutes left, Johnny asked me to use that time for playing pool with him.

At the start of session 10, Johnny agreed to focus on the incident of him punching the window and his bleeding hand and "the blood going everywhere" and the negative cognition "I cannot trust my judgment," and reported no distressing reaction in response that that memory. The remainder of session 10 focused on the third incident chosen by Johnny for past trauma processing involving his father being drunk and slamming his mother's head into an armchair leaving her with a bloody nose. The scene that represented the worst part of the entire incident for Johnny was his mother's bloody face. He reported remembering the image "once in a while" before falling asleep. As the negative cognition, Johnny proposed "I was powerless, I couldn't do anything," which seemed to be an accurate expression of what a child witnessing his mother being



physically assaulted could have felt, rather than a representation of a negative belief about himself now. He was encouraged to review the list of possible negative cognitions, but was unable to select one and seemed frustrated with my invitations to continue examining the list of negative cognitions. He easily agreed to review the list of positive cognitions and selected "I did the best I could." He identified his belief in that cognition as five on a seven point Validity of Cognition (VoC) scale. Johnny reported that focusing on the image evoked "sad, depressed" feelings, the level of disturbance (SUD) was seven, and he felt the disturbing emotions around his heart. Johnny stopped the first set of eye movements after approximately 24 sweeps to report no change. After the second set of eye movements of approximately the same length, Johnny reported that he had a thought about his mother being "brave about it." Johnny was asked to "Go with that," but continued to talk and added "she was strong" and that he felt "proud of her." He was asked to focus on what he reported, but interrupted the next set of eye movements after approximately 10 sweeps with a comment uttered in a frustrated tone of voice that he was not getting anything. He was reminded that he was not supposed to try to make anything happen, but to follow the eye movements and report anything that he would be aware of. The process was restarted with Johnny focusing again on the image of his mother's face being covered with blood, and spontaneously reported "I'm proud of her; like for not trying to fight back or anything; could've just made it worse. She was brave and strong about it." The above became the focus for the next set of eye movements, which Johnny interrupted after approximately 20 sweeps with a comment of "nothing else." When asked about how he was affected by the above incident as a child, Johnny replied "the next day I completely forgot about it." Johnny cooperated with my request to focus again on the image of his mother's face being bloody and reported the

level of disturbance (SUD) reduced to two, but declined to further process it. He stated that he already felt better about it and the remaining disturbance “will go away in time.” This could possibly indicate that the level of disturbance was greater than what he reported and that he experienced the process of therapy as difficult and chose to discontinue it as a way of reducing his discomfort. Johnny seemed very determined in his decision to stop his work with the memory of his father assaulting his mother, but agreed to perform the imaginary task of placing all images, memories, thoughts, and emotions associated with the incident in a locked container, while performing approximately 15 eye movements.

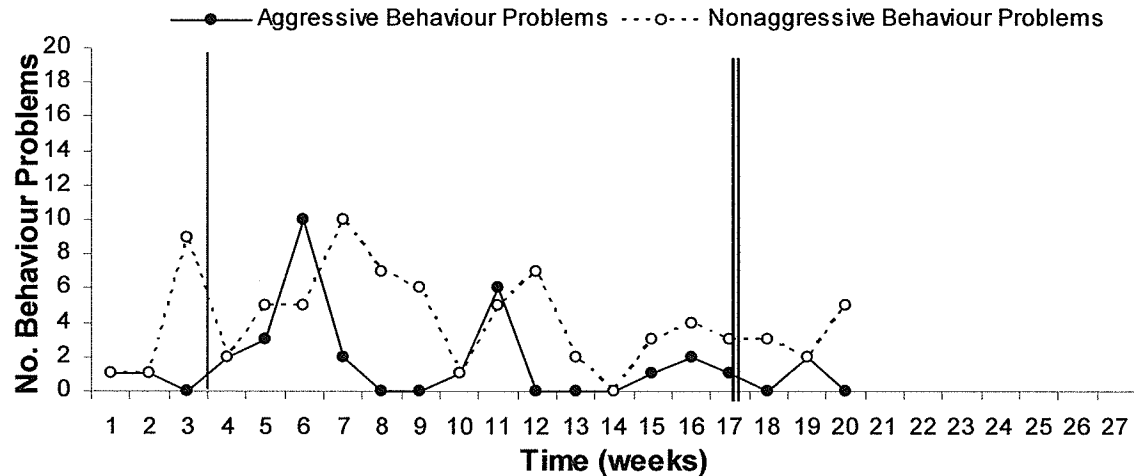
At the start of session 11 (week 17) Johnny refused to review the past session offering no explanation, but stating “I don’t want to!” and “I just don’t want to!” Johnny also stated that he did not want to focus on the remaining incidents of past trauma, which he identified earlier. In response to my questions, Johnny indicated that he liked Positive Future Movies but did not like the other treatment components. He thought that thinking about the positive future and that his choices could make a difference might be helpful to him. As he continued to be determined in his decision not to continue with the Past Trauma Treatment, the active phase of treatment was closed and the followup phase started.

The follow up phase only lasted three weeks because Johnny ran away from the centre after the staff member found him in possession of marijuana. The unit staff reported him as a missing person, which activated an outstanding warrant for his arrest and he was detained at MYC for two months.

## Results

*Behaviour Problems on the Unit.* Johnny's behaviour problems noted in the unit charts are shown in Figure 13.

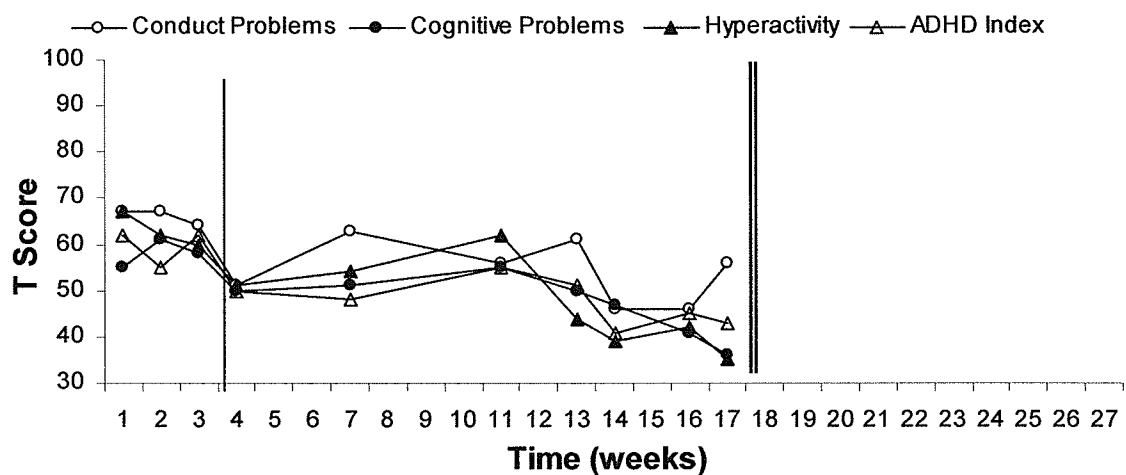
Figure 13. Johnny's Behaviour Problems Reported in Unit Chart.



The vertical line after week three marks the beginning of the treatment phase and the double line after week 17 marks the beginning of the follow up phase. A visual inspection suggests a volatile pattern of behaviour, where short periods of settled behaviour are followed by rapid increases in both aggressive and nonaggressive behaviour problems. It also indicates that starting week 13 Johnny had an eight-week stretch of no or very few aggressive problems and a seven-week stretch of relatively few nonaggressive behaviour problems, indicating a possibility of a positive treatment effect. However, this is relative to his behaviour during the initial part of treatment, rather than baseline, during which a limited number of behaviour problems was recorded by staff. Even during the week he ran away and was arrested, there were no reported aggressive problems and the elevation in his nonaggressive behaviour problems was not as high as his previous peaks.

*Conners-Wells' Self-Report Scale.* Johnny's self-report data on the Conners-Wells' Self-Report Scale are shown in Figure 14. The visual inspection indicates a variable pattern for all four variables during the treatment phase. Conduct Problems shows a decreased number in the middle of the latter half of the treatment phase, and an increase at the end, but still remaining approximately one standard deviation lower relative to baseline. Hyperactivity starts in the above sixty range (possibly significant

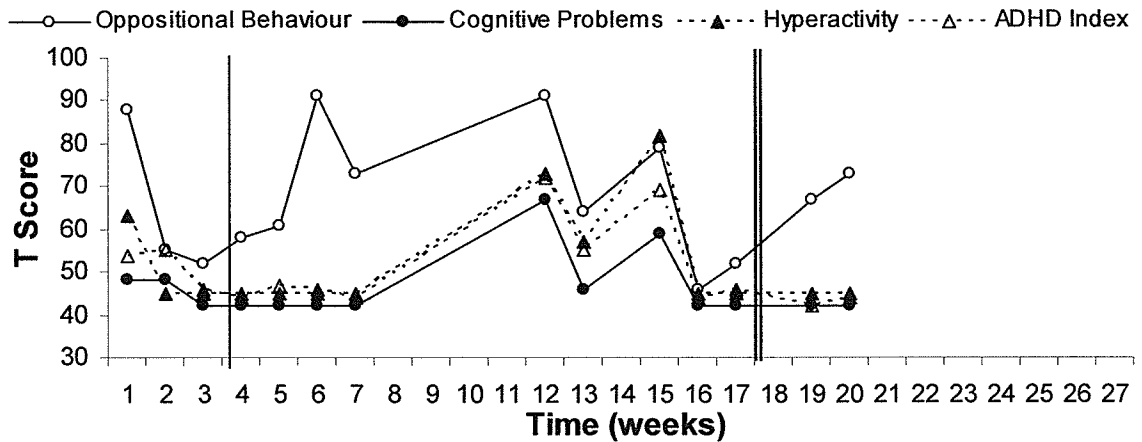
Figure 14. Conners-Wells' Adolescent Self-Report Scale Scores for Johnny.



problem) during baseline, shows some variability, but stays consistently in low forties range in the past five weeks of treatment. This is a significant change of approximately two standard deviations, indicating a positive treatment effect. Unfortunately, Johnny refused to complete his self-report measures during the follow up phase.

*Conners' Parent-Rating Scale.* Johnny's parent rating scale data, which was completed by the unit staff, are shown in Figure 15. The visual inspection of staff ratings on this scale indicates a volatile pattern of behaviour and a lack of a clear and stable change in data associated with the treatment phase.

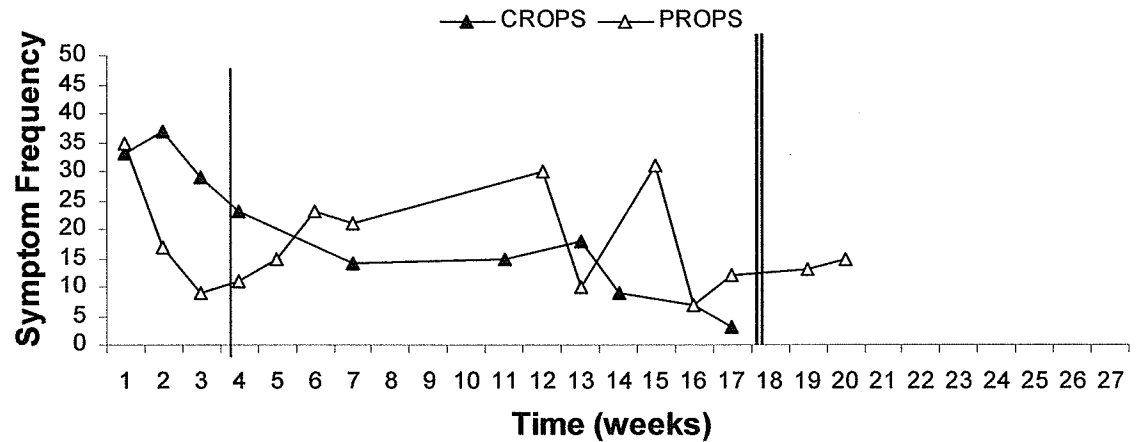
Figure 15. Conners' Parent Rating Scale Scores for Johnny.



*Posttraumatic Symptoms.* Johnny's self-reported (CROPS) and staff-rated

(PROPS) posttraumatic symptoms are reported in Figure 16.

Figure 16. Posttraumatic Symptoms.



The visual inspection suggests that the frequency of posttraumatic symptoms reported by Johnny (CROPS) shows a significant decrease during treatment phase relative to baseline, however the strength of that observation is challenged by a short baseline and a small decline in the frequency of self-reported posttraumatic symptoms in week three of the baseline. The frequency of staff reported symptoms (PROPS) forms an unstable and variable pattern and does not indicate that the commencement of treatment was associated with a consistent and stable change.

*Summary*

Johnny consented to his participation in this treatment research project and presented as generally cooperative, despite his statements indicating dislike for the treatment components that evoked negative emotions including Negative Future Movies, Early Warning System, Choices Have Consequences, and Tease Proofing. Johnny required two sessions to complete the Early Warning System producing a less detailed description than other participants, however, during the following session he demonstrated a good recall of his anger escalation cycle. Johnny initially presented as open to the Past Trauma Treatment and addressed three of his traumatic memories, despite their strong emotional component (SUDS rated as 7 on a 10 point scale). Close to the end of the treatment, Johnny decided to terminate his participation in the treatment, most likely in response to strong negative emotions he experienced when focusing on the incident of his drunk father slamming his mother's head into an armchair leaving her with a bloody nose. SUDS ratings suggest that Johnny accomplished full or near full resolution of the impact of two traumatic memories and a significant reduction in SUDS for his third memory of past trauma. He also significantly strengthened his belief in his positive cognition "It's over and I'm safe now."

The visual inspection of Behaviour Problems on the Unit indicates a significant decrease in the number of aggressive behaviour problems lasting eight weeks and a significant decrease in the number of nonaggressive behaviour problems lasting seven weeks indicating a strong possibility of a positive treatment effect. The visual inspection of Conners-Wells' Self-Report Scale indicates a significant decrease in Conduct Problems in the middle of the latter half of the treatment phase that, which despite a later increase, still remained approximately one standard deviation below baseline level. The

Hyperactivity Index decreased to low average range for the past five weeks of treatment, representing a significant change of approximately two standard deviations relative to baseline indicating a positive treatment effect. The visual inspection suggests that the frequency of posttraumatic symptoms reported by Johnny (CROPS) shows a significant decrease during treatment phase relative to baseline. The strength of that observation is challenged by a short baseline, a small decline in the frequency of self-reported posttraumatic symptoms in week three of the baseline, and Johnny's refusal to complete his self-report measures during the followup phase. The visual inspection of staff rated Conners' Parent-Rating Scale and staff rated posttraumatic symptoms (PROPS) do not indicate that the commencement of treatment was associated with a consistent and stable change.

### Dennis

#### *Background Information*

According to his social history, Dennis was exposed to family violence and alcohol abuse, was neglected, abandoned, and physically abused, and witnessed his mother being assaulted by multiple male partners. The social history indicates that his father did not maintain any contact with Dennis and the mother abandoned him and his sister at an early age maintaining only a sporadic contact with him subsequently. Dennis experienced multiple foster placements since he was five years old and became a Crown Ward of the Province at age eleven. A psychological assessment conducted when Dennis was twelve indicated that Dennis presented as anxious, insecure, and depressed with a tendency to dissociate or withdraw, to feel lonely, to be very sensitive to social rejection, and to wetting his bed and soiling his pants. During that assessment, Dennis reported sexual victimization, which he later denied. The social history indicated that Dennis has

had an extensive history of antisocial and aggressive behaviour, such as lying, cheating, fighting, and attacking others. The psychological assessment indicated that Dennis's aggressive behaviour and lack of caring about social approval were related to his feelings of inferiority, emotional discomfort, and a sense of disconnection from people. A psychiatrist who interviewed Dennis at the age of thirteen concluded that Dennis was displaying a "provocative victim" pattern and features of Oppositional Defiant Disorder and Conduct Disorder. The referral file indicated that Dennis has displayed a host of symptoms present in children exposed to trauma: exaggerated emotional reactivity (anxiety, or anger), inability to stay focused, lack of confidence in himself and others, poor self-esteem, perceiving the world around him as an uncaring and dangerous place, and out-of-control behaviour.

During his first few months at Knowles Centre, Dennis wet his bed occasionally, but has made a considerable effort to control his aggressive behaviour, hoping to convince his social worker that he resolved all of his problems before arriving at the Centre and therefore did not require treatment. After learning that his plan did not work, Dennis's behaviour in the unit and at school deteriorated and the number and severity of his physical altercations with peers increased. At school, Dennis had displayed an inconsistent effort, refused to complete classroom assignments and homework, and presented as uncooperative. The unit staff reported that Dennis acted sneaky, violated the personal boundaries of others by touching them and pulling their hair, and displayed temper tantrums when confronted about his behaviour. In the 22 months between his admission to the centre and the commencement of his treatment, Dennis had run away from the centre seven times, was involved in numerous physical fights with other residents, including attacks on boys that were much younger and smaller than him. He



was involved in number of auto thefts and driving without a valid driver's licence. On one occasion, along with two peers, Dennis threatened an elderly woman with a knife and stole her purse. He was detained at the MYC several times on various charges and was incarcerated three times for periods ranging from three to five months.

My first contact with Dennis occurred approximately twenty months before commencing his research treatment. At first meeting on the unit, Dennis demanded that I should take him out for lunch, because other clinician's did that with other residents, which was true on birthdays and other special occasions. Dennis presented with a flat affect, with an apparent anxiety and defensiveness and refused to meet with me to discuss his admission to the Centre, but agreed to play foosball. In subsequent meetings he often presented as an unhappy youngster, vacillating between being sad and depressed on the one hand and frustrated and angry on the other. Physically, Dennis presented as a stocky five-feet-six-inches, dressed in baggy pants and sweatshirt, which made him appear big. The unit staff reported that other residents called him fat, to which he responded with anger and name calling. Dennis's clothes were clean, but during his first year at Knowles Centre, the unit staff needed to remind Dennis every morning to shower and wear clean clothes. Dennis had short thick black hair and his facial expression was either sad or frustrated and he did not seem to smile. Eight months before commencing his research treatment, I offered Dennis one EMDR session to help him overcome his fear of needles. His doctor believed that he had diabetes and had recommended blood tests, but Dennis refused to cooperate claiming he was scared of needles. During the EMDR treatment, which started with Dennis focusing on his fear on needles and performing eye movements, Dennis recalled that as a four- or five-year-old child, he witnessed his older sister screaming and fighting with his mother and a nurse,

who were restraining her to obtain a blood sample. The treatment appeared successful and Dennis went for his blood test the next day and agreed to be vaccinated for meningitis at school one week later.

### *Treatment Participation*

#### *Motivation Enhancement: Future Movies*

He consented to his participation in this treatment research project, but did not consent to video- or audiotaping of the sessions so the description that follows came from my notes on our sessions. After being introduced to the Future Movies concept, Dennis started with a detailed description of his childhood difficulties, including being abandoned by his mother and his life in multiple foster homes. After approximately 5 minutes of listening to him, I said to Dennis that I appreciated his story because it shows how difficult his childhood was and suggested that we jump into the future. Both Positive and Negative Future Movie were completed during first session, which occurred in week seven of Dennis's participation in research.

*Positive Future Movie.* Dennis visualized that in 10 years, at the age of 26, he would live in a small city in North-western Ontario, where he had lived prior to his admission to Knowles Centre. He imagined himself living with his sister in a house furnished with custom made furniture and driving a black Jeep Grand Cherokee with shiny chrome rims and subwoofers in the back. The last image of his positive future movie, when the credits roll, involved Dennis being well dressed in elegant black shoes, black pants, and a leather jacket, wearing a platinum cross, and standing in front of a restaurant with his girlfriend and his sister. Dennis smiled and reported that the image evoked a "nice feeling," which he felt in his entire body. I asked him to define that nice feeling and he replied "I just feel happy" and smiled. He practiced that image and the

words "I've made it all the way" twice with sets of approximately 12 eye movements each. Dennis requested a slower pace of eye movements and asked about the role of eye movements in the treatment. He seemed to be satisfied with the standard explanation. Dennis stated that he wanted to have in his Future Movie a scene showing that he had friends, which he accomplished by imagining his friends sitting in the restaurant and him waving to them as he entered. Dennis smiled during the eye movements and reported feeling "nice" afterwards. The next scene practiced with eye movements involved his high school graduation and included Dennis walking up the stage to receive his diploma, feeling nervous at first then feeling proud and the thought "I did it good, well done!" He included in his visualization his sister and his mother sitting in the audience and suggested that his mother would be very proud of him. After viewing the scene imaginally with one set of approximately 12 eye movements, Dennis stated "I was walking back; Oh it was such a nice feeling; It was loud, people clapping...old guy smile." Another scene that Dennis chose to include in his positive future movie involved him boarding the airplane at the Winnipeg Airport to return to his city in Ontario after successful completion of his treatment at Knowles Centre. He reported experiencing feelings of happiness and excitement when visualizing the above scene, which he practiced with approximately 12 eye movements.

*Negative Future Movie.* Dennis expressed some resistance to focusing on that part of the treatment and stated "I will be too busy to do anything bad; I will be going to school; I will have other things on my mind." After some discussion, Dennis agreed to visualize a past situation involving him being locked up at the MYC for several months following stealing, driving, and crashing a car, then running from the police, and a police dog jumping on him, followed by his arrest and incarceration at the MYC ("I see

myself in that fucking cell”). Dennis visualized the above scene with the words “It’s not worth it.” He stopped after approximately eight eye movements, his demeanour and tone of voice indicated that visualizing the scene of his incarceration at MYC with eye movements caused him to become angry. Dennis explained that he felt angry about being handled roughly by the police and being deserted by his friends. He also stated that he understood the behaviour of the police officers because they needed to teach him a lesson not to steal cars and added that, when in trouble with the law, he always gets down on himself. He refused to practice again with eye movements his image of being incarcerated. In response to my question, Dennis stated that he learned not to “go back there [MYC]” and not to steal cars and I asked him to “Go with that,” which he did for approximately six eye movements.

Dennis listed several things that could help him achieve his positive future including thinking about his mother and the cards she sent him with messages to be good; a promise his mothers and sister made to take him shopping after he completes his treatment; a desire to improve his life and to make himself proud; his academic skills; and his ability to predict negative consequences of his behavior. Dennis was able to report only a few factors that could interfere with him reaching his positive goals including negative friendships and girls, but was unable to explain how the latter would affect negatively on his future. He stated believing that he was 85% motivated towards reaching his positive future. The Motivation Enhancement part of treatment was completed in session one.

#### *Adaptive Skills Training*

*Early Warning System.* This part of treatment was completed during the second session. To work on his anger, Dennis proposed a situation that started when he was

watching television and a female staff told him to go to another room to turn off the computer. Dennis reported that he interpreted staff telling him to turn off the computer as an accusation that he left the computer turned on, which he denied doing. Dennis experienced a feeling of mild frustration with staff's request, but dismissed it and continued watching his show. When staff turned the television set off, Dennis felt hot inside and experienced increase in his anger, said to the staff "What the hell are you doing," and started to think, "She is always on my case." Dennis reported that he tried to control his anger, as he was aware that acting it out could result in the staff sending him to his room for the rest of the evening. The staff asked Dennis again to turn the computer off, but he "told her to shut up." The staff then told Dennis to go to his room, but Dennis refused. Then he thought, "I lost everything" and "that's when I got out everything," including swearing and verbally insulting the staff. After several minutes of verbal aggression, Dennis decided to return to his room, still feeling very angry and thinking, "I can't stand it." He slammed the door to his room and punched several holes in the wall of his room. He then started to think about his girlfriend who told him earlier that she might have cancer. Dennis reported that the bad news from his girlfriend caused him a significant worry and likely had some contribution to his overall level of tension and overreaction to staff's request to turn off the computer. Once all the steps in Dennis's anger escalation cycle were described, I asked Dennis to practice them with eye movements, which turned out to be a challenge because Dennis kept interrupting the process with different angry thoughts that he wanted to tell me. He managed to complete the two sets of eye movements of approximately 40 sweeps each while visualizing as a slow motion movie all the above described steps in his anger escalation cycle.

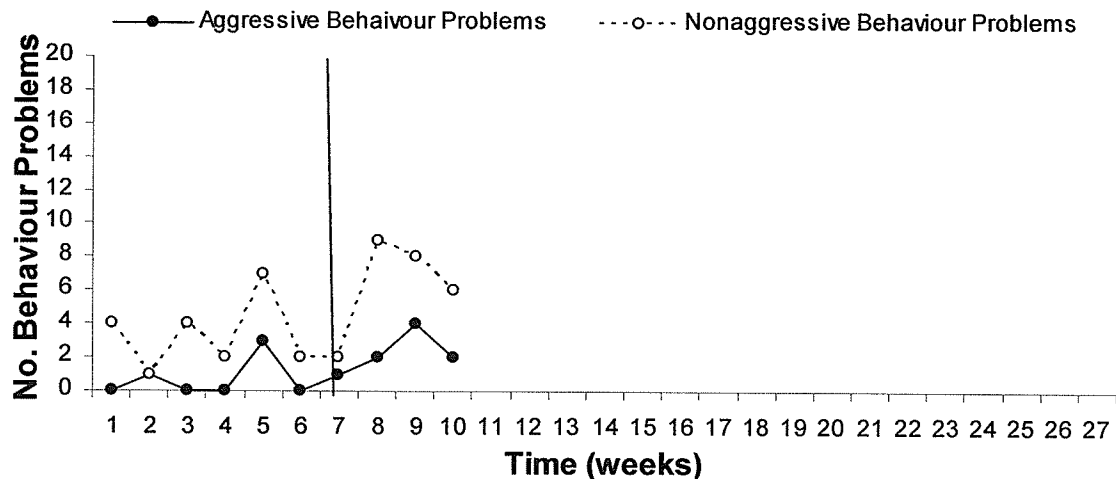
*Choices Have Consequences.* This part of treatment was completed in session three, which occurred two weeks after session two (week 10 of Dennis's participation in research) due to his being on the run most of the previous week. As an example of a negative choice, Dennis relayed the story of him stealing a DVD player from his group home, which resulted in his arrest and placement at MYC. He reported that he made a decision to steal and sell the group home's DVD player to have money to treat his girlfriend. He felt anxious about his plan so he decided to make himself angry, which he accomplished by swearing. Dennis visualized his actions, their consequences, and the words, "It's not worth it," while performing eye movements. Dennis performed approximately 60 sweeps of eye movements in this set, but he interrupted the flow of the set twice. First time Dennis interrupted after approximately 12 sweeps with a comment "This isn't working; I'm not feeling anything." I asked him to continue and he did, but after 12 more sweeps he interrupted with a comment "It works, I'm feeling it," but continued as directed ["Go with that"]. After the set Dennis reported that, based on his experience from previous sessions, he expected eye movements to elicit emotions and not feeling any, he thought that eye movements were not working. He also reported that as he continued with the exercise, he experienced very intensely the fear and the anger that he felt when he was stealing the DVD player from his unit. For the positive choice exercise, Dennis chose a situation with another resident being provocative towards him, Dennis becoming angry at first, but choosing to avoid a fight by speaking to the challenger in a conciliatory way. Dennis visualized the provocation, his decision not to fight and the words "good one" while performing a set of 12 eye movements. The session ended after that exercise. Due to Dennis's chattiness and constant interruptions with tangential comments completing two exercises took an entire third session.

Following session three, Dennis ran away from the Centre and stole a car, which he crashed trying to escape a police chase. He was arrested and detained at MYC for three months. After his return from MYC, Dennis expressed interest in restarting his participation in the treatment, but was back at MYC within two months for another car theft, running away from police and resisting arrest. I offered Dennis an opportunity to complete his treatment when returned from MYC five months later, but outside of the research project, which was then completed. Dennis completed the treatment package and was discharged from Knowles Centre into a supported independent living arrangement with CFS in his home city in Ontario. The data presented here was collected during his first treatment participation.

### Results

*Behaviour Problems on the Unit.* Dennis's behaviour problems noted in the unit charts are shown in Figure 17.

Figure 17. Dennis' Behaviour Problems Reported in Unit Chart.

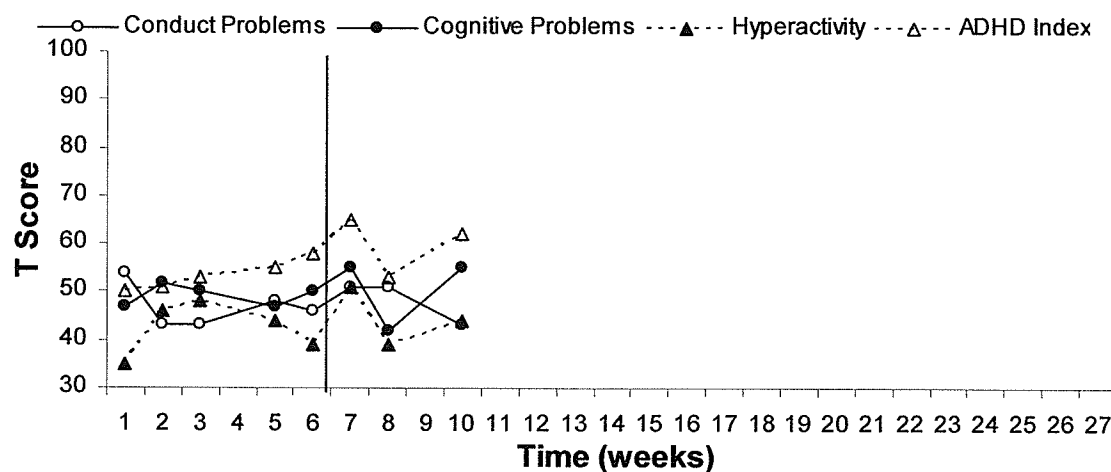


The vertical line after week six marks the beginning of the treatment phase. The visual inspection indicates a slight increase in the generally low number of aggressive behaviours reported in the unit chart. There is also apparent increase in the number of all

behaviour problems during the treatment phase, which indicates that the beginning of treatment had no positive effect on the number of Dennis's behaviour problems recorded in the unit chart.

*Conners-Wells' Self-Report Scale.* Dennis's self-report data on the Conners-Wells' Self-Report Scale are shown in Figure 18.

Figure 18. Conners-Wells' Adolescent Self-Report Scale Scores for Dennis.

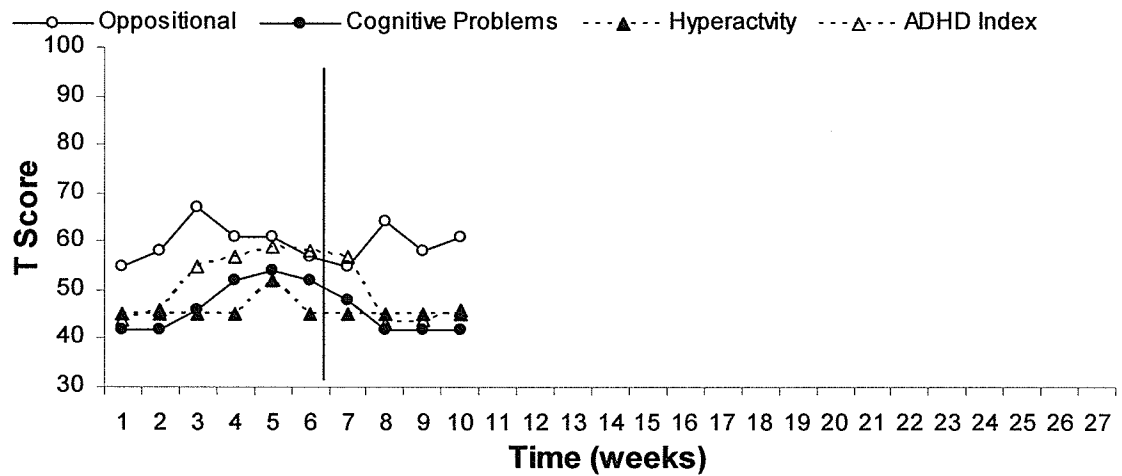


Visual inspection does not reveal any positive effect associated with the commencement of Dennis's treatment. During the six-week baseline period Dennis rated himself within normal range on all four subscales; he would need to see and rate himself as displaying below average frequency of problems, in order demonstrate treatment gains.

*Conners Parent Rating Scale.* Dennis's parent rating scale data, which was completed by the unit staff, are shown in Figure 19. The visual inspection of staff ratings of Dennis's oppositional behaviour remains mostly in the above 60 range (possible significant problem) during both baseline and treatment phases, indicating no positive treatment effect associated with the commencement of treatment.

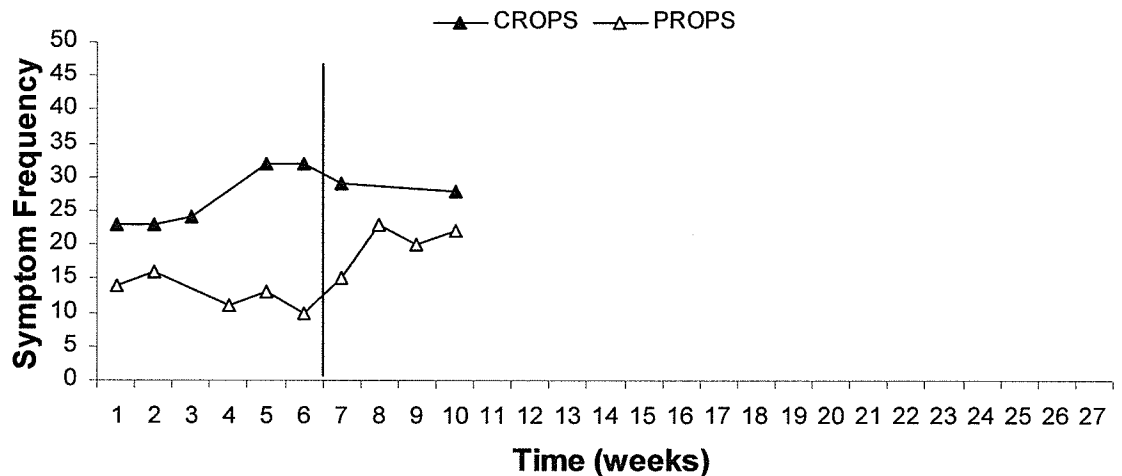


Figure 19. Conners Parent Rating Scale Scores for Dennis.



*Posttraumatic Symptoms.* Dennis's self-reported (CROPS) and staff-rated (PROPS) posttraumatic symptoms are reported in Figure 20. The frequency of symptoms reported by Dennis (CROPS) and by staff (PROPS) show no clear positive

Figure 20. Dennis' Posttraumatic Symptoms.



effect associated with the commencement of treatment, however, Dennis did not receive the trauma portion of the treatment due to his incarceration.

*Summary*

Dennis readily consented to his participation in treatment and presented as cooperative with the treatment tasks. He appeared to enjoy Positive Future movies and seemed to experience strong positive emotions when viewing with eye movements

positive future scenes. He also reported experiencing negative emotions when performing eye movements and focusing on negative events. Dennis' participation in this research project ended after the third session due to his incarceration at MYC on several charges related to his stealing a car, driving it without a driver's license, and resisting arrest. Dennis's behaviour leading to his incarceration indicates that the components of the treatment package that he completed including Positive and Negative Future Movies, Early Warning System, and Choices Have Consequences did not have sufficient impact on his decision making process to become involved in delinquent behaviour. The visual inspection of self-report and staff-rated measures also indicates no positive changes associated with the commencement of treatment.

Greg

#### *Background Information*

Greg's mother was still a teenager when he was born and she required ongoing help and supervision from CFS. The CFS file indicates that Greg and his two-years-younger brother had been neglected, physically abused, and placed in foster care several times. When Greg was six years old, his mother's new partner joined the family. He was alleged to abuse drugs and alcohol and to physically abuse Greg and his brother. Greg's behaviour problems reported in his social history included hyperactivity, self-injurious behaviour, swearing, temper tantrums, destruction of property, setting fires, stealing, and rebelling against authority at school and at home. Greg has frequently threatened and physically assaulted people, including staff working with him and acquired several assault charges and was incarcerated twice at MYC. At the age of thirteen and a half, Greg physically attacked his mother for taking Lego blocks away from him as a punishment for shoplifting. Other problems reported in the social history included

obsessive-compulsive behaviour, inappropriate attention seeking, and avoidance of difficult tasks. In late childhood Greg was diagnosed with Tourette Syndrome and was treated pharmacologically with high doses of Haldol (haloperidol). Greg has experienced recurrent motor and vocal tics such as snorting, sniffing, grimacing, and eye blinking for which he received excessive teasing from his peers.

Greg was admitted to Knowles Centre one month after his fourteenth birthday. His adjustment to his residential unit and the on campus school was poor. His problems included running away, refusing to follow requests and directions from staff, and stealing. Greg had been engaged in numerous conflicts with others, which at times escalated to include threats of harm and fistfights. During his fifteen months at the centre, he was involved in four physical assaults on peers and six on staff. He also had made demeaning comments towards peers including racial slurs.

### *Treatment Participation*

#### *Motivation Enhancement: Future Movies*

Greg presented as a five-feet-eleven-inches tall, slender, good looking youngster, with a dirty blond short cut hair that was neatly combed. He wore well fitting pants and shirts that were clean but looked worn out. Greg's skin was very sensitive to touch and he had a very limited tolerance for the feeling of stiff textiles. Greg generally presented with a flat affect and spoke in a monotone. Greg often made attempts to joke, which often leads to problems as either the content or the timing of his joking was considered inappropriate by his teachers and staff. According to teachers and staff many of Greg's jokes were either race or gender insensitive. I had worked with Greg for ten and a half months at the start of his baseline. One of the issues that we have dealt with regularly was Greg always wanting to borrow something from my office and touching objects in

my office without asking permission. I have always been able to set boundaries with Greg in a way that he accepted, which was not always the case with unit staff or teachers, where denial of his requests at times led to Greg's aggressive acting out. Greg readily consented to his participation in this treatment research project including video- and audiotaping of sessions. Greg presented as generally cooperative with the treatment process, however, managing of his frequent complaints of being tired and wanting to quit for the day was challenging. On the one hand I wanted to be respectful of his feelings and the right to quit, but on the other hand stopping whenever Greg complained about his tiredness would hinder the progression of his treatment. Greg was able to complete both the Positive and Negative Future Movie in first session, which occurred on week ten of his participation in this research project.

*Positive Future Movie.* Greg suggested that in ten years, at the age of 24, he wanted to be a police officer, but he agreed that that would not be likely because of his criminal record involving several assault charges. As his second choice, he visualized being a computer technician and working in his own computer repair shop. His image of his shop included tools lying around, a coffee maker on the table, pictures on the walls, and a couch, television set and a video player for customers to watch. Greg reported that visualizing the above image in detail resulted in a "good feeling" and happy sensations in his entire body. He reported being able to focus on all elements of his image and the thought "I'm doing a good job", while performing a set of approximately 12 eye movements. Another scene visualized by Greg was his high school graduation ceremony. The scene was practiced twice with sets of approximately 20 eye movements, while Greg imagined receiving his diploma, returning to his seat, feeling excited and thinking "way to go Greg!" Greg also imagined that in ten years he would be married

with two kids, living in a large five bedroom house with a big screen television and a play station. The image of Greg playing with his children inside his house was practiced with approximately 12 eye movements. Another scene practiced with eye movements involved Greg driving his Doge Viper thinking "I've made it!" and feeling excited was practiced with approximately 12 eye movements.

*Negative Future Movie.* For his Negative Future Movie, Greg visualized sitting in an empty jail cell furnished only with a bed, looking at the bars in the window, feeling tired and angry, and thinking "It's not worth it!" while performing a set of approximately 12 eye movements. The session ended after that segment because Greg complained about feeling tired and asked to stop. During the next (second) session, Greg recalled most details from his Positive Future Movie, but claimed that he could not recall anything from his Bad Future Movie. He accepted my suggestion to practice with eye movements (one set of approximately 12 sweeps) the positive scene of him being a computer technician and the negative scene depicting Greg being incarcerated at MYC (one set of approximately 20 sweeps). We also finished discussing two other parts of the Motivation Enhancement section of treatment, establishing the degree of his motivation towards the good future and listing his positive and negative traits. Greg stated that he was 80% motivated to work towards achieving his good future. He listed several factors that could help him achieve the positive future including ability to work independently, some computer skills, and enjoying working with and fixing computers. He agreed that stealing and fighting could sabotage his good future.

#### *Adaptive Skills Training*

*Early Warning System.* The work described in this section was accomplished in two sessions (latter part of session two and first part of session three). Session two concluded

after Greg listed the above sequence of events, which occurred during his attack on staff. During session three I assisted Greg in focusing on each step of the sequence that we identified in session two. At the start of the session Greg complained that his eyes were sore so in lieu of eye movements he performed butterfly taps (BT- alternate tapping on the upper arms with the arms crossed) for approximately 10 seconds. Each place in sequence where Greg performed butterfly taps is marked with (BT).

As Greg could not decide on an example of his aggressive behaviour for this segment of treatment, I suggested and he agreed to review a recent situation involving him assaulting a male staff. Prior to his confrontation with the staff, a male resident approached Greg claiming that Greg stole his CDs and demanded their return, which Greg refused (BT). Greg reported that following his confrontation with the male resident, he felt angry and “shaky inside” (BT) and rated the intensity of his anger at six on a ten-point scale. Greg retreated into his room where, in a short time, he was confronted by a male staff, who removed all of the CDs he found in Greg’s room (BT). Remembering this staff intervention Greg retrospectively rated his anger at that time as nine on a ten-point scale. When Greg noticed that, along with the stolen CDs, staff also took CDs belonging to him, he thought “It’s unfair!” and “[the staff] had no right to take my CDs” (BT). I asked Greg to focus on being more shaky (BT) and thinking “I want my CDs back” (BT). Next, Greg went to the staff office, grabbed the CDs and ran to his room (BT). Greg reported that during his action of retrieving CDs from the staff office his body was less shaky (BT). On the way to his room Greg saw in his peripheral vision that staff was following him, so he swore at the staff member and shouted “Get the hell away from me!” (BT). Greg reported becoming even angrier when the staff held his arms while retrieving CDs from his hands, which he interpreted as the “use of force”

against him. He stayed in his room for several minutes after the staff member left, thinking about his next move. He decided to contact the Office of the Child Advocate to complain about the staff, so he left his room and demanded an access to the telephone, which the staff member denied. In response, Greg thought "That's enough!" (BT) and felt that he wanted to fight (BT), so he ran towards the staff member and hit him on the head several times (BT). The staff member with the help of two other staff members restrained Greg, placed him in a seclusion room and called police. Greg reported feeling "nervous and mad" during the restraint and screaming at staff "Get the fuck off me!" His anger started to dissipate in the seclusion room when the police arrived to charge him with assault and to remove him from the unit. Greg presented as hesitant during this part of the treatment, initially claiming that he did not remember hitting the staff and later claiming that discussing the above incident made him tired.

*Choices Have Consequences.* This part of treatment started in the latter part of session three, immediately following the mapping of Greg's angry escalation cycle. He agreed to use the previously discussed incident of him hitting the staff as an example of a bad choice. Greg performed butterfly tapping while mentally reviewing the situation, including his angry feelings, assault on staff, his arrest and assault charges, and short placement in custody at MYC and the words "It's not worth it." Then I asked Greg to imagine a positive resolution of the above situation starting with staff entering his room and asking for the stolen CDs, Greg handing them to him, staying in his room and enjoying listening to his CDs as a reward for his positive choice (BT). I asked Greg to practice the above two variants with butterfly tapping one more time and he agreed.

Greg claimed that he could not recall another example of a bad choice, but accepted an example suggested by me involving him throwing a padlock in the direction

of his teacher, who told him to leave the classroom. The padlock missed the teacher, but Greg received a weeklong suspension. To represent possible bad consequences of his choice to throw the padlock in the teacher's direction, Greg imagined the padlock hitting the teacher, him being incarcerated at the MYC and thinking, "It's not worth it" while making butterfly taps. For the positive choice practice, Greg imagined the same teacher asking him to leave the classroom and him following teacher's direction and later enjoying an unsupervised leave from the Centre (BT). Greg agreed to follow my suggestion to rework another of his bad choices of throwing a book at a teacher after being asked to leave the classroom. Greg visualized himself following the teacher's request and enjoying an unsupervised outing after school (BT).

Greg's swearing at teachers has been the main cause of his frequent removal from school. Hoping to help Greg gain more control over that behaviour, I asked him to visualize with several sets of butterfly tapping a past example of swearing at a teacher, followed by a negative consequence of losing privileges, including being grounded to the unit, and thinking "It's not worth it (BT)." For the positive choices practice, Greg visualized working on his classroom assignment and, consequently, enjoying an unsupervised leave (BT). The session ended at Greg's request, as he once again complained about headache, tiredness, and poor concentration. He also appeared intellectually slow, possibly an effect of the heavy dose of the medication used to control his Tourette Syndrome symptoms.

During the next (fourth) session, Greg demonstrated some recall of the Choices Have Consequences covered in the previous session, but when the conversation focused on his comment from a previous session that two types of choices get him into trouble, stealing and assaulting people, Greg started to complain about having a headache. I



reflected that conversations about his problem behaviours seem to result in his complaints about not feeling good. Greg did not react to my comment so I proceeded with asking him about other examples of bad choices. Greg was unable to recall any, but agreed to work on the situation that occurred since the last session and involved Greg physically hurting a female staff. The incident started with Greg accidentally stepping on the foot of a female staff. The staff joked "I like my foot to be stepped on" to which Greg reacted with stomping her foot twice, causing pain and bruising. Greg initially resisted the process and claimed that he could not recall the incident, however, he was certain that the female staff member who discussed it with him "doesn't lie", so he agreed that it had to be true. Greg agreed to review the incident with eye movements as an example of a bad choice, involving the consequence of confinement to his room for the evening and the words "It's not worth it." Greg also imagined better handling of the situation including apologizing to the person for stepping on her foot accidentally and continuing with his activity. In a subsequent session, he claimed that he had no recall of that session, so it was reviewed with him again with one set of approximately 12 eye movements.

*Tease Proofing.* Session five (week 14 of research participation) focused on tease proofing. Greg reported that he usually responds with anger to teasing about his Tourette Syndrome or his mother. He chose to work with a situation involving another resident mimicking his Tourette Syndrome ticks. Greg practiced with a set of approximately 24 eye movements visualizing himself ignoring teasing and reported feeling good about that choice. This example was practiced with another set of approximately 24 eye movements, but this time Greg was also thinking "I'm in charge of my behaviour." He also practiced with a set of approximately 30 eye movements

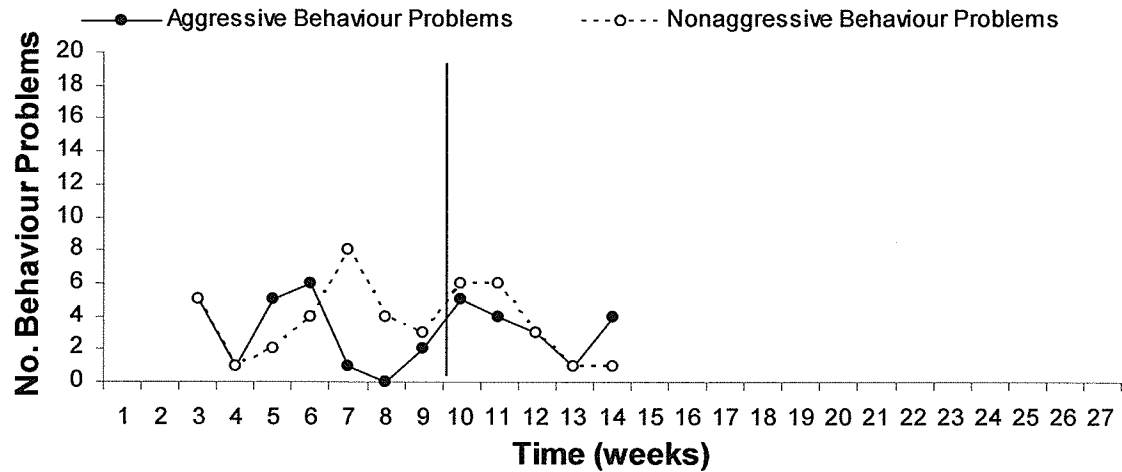
applying protective shields, similar to the *Star Trek Enterprise*. After completing the exercise, Greg laughed and explained that he imagined being attacked by a big teaser ship and thinking, "No bullies are going to get to me." The exercise was repeated two more times with sets of approximately 36 eye movement sweeps. When asked to imagine a situation involving somebody making negative comments about his mother, Greg stated that he would "beat up" anyone making fun of his mother, but agreed that aggressive responses to teasing could result in criminal charges and would sabotage his future. He practiced with a set of approximately 12 eye movements using a protective shield in a response to being teased about his mother. I met with Greg the next day for 20 minutes to finish the Tease Proofing session. Greg started with imagining a cartoon scene depicting him being teased by Bugs Bunny mimicking his ticks and Greg just walking, while performing approximately 18 eye movements. He also imagined a cartoon scene with a resident from his unit who has been relentless in mimicking Greg's ticks and saying to him "Stop, it does not bug me" and performed a set of approximately 12 eye movements. During that brief session Greg presented as more focused, responsive, and engaged.

A few days following the fifth session, Greg physically assaulted a male staff at the movie theatre and was subsequently charged with an assault, placed at MYC and administratively discharged from Knowles as the unit staff felt too afraid to continue working with Greg. According to staff, Greg wanted to see an R rated movie, which he was denied. He agreed to see another show, which he left without staff permission. Staff followed him outside the theatre and Greg hit him several times on the head. Greg's assault on a staff member resulted in assault charges, a brief incarceration at MYC and an immediate discharge from the Centre.

Results

*Behaviour Problems on the Unit.* Greg's behaviour problems noted in the unit charts are shown in Figure 21.

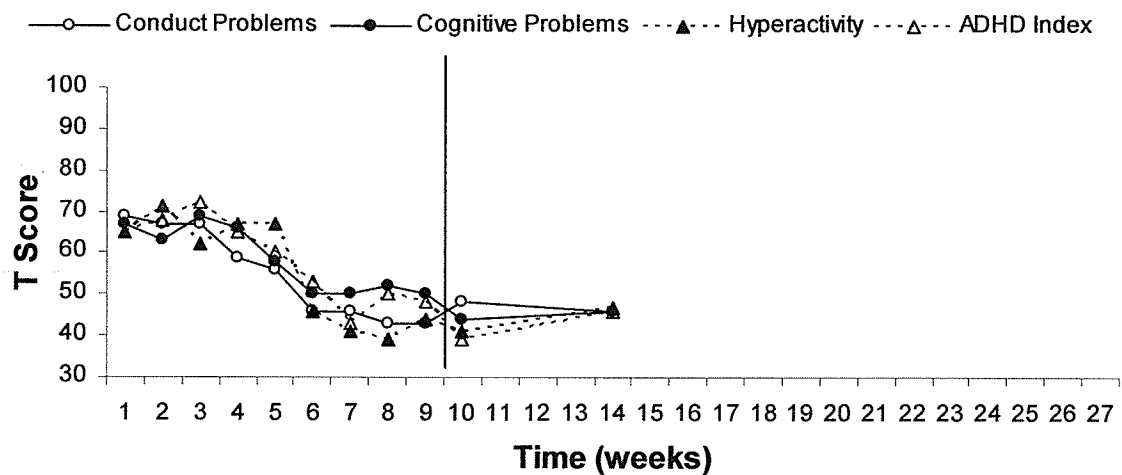
Figure 21. Greg's Behaviour Problems Reported in Unit Chart.



The vertical line after week nine marks the beginning of the treatment phase. The visual inspection indicates a variable pattern for both aggressive behaviour problems and nonaggressive behaviour problems during both baseline and treatment phases

*Conners-Wells' Self-Report Scale.* Greg's self-report data on the Conners-Wells' Self-Report Scale are shown in Figure 22. The visual inspection does not and could not

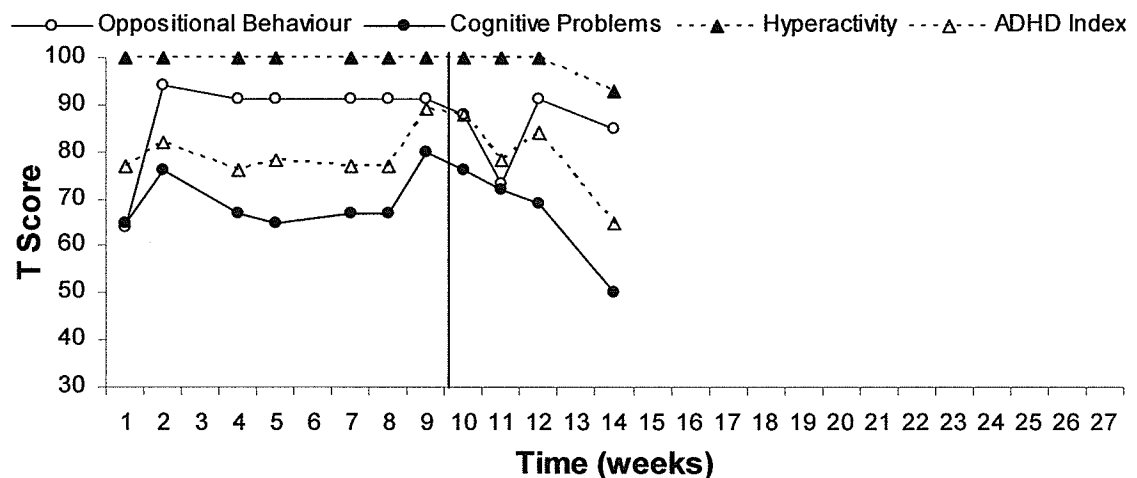
Figure 22. Conners-Wells' Adolescent Self-Report Scale Scores for Greg.



indicate that treatment was associated with a consistent decrease in conduct problems and other problems reported by Greg on the Conners Adolescent Self-Report Measure as Greg's baseline appears to have been steadily declining such that the last four weeks of the baseline Greg's self-reported problems were in the normal range. Greg's ratings of his problems were significantly lower than staff ratings.

*Conners Parent Rating Scale.* Greg's parent rating scale data, which was completed by the unit staff, are shown in Figure 23.

Figure 23. Conners Parent Rating Scale Scores for Greg.

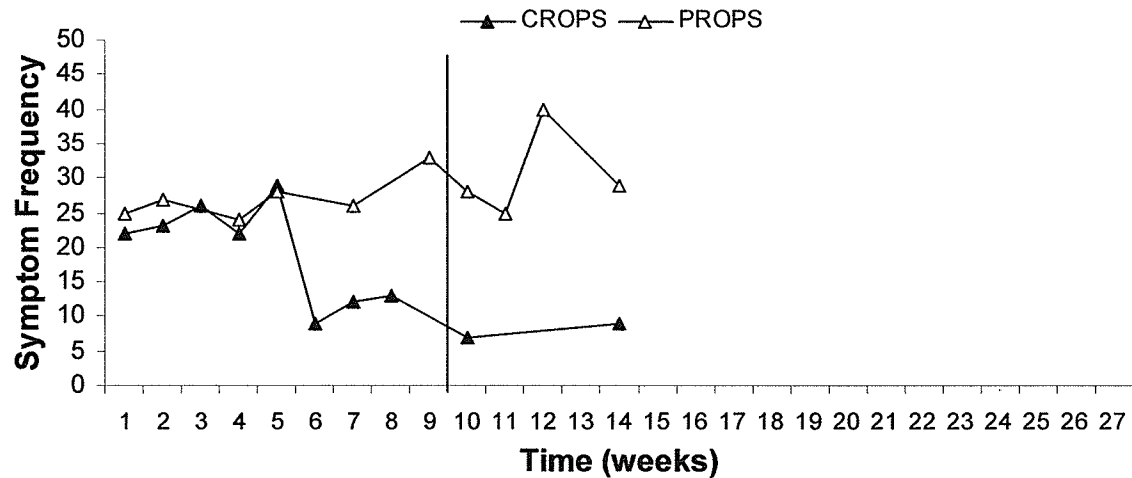


The visual inspection does not indicate that the commencement of treatment was associated with a consistent decrease in oppositional or other problems rated by staff on the Conners Parent Report Scale. The very last data point shows a significant decrease in ratings of Cognitive Problems and ADHD Index in week five of treatment. Staff ratings on this scale indicate consistently a very high frequency of oppositional and hyperactive/impulsive behaviour during baseline and the first three weeks of the treatment phase showing a minimal drop in week five of treatment, followed by an assault on a staff member.

*Posttraumatic Symptoms.* Greg's self-reported (CROPS) and staff-rated

(PROPS) posttraumatic symptoms are reported in Figure 24.

Figure 24. Greg's Posttraumatic Symptoms.



Greg's premature discharge from the centre occurred before he could receive the post trauma treatment. The visual inspection indicates no reduction in staff ratings of his posttraumatic symptoms (PROPS) associated with the commencement of treatment and a significant reduction in self-reported symptoms (CROPS) occurring in week six of baseline and remaining relatively stable for the remaining part of baseline and the beginning of the treatment phase.

*Summary*

Greg presented as generally cooperative with the treatment process, but requested early termination of sessions frequently, especially when his behaviour problems were discussed. Greg responded well to the Positive Future Movies and reported good feelings and happy sensations in his entire body associated with practicing Positive Future Movies images with eye movements. He also seemed to give a full effort with the positive choices and Tease Proofing parts of treatment. He cooperated with the Early Warning System and negative choices, but it is not likely that they had any impact

as he continued to claim that he did not remember his recent incidents of his aggressive behaviour. His assault on a staff member at the movie theatre indicates that the treatment had no effect on Greg's decision making or anger management.

It is likely that Greg's Tourette Syndrome and the high doses of the neuroleptic medications used to treat it diminished his ability to respond to treatment process by decreasing his energy level, motivation, and cognitive processes. The visual inspection of self-report and staff-rated measures indicates no positive changes associated with the commencement of treatment.

Trevor

*Background Information*

Trevor is the youngest of five children born to his parents, who relocated to a small town in Northern Manitoba from the East Coast when Trevor was five years old. Trevor had witnessed substance abuse by his parents and older siblings, violence between his parents, and several episodes of his father leaving the family for periods of time ranging from several days to several months. Trevor reported that his older brother, who was once incarcerated for drug trafficking, introduced him to street drugs by giving them to Trevor. Since his early school years, Trevor has displayed multiple behaviour problems including aggressive acting out, fighting, assaulting other children, for example choking another boy, and substance abuse. CFS has been involved with Trevor and his family on intermittent basis and Trevor was placed in care several times, but was returned to his parents shortly because of his refusal to cooperate with foster parents and running back home.

Trevor's baseline started four weeks after his second admission to Knowles Centre (two months before his fourteenth birthday). The first admission occurred when

Trevor was eleven-year-old and out of his parents' control, exhibiting multiple behaviour problems at school and in the community. Trevor's first placement at Knowles Centre was terminated by his father in response to Trevor's frequent running away from the Centre and association with delinquent youth in Winnipeg's inner city area. Prior to his second admission to Knowles Centre, Trevor had been involved in a number of delinquent activities including stealing and driving cars.

Immediately after his admission, Trevor presented as friendly and cooperative with the unit staff and the teachers, but within a few weeks he started to miss school, displayed angry outbursts, engaged in conflicts with peers, and threatened peers with a physical harm. Trevor was observed by staff boasting to other residents about his aggressive behaviour, stealing cars, and substance abuse. He also displayed a dismissive attitude towards his legal charges and stated that he did not consider an incarceration at MYC as negative. He also minimized the negative consequences that his delinquent behaviour had on him or others and stated that stealing and driving cars was a great thrill for him.

#### *Treatment Participation*

Trevor presented as a five-foot-three-inches tall average built boy dressed in baggy pants and sweat shirt. He had very short blond hair and a friendly face, smiled often, and was easy to engage in conversation. He spoke freely about his delinquent behaviour and did not seem to care about its consequences to him or others. Unlike most adolescents that I met working at Knowles Centre, he spoke freely about his family's problems and reported high level of worry about his parents, especially at night, affecting his ability to fall asleep. The Centre's consulting psychiatrist diagnosed Trevor with ADHD and conduct disorder, and suggested that Trevor be monitored for possible

signs of a mood disorder. After I explained the treatment to him, Trevor expressed interest in learning how to make better choices and how to deal more effectively with past negative events and present family stress. He consented to his participation in this treatment research project including audio- or videotaping of the sessions.

*Motivation Enhancement: Future Movies*

The future movie session occurred two weeks before Trevor's 14<sup>th</sup> birthday. Trevor presented in a positive mood, was cooperative, and completed both Positive and Negative Future Movies in session one, which was the fourth week of his participation in this research project.

*Positive Future Movie.* Trevor imagined that in 10 years he would be living with his girlfriend in Calgary, "because the job market is better there." He also imagined living in a house painted in eggshell white, owning a big screen TV, and driving a black 5.0 litre Ford Mustang. The final scene in Trevor's positive future movie depicted him in front of his house washing his Mustang. Trevor reported that he was not able to create mental images of his future movie scenes, but while thinking about them he experienced feelings of pride and happiness and sensations in his chest that he described as "excited." He reported being able to focus on all of the above elements and the statement "I've made it," while performing two sets of eye movements consisting of approximately 16 and 20 sweeps respectively. Trevor reported that during each set his focus on the exercise "went away and came back." Trevor stated that in order to achieve the positive future he needed to "stop getting into trouble," complete his residential treatment, and return home to one of his parents. He added, when asked, that he needed to stay in school to complete Grade 12 and then go to college. Trevor proposed that he would show his commitment to not getting into trouble by having an evening job and attending



school during the day. He also suggested that becoming involved in recreational activities, such as bowling and working out with weights, would help him stay out of trouble. Since Trevor has had some involvement in bowling in the past, I asked him to imagine himself at the age of 16 or 17 bowling on a team and having fun. He reported that during the set of approximately 20 eye movements he lost his focus on the image, so he decided to run his bowling scene from the beginning, thus showing that he took the task seriously. He also imagined himself graduating from high school while performing approximately 20 eye movements and at his own initiative, included a scene of a person handing him his diploma saying to him "Congratulations, well done!" He also reported that he imagined looking at his diploma and saying to himself "Yes, I finally did it!" This scene was practiced with approximately 20 eye movements for the second time, and Trevor reported visualizing all of the elements previously reported.

*Negative Future Movie.* When asked to imagine what could happen if he continued with his behavior problems, Trevor stated that he would go to jail. He reported that he could easily imagine himself being in jail because he was already incarcerated twice for short periods of time. His image of being in jail involved him sitting in a locked room all day and being very bored. Trevor visualized the cell as a small room with "nothing inside but a mattress, Plexiglas window and a buzzer." He agreed to add the words "it's not worth it" to the scene, but during visualizing the scene with the eye movements he changed those words to "I should not have done the crime, and now I have to do the time." Trevor reported while performing approximately 18 eye movements he visualized a sequence starting with "me being picked up by the cops, being brought back [to MYC] and having to go to the bathroom and push that little buzzer." He also visualized a thick metal door and little window and thought "I should

not do the crime, now I do the time.” For a reason that is not clear now, the jail scene and his words “I should not have done the crime, and now I have to do the time” were not practiced with eye movements for the second time.

Trevor struggled with listing positive things about himself that could help him realize the good future. He accepted my suggestions that he was friendly, enjoyed being involved in positive recreational activities, was able to connect with adults and solicit support, and responded well to corrective feedback from staff. Trevor was also able, with my help, to list a number of things that could interfere with him reaching his positive future including his friends and his involvement in criminal activity. Trevor appeared to have some problems estimating the level of his dedication to his good future, stating that it was 90%, which was at odds with the extent of his behavioral problems, criminal activity, and extensive non-attendance of school. At the start of the next sessions, Trevor reported remembering the graduation scene for his Positive Future Movie and claimed to have no recollection of his Negative Future Movie. For the purpose of strengthening the effect of his Future Movies, I invited Trevor to practice with one set of 12 eye movements the graduation scene from Positive Future Movie and the incarceration scene from the Negative Future Movie. Trevor described the jail cell that he imagined as an empty room with concrete walls, one big metal door and a window. He reported feeling trapped when visualizing being locked up in jail.

#### *Adaptive Skills Training*

I was concerned about Trevor running away from the Centre and becoming involved in a delinquent behaviour that could result in his incarceration at MYC, so in the second session I considered changing the order of treatment segments and introducing Choices Have Consequences before the Early Warning System. Trevor

validated that consideration by answering my question “What was getting him into more trouble, his temper or his bad choices?” with “bad choices.”

*Choices Have Consequences.* As an example of a positive choice, Trevor shared his decision not to physically fight with another resident who had stolen CDs Trevor received as a birthday gift. Trevor reported that he felt very angry with that resident, but decided not to fight as he did not want to be arrested and placed at MYC. Trevor added that the fact that he just returned from MYC helped him think that he did not want to return there. He was asked to view the above situation and his choice not to fight while performing 30 sweeps of eye movements. He stated that the positive consequence of his choice was maintaining his freedom, and he chose an image of him playing football as representing freedom. Trevor also reported expanding his visualization during eye movements by starting it with his return from MYC, followed by finding out that his CDs were stolen, feeling angry and wanting to fight, then changing his mind and playing football.

As an example of a bad choice, Trevor reported his recent decision to run away from his outing with staff, which resulted in a breach of his probation order and spending a couple of nights at MYC. Trevor reported that his decision to run from staff was impulsive: he saw his friends, became excited, so he decided to run away and be with them. While performing sets of approximately 25 eye movements, Trevor visualized a series of events leading to his decision to run away, his time at MYC, feeling trapped, and saying to himself, “It’s not worth it.” The second example of a bad choice offered by Trevor involved him stealing a car, which resulted in him being incarcerated for a period of one month at MYC. Trevor reported that his decision to run away from the Centre and steal a car was related to him feeling homesick. After

approximately 30 sweeps of eye movements, Trevor reported that he was able to visualize the sequence of events starting with him feeling home sick and bored, inviting another resident to run with him, stealing a car and driving it, being arrested by police, being locked up in the MYC, feeling trapped, and thinking "It's not worth it."

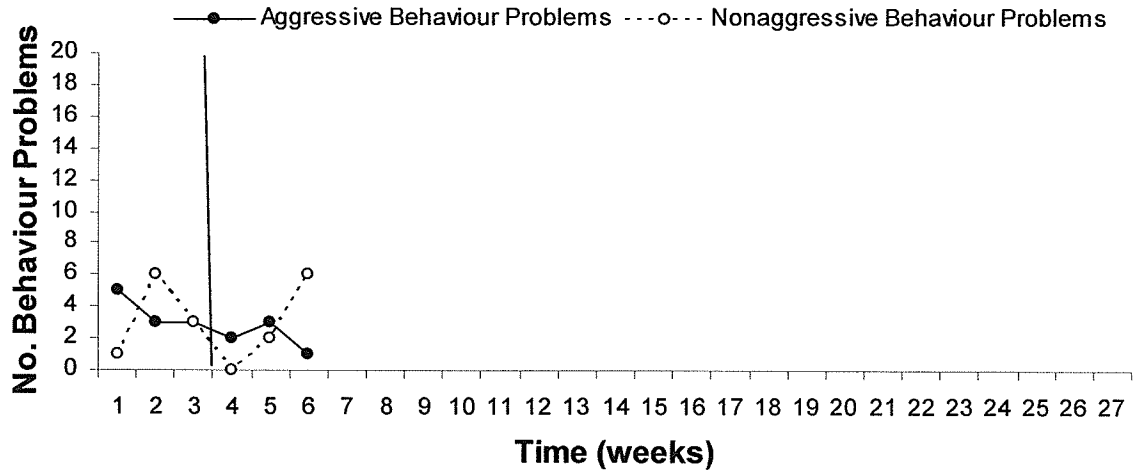
Trevor's second example of a good choice was his recent decision to wake up in the morning and go to school despite feeling very tired. He visualized a sequence of events, starting with him feeling tired in the morning, deciding to get up, going to school, and then feeling happy and saying to himself "way to go" while performing approximately 17 sweeps of eye movements. I asked Trevor to visualize the entire sequence of events involved in his decision to wake up and go to school, then jump to the future and imagine his graduation ceremony. When trying to visualize the above sequence, Trevor joked "and I slept in; just kidding." After approximately 30 sweeps of eye movements Trevor reported that he was able to visualize all of the elements.

Following that session, Trevor ran away from the Centre with another male resident and was caught by RCMP driving a stolen van. He was incarcerated for one month at MYC and upon return expressed interest in continuing his treatment. He attended two sessions which focused on reviewing and practicing with eye movements what we did before his incarceration, namely Future Movies and Choices Have Consequences. Trevor ran away again, engaged in auto theft and was incarcerated again. He returned to Knowles Centre, but continued to run away and was discharged to his mother's care.

### *Results*

*Behaviour Problems on the Unit.* Trevor's behaviour problems noted in the unit charts are shown in Figure 25.

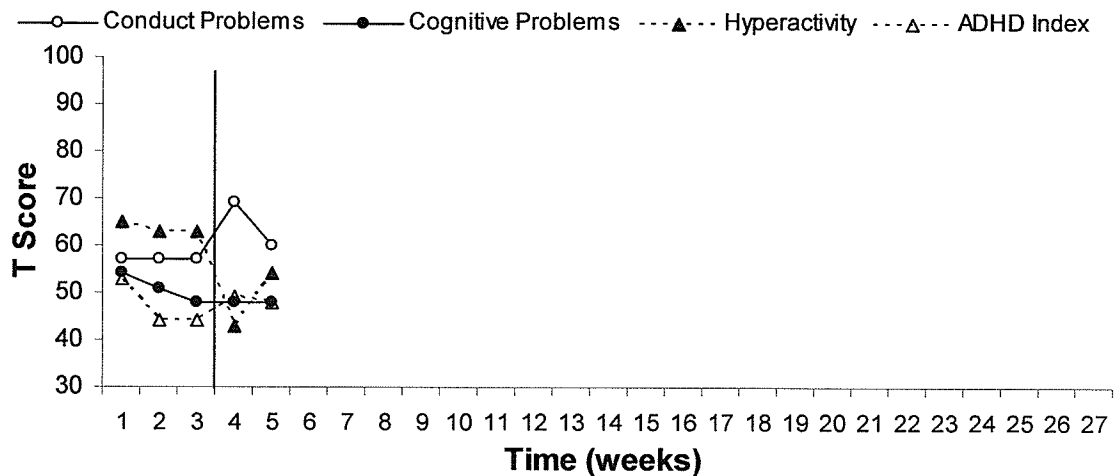
Figure 25. Trevor's Behaviour Problems Reported in Unit Chart.



The visual inspection reveals a variable pattern for both aggressive behaviour problems and nonaggressive behaviour problems during both baseline and the start of the treatment phase and no indication of a positive change in nonaggressive behaviour problems associated with the commencement of treatment. The frequencies of aggressive behaviours are too low to show a clear change in pattern.

*Conners-Wells' Self-Report Scale.* Trevor's self-report data on the Conners-Wells' Self-Report Scale are shown in Figure 26.

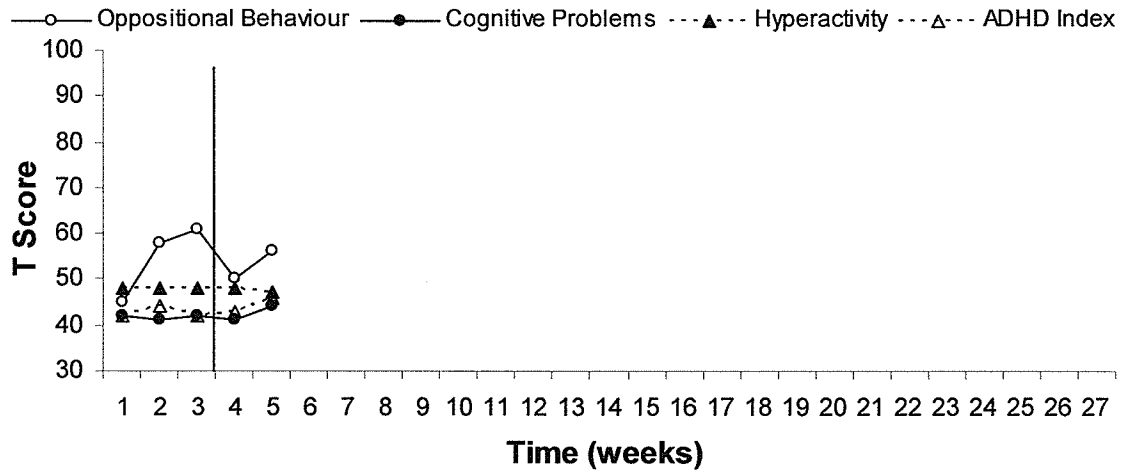
Figure 26. Conners-Wells' Adolescent Self-Report Scale Scores for Trevor.



The visual inspection indicates an increase in self-reported Conduct Problems occurring at the start of Trevor's treatment and an unstable decline in Hyperactivity problems.

*Conners Parent Rating Scale.* Trevor's parent rating scale data, which was completed by the unit staff, are shown in Figure 27.

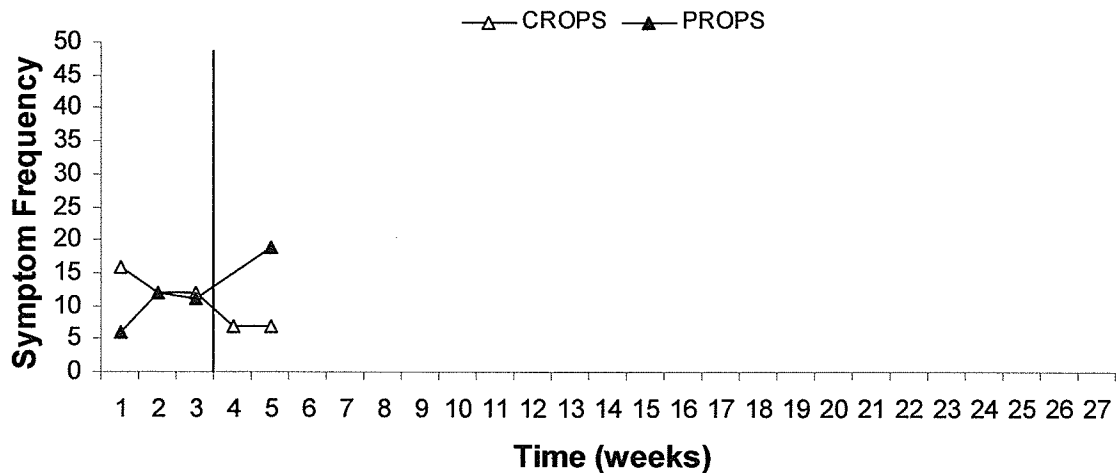
Figure 27. Conners Parent Rating Scale Scores for Trevor.



The visual inspection indicates no clear change in the level of staff reported problems associated with the commencement of treatment.

*Posttraumatic Symptoms.* Trevor's self-reported (CROPS) and staff-rated (PROPS) posttraumatic symptoms are reported in Figure 28. Trevor's treatment was shortened by his reengagement in delinquent behaviour before he could receive the past

Figure 28. Trevor's Posttraumatic Symptoms.



trauma treatment. In total he received two sessions of treatment from which it would not be reasonable to expect any changes. The visual inspection suggests an increase in staff

ratings of his posttraumatic symptoms (PROPS) associated with the commencement of treatment and a reduction in self-reported symptoms (CROPS) at the beginning of the treatment phase but it is doubtful that these could be interpreted as meaningful.

### *Summary*

Trevor presented as cooperative, performed treatment tasks with ease, and reported that practicing Positive Future Movie images with eye movements evoked positive emotions. One week later he reported remembering the graduation scene from the Positive Future Movies and no recall of his Negative Future Movie. He also completed Choices Have Consequences, which did not seem to have any impact on his behaviour and decision making processes, as he ran away from the Centre and was caught by the police driving a stolen van, resulting in one month incarceration at MYC. Following his incarceration Trevor continued to run away and became incarcerated at MYC several weeks later. The visual inspection of self-report and staff-rated measures indicates no positive changes associated with the commencement of treatment.

### *Peter*

#### *Background Information*

When Peter was eleven-months-old, his parents separated and he remained in the care of his father. According to the social history provided by CFS, his father had been involved in using and selling street drugs, and severely neglected and physically abused Peter. While in his father's care, Peter was frequently left with his maternal grandfather for periods of up to a few months. His mother had struggled with personal problems and alcohol addiction and did not maintain regular contact with Peter and moved to another province when he was seven years old. Two years later, she returned to Manitoba with two new children and obtained custody of Peter. According to Peter's CFS file, she has

neglected Peter and has been unable to set age appropriate limits for him. Peter has displayed multiple behaviour problems and acquired twenty criminal charges within six months after turning twelve years of age. Although most of his charges were for breach of conditions of his bail order, one was for an assault with a weapon, one for mischief, and several were for theft. His behaviour problems included running away from home, drug and alcohol abuse, frequent physical fights at school and in the community, breaking into cars and homes, shoplifting, vandalism, and fire setting. At school, Peter refused to follow directions, frequently left school without permission, and was occasionally suspended for short periods.

At twelve and a half years of age, Peter was admitted to residential treatment at Knowles Centre. He experienced behaviour problems both in the unit and at school, including conflicts and physical fights with other residents, throwing and destroying objects, refusing to follow staff directions, running away, shoplifting, stilling cars and driving them, and drug use. Peter was diagnosed with ADHD and treated with Ritalin.

#### *Treatment Participation*

Peter presented as a pleasant and generally cooperative youngster, but easily distracted and frequently interjected unrelated or irrelevant ideas and made noises imitating airplane or train engine noises. Peter was extremely skinny, weighing approximately 90 pounds at five-feet-six-inches tall. His appetite was severely suppressed by Ritalin that he was prescribed for his problems with attention, impulsivity, and hyperactivity. Peter liked only French fries and Poutine, a French-Canadian dish comprised of French fries, gravy, and cheese curds. The unit staff tried various incentives to encourage Peter to eat a variety of foods and more frequently, but their success was very modest. Peter reported that when he ran away, he would not eat



any food for a few days at a time. Peter consented to his participation in this treatment research project and to video- or audiotaping of sessions and began his baseline two months after his admission to Knowles Centre. Peter's sessions ranged between 30 and 50 minutes due to his short attention span and problems with maintaining interest in treatment tasks. Due to his running away from the Centre, Peter was unavailable for some of the sessions.

*Motivation Enhancement: Future Movies*

The Future Movies part of treatment was introduced to Peter in week seven of his participation in research and required two sessions to complete, as he appeared unable to remain focused on subjects relevant to treatment and frequently introduced irrelevant subjects. I tried to maintain a balance between my need to address the treatment objectives and his need to tell stories, by listening to some of them and cutting off others and asking him to focus on treatment.

*Positive Future Movie.* When asked to imagine himself in ten years, at the age of 23, Peter offered, "I will probably be in jail". He interjected that theme several times when his task was to generate images for his Positive Future Movie. However, with my prompting, Peter proposed that at the age of 23 he would be living in a house in a small city in Saskatchewan, where he lived until nine years of age with his sister, stating, "She is the only person I trust." He imagined himself as a high school graduate, working as a garbage man because they make a lot of money, being a rapper, and driving "a souped up car" painted baby blue. For the final scene of his future movie, Peter envisioned himself performing a Grass Dance, a traditional Native dance, in front of his family, feeling happy, and the family members shouting "Go Peter, you can do it!" After the image was practiced with a set of 12 eye movements, Peter reported imagining his

mother looking old, with grey hair and cheering him “Yeah Peter!” The scene was practiced with a set of approximately 12 eye movements one more time and Peter reported feeling happy and imagining his older sister cheering him on, which was also practiced with a set of eye movements. Peter reported that the next scene that he practiced with eye movements (approximately 16 sweeps) showing his high school graduation ceremony while he was thinking “I finally did it!” evoked a feeling of satisfaction. After the third scene he practiced with a set of approximately 12 eye movements involving him standing in front of his house ready to take his dog for a walk, Peter said “This feels like fun.”

*Negative Future Movie.* Working with Peter on his Negative Future Movie during session two, proved to be very challenging. Answering my question, Peter stated that if he continues to get into trouble, he will end up in Stony Mountain (a federal penitentiary near Winnipeg). He reported experiencing a strong negative feeling in his entire body associated with thinking about being incarcerated, which he also described as “horrible.” He refused to focus on a mental image of being in jail claiming that it was too hard because it was reminding him about how bad he felt when he was incarcerated prior to his admission to Knowles Centre. He rejected my request to imagine being in jail, feeling bad, and thinking “It’s not worth it,” and performing eye movements.

Peter required a multiple questions and suggestions to identify his resources, as he answered most of these questions with “I don’t know.” He identified the following: his intelligence, family support, and both his mother and grandfather attending university. He agreed with my suggestion that being athletic and playing sports could help him make attending school more enjoyable, thus increasing his chances of high school graduation. Peter also agreed that being a pleasant individual and enjoying his

interactions with other people might help him attain a better future. Peter did not propose any of his own ideas, but agreed with my suggestion that his impulsivity and his negative friends could jeopardize his chances of achieving positive future. He also identified his propensity to fight and the mindset that he has to fight physically any time somebody challenges him could also interfere with his chances of achieving a positive future. At this point Peter began to talk with a sense of overconfidence about him not being afraid of anyone, including the police, and not turning away from any chance to fight (“When somebody gets you mad, they can’t stop me! I am total blackout! I black out on anybody, and then they try to hold me back, and I just throw them around!”). I refocused the discussion on the degree of his motivation to obtain a positive future and, after some discussion, Peter decided that he was 80% motivated to achieve the positive future.

There was a three-week break between sessions as Peter missed one session due to his home visit and another due to me being sick. When asked to report what he remembered from his Future Movies session, Peter stated that he did not remember anything because he was busy reminiscing about his AWOL and the fun he had during that time. I began to review with Peter the elements of his Future Movies, when he began talking about his recent angry outburst, which seemed an ideal segue to the next section of the treatment, so I decided to seize the opportunity.

### *Adaptive Skills Training*

*Early Warning System.* This was session three, week eleven of Peter’s participation in the research. To map Peter’s anger escalation cycle, we used his report about becoming very angry when witnessing the staff member confront another resident and Peter’s cousin about lying. This was practiced with eye movements as the first step

in Peter's anger escalation cycle. Peter's story indicated that his anger started to escalate when he thought "staff are unfair and cheap." As he appeared uncertain about the role of that cognition in his anger escalation, I asked him to imagine and practice with eye movements two scenarios: one with him thinking "staff are unfair and cheap," and another with him thinking that the staff were fair and the other resident was wrong. As he was still uncertain after one try of each scenario, I asked him to think one more time "staff was fair" and perform another set of eye movements. Peter reported that the cognition "staff are unfair and cheap" resulted in an angry feeling, while the cognition the "staff was fair" did not. Following the thought "staff are unfair and cheap," Peter began to swear and clenched his fists. Peter reported that the staff member talked to him, but he did not hear him, as he was thinking about hitting the staff ("punch their lights out!"). Peter reported that his anger tends to last for extended periods of time ("When I get mad, I'm mad!") and, in that particular incident, he reported going to bed angry and having an angry dream. He agreed that he could benefit from being able to get over his anger quicker, which was practiced with a set of approximately 12 eye movements. He also agreed that focusing on his angry thoughts prolonged his anger, while engaging in activities could dissipate his anger quicker. Peter focused on the thought that engaging in activities could shorten the duration of his anger and performed a set of approximately 12 eye movements. I complemented Peter for his hard work during the session, which he seemed to appreciate. During the next session Peter indicated that he remembered the steps involved in his anger escalation cycle.

*Choices Have Consequences.* This part of treatment was delivered in three sessions due to Peter's problems with maintaining focus and interest, as well as his tendency to run away from the Centre. The first example of a bad choice that Peter

discussed in session four (week 12) involved his running away from the Centre and stealing a van. He reported that he asked the Centre staff to take him for a ride around the city because he felt bored. During the ride, he saw an acquaintance and had “a vision” of them riding together in a stolen vehicle. When the staff member stopped the van at the red light, Peter “jumped out” and ran away. Shortly, he met with his acquaintance and some of his friends and together they stole the van and decided to go to Saskatchewan. They were stopped by RCMP approximately 60 kilometres outside of Winnipeg and Peter, after spending several hours at the police station, was returned to the Centre. During the session I asked him to imagine the sequence of events involved in this incident, including being locked up at the police station, the very unpleasant feeling he reported experiencing there, and the words “It’s not worth it.” With several reminders to stay on task, Peter was able to view the above with a set of eye movements. He appeared unfocussed and easily distracted, introduced irrelevant subjects into the discussion, and expressed reluctance to imagine himself in jail as a consequence for his negative choice, arguing that “I don’t want to remember! I really don’t want stuck in my head the jail part!” However, he agreed that stealing another car would likely get him incarcerated, so it would be to his advantage to think about being incarcerated as a potential consequence for such a choice, whenever he felt tempted to engage in another vehicle theft. To reinforce the negative consequences associated with his running away, I asked Peter to imagine as a slow motion movie the series of events starting with him feeling bored and craving excitement, choosing to run away, feeling cold and hungry and having no place to stay, and being locked up at the MYC. I also asked Peter to focus on the negative feelings he felt when incarcerated and the words “It’s not worth it” as he performed approximately 12 eye movements. Peter reported that he was able to visualize

the above sequence of his choices and their consequences, including the scene of being locked up at MYC and the words "It's not worth it." This concluded session four. The session was only 30 minutes long because of Peter's reluctance to discuss his choices and their consequences and his earlier request to stop. I wanted to avoid a possible increase in his resistance to treatment by pushing him to do more work against his wishes.

The fifth session started with reviewing the previous session and learning that Peter did not remember anything, because "My mind is on my sister. All of it." Peter explained that he just learned that his 16-year-old sister was pregnant. Peter agreed to view with eye movements his recent incident of being arrested for shoplifting, which occurred during his latest episode of running away from the Centre. Peter viewed the sequence of events starting with his decision to run away, having no place to stay and feeling hungry, shoplifting, being arrested and incarcerated, and thinking "It's not worth it," with a set of approximately 10 eye movements. Peter reported that recently thinking about his sister helped him decide not to run when invited by another resident. This was practiced with eye movements as an example of his positive choice. Peter reviewed in his mind, like a slow motion movie, his decision not to run away, ending it with an image of being hugged by his mother and sister and thinking "Well done Peter!"

*Tease Proofing.* Following the above examples of positive and negative choices I introduced Peter to the next part of the treatment protocol, Tease Proofing. Peter stated that he did not want to discuss teasing because he was feeling weird. I enquired and learned that he felt dizzy most of the time, but never disclosed it to anyone but his family. He also claimed that his dizziness was never discussed with the medical doctor, so after the session, I asked unit staff to arrange Peter an appointment with the Knowles

Centre consulting physician. Peter also proceeded to tell me that he thought his unit was haunted. He reported hearing footsteps when there was no staff or other residents around and feeling a "freeze." I asked Peter if he felt safe in the unit and he reported that he used sweet grass to help himself feel safe<sup>10</sup>. I encouraged Peter to discuss his experience with the Aboriginal teacher who was on staff at Knowles Centre, which he agreed to do. Discussing the above concerns used the time that I reserved for the Tease Proofing.

Following this session, Peter ran away from the Centre and missed the next session. When I met with him again (session six, week 15), he had his right hand dressed up in bandages to cover burn wounds he sustained while away. He also reported that he got "group stomped by a bunch of girls wearing high heels." Because of his continued running away, I decided to work more with Choices Have Consequences part of treatment. I chose to start with an example of a positive choice and Peter visualized with approximately 12 eye movements resisting his desire to run away and the positive consequence of spending a weekend with his family. After the set of eye movements, Peter reported that during his visualization he was silently repeating "I don't want to go AWOL, I want to go home." The exercise was repeated two more times with eye movements and each time Peter reported feeling proud about his decision not to run away and thinking "Way to go!"

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<sup>10</sup> Sweet grass is one of the most sacred plants for the Plains Indians. It is a tall wild grass with a reddish base and perfume-like, musty odour. On the Plains, sweet grass is usually braided together in bunches as a person's hair is braided. To do a smudging ceremony, one burns the clippings of sweet grass (could be mixed with sage and cedar), rubs his/her hands in the smoke, gathers the smoke and brings it into his/her body. The smoke could be rubbed onto oneself, especially onto any area in need of spiritual healing (Borden & Coyote).

Peter spontaneously reported his recent decision not to engage in a fist fight with another resident who was taunting him. Peter accepted my suggestion to focus on his decision as an example of a good choice and practice eye movements, but kept interjecting violent fantasies of fighting stuff and “going psycho” and required several reminders to focus on the task. With my assistance Peter was able to practice with eye movements an imaginary slow motion movie starting with being provoked by another resident, making a decision not to fight, and going home to visit with his family and getting more privileges as a positive consequence of his positive choice. He declined to incorporate positive cognitions, such as “Way to go!” or “Well done!” into this exercise.

As an example of a bad choice, Peter imagined stealing a car, being arrested, becoming incarcerated at MYC and hating it. He did not want to do the exercise with eye movements claiming that he did not like the feeling associated with thinking about being locked up in jail, albeit he agreed that it was important for him to remember that the next time before he attempted to steal a car, so he would not go to MYC.

*Tease Proofing II.* This segment of treatment (session seven) was offered to Peter one day after a previous session to compensate for the time lost due to his running away. I introduced Peter again to Tease Proofing and he responded with “I get mad when people diss my family!” He followed with multiple aggressive comments creating an impression that he felt obligated to act aggressively towards anyone making negative remarks about his family. When, following the barrage of aggressive comments, Peter said “sometimes I just ignore them,” I replied “It’s pretty amazing that you can do that,” hoping it would be a segue to the Tease Proofing exercise. Peter ignored my comment and continued to make comments like “Kids are always trying to push my buttons, but I am always ready to punch them out.” After a litany of aggressive remarks, Peter



reported that he was able to refrain from punching another resident who called his mother a dog. I complimented Peter for his choice and asked him to concentrate on his decision, starting with other resident's provoking remark, his angry reaction and decision not to react aggressively. Peter continued to list examples of what he could have done to the other resident, but I responded with a firm request that Peter focus on the positive aspect of the situation, which was his decision to refrain from aggressive reaction to teasing, and the positive consequence of enjoying a weekend home visit with his family. Peter interjected a few more aggressive verbalizations, but was able, with my guiding, to complete a set of approximately 12 eye movements while imaginably reviewing his positive response to teasing. Through discussion Peter generated another idea for Tease Proofing involving him wearing an imaginary "super protective vest" to help him not to feel affected and need to react aggressively to other residents "back stabbing" him. Peter practiced wearing his "super-protective vest" and not reacting to teasing in three different scenarios, including someone showing disrespect to his mother, while performing short sets of eye movements of 8 to 10 sweeps.

#### *Past Trauma Treatment*

After I introduced the Past Trauma section of the treatment to him in session eight (week 16), Peter began to complain about being unable to fall asleep because of disturbing thoughts which he did not want to disclose to me. I suggested that he imagine some kind of safe or container where he could put his disturbing thoughts and lock them up. At first Peter expressed disinclination towards the idea of putting his thoughts in a container claiming "They [thoughts] are trying to tell me something." He seemed unable to say what message he was getting or expecting to get from his disturbing thoughts and after my clarification that he would still have access to his thoughts if he chose so, he

proposed to do the exercise as a cartoon movie. He imagined his disturbing thoughts as cartoon characters and put some of them in his safe with a plunger and swept the others into the safe with a broom, then locked the safe with a code 126. The exercise was practiced with eye movements twice, requiring approximately 15 sweeps each time. Following the exercise, Peter reported that some of his disturbing thoughts were about death, but declined to explain. At my direction, he practiced with eye movements imagining himself as a cartoon artist drawing a picture of himself with the bubble above his head and thoughts of death in it, then erasing those thoughts, and replacing them with thoughts about having fun and enjoying himself. The exercise was repeated twice with approximately 12 sweeps of eye movements each time. Following this exercise Peter reported that recently he was able to use his tease proofing skills and did not respond to another resident putting down his mother. Peter reviewed the situation and his positive choice with approximately 20 eye movements, while thinking "good job."

In session nine (week 17), Peter elected to work with the memory of his mother being assaulted by her boyfriend that he thought had occurred when he was 6 years of age. Peter started his story with the statement that his sister was hiding in a kitchen cupboard and in response to my question "What was she doing there?" he added that he was locked up in the bathroom. Several questions from me helped to clarify that he was locked up in the bathroom by his mother's boyfriend, who was hitting her and threatening to kill her. Peter reported that he attempted to intervene by trying to grab his mother's boyfriend, but was locked up in the bathroom, from which he was unable to free himself. Peter reported that he hit his mother's boyfriend's toe with a baseball bat, but I was not certain if that was not just his fantasy. Peter reported that his mother's boyfriend kicked him in the buttocks, which "sent me flying across the room" and

resulted in hitting his head against the wall. Peter was reporting the above with a sense of excitement and occasional laughter, inconsistent with the traumatic circumstances he was describing. Peter added "I still have the picture in my head. Peter reported that the man who assaulted his mother "called the house once and I picked up the phone and I told him that if he ever calls my house again, I will hunt him down and I will kill him!" Next, Peter examined the list of negative cognitions, but was unable to identify one that would reflect the negative belief he would presently have about himself when focusing on the traumatic incident. For his positive cognition he chose "I did everything I could" and indicated believing that it was completely true (VOC=7). He followed my request to read the list of Positive Cognitions again, but was unable to select another one.

Peter reported that recalling the incident made him angry and he rated the level of disturbance as very high (SUD = 9). To the question "What feeling do you get when you bring that image up in your mind?" Peter replied "I don't! I don't bring it up! I throw it out right away!" Then he added "It's over and done with. I'm so mad at that man!" A moment later he said "If I see that man, I'm going to kill him!" When asked if he would like the image of his mom being assaulted not to bother him as much, Peter responded "It does not bother me; I just keep my mind busy." When asked again if he would like that image to bother him less, Peter said "No, I would like it not to bother me at all!"

Before starting the trauma processing, I asked Peter to imagine that he was watching his mother being assaulted by her boyfriend on the television screen with the ability to fast forward, come closer to the screen, or step away from it, and also with the ability to turn down the volume if he wished to do so. He stated that he would be watching it from a further distance. That set up was intended to give Peter a sense of control over the image while performing eye movements. Peter was also reminded that

he was able to survive those events when he was a child, therefore he will be able to manage the memories of those events as a teenager. This prompted Peter to state that as a child he could handle a lot of things. When asked again to imagine the assault on his mother as watching it on a television screen "I dream about it every night and that's my television screen." Peter reported that he was able to imagine the scene of his mother's boyfriend pulling his mother's hair and swearing at her, and think the words "I should have done something" while performing approximately 15 eye movements. After the set Peter reported remembering that he covered his ears not to hear the screams. He was asked to "Go with that" and after approximately 20 eye movements Peter reported that he was concentrating on the image of his mother being hit by her boyfriend. Peter also reported thinking "I should do something," so during the assault he tried to hit his mother's boyfriend. Peter's voice was very quiet even though he was reporting feeling mad and hitting his mother's boyfriend. After another set of eye movements of approximately 20 sweeps, Peter said with a faint laughter "Now I am back to the couch because I can't do anything and I'm crying." After the next set of approximately 30 sweeps Peter said "I'm still on the couch and I'm crying out loud." After the next set of eye movements of approximately 30 sweeps, Peter reported "I am watching television to blank it out." Following the next set of approximately 40 eye movements Peter reported that he did not get anything.

At reassessment, which consisted of Peter concentrating on the image of his mother being assaulted by her boyfriend, Peter stated "I wish I had a gun." When I reflected back to Peter with the statement "You wish you had done something?" Peter replied "I wish I had an axe or something and hurt him!" After a set of eye movements of approximately 35 sweeps, Peter reported that he was not getting anything. When

asked to concentrate on the scene representing the assault, Peter reported that he took this scene off his eyes screen and put it on the ice files. Peter was asked to "Concentrate on that" and perform another set of eye movements, and after approximately 15 sweeps he reported that his mind was blank and the image was "on ice files and was frozen there for a long time." To a question "Are you still worried that if you remember it, it will be tough on you?" Peter replied "Kind of, but I am not that scared." Peter was asked to bring the memory from the ice file, get it unfrozen, and check how it makes him feel. Peter performed the exercise and said "I wanted to give him a thousand shots!" To my remark that he still sounded pretty angry Peter replied "I am always going to be angry with that man!" He stated that the anger was "in my heart and in my head because my heart and my head control my body." I suggested to Peter that he "Go with that" and after approximately 30 sweeps of eye movements he reported "I wish he was never there. I wish there was never such a man." At this time, Peter was asked to bring the image and rate the level of disturbance troubling him, but he replied that the image was gone and "back on the ice files." Peter was asked to concentrate on what he was doing when he was putting bad memories on the ice files and performed eye movements. After approximately 12 sweeps, Peter reported that he imagined the image of the memory of his mother being assaulted by her boyfriend lying on his hands then it was ripped out of his hands, and "It disappeared so fast." I asked him to focus on the image disappearing so fast and to perform eye movements, but he interrupted after approximately 5 sweeps and said with a smile, "It went super fast." Peter explained the meaning of "ice files" this way: "It's like sleep; that's why I call it ice files because it's like sleeping all the time and wouldn't want to be awakened." The session was interrupted at that point

because Peter wanted to attend a school event. I asked him to perform the exercise of putting his disturbing memories either in a safe or on the ice files, but he refused.

When the session was resumed later in the afternoon, I started with asking Peter to bring back in his mind the image of his mother being assaulted and threatened. He reported feeling mad at his mother's boyfriend and rated his SUDS as four. After the first set of approximately 30 sweeps of eye movements, Peter stated "I want to hunt him down and kill him!" Following another set of approximately 30 sweeps, Peter stated I cannot kill him, he is my sister's father." I said "Go with that" and after a set of approximately 20 sweeps Peter said "He doesn't bother us now." After I said "Go with that" and a set of approximately 40 eye movements Peter reported not getting anything. After concentrating on the image of the incident, Peter reported not getting any emotions or disturbance and also said "My mom is safe now and she goes to school." I asked him to "Go with that" and after a set of approximately 30 eye movements Peter said that he was not getting anything. I asked him to bring the image of the incident and the thought "I did everything I could" and perform a set of approximately 20 eye movements, after which Peter reported "I tried to stop him, but I was too small." After another set of approximately 30 eye movements Peter reported getting nothing. I asked him rate the validity of "I did everything I could" on VoC scale and he said seven. After two more eye sets of approximately 12 sweeps each and thinking "I did everything I could" I asked Peter to perform a body scan and he reported not detecting any tension, except for sore abs from sit-ups he did last night. The session concluded at that point.

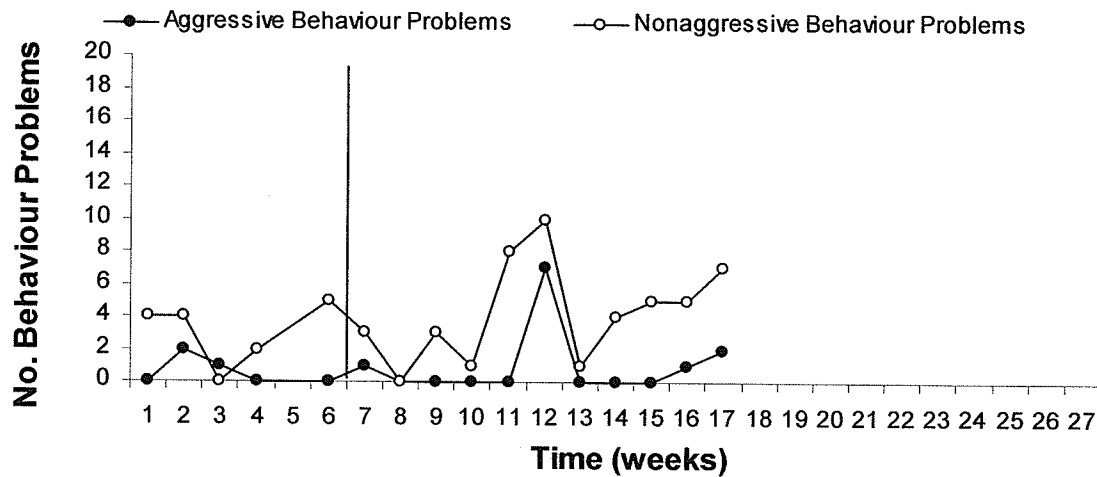
This was Peter's last session because his mother decided suddenly to relocate the family to Saskatchewan. I asked her to consider a possibility of Peter joining her in four weeks, after completing his treatment with me. My recommendation was supported by

Peter's CFS social worker, who offered to pay for Peter's travel expenses, but Peter's mother rejected that possibility for two reasons. First, she wanted the whole family to move together and, secondly, she was concerned about Peter's running away behaviour, one of the reasons behind her decision to relocate to Saskatchewan. She explained that she made her decision so sudden, because she got a good job offer there. She agreed to fill out the parent-rated questionnaires and ask Peter to complete client self-report questionnaires and send them to me, but she never did.

### Results

*Behaviour Problems on the Unit.* Peter's behaviour problems noted in the unit charts are shown in Figure 29.

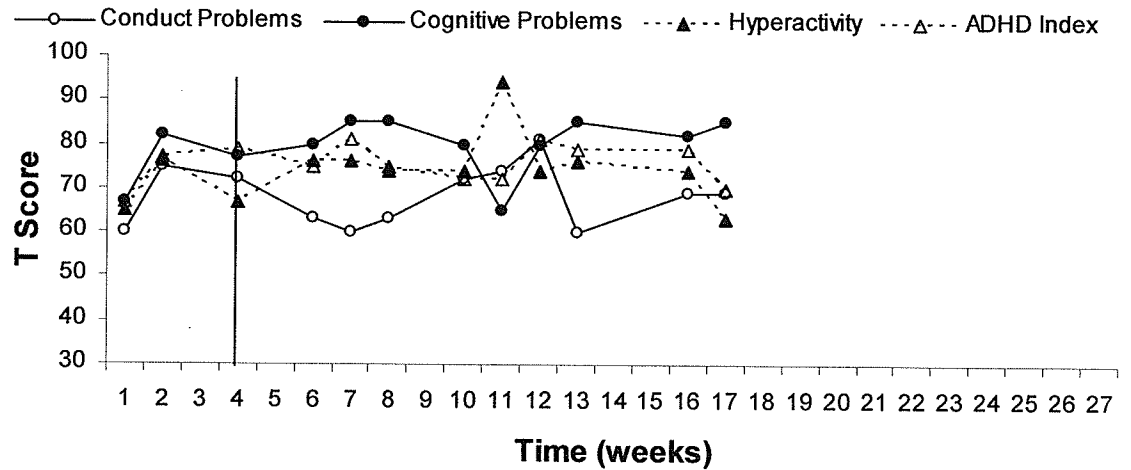
Figure 29. Peter's Behaviour Problems Reported in Unit Chart.



The visual inspection suggests variability in frequencies of nonaggressive behaviour problems recorded in the unit chart, no discernible impact on that pattern associated with the commencement of treatment, and spikes at weeks 11, 12 and 17 in nonaggressive behaviour problems that exceeded baseline. The frequency of aggressive behaviour problems also remained variable, but too low, except for week 12, to clearly indicate any improvement associated with the commencement of treatment.

*Conners-Wells' Self-Report Scale.* Peter's self-report data on the Conners-Wells' Self-Report Scale are shown in Figure 30.

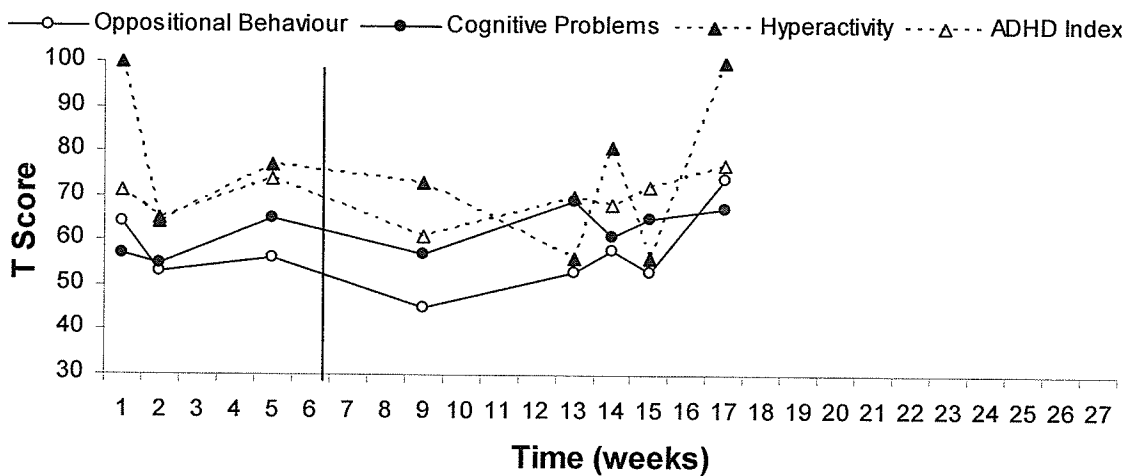
Figure 30. Conners-Wells' Adolescent Self-Report Scores for Peter.



Visual inspection does not indicate that the commencement of treatment was associated with a consistent decrease in self-reported conduct and other problems. During both the baseline and treatment phase Peter's self-reported problems remained in the probable significant to very significant problems range.

*Conners Parent Rating Scale.* Peter's parent rating scale data, which was completed by the unit staff, are shown in Figure 31. The visual inspection of staff ratings

Figure 31. Conners Parent Rating Scale Scores for Peter.

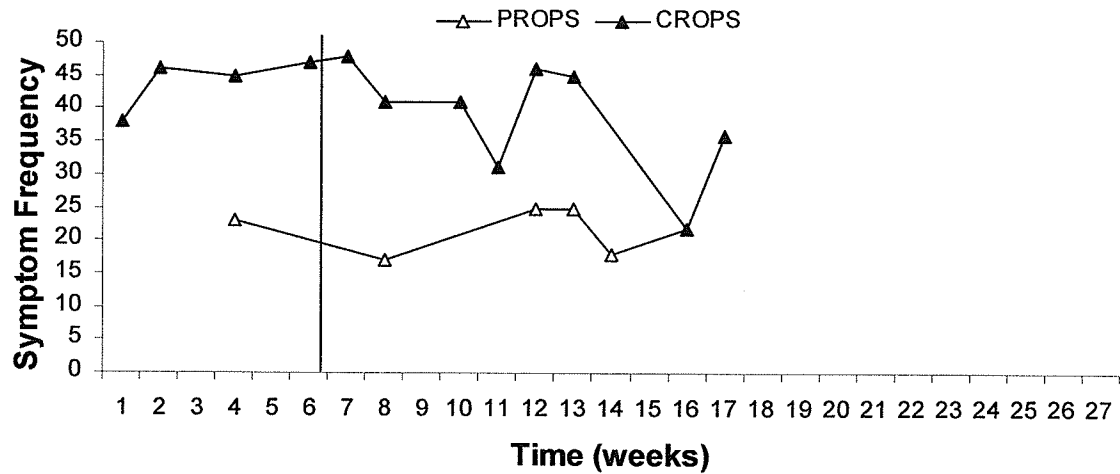




of Peter's behaviour shows some variability within both baseline and treatment phase, but no evidence of a meaningful decrease in the level of reported problems associated with the commencement of the treatment.

*Posttraumatic Symptoms.* Peter's self-reported (CROPS) and staff-rated (PROPS) posttraumatic symptoms are reported in Figure 32. The visual inspection

Figure 32. Peter's Posttraumatic Symptoms.



of both staff-rated posttraumatic symptoms (PROPS) and self-reported posttraumatic symptom (CROPS) reveals no evidence of a meaningful decrease in either variable associated with the treatment phase. Unfortunately, the unit staff returned only one PROPS form for the entire baseline phase, thus making the comparison between the baseline and the treatment phase untenable. The self-reported posttraumatic symptoms (CROPS) remains consistently high during the baseline and high during the treatment phase, except for two occasions when Peter reported significantly lower frequencies of posttraumatic symptoms.

### *Summary*

Peter's attitude towards his participation in treatment was generally positive, but his ability to stay focused on treatment tasks varied, depending on the waxing and

waning of his attention span, frustration tolerance, and level of frustration and anger, as well as his running away from the Centre. The Positive Future Movie elicited positive emotions in Peter, however, in his next session after a three-week delay, Peter had no recall of his Future Movies. The Negative Future Movie elicited negative emotions, which Peter used as a reason for his refusal to practice with eye movements the scene of being incarcerated. The Early Warning System seemed to help Peter identify steps involved in his anger escalation cycle including the link between his thoughts and angry arousal, which he remembered at the next session. Peter received a fair dose of the Choices Have Consequences treatment spread over three sessions to accommodate his focussing problems and to help him stop the pervasive cycle of running away and involvement with delinquent behaviour. Peter's continued running away from the Centre suggests that, at least in the short-term, participation in Choices Have Consequences did not seem to have a significant impact on a critical aspect of Peter's delinquent behaviour. Peter presented as cooperative with Tease Proofing, but his ability to focus varied and he frequently offered streams of aggressive verbalizations.

Peter responded well to the Past Trauma Treatment and managed to significantly reduce his emotional reaction to the memory of his mother being assaulted by her boyfriend (SUDS reduced from 9 to 0). Albeit successfully addressed, this was only one of many traumatic memories requiring therapeutic intervention, therefore the overall positive effect of his participation in the Past Trauma Treatment would likely be minimal. As noted, his trauma treatment was terminated prematurely due to his mother's sudden decision to relocate to another province. The visual inspection of self-report and staff-rated measures indicates no positive changes associated with the commencement of treatment.

Jason

*Background Information*

Jason is the youngest of four children born to his mother, with each child having been fathered by a different man. Growing up he had witnessed violence and alcohol abuse by both parents and was sexually abused by his grandfather. Jason's home environment had been extremely chaotic with little to no boundaries placed on his behaviour, and his mother had interacted with him and his older brother in an angry, violent, and impatient manner. His father was alleged to have sexually abused his stepdaughter, which resulted in the involvement of CFS and pressure on father to move out of the family home. The family fled to another province and lived there for few years. Upon family's return to Winnipeg, when Jason was nine years old, the parents separated and Jason's mother married a man who was the father of her second oldest child who abused alcohol and acted violently towards her and other family members.

Jason's teachers complained that he had been hyperactive, prone to impulsive behaviour, displayed poor concentration and academic delays, especially in reading. He also displayed multiple behaviour problems including threatening teachers and other students with physical violence. At the age of nine, Jason, along with two peers, was involved in a sexual assault on a much younger boy resulting in a two-year-long foster care placement and individual psychotherapy of the same duration. While in foster care, Jason was diagnosed with ADHD and was treated with Ritalin, which was discontinued by his mother when he returned into her care. Upon his return home at the age of twelve, he continued to display serious behaviour problems including angry outbursts and aggressive acting out including punching holes in the walls, hitting his siblings and mother, and threatening his mother and stepfather. In response to his threats towards

teachers and other students, the school suspended him for short periods of time. Jason has acquired several legal charges including shoplifting from a grocery store, stealing CDs from a community club, and urinating in an elevator. The city police came to the family home twice to talk to Jason about threatening another youth with a knife.

Jason was admitted to Knowles Centre in May 2002 at the age of 12. Right from his admission to the Centre he has displayed a wide range of behaviour problems both at school and in the unit including lying, refusing to follow directions or requests, swearing, verbally threatening peers and adults, and hitting walls and doors. At school, Jason responded with anger and verbal aggression to teachers' attempts to set limits on his behaviour or redirect him to his work. Both teachers and the unit staff reported that Jason appeared unwilling to take responsibility for his behaviour problems and, when confronted about his negative behaviour, he either became defensive and verbally aggressive, or blamed others. When his requests were denied, Jason would become angry, insulting, or verbally threatening, especially towards women. With peers, Jason presented as very competitive, taunting, and threatening them verbally and physically.

#### *Treatment Participation*

Jason was a five-foot-five-inches tall Métis boy of average built, with short light brown hair, and piercing eyes. He smiled and laughed frequently, but in his interactions with staff, teachers, and peers he was quick to anger and aggressive behaviour. Jason consented to his participation in this treatment research project including audio- or videotaping of the sessions and started his baseline data collection four months after his admission to Knowles Centre. Jason's ability to stay focused waxed and waned and occasionally Jason acted silly, for example making noises and speaking in different voices. Jason's problems with sitting still or being quiet posed some challenge in

therapy, as he required frequent reminders to stay focussed, but at school and in the unit they would often result in confrontations as Jason tended to either ignore or react angrily to limits set by teachers and staff. Jason's aggressive behaviour was never a problem in therapy, because the usual triggers, such as rigid limits, expectations, and consequences for his misbehaviour were not part of Jason's experience with me.

*Motivation Enhancement: Future Movies*

The Motivation Enhancement part of the treatment required two sessions (weeks 10 and 11 of his participation in this research project) to complete because Jason frequently interrupted the flow of treatment with irrelevant or silly comments. After I introduced the idea of Future Movies to Jason and asked him what he thought happened in the movie, he replied "The boy got juiced." Jason interjected responses that he considered funny on a regular basis, but also responded well to my requests that he remain focused. Jason regularly used street language and at times I repeated his statements verbatim, but most of the time I rephrased them, for example his statement "I would have to put up with Katherine's (a teacher) crap" I reworded as "You would have to cooperate with your teacher." Jason reported feeling comfortable with the eye movements and did not seem to have problems with tracking my fingers with his eyes, except for two occasions during his Future Movies: the first time at the beginning of the first set of his Positive Future Movie and the second time at the beginning of the first set of his Negative Future Movie.

*Positive Future Movie.* For the Positive Future Movie, Jason visualized that in ten years he would be 23 years old, living in a large house in an affluent part of Winnipeg with his girlfriend and a child, and driving a Lamborghini Diablo, an extremely expensive car. When asked if this was realistic Jason responded "No," that he

was just kidding, and then changed the make of the car to a Monte Carlo. For the final image of his future movie, when the credits roll, Jason chose cruising in his car with his older brother and listening to music. Jason needed several minutes to choose “I can do it” as his positive cognition to accompany his image of cruising with his brother and, in the process, he changed the car from a Monte Carlo to a Cadillac Escalade. The image was rehearsed twice with sets of approximately 15 eye movements each and Jason reported experiencing a “happy tingly” feeling. The image of Jason standing in front of his large house with his girlfriend was also practiced with two sets of approximately 12 eye movements.

At the start of session two, Jason recalled two parts from his Positive Future Movie, cruising with his brother and having a girlfriend and a large house. In the process of reviewing the latter image, Jason changed his future living place from the affluent part of Winnipeg to a small city near Winnipeg, where he lived for two years in a foster home. Jason imagined a large house on an acreage and practiced with two sets of approximately 12 eye movements each imagining himself cutting grass with a tractor type of lawn mower and thinking “I’ve made it, woo!” After the first set, Jason shouted to the microphone “Woo, I’ve did it!” but quickly became serious and practiced the above scene with another set of approximately 10 eye movements. The next scene practiced with a set of approximately 12 eye movements showed Jason working in a concrete business, standing in front of a finished driveway feeling tired and satisfied and thinking “Good job Jason!” With help, he was able to identify what he needed to do to help himself obtain a better future including better handling of limits imposed by adults, and attending school regularly. Jason performed approximately 10 eye movements while imagining cooperating with his teacher (“Taking Katherine’s [teacher] crap”) and sitting

down at his desk when she says “Jason sit down, Jason sit down.” Jason also practiced with a set of approximately 12 eye movements a scene representing his cooperation with the unit supervisor.

*Negative Future Movie.* For his Negative Future Movie, Jason imaged being in jail, feeling mad, and thinking “It’s not worth it” while practicing two sets of approximately 12 eye movements.

As his good qualities and resources, Jason identified that he was smart, hard working, had some summer work experience, he and his mother cared about each other, and his mother was supportive of him. Jason also agreed that he was very determined and able to get what he wanted most of the time. Jason identified his tendency to argue, get angry and threaten people, and his poor reading skills as his negative qualities that could interfere with him attaining his positive future goals.

#### *Adaptive Skills Training*

*Early Warning System.* During that phase of treatment (session three), Jason appeared to be easily distracted, introduced topics unrelated to those discussed, and spoke threatening remarks towards the unit supervisor into the microphone. He appeared most unfocused at the beginning and at the end of the session and more serious and involved in the exercises during the middle part of the session. Jason chose to work on his angry responses to his homeroom teacher that frequently led to his removal from the school and loss of privileges in the unit. When discussing his latest confrontation with his teacher, Jason kept interjecting comments about feeling angry with one of his peers who challenged him to fight. Review of that situation identified the following steps in Jason’s anger escalation: the peer made disparaging remarks about Jason; Jason felt tense inside; Jason made retaliatory remarks towards his peer (“You’re gonna get it”);

Jason felt physiologically aroused (“feeling hot”) and verbally threatened the peer. I also suggested that Jason review in detail his angry confrontations with his teacher, which frequently resulted in him being expelled from classes and occasionally suspended from school. The steps in Jason’s anger escalation pattern with the teacher were identified during session three and reviewed and practiced with eye movements in session four. The information in brackets indicates when the eye movements were performed and how many sweeps were included in a set. Jason reported that he would become intensely angry with his teacher whenever she pointed at the door and said “Away you go Jason” when he misbehaved or did not follow her directions (12 sweeps). He would think “It’s not fair” (8 sweeps), start feeling heated inside, become shaky (12 sweeps), and would start arguing (12 sweeps). Arguing would increase Jason’s anger and he would think “I can’t take this anymore,” then he would swear and storm out of the room (10 sweeps). When away from the situation, Jason would become less angry and start thinking, “I messed things up for myself” (10 sweeps). He would briefly feel angry with himself, but the thought “I don’t care” occurring next would be followed by an increase of his aggressive acting out (12 sweeps). After each step was practiced with eye movements, I asked Jason to imaginally review all the steps in the sequence, like a slow motion movie, and perform three sets eye movements of approximately 24 sweeps each.

*Choices Have Consequences.* This section of treatment occurred in session four (week 13 of his research participation) after the review of the Early Warning System from the previous session, which Jason recalled well. I asked Jason to view his aggressive behavior in response to teacher asking him to leave the classroom as an example of a bad choice. When thinking about the loss of privileges as typical consequences for his aggressive behavior towards the teacher, Jason readily endorsed



the “It’s not worth it” statement. Jason imagined teacher asking him to leave the classroom, Jason refusing and arguing with the teacher, then losing his privileges, and thinking “It’s not worth it” when performing two sets of approximately 12 eye movements. For a positive choice practice, Jason imaged his teacher asking him to leave the classroom, but he chose to cooperate. Jason imagined that the positive consequence of choosing to cooperate with the teacher would be a family visit with his mother and he said to himself “Oh, I’ve made it!” He reported that, during the previous week, he left the classroom when asked by the teacher, did not incur any negative consequences, and was able to visit his family. When asked to select a thought to go with the above image, Jason suggested “smoking” and when he was reminded that previously he selected “I’ve made it,” he replied “I’ve made it, now I can have a cigarette.” He immediately offered “I’ve made it!” but quickly added “enjoying the taste of Du Maurier [a particular brand of cigarettes].” Another example of a negative choice that Jason chose to practice with eye movements was his swearing at the unit supervisor. Jason visualized the situation including the consequences of being grounded to the unit and the words “It’s not worth it” and performed eye movements.

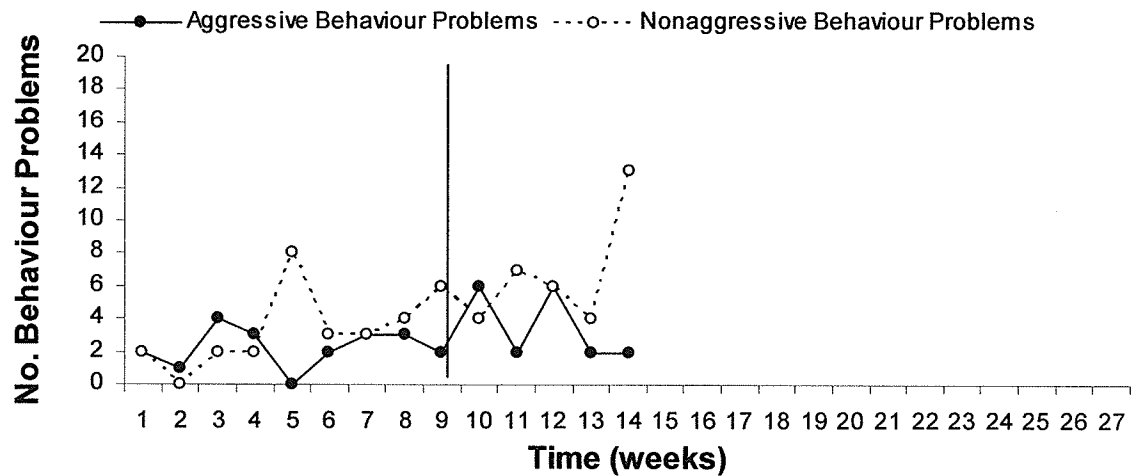
Jason’s argumentative and aggressive behavior with his parents and his consequence of being in residential treatment were reviewed as other examples of his bad choices while doing eye movements. During this exercise, Jason maintained a serious composure without the silly behavior that he had displayed at other times. Staying at school all day, as an example of a good choice, was practiced with eye movements. Attempts to generate more examples of positive choices proved unsuccessful, as Jason reverted to his silly behavior, making Donald Duck sounds to the microphone.

This was the last session with Jason because the next week he missed his session due to being on the run, which culminated in his refusal to return to the unit. His mother told me in a telephone conversation that Jason showed her bruises on his neck and told her that the unit staff had choked him. I advised her to have him examined by a physician and to report his allegations to Child and Family Services, which she did. Jason's physician stated that he could not determine the origin of the bruises and the CFS investigation cleared the staff, but Jason's mother decided to cancel the Voluntary Placement Agreement with CFS and to keep Jason at home.

*Results*

*Behaviour Problems on the Unit.* Jason's behaviour problems noted in the unit charts are shown in Figure 33. The vertical line after week nine marks the beginning of the treatment phase. Visual inspection suggests variability in frequencies of aggressive behaviour problems and nonaggressive behaviour problems recorded in the unit chart,

Figure 33. Jason's Behaviour Problems Reported in Unit Chart.

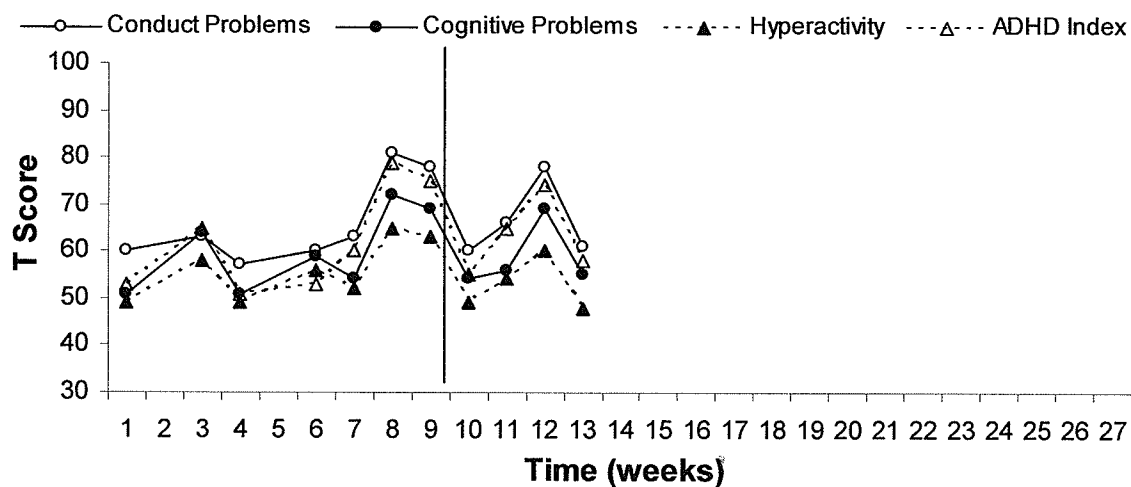


and no discernible impact on that pattern associated with the commencement of treatment. During week four of the baseline, Jason moved from a locked to an open unit and started a new school year, however, those events did not seem to have a noticeable

impact on Jason's behaviour. Jason's running away from the Centre, his abuse allegations against staff, and refusal to return to the Centre were preceded by a sudden increase in the number of nonaggressive behaviour problems in the unit, specifically refusing to follow directions, five brief episodes of leaving the unit without permission, and swearing.

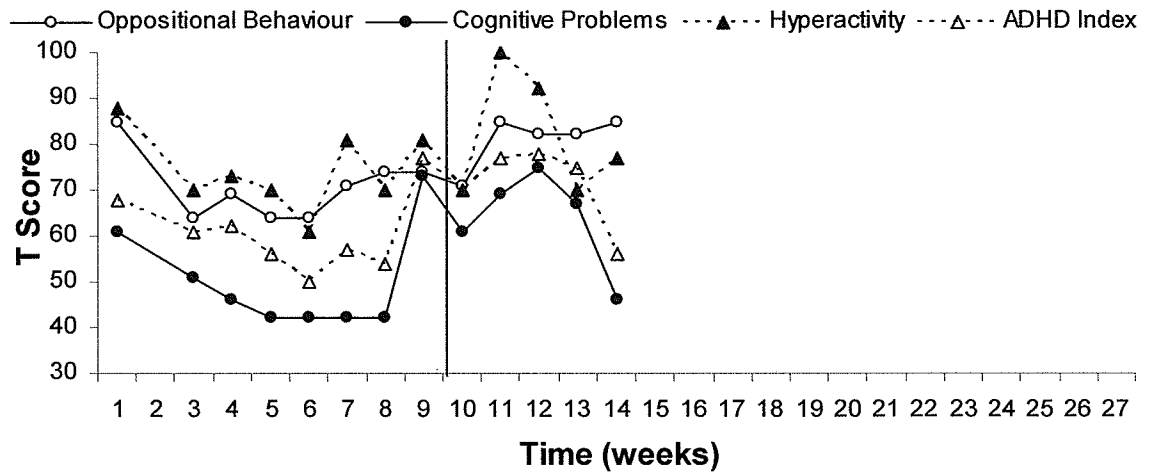
*Conners-Wells' Self-Report Scale.* Jason's self-report data on the Conners-Wells' Self-Report Scale are shown in Figure 34. There appeared to be two periods (8-9 and 12) of somewhat elevated self-perceptions of difficulties. Visual inspection does not indicate that the commencement of treatment was associated with a consistent decrease in self-reported behaviour problems.

Figure 34. Conners-Wells' Self-Report Scale Scores for Jason.



*Conners Parent Rating Scale.* Jason's parent rating scale data, which was completed by the unit staff, are shown in Figure 35. Visual inspection does not indicate that the commencement of treatment was associated with a consistent decrease in staff ratings on this scale.

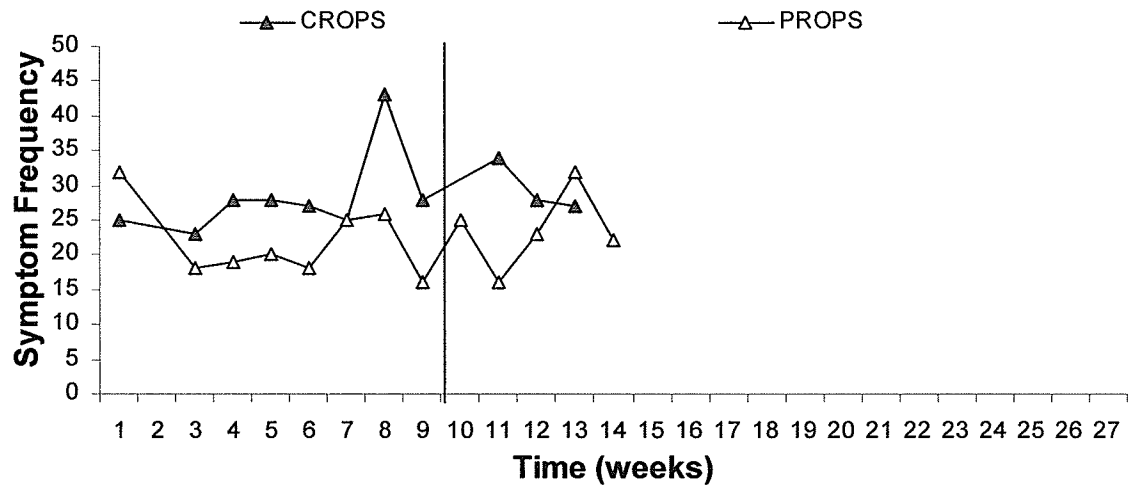
Figure 35. Conners Parent Rating Scale Scores for Jason.



*Posttraumatic Symptoms.* Jason's self-reported (CROPS) and staff-rated

(PROPS) posttraumatic symptoms are reported in Figure 36. Visual inspection does not indicate that the commencement of treatment was associated with a consistent decrease in self-reported (CROPS) and staff rated (PROPS) posttraumatic symptoms, however,

Figure 36. Jason's Posttraumatic Symptoms.



due to the premature termination of treatment, Jason did not participate in the post trauma part of the treatment protocol. It is noteworthy that relative to other research participants, Jason has consistently reported high numbers of posttraumatic symptoms.

*Summary*

Jason presented as cooperative with the treatment, but his problems with sustaining attention and impulsivity resulted in frequent loss of focus and intrusions of irrelevant subjects. The Positive Future Movie seemed to evoke positive feelings and Jason seemed to remember main themes of his Future Movies during the following session. Jason completed the Early Warning System part of treatment in one session, despite significant problems with staying focused and silliness, and successfully mapped his anger escalation cycle, which he remembered well in the next session. During Choices Have Consequences session, Jason appeared serious with some of the tasks and acted silly with others. Jason was discharged prematurely from treatment following an episode of running away and claiming that he was choked by the unit staff. The visual inspection of self-report and staff-rated measures indicates no positive changes associated with the commencement of treatment.

*Michael**Background Information*

Michael's mother has had a history of involvement with the Child and Family Services (CFS) as a teenager, including out-of-home placements, and she gave birth to Michael at 16 years of age. Michael was initially cared for by his mother with the support of her parents and CFS, but when he was less than one year old, his mother met her future husband and moved to another province, leaving Michael with his grandparents. Michael was reunited with his mother and her new family a few years later. Michael's mother had five children with her new husband and four of them ended in permanent care with CFS. Michael has been in and out of care with CFS returning to either his mother's or maternal grandmother's care whenever his foster or group care

placements broke down due to his behaviour problems and lack of cooperation from his mother. Michael has displayed multiple behaviour problems, including refusing to attend school, non-compliance, and threatening other students and teachers. The CFS file indicates that already in grade three, Michael presented as non-compliant with teachers and classroom rules and refusing to complete his assignments, unhappy, emotionally withdrawn, angry, and aggressive with teachers and other students. On one occasion, Michael threatened to burn the school library. He also presented as noncompliant and aggressive with foster and group home parents, threatened them with violence, and on two occasions assaulted staff. He frequently ran away from his placements and engaged in delinquent behaviour including break and enter, destruction of property, theft, auto theft and acquired several criminal charges. Michael reported that he has been smoking cigarettes since age eleven and has used alcohol and street drugs including marijuana and hash oil. A psychological assessment by a Winnipeg psychologist indicated that Michael was of average to high-average intelligence and had no detectable deficits in attention, concentration and working memory. The psychological assessment also noted a history of persistent physical and emotional abuse, family violence, and disorganization resulting in Michael's negative sense-of-self, hypervigilance, insecurity in forming attachments with others, and inability to tolerate dependency on others.

Since his admission to Knowles Centre, Michael presented as a very guarded and withdrawn youngster, with a strong propensity towards oppositional and defiant behaviour, and a marginal cooperation with unit rules and staff. The behaviour problems Michael displayed at the Centre included frequent power struggles with staff, refusing to follow directions, slamming doors, kicking and punching holes in the walls, destroying furniture, frequent running away, drug use, and threatening staff and other residents.

When on the run, Michael engaged in delinquent behaviour acquiring new criminal charges including attempted auto theft, attempted break and enter, and several breach of probation charges. The unit staff also reported that Michael frequently engaged in nuisance and immature behaviours such as undoing screws from cupboards, handles, and light fixtures, banging his spoon on the table during breakfast, making noises, and crying when consequenced for misbehaviour.

### *Treatment Participation*

#### *Motivation Enhancement: Future Movies*

Michael presented as a five-foot-eleven-inches tall, somewhat overweight boy with a sandy blond shoulder length hair. Michael had soft facial features, however, his face looked tense and I never saw him smile. He had a rather high pitched voice and often complained about the staff, teachers, or his social worker. During the treatment he has received prior to his participation in this research project, Michael presented as very guarded and unwilling to talk about his problems or his family. Michael consented to his participation in this treatment research project including audio- or videotaping of the sessions and began his baseline ten months after his admission to Knowles Centre.

*Positive Future Movie.* Michael proposed that in ten years, at the age of almost twenty six, he will be sharing a house in the West End of Winnipeg with a friend, working nights at the post office because they offer “good money,” sleeping in the day, and visiting with friends in the evening. One of the images that Michael proposed for his Positive Future Movie involved him sitting at the table in his house “having fun” coupled with the words “I did it!” and practiced with eye movements twice. After each set of approximately 12 sweeps, Michael reported experiencing “warm, fuzzy, happy” feelings. Michael stated that one of his goals is to finish high school and he agreed to

practice with eye movements the image of his high school graduation coupled with the words "I've made it." He reported that thinking about graduating from high school made him feel happy and proud. When asked to imagine a car that he would be driving at 26, Michael replied an Acura NSX as an old beater and Cadillac Escalade as his main vehicle. The image of Michael driving the Acura NSX was practiced with eye movements and the words "I've made it." Michael stated that to realize his future aspirations, he would need to abide by the law, stay all day at school, play pool [billiards], listen to music, obtain more privileges at his group home, and explain to his friend his desire to change so his friend could support him.

*Negative Future Movie.* For the Negative Future Movie, Michael practiced with eye movements an image of him being locked in a jail cell, feeling bored, and thinking "It's not worth it." Michael reported that he had been incarcerated at MYC on several occasions and he felt very bored there. Michael reported thinking that his tendency to "take off" whenever he wants to, skipping classes, arguing with staff and teachers, "doing criminal stuff," drinking, and drug use could interfere with his wish to create a good future for himself. He reported thinking that he was 80% motivated to strive for a good future. At the end of the session, Michael thanked me for what we had done and said "Now I know what I need to do." Michael declined to elaborate on what he meant by that and left my office to go back to his group home. Michael missed the next three sessions due to various behaviour problems including brief periods of running away, before he ran away from the Centre and refused to return. In a telephone conversation with unit staff, Michael stated that he planned to stay away from the Centre for a whole month because that would result in an automatic discharge from care, which would

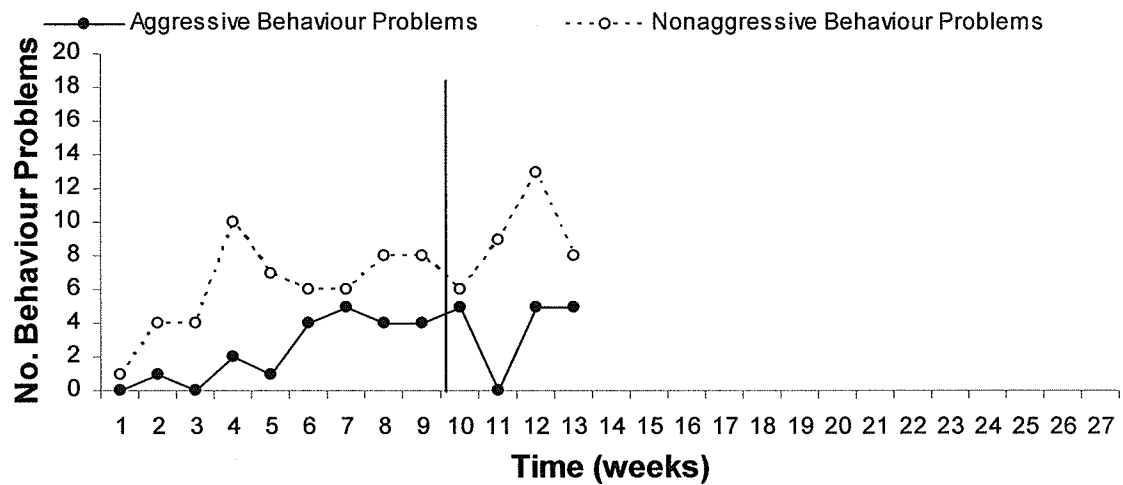


allow him to return to his grandmother's care. As Michael predicted, he was discharged after 30 day absence from the centre.

### Results

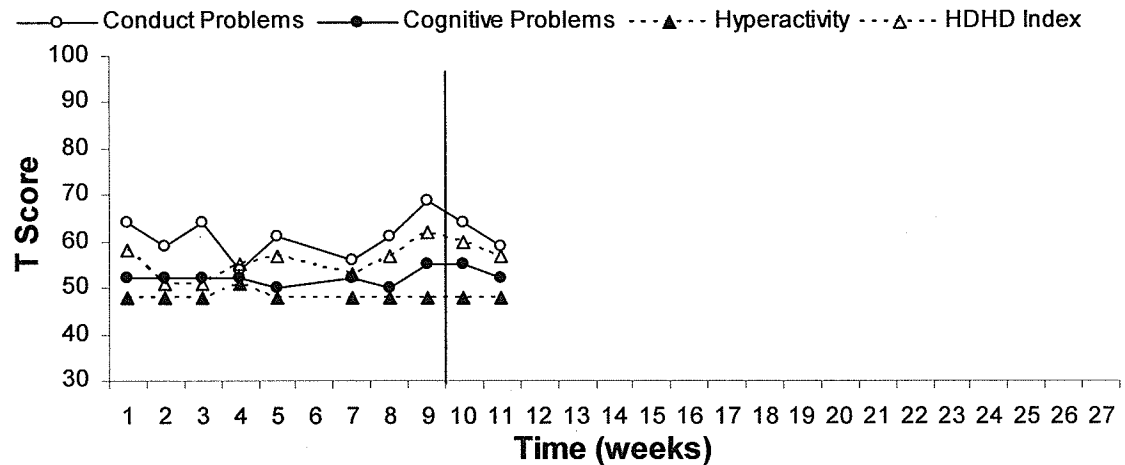
*Behaviour Problems on the Unit.* Michael's behaviour problems noted in the unit charts are shown in Figure 37. The vertical line after week nine marks the beginning of the treatment phase. Following his first treatment session that covered Future Movies, Michael missed the following three sessions then ran away and refused to return to the centre. Based on the above, there could be no expectation of any treatment effect. The visual inspection shows a variable and escalating pattern of both aggressive and nonaggressive behaviour problems on the unit.

Figure 37. Michael's Behaviour Problems Reported in Unit Chart.



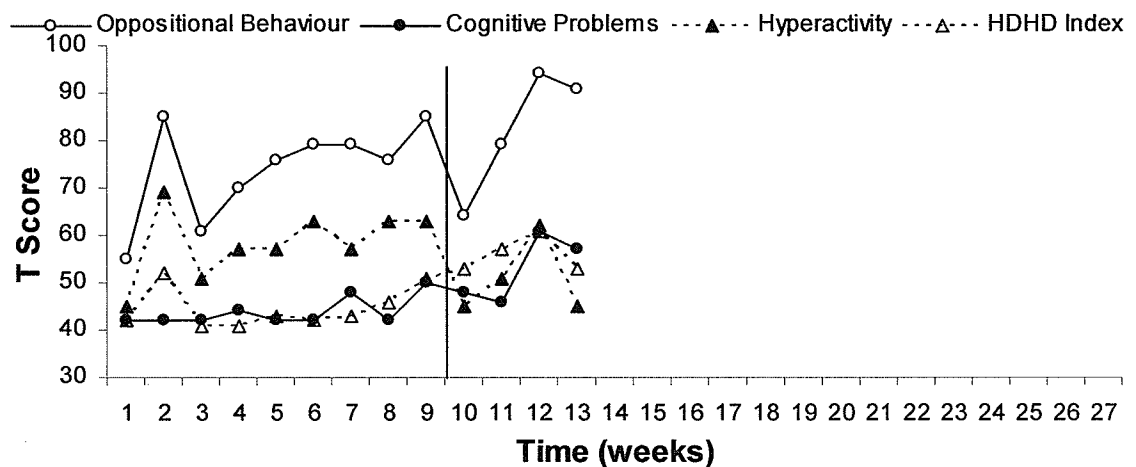
*Connors-Wells' Self-Report Scale.* Michael's self-report data on the Connors-Wells' Self-Report Scale are shown in Figure 38. The visual inspection indicates that Michael reported a consistent subclinical level of conduct problems and other problems and a mildly elevated level of ADHD symptoms.

Figure 38. Conners-Wells' Adolescent Self-Report Scale Scores for Michael.



*Conners Parent Rating Scale.* Michael's parent rating scale data, which was completed by the unit staff, are shown in Figure 39.

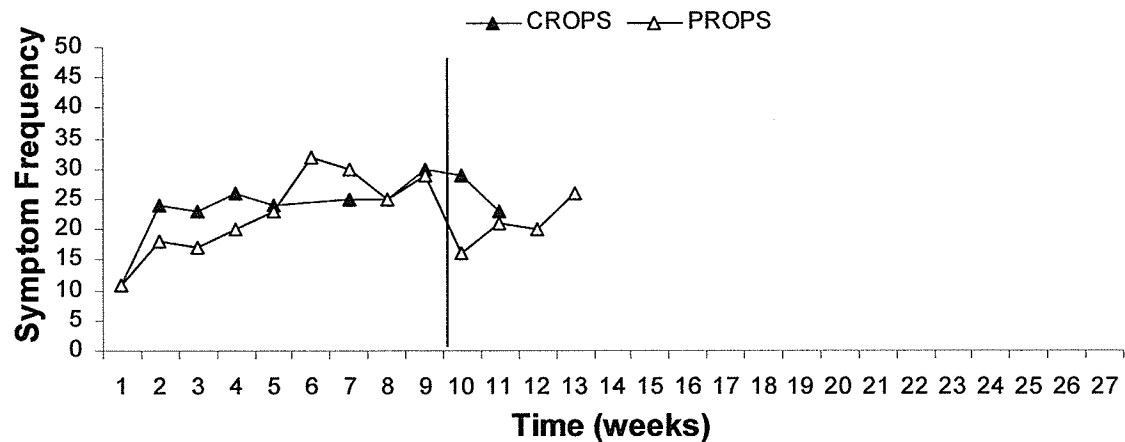
Figure 39. Conners Parent Rating Scale Scores for Michael.



The visual inspection indicates a high and variable level of oppositional behaviour problems rated by staff on the Conners Parent Report Scale. A significant drop of one and a half standard deviations in the week of his Motivation Enhancement session followed by a sharp increase leading to his running away.

*Posttraumatic Symptoms.* Michael's self-reported (CROPS) and staff-rated (PROPS) posttraumatic symptoms are reported in Figure 40.

Figure 40. Michael's Posttraumatic Symptoms.



The visual inspection high levels of self-reported posttraumatic symptoms (CROPS) and staff-rated posttraumatic symptoms (PROPS) throughout the entire nine-week baseline.

#### *Summary*

Following nine weeks of compliance with baseline data collection and the Positive Future Movie session, where Michael considered and practiced with eye movements a number of positive future possibilities and experiencing positive emotions, he ran away from the Centre and was discharged after a 30-day absence. The timing of his decision to run away remains puzzling, as the comments he made during his Future Movies session indicated an interest in his positive future and a contemplation of increased cooperation with teachers and staff. The visual inspection of self-report and staff-rated measures indicates no positive changes associated with the commencement of treatment.

#### DISCUSSION

The main goal of the current study was to test the effectiveness of the treatment package developed by Greenwald (1999) for conduct disordered adolescents. Greenwald (1999) posited that the lack of recognition of the role trauma plays in the

development of conduct problems is one of the major factors reducing the effectiveness of extant treatment programs. He therefore proposed a treatment package addressing a number of key skill deficits prevalent in youth with conduct problems including anger management, decision making skills, and overreacting to provocations and, critically, past trauma issues. Greenwald (2002a) tested his treatment model (MASTR) with five grade 7-12 students in a public school system referred for school-related problems and he reported that his treatment resulted in reductions in both posttraumatic stress symptoms and problem behaviours. Greenwald (2002a) also expressed hope that further studies would contribute to both the development of theory and increasing effectiveness of treatment. This study was inspired by Greenwald's (2002a) results and attempted to examine the effectiveness of his model with a more seriously disturbed and residentially placed adolescents with conduct disorder.

Based on the same rationale of trauma being a contributing factor to the development of conduct disorder, Soberman (1998) conducted a controlled study involving 29 boys receiving either residential or day treatment at a residential care facility to examine if EMDR treatment could significantly reduce emotional and behavioural symptoms in traumatized preadolescents and adolescents diagnosed with one of the disruptive behaviour disorders including conduct disorder. Soberman reported that a treatment group of 14 youngsters receiving three EMDR sessions did not differ significantly from the control group. With this sample of adolescents that is likely more comparable to my research participants than those in Greenwald's (2002a) study, Soberman concluded that the lack of significant change after the treatment could possibly be attributed to three main factors: a) the treatment was too brief; b) the

treatment participants presented mainly with more chronic type II trauma<sup>11</sup>; and c) instruments used in the study (Impact of Events Scale, PROPS, and CROPS) were not specific enough to detect successful resolution of some of the traumatic memories.

The present study involved a more extensive treatment package than the Soberman (1998) study and involved a larger group of adolescents than Greenwald's (2002a) study. The research participants in this study also appear significantly more disturbed than those in Greenwald's or Soberman's samples. The next sections of this chapter review and discuss the results of this study in the context of other research.

As noted in the Introduction, adolescents with conduct disorder are very difficult to treat and despite an extensive research literature no adequate treatments have yet been identified (Frick, 2000). A number of well researched programs proven to be effective with children and preadolescents with CD have been significantly less effective with adolescents, particularly those with large number of symptoms, early childhood onset of CD, and comorbid problems of disinhibition associated with ADHD (Frick P. J. & Loney, B. R., 1999). All 10 boys in this study presented with an early childhood onset conduct disorder, nine had significant academic problems, five had comorbid ADHD, and some had other psychiatric problems. In all ten cases other interventions have been tried and failed before they were placed in residential facility. For a half of them, the residential placement at Knowles Centre was also unsuccessful (two were discharged on the run and three were incarcerated), which is, unfortunately, consistent with the literature on residential care (Chamberlain, 1999).

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<sup>11</sup>Terr (1999) used type II trauma term to account for the effects of long-standing and anticipated ordeals, such as abuse, which tend to result in long lasting effects including: (1) recurring memories and visualizations of traumatic event(s); (2) repetitious behaviours and bodily responses; (3) trauma specific fears; and (4) pessimistic view of people, life, and the future.

## Treatment Delivery Issues

Since the main goal of this research was to investigate the effectiveness of the MASTR treatment package with a sample of adolescent boys with conduct disorder placed in a residential treatment facility, nobody was screened out, which almost certainly made demonstrating the effectiveness of treatment more challenging than it would have been with a less severely impaired sample. Including everybody meeting DSM-IV diagnostic criteria for conduct disorder seemed sensible as representative of the sorts of adolescent boys so diagnosed who wind up in a residential treatment facility like the Knowles Centre. There was no special effort made to find participants with childhood onset of conduct disorder, but all 10 fell into that category which, in my opinion, is reflective of the level of disturbance present in residentially placed youth. Perhaps it was a questionable decision for several reasons to include in this study the youngster with Tourette Syndrome (Greg). First, youth with Tourette Syndrome, in addition to delinquent behaviour and aggressive behaviour, tend to present with extensive psychopathology including impaired social functioning, thought problems, and attention problems, the severity of which seems to be positively correlated with the intensity of their tic symptoms (Yan et al., 2006). Second, the high doses of neuroleptic medications used to control his tics, with side effects of sedation and reduced motivation, energy level, and ability to concentrate, raises questions about Greg's level of cognitive and emotional functioning and ability to adequately process the information presented in the treatment package.

Obviously, the very high attrition rate of research participants was a significant problem of this study. From the pool of 10 participants who started the treatment only one (Phillip) completed the full treatment package and eight-week followup. A year

later, Phillip graduated from high school, found a part-time job and graduated from the Centre into an independent living situation. Another two (Nathan and Johnny) completed almost the entire treatment package. Nathan did not have all of his past traumas addressed due to his discharge date rigidly set to coincide with the start of a school term. Nathan completed the eight-week followup demonstrating good adjustment to his reserve and old school from which he was previously expelled. Johnny withdrew from treatment with the memory of his father's physical assault on his mother not fully processed and a few more traumas not yet addressed, started the follow up, but was incarcerated at the beginning of week four. It is possible that the lack of a complete past trauma treatment continued to contribute to his emotional instability and delinquent behaviour and subsequent re-incarceration. One other (Peter) completed some of the past trauma work, but was discharged due to his mother relocating to another province with most of his past traumas being left untreated. Numerous attempts were made to obtain followup data from Peter and his mother to assess if the partial treatment that he received had any beneficial effect, but my phone messages were not answered by Peter's mother. Johnny, who decided to stop past trauma treatment, continued his delinquent behaviour and became re-incarcerated.

The dropout rate occurring in this treatment study was 80%, as only two participants successfully completed follow up, which exceeded drop out rates reported in literature of 30-60% for children and adolescents with conduct disorder (Kazdin & Mazurick, 1994). Most of the dropouts in this study occurred in either the early or middle stages of the treatment. The factors associated with an early dropout from treatment identified by Kazdin and Mazurick--low family income, poor living accommodations, adverse family child-rearing practices, child contact with antisocial

peers, and poor adaptive functioning at school--were all present in almost all of this study's participants.

In addition to factors listed by Kazdin and Mazurick that were derived from the analysis of community-based treatments, this study was also impacted by factors associated with research participants being in a residential facility. Chamberlain (1999), after reviewing literature on residential treatments, concluded that "strategies that aggregate high-risk youth in intervention conditions should be reassessed, as in this study the group treatments produced the highest escalation in tobacco use and problem behaviors in school beginning at termination and persisting during the 1-year follow-up period" (p.503). The association with deviant peers was shown by many studies to be related to either lack of progress in treatment or deterioration in functioning (Weersing & Weisz, 2002; Weiss et al., 2005). Gifford-Smith, Dodge, Dishion, and McCord (2004) argued that positive influence of group interventions for youth with behaviour problems may be offset by deviant peer influences. In this study, problems with missed sessions and dropping out of treatment were for most participants (Nathan, Johnny, Dennis, Trevor, Peter, and Jason) related to problematic behaviours involving other residents including running away, substance use, shoplifting, stealing and driving automobiles, robberies, vandalism, and so forth. Three participants (Dennis, Greg, and Trevor) did not finish the treatment due to resuming their delinquent behaviour and being incarcerated and two (Jason and Michael) were discharged from the Centre after they ran away and refused to return. Both had significant conflicts with the unit staff and were aided by their families in their refusal to return to the Centre. One participant (Wesley) refused to engage in trauma treatment, one (Johnny) prematurely terminated his involvement in trauma treatment without an explanation (I think likely because he was overwhelmed by



negative emotions), and another (Peter) was withdrawn from the program at the start of his trauma treatment by his mother who was moving to another province.

### The Impact of Treatment

The 80% attrition rate forced a change in the methodology of this study as the available data could not adequately support the type of visual analysis required by the multiple baseline methodology (e.g., Kazdin, 1998). However, the study obtained information relevant to the three questions this study attempted to answer: (1) "Does the combination of adaptive skills training and eye movements result in decrease of behaviour problems in conduct disorder children?" (2) "Does EMDR treatment reduce posttraumatic stress symptoms in conduct-disordered children?" and (3) "Does EMDR treatment of past trauma result in reduction of conduct problems?" To account for the incomplete data and to take advantage of accumulated data, two types of analyses were carried out. One, the quantitative data collected as part of the multiple baseline design was graphed and treated to visual inspection rendering useful information about individual treatment outcomes. Two, the secondary qualitative analysis of therapy notes and audio recordings of therapy sessions (presented in the previous chapter) was performed.

The visual inspection of collected data suggests that the treatment method evaluated in this study may have been effective with some participants (Phillip pp. 54-86; Nathan pp. 102-120; Johnny, pp. 120-138). The two participants who completed follow up, Phillip and Nathan, appeared to show favourable changes over the courses of their treatment and to maintain their treatment gains over the period of 8 weeks. SUDS and VoC measures also indicate that EMDR treatment resulted in either complete or significant reduction in negative affect associated with targeted traumatic memories

(Phillip, Nathan, Johnny, Peter), thus suggesting some effectiveness of this treatment package with this population.

Partially positive results of this study deserve serious consideration for several reasons. First, the participants of this study presented with characteristics frequently associated with poor treatment outcomes: large number of symptoms, early childhood onset of CD, and comorbid problems of disinhibition associated with ADHD (Frick & Loney, 1999). Conduct disordered adolescents with a larger number of symptoms did not benefit much from well researched and proven family based programs such as Parent Management Training (Kazdin, 2001) or Multisystemic Therapy (MST) (Martens, 2004). Martens reviewed research on MST and concluded that

MST is mainly appropriate for those individuals who are antisocial and their families who are motivated for it, and who are not severely (a) emotionally, socially, or morally disturbed and/or traumatized; (b) abused, rejected, and neglected by their relatives; (c) angry, hostile, and rancorous; and (d) at risk of reoffending, and who are capable of cooperating with relatives and MST staff and understanding instructions (p. 392).

According to these criteria, participants in this study would likely not benefit from MST, as almost all of them had minimal and often conflictual involvement with their families and long histories of out of home placements. Two participants had no involvement with their biological parents, and none of the participants had both of their biological parents living together in one household. Second, almost all participants engaged in delinquent activities during their participation in this study. Given the above, the limited success obtained in this study is almost to be expected. Third, the limited positive results obtained in this study are consistent with meta-analytic studies indicating that treatments

delivered outside of university settings have not been effective with this population (Schoenwald & Henggeler, 1999; Weisz, J. R., Weiss, B., & Donenberg, G. R. 1992).

### Treatment Components

This section will review each of the components of the treatment package with regard to indications of their usefulness and potential effectiveness for treating adolescents with CD.

#### *Motivation Enhancement: Future Movies*

Two elements of this treatment component, Positive and Negative Future Movies, involve imagery of possible future events that are rehearsed with eye movements. Some of the imagery rehearsed with eye movements was prompted by my questions including where they saw themselves living, with whom, whether they saw themselves working or going to school, and if they saw themselves as graduating from high school.

#### *Positive Future Movies*

All ten participants reported being able to create mental imagery of discussed material, however, one (Trevor) reported an initial problems with visualizing at the start of his Positive Future Movie. All 10 boys saw themselves as graduating from high school, seven as working after their graduation, and two as continuing with a post-secondary education. All ten visualized themselves as living in a house: one saw himself as living alone, one with his mother, one with a girlfriend, two with their sisters, two with either girlfriend or wife and children, and three with friends. Table 1 summarizes the contents of boys' images produced during their Positive Future Movies sessions.

Table 1. Elements in Positive Future Movies.

| Name    | Relationships |     |        | Car |     | Living Arrangement |     | Where living |      | After Graduation |       |
|---------|---------------|-----|--------|-----|-----|--------------------|-----|--------------|------|------------------|-------|
|         | Girfr         | Fam | Friend | Mod | Exp | House /with        | Apt | HT           | Away | Work             | Study |
| Phillip | X             |     |        | X   |     | by self            |     |              | X    | X                | X     |
| Wesley  | X             | X   |        | X   |     | Mother             |     | X            |      | X                |       |
| Nathan  |               |     | X      | X   |     | Friend             |     |              | X    | X                |       |
| Johnny  | X             |     | X      | X   |     | Friend             |     |              | X    |                  | X     |
| Dennis  | X             | X   | X      |     | X   | Sister             |     | X            |      |                  |       |
| Greg    |               | X   |        |     | X   | Wife & 2 kids      |     |              |      | X                |       |
| Trevor  | X             |     |        | X   |     | Girfr              |     |              | X    | X                |       |
| Peter   |               |     | X      |     | X   | Sister             |     | X            |      | X                |       |
| Jason   | X             | X   |        |     | X   | Girfr & child      |     | X            |      | X                |       |
| Michael |               |     | X      |     | X   | Friend             |     | X            |      | X                |       |

Relationships – relationships they spontaneously included in their Positive Future Movie  
 Girfr – girlfriend; Fam – family; Mod – modest/realistic car in the image;  
 Exp – very expensive car in the image (e.g. Diablo, Escalade); Apt – Apartment  
 HT – home town; Away – meaning away from the place where they grew up

The response of the treatment participants to Positive Future Movies was uniformly positive, including those who required a significant input from me to develop images of their positive future. Ten reported happy feelings, six reported feeling proud, four reported feelings of excitement, and two reported less intense positive feelings, such as feeling nice and good. Three of the participants smiled a lot during Positive Future Movies exercises and two showed their excitement through a change of the vocal quality of their voices. Table 2 presents the affective content of the Positive Future Movies reported by the participants. The generation of positive emotion in the first treatment session is likely to have at least an initial positive influence on participants' motivation to participate in treatment. Stigler and Pokorny (2001) posited that "Emotion activation is one of the parameters that contribute to the success of psychotherapy" (p. 426). Mahoney (1991) posited that "personal meanings rarely change without emotional involvement... psychological change involves changes in the tacit personal 'constructs' that constitute meanings" (p. 178). Lee and Sternthal (1999), based on their study of the influence of positive mood on brand name retrieval, proposed that "relative to a neutral

mood, a positive mood results in a more strategic allocation of cognitive resources to stimulus processing as well as a more strategic deployment of these resources in learning stimulus information” (p. 125-6). Four participants recalled most of the details of their Positive Future Movies at their next session and another four recalled some of the elements at their next session, which is consistent with the literature indicating that the use of imagery in therapy enhances cognitive processing and recall of the information. As for the other two research participants, Peter claimed to have no recall of his Positive Future Movie explaining that he was too busy thinking about his AWOL and no information was available from Michael who dropped out after the first session (ran away and was discharged after 30 days of absence).

Table 2. Emotions in Positive Future Movies.

| Name    | Affect |     |     |      |    |      | Feelings location |       |      | Able to visualize |              |
|---------|--------|-----|-----|------|----|------|-------------------|-------|------|-------------------|--------------|
|         | Hap    | Exc | Prd | Nice | Sm | VC   | WB                | Chest | Head | Yes               | No           |
| Phillip | X      | X   | X   |      | X  |      | X                 |       |      | X                 |              |
| Wesley  | X      |     |     |      | X  | e, s | X                 |       |      | X                 |              |
| Nathan  | X      | X   | X   |      |    |      |                   |       |      | X                 |              |
| Johnny  | X      |     |     | X    |    | e    | X                 | X     | X    | X                 |              |
| Dennis  | X      | X   | X   | X    | X  |      | X                 |       |      | X                 |              |
| Greg    | X      | X   |     |      |    |      | X                 |       |      | X                 |              |
| Trevor  | X      |     | X   |      |    |      |                   | X     |      | X later           | At the start |
| Peter   | X      |     | X   |      |    |      |                   |       |      | X                 |              |
| Jason   | X      |     |     |      |    |      |                   |       |      | X                 |              |
| Michael | X      |     | X   |      |    |      |                   |       |      | X                 |              |

Hap – happy; Exc – excited; Prd – proud; Sm – smiling; VC – Voice change (e-excited, s-softer); WB – whole body

Arbuthnott, Arbuthnott, and Rossiter (2001) reviewed available research on guided imagery and concluded that the use of imagery in psychotherapy is likely to improve the efficacy of the change in learning new behaviour. They suggested that the use of imagery in the process of planning future goals was likely to increase the person’s ability to recall those goals at relevant future moments, but also suggested that further research was needed to determine if that enhanced the probability of completion of those goals. Arbuthnott et al. (2001) suggested that asking clients to imagine their life after the

problems have been resolved helps “to focus his or her attention on a desired end point” (p. 124-125). This is important, according to Arbuthnott et al., because clients entering therapy often know what they do not like or what is wrong, but have rather a vague sense of what they want, which is especially true for adolescents with conduct disorder (Greenwood, 1999). Cappas, Andres-Hyman, and Davidson (2005) suggested that “the technique of envisioning a different life, be it to elicit empathy or hope, may as successfully invoke change as actual experience by virtue of stimulating the same neural substrates” (p.380).

My clinical impression was that Positive Future Movies can be a very useful tool as they a) help create a very positive shared experience between therapist and client and likely lower the sense of threat associated with being in therapy; b) invite clients to envision a possibility of a positive future, which could give them some sense of direction; c) help to create a sense that a positive future is possible, which could challenge their sense of hopelessness; and d) remind them about the responsibility for creating their own positive future. In summary, Positive Future Movies appeared to be an effective way of introducing distrustful and cautious adolescent males with conduct disorder into therapy. Furthermore, the procedure is relatively easy to apply and the range of positive emotions it elicits is good for both the therapist and the client to see, as both might be running short on hope at times. The long-term motivational impact of Positive Future Movies is difficult to determine based on this sample since all had a very positive emotional experience with the technique, but only two managed to complete the follow up stage and perhaps one more (Peter) could if his family had not moved to another province. It is possible, according to cited earlier Arbuthnott et al. (2001) findings that more extensive use of Positive Future Movies, for example more situations

practiced with eye movements over a greater number of sessions, would enhance the strength of their impact. As the data presented in Table 2 clearly indicates, visualizing of positive future generated positive affect in all ten boys. Since eye movements were part of exercises resulting in positive affect, they could have either positive or neutral effect. A few studies provided an evidence for a positive role of bilateral stimulation (D. Wilson et al., 1996 for eye movements and Servan-Schriber et al., 2006 for vibrations and sound) and my impression was that the eye movements helped the boys to focus on the images of their future and experience the positive affect associated with those images. If the only effect they had was to focus the hyperactive boys for periods of time to allow them to develop positive images of their future and nothing else, their contribution could be considered substantial. Although I did not test it empirically, at least some of the participants in my study would be unable to sustain prolonged focus on the Positive Future Movie tasks without the help of eye movements. It might be helpful for future research to determine the optimal dose of this treatment segment.

#### *Negative Future Movies*

After being introduced to the Negative Future Movies all ten participants spontaneously reported that if they continued with their delinquent behaviour, they would become incarcerated. Four of them (Phillip, Nathan, Trevor, and Michael) reported mild levels of negative emotions including boredom, sadness, loneliness and showed no resistance towards that exercise. Six reported strong affective response to their imagined incarceration including anger (Wesley, Dennis, Greg, and Jason) and a “horrible” feeling (Johnny and Peter). From the group of six participants expressing a strong emotional reaction to the Negative Future Movies, only Jason did not show any distress or reservation towards his participation in that exercise. Peter refused to

participate and the other four participated after expressing their initial resistance to the exercise. Intense emotional reactions to Negative Future Movies exhibited by 6 of 10 participants appear consistent with Holmes and Mathews' (2005) statement that "negative imagery has greater effects on self-reported anxiety than does verbal processing of the same material" (p. 495). Therefore, it is possible that at least some participants could finish their Negative Future Movies session with a significantly elevated level of anxiety. Despite the intended result being promotion of a responsible behaviour by enhancing the sense of choice (Greenwald, 1999; 2002a), for some youngsters the effect might be negative in more than one sense. First, the negative affect resulting from Negative Future Movies could diminish the positive effect of the Positive Future Movies. Second, the heightened anxiety could lead to increased acting out in those who use acting out as a way of dealing with negative emotions, which would characterize most of the boys in this study. Third, a possibility of elevated anxiety could increase the negative image of the self (Cappas et al., 2005) and consequently undermine clients' chances for a positive treatment outcome. Table 3 presents imagery and affective details of the Negative Future Movies.

A procedural variation involving a return to a brief visualization of the positive future could help decrease the anxiety generated by the Negative Future Movies and help end the Motivation Enhancement session on a more optimistic note. Further investigation could help determine if indeed some adolescents with conduct disorder do experience elevated levels of anxiety during and after performing Negative Future Movies, what effect does that have on their level of motivation to change, and can that anxiety or other negative emotions experienced during Negative Future Movies destabilize some of them. Another set of useful questions to answer concerns the



Table 3. Elements and emotions in Negative Future Movies

| Name    | Details of the image |    |        |       |      |      | Emotions |        |     |         |       |     | Res |
|---------|----------------------|----|--------|-------|------|------|----------|--------|-----|---------|-------|-----|-----|
|         | Bars                 | Hc | Guards | Noise | Cell | Cops | Bored    | Lonely | Sad | Trapped | Angry | Hor |     |
| Phillip | X                    |    | X      | X     |      |      | X        | X      | X   | X       |       |     |     |
| Wesley  |                      |    |        |       |      | X    |          |        |     |         | X     |     |     |
| Nathan  | X                    | X  |        |       |      |      |          |        | X   |         |       |     |     |
| Johnny  |                      |    |        |       |      |      |          |        |     |         |       | X   |     |
| Dennis  |                      |    |        |       |      | X    |          |        |     |         | X     |     |     |
| Greg    | X                    |    |        |       | X    |      |          |        |     |         | X     |     |     |
| Trevor  |                      |    |        |       | X    |      | X        |        |     |         |       |     |     |
| Peter   |                      |    |        |       |      |      |          |        |     |         |       | X   |     |
| Jason   |                      |    |        |       |      |      |          |        |     |         | X     |     |     |
| Michael |                      |    |        |       |      |      | X        |        |     |         |       |     |     |

Hc – being handcuffed; Cops – being handled roughly by police officers; Hor – Feeling horrible  
Res – resisting the exercise

interaction between the effects of Positive and Negative Future Movies: 1) How much motivation for change do Positive Future Movies create? 2) Do Negative Future Movies add in a synergistic way to the effect produced by the Positive Future Movies? 3) Can Negative Future Movies diminish motivation for change in some clients? 4) Which clients are likely to have a negative reaction to the Negative Future Movies? 5) What number of repetitions for both Positive and Negative Future Movies is needed to create the biggest increase in the motivation for treatment? And 6) Would the optimal number of repetitions for either the Positive or Negative Future Movies vary depending on the level of motivation clients have at the start of the treatment?

### *Adaptive Skills Training*

Greenwald (1999, 2002) developed the adaptive skills training to address the coping skills deficits that are prevalent among adolescents with conduct disorder. The strategies in this treatment component consist of a combination of cognitive-behavioural techniques, creative imagery, and eye movements. My experience with each of the treatment components of the Adaptive Skills Training is reviewed next.

### *Early Warning System*

The Early Warning System was provided after the initial Motivation Enhancement stage of treatment except for one participant (Trevor) who received

Choices Have Consequences first in an effort to prevent his imminent reinvolvement in criminal activity, anticipated on the basis of increase in his noncompliant behaviour on the unit. In this study, the Early Warning System involved one to two sessions to complete, producing surprisingly detailed descriptions of their anger escalation cycles from participants. Although the participants varied in the detail of their descriptions, they all produced their own sequences representing distinct steps in the progression of their anger escalation. The relative ease with which these adolescents dissected their angry outbursts and, contrary to their initial belief that their anger erupted suddenly, identified multiple steps was surprising. Six out of eight participants (Phillip, Wesley, Johnny, Dennis, Peter, and Jason) who completed the Early Warning System demonstrated a good recall of their anger escalation cycle during the next session. Two of the participants showed an initial resistance to discussing their examples of aggressive behaviour, but were still able, with prompting and encouragement, to map their anger escalation cycles. This part of treatment appeared to be both productive and significant as it provided all of the boys with a new, expanded, and a functional understanding of the steps involved in the escalation of their anger. Subsequent reports from some of the boys (Phillip, Wesley, and Johnny) indicating that on at least one occasion they choose to inhibit their aggressive response to a provoking situation, provided some anecdotal confirmation of a positive impact of this treatment segment.

However, besides three participants reporting that they consciously chose to deescalate their anger in order to avoid negative consequences of acting out, there was no other indication that this treatment segment had a significant and lasting effect on participants' anger management skills. For example, Nathan could not recall anything from his first Early Warning System session, had a second session practicing and

reviewing his Early Warning System, and shortly after this second session he was involved in a fist fight with another resident. The Aggressive Behaviour Problems index derived from unit charts did not provide any indication of a significant change in the number of aggressive behaviours exhibited by any of the participants. For a number of reasons, however, it is likely that this measure was not sensitive enough to detect such changes. First, staff were likely not aware of all or perhaps even most of the expressions of aggressive behaviour occurring among residents. Second, since staff did their chart entries at the end of each shift they could forget minor expressions of anger or aggression occurring earlier in the shift. Third, due to continuous dealing with angry and aggressive behaviour, some staff might have become desensitized and less concerned about minor expressions of aggression and consequently not record them. For example, Wesley had very few aggressive behaviours recorded in his chart, which was surprising for a youngster with his history of aggressive behaviour, defensiveness, and tendency to get his way. Another distinct possibility, of course, is that this brief treatment was not powerful enough to produce significant changes in well-entrenched patterns of angry reactivity. Further research could determine if extending its application to several sessions to allow for a repeated review a number of different examples of angry outbursts would produce stronger effects for the Early Warning System. Multiple measures taken from multiple perspectives all sensitive enough to detect those changes are essential.

### *Choices Have Consequences*

This segment of treatment builds on the Motivation Enhancement and Early Warning System and aims to help youngsters understand and remember in critical moments that there are consequences to their choices. Except for Michael, who ran away

after his first treatment session, nine participants received between one and three sessions of Choices Have Consequences, depending on their level of cooperation, ability to focus on exercises, and clinical needs (consistent with Greenwald's recommendation). The response to Choices Have Consequences has also been mostly positive, but the problems with cooperation were more prevalent than with the Early Warning System (Wesley, Johnny, Greg, Peter, and Jason). Wesley presented with increased uncooperative/defiant behaviour, Greg presented as very tired and unfocused (likely side effect of his psychotropic medication), Johnny refused to continue after reviewing one example of negative behaviour, while Peter and Jason experienced problems with focusing and controlling their impulsivity and interjected numerous tangential thoughts. Wesley and Peter reported no recollection of their Choices Have Consequences session, which was not surprising given Wesley's negative attitude and Peter's lack of focus. Phillip and Nathan were unable to recall their positive choices, which was surprising given their good effort and positive attitude exhibited during the session. Despite the above difficulties, all nine boys rehearsed with eye movements at least two examples of positive choices leading to positive consequences paired with a positive cognition (e.g. "Way to go!") and two examples of negative choices leading to negative consequences, paired with a "It's not worth it" statement. Some of the participants reported experiencing positive feelings during imagining their positive choices and performing eye movements (Nathan), and some reported experiencing negative emotions when imagining negative choices with eye movements (Johnny, Dennis, Peter).

It is difficult to be completely certain about the impact of Choices Have Consequences on participants of this study, but it is relatively clear that this strategy alone was not strong enough to stop them from making bad decisions. For example,

Peter received three Choices Have Consequences sessions in the hope that he would stop running away from the Centre and involving himself in criminal activity. In the two and a half week period between his last Choices Have Consequences session and his discharge, Peter did not run away or engage in delinquent behaviour, but there is really no way to determine the relative influence of treatment on his decisions. Five other treatment participants (Johnny, Dennis, Greg, Jason, and Trevor) who received Choices Have Consequences continued to run away and engage in delinquent behaviour.

### *Tease Proofing*

This segment of treatment was used with five participants (Philip, Wesley, Johnny, Greg, and Peter) who had problems with overreacting to teasing or provocations. Nathan did not seem to need this part of treatment and the other four participants (Dennis, Trevor, Jason, and Michael) dropped out of treatment before reaching this stage. As reported by Greenwald (1999), this technique could be relatively easy for some and more challenging for others. Some of the participants approached it with a great deal of creativity, for example Greg, when working on decreasing his reactions to being teased about his Tourette Syndrome, imagined being attacked by a "big teaser ship" and thinking, "No bullies are going to get to me." Peter imagined a "super protective vest" as way of decreasing his aggressive response to teasing. Three of the five youngsters participating in this treatment component displayed difficulties with it. Peter and Wesley experienced problems with intruding aggressive thoughts related to focusing on their experiences of being teased and Johnny insisted that he did not experience any instances of teasing. While Peter's attitude became cooperative as his Tease Proofing session progressed, Wesley and Johnny remained uncooperative. Due to only three participants engaging meaningfully in the Tease Proofing exercise, it is

difficult to evaluate its effectiveness. It is likely that the helpfulness of this technique would increase with a greater number of situations rehearsed, especially for those for whom overreacting to provocations is a problem. Possible positive consequences of decreased tendency to overreact to teasing and provocations would likely be numerous including an improvement in family and social relationships, greater productivity at school or work, and so forth.

### *Adaptive Skills Training in the Context of Other Research*

#### *Greenwald's Research*

In general, the Adaptive Skills Training as a package appears to have been appealing and meaningful for most of the treatment participants. The first component, the Early Warning System seemed to generate the most involvement and produced the desired results of generating a detailed description of the anger escalation cycle for each participant. Eye movements seemed to play their intended role of setting each step in the boys' anger sequence apart and helping with later recall of the sequence. Good recall of the steps involved in their anger escalation cycle shown by six out of eight participants suggests that this treatment segment was meaningful to most of the participants. The receptivity to recall of Choices Have Consequences and Tease Proofing was less evident, possibly due to the emotional content of these treatment segments being more difficult to manage. Of the four participants who reached the Past Trauma Treatment segment, two (Phillip and Nathan) showed no resistance to this stage of treatment and two (Johnny and Peter), showed some resistance at various points. Phillip and Nathan were more successful in their treatment and were the only two to complete the Follow up stage.

Greenwald (2002a) in his study of MASTR therapy with the five adolescents with conduct problems did not attempt to separately evaluate the effectiveness of Adaptive Skills Training segment, but the graphic representation of some of his data could be subjected to visual inspection. Greenwald applied, among other standardized measures, State and Trait Scales of the State-Trait Anger Expression Inventory (STAXI) he treated with MASTR therapy. These self-report measures showed that only one out of the five participants reported a significant reduction in his Trait Anger score and another showed a significant reduction in the State Anger score. The visual inspection of Greenwald's (2002a) charts indicates that three of the five participants in his study had low pre-treatment scores on STAXI State Anger and four of the five participants had low pre-treatment scores on STAXI Trait Anger. This could mean that they either did not have anger related problems before treatment even began or that the STAXI was not sensitive enough to detect them. Both possibilities could have contributed to the apparent lack of evidence that the MASTR treatment package, including Early Warning System reduces anger related problems.

#### *Empirically Supported Treatments for Conduct Disorder*

There are several anger management approaches for conduct disordered adolescents considered as probably efficacious (Weisz and Jensen, 1999) that involve a significant number of sessions devoted to teaching and practicing a variety of stress and anger management skills. Weisz (2004) described two anger management programs classified by the APA Treatment Task Force as Probably Efficacious. The first program, Anger Control Training with Stress Inoculation (Feindler et al., 1984 and Schlichter & Horan, 1981), was designed for delinquent and disruptive adolescents ages 12-18 and can be delivered in both individual and group formats. In either format it involves a

minimum of 10 one-hour sessions. In the first stage of this treatment participants analyze actual recent episodes of their angry outbursts and learn about their anger and the consequences of their angry responses. Anger Control Training with Stress Inoculation also involves learning relaxation skills, multiple coping strategies to reduce angry arousal, use of self-talk, and role playing. The second treatment Anger Coping Program (Lochman et al., 1981, 1984, 1989, as cited in Weisz, 2004) was intended for aggressive children ages 9-12 and involves 12 to 18 40- to 60-minute sessions. Delivered in a group format, it utilizes various approaches including art and videotape-clippings showing angry scenes and intends to teach cooperation, problem solving, management of angry arousal, and use of self-talk. Both anger management programs seem to have common objectives with the Adaptive Skills Training section of Greenwald's treatment package as they attempt to educate the clients about their angry arousal (Early Warning System), the consequences of aggressive behaviour (negative part of Choices Have Consequences), benefits of cooperation (positive part of Choices Have Consequences), and handling provocations (Choices Have Consequences and Tease Proofing).

Although both the Anger Control Training with Stress Inoculation and the Anger Coping Program have their scientific and clinical problems (see Weisz, 2004), they are referenced here to make a point that improving anger management skills in children and adolescents with conduct problems is a process that takes time and involves teaching and rehearsing of multiple skills. Although Early Warning System, as well as other components of the Adaptive Skills Training, uses imagery and eye movement which may accelerate learning, their effectiveness could likely be enhanced by increasing the number of sessions used to practice them.



Since severely disturbed adolescents with CD do not benefit from problem-solving skills training approaches as readily and significantly as do their younger counterparts (Kazdin & Weisz, 1998), a greater number of sessions would almost certainly be required for significant treatment impact. For the sake of comparison, Cognitive Problem-Solving Skills Training (PSST) that was shown to be an effective treatment for antisocial youth in the study conducted by Kazdin et al. (1992), involved 25 individual weekly 50-minute sessions. The program used cognitive and behavioural techniques and involved teaching problem-solving skills, in session practice, modeling, role playing, corrective feedback, and social and token reinforcement. The participants in Kazdin et al. study were also assigned homework requiring them to apply steps they learned to increasingly more difficult interpersonal situations in their everyday lives.

#### *Past Trauma Treatment*

The past trauma treatment included in this treatment package basically followed the standard EMDR protocol as described by Shapiro (1995, 2001). A minor modification recommended by Greenwald (1999) was to eliminate articulating negative and positive cognitions before commencing EMDR sessions proper as he argued that these tended to emerge during the treatment with his adolescent sample. Soberman (1998) expressed a similar view regarding the emergence of positive and negative cognitions during trauma processing. Several measures were used to assess participants' response to trauma treatment including SUDS, VoC, PROPS, and CROPS. In standard EMDR practice, reduction in SUDs levels to zero or one is seen as an indicator of sufficient processing of the traumatic memory to proceed to an installation of a positive cognition, with the desired outcome being the rise in VoC to seven (Shapiro, 1995).

Greenwald (1999) posited that adolescents with conduct problems will experience significant difficulties in engaging in trauma-oriented psychotherapy of any sort for fear of being overwhelmed by negative affect, which could lead to violent or self-destructive behaviour. Greenwald cautioned that prematurely attempting trauma work could result in refusal to continue with the treatment and proposed that establishing a trusting relationship first could decrease that risk. My experiences with this segment of treatment directed specifically at these boys traumatic experiences confirmed Greenwald's predictions. Despite a well established rapport, one participant (Wesley) refused to engage in trauma work and another (Johnny) decided to discontinue the trauma work after successfully processing several memories of past trauma.

Interestingly, both made their decisions in response to a traumatic memory involving their mothers being assaulted by their fathers. Johnny reported the SUD level associated with the memory of his mother being assaulted by his father as a seven out of ten, but this could have been an underestimation of his actual distress evoked by that memory. It is not an infrequent phenomenon in doing EMDR that peoples' SUD levels increase over their initial ratings before they start to decrease. Another participant (Peter), who seemed to have successfully processed the memory of his mother being assaulted by her boyfriend, reported a very high level of distress (SUD=9) throughout most of the process that only went down towards the very end of processing that memory. Both Johnny and Peter were unable to finish in one session processing their memories of their mothers being assaulted, but Peter was offered an additional session on the same day to finish the treatment. It is likely that ongoing distress associated with an incomplete processing of the memory of his mother being assaulted (his SUD rating of two when he decided to

stop EMDR was likely an underestimate) led Johnny to his decision to withdraw from further EMDR treatment.

### *The Outcome of Past Trauma Treatment*

Three out of four youngsters (Phillip, Nathan, Peter) participating in past trauma treatment reported achieving complete reduction of their subjective distress associated with the memories that they processed, while one (Johnny) reported achieving complete resolution of two of the three memories that he processed during his Past Trauma Treatment. The traumatic memories were identified during an interview that followed Adaptive Skills Training. The boys were at first asked general questions about the bad things that happened to them when they were growing up, followed by more specific questions about abuse, neglect, out of home placements, accidents, bullying, hospitalizations, experiencing and or witnessing acts of violence, and illnesses and deaths of significant others. The boys were given a choice of which memory to address as first, second, and so forth, which was intended to increase their sense of control over the process that was expected to be very difficult for them.

Phillip processed three traumatic memories with EMDR. Phillip's first traumatic memory involved bullying that he had experienced at school for a number of years and over the course of the EMDR processing of that memory his SUD score went from two to three, before going down to one. Phillip's ratings do not seem to indicate a significant emotional discomfort associated with that particular memory; however, given the fact that he has experienced a number of years of severe bullying at school, his ratings were treated as an expression of his tendency to suppress emotions. Philip's VoC rating associated with his positive cognition, "I'm okay the way I am," rose from five to six (Phillip reported that his bad case of acne was affecting the strength of his belief in his

positive cognition). Phillip's second traumatic memory concerned his teacher grabbing him by the arm in front of other students and over the course of two EMDR sessions the SUD level went from two to three before reducing to one. Once again Phillip reported a low SUD level for the memory of an incident that both Philip's mother and social worker described as very traumatic. Phillip's VoC rating associated with his positive cognition "I did the best I could" increased from three to seven. Phillip's third traumatic memory involved sudden discontinuation of his father's visiting when he was six years old and over the course of the EMDR processing of that memory his SUD score went from four to three, but during the following session he reported SUDs to equal one. He was unable to identify neither a negative nor a positive cognition associated with that memory. Phillip, acknowledged his emotional guardedness when working with the memory of being grabbed by the teacher fearing that letting his emotions emerge could lead to out of control behaviour, which he experienced in the past on a number of occasions. Phillip also tended to rate his initial SUD as low, likely a sign of his emotional guardedness. During EMDR processing Philip reported higher levels of subjective disturbance, indicating that EMDR was helping him access emotional aspects of his memories.

Nathan processed two traumatic memories with EMDR. Nathan's first traumatic memory involved being attacked from behind by two unknown youths while walking alone at night on his reserve. Nathan was unable to identify any of the important components of the memory including positive and negative cognitions, affect, SUDs, or physical sensations. Two sets of eye movements did not result in any identifiable component that could serve as basis for further processing, so the work with that memory was discontinued. Nathan's second traumatic memory concerned a whipping

with a red willow rod that he got from his stepfather and with this memory he was able to report an initial SUD rating of four, which over the course of the EMDR processing of that memory his SUDs went from four to eight before reducing to zero. Nathan's VoC rating for his positive cognition, "I can succeed now" increased from four to five and he identified as a barrier his significant problems with written assignments. Nathan's Past Trauma Therapy was cut short because of an inflexible discharge date at the turn of school semesters.

Johnny processed three traumatic memories with EMDR. Johnny's first traumatic memory involved him cutting his leg on a piece of glass at the age of four and over the course of the EMDR processing of that memory his SUD level went down from seven to one. His VoC rating for his positive cognition associated with that memory, "It's over and I'm safe now," increased from four to seven. Johnny's second traumatic memory concerned him punching the window and cutting his wrist in the process and over the course of the EMDR processing of that memory his SUD score went down from seven to one. Johnny identified two positive cognitions, "I'm worthy" and "It's over, I'm safe now" and reported fully believing in both statements (VoC = 7). He was unable to choose another positive cognition from the list that could be strengthened in the process EMDR treatment. Johnny's third traumatic memory involved his drunk father slamming his mother's head into an armchair leaving her with a bloody nose and over the course of the EMDR processing of that memory his SUDs went from seven to two. At this point Johnny decided to stop and at the next session he refused to continue working on this memory and any others. Johnny rated his belief in "I did the best I could," which he chose as his positive cognition as five on a seven point VoC scale. As

the processing of that memory was not completed, due to Johnny's decision to withdraw from treatment, the second VoC rating for his positive cognition was not obtained.

Peter processed only one traumatic memory involving his mother being physically assaulted and her life threatened by her boyfriend and over the course of the EMDR processing of that memory his SUD level went from nine to zero. The process appeared to be very difficult for him and his voice was unusually quiet, and his usual hyper behaviour was absent. He seemed steeled, focused, and connected with his emotions as indicated by the fluctuation of the pitch and the volume of his voice. Peter chose "I did everything I could" as his positive cognition and reported believing that it was completely true (VOC=7). He was encouraged, but remained unable to select another example of positive cognition.

Thus, the significant decrease in SUDs and an increase in VoC suggest that EMDR may have been helpful in significantly reducing the impact of some traumatic memories in adolescents with conduct disorder. The checks performed at the start of each session indicated that the SUDs for processed memories remained at the same low level achieved in the previous session or decreased further. The first exception was Phillip's memory of being grabbed by his teacher, where the first EMDR session did not produce resolution because of his self-reported guarding, but in the second session during the course of EMDR the SUDs reduced to one. Phillip reported a SUD equal one at the end of processing for each of his three memories, but at the conclusion of his treatment several weeks later he reported the SUD values for all three of EMDR-processed memories to equal zero, indicating that the positive effect of EMDR processing of his traumatic memories not only continued, but also increased. The second exception was Johnny's memory of his father's assault on his mother. The lack of

resolution of this memory likely continued to trouble him leading to his decision to discontinue further treatment.

Further support for the effectiveness of EMDR in treating trauma in conduct disordered adolescents is offered by data obtained from the CROPS and PROPS questionnaires. One participant, Nathan, showed a significant reduction in the frequency of reported posttraumatic symptoms on both the CROPS and PROPS and two participants, Phillip and Johnny, showed a significant reduction on the CROPS. The participant, Peter, who achieved a resolution of one traumatic memory only did not show any changes on either CROPS or PROPS, which could not be expected given the extent of his childhood neglect and abuse. Peter was discharged right after processing one traumatic memory so no work was possible on his many other traumatic memories.

#### *Benefits of EMDR use with Conduct Disordered Youth*

The main beneficial effects of past trauma treatment with EMDR that were reviewed in the previous section appeared to include the reduction of the emotional impact of traumatic memories, identification of negative cognitions associated with those traumatic memories, and the replacement of negative cognitions with positive ones that were subscribed to as being strongly believed. Several other beneficial effects associated with EMDR use with conduct disordered adolescents are noteworthy. First, EMDR enabled a delivery of past trauma treatment to participants, Nathan and Johnny, who previously refused to engage in any discussions about their traumatic pasts. In my judgment, two factors associated with EMDR were helpful in the process of engagement and treatment. The first factor was the structured nature of the protocol, breaking the extensive process into small steps, like filling in the blanks one at a time, including traumatic images, negative cognitions, positive cognitions, VoCs, emotions, SUDs, and

location of body sensations. The trauma processing also occurred in small steps requiring focusing on several elements and performing eye movements. It seemed much easier for them to reveal their experiences of trauma in small fragments during EMDR processing than to tell their entire story at once. Peter is a good illustration of this as he started his story by stating that he was hiding in the cupboards and then slowly revealed the entire experience of witnessing his mother being assaulted. The second benefit was the identification and expression of different emotions associated with various parts of traumatic experiences. It is my impression that EMDR treatment of trauma involving a 10 to 60 seconds focus on small aspects of traumatic memory facilitates identification and expression of emotions associated with those memory aspects. It is not likely that verbal discussion of the same traumatic memory would result in identification and expression of multiple emotions associated with one traumatic memory. For example, Phillip expressed several emotions associated with his memory of his teacher grabbing him by the arm in front of other students included anger, sadness, helplessness, embarrassment, and some happy feelings ("a bit happy"). Another beneficial impact of EMDR therapy was a spontaneous shift in perceiving some of the key elements of the traumatic memory allowing for resolution of the negative affect and emerging of the positive affect. For example, Johnny reframed his mother's passivity as her being brave, and concluded that if she were to resist the physical violence of his father, she would likely sustain more extensive injuries. Peter's conclusion that his mother was attending school and doing better now preceded resolution of his anger at the man who assaulted her, and the thought that he was too small to do anything helped him resolve his sense of responsibility for not protecting his mother.



The speed with which the research participants appeared to resolve the emotional impact of their traumatic memories seems to offer some modest support for the accelerated information processing hypothesis proposed by Shapiro (1995). Of course, there is no certainty that all clients reported accurately the true levels of their SUDs at various points in the treatment process but could have been responding to some subtle or not so subtle demand characteristics of the situation.

In line with many previous theorists going back at least to Freud, Greenwald (2005) posited that past trauma, whether resulting from a personally experienced or observed event, can have a profound effect on the person even when it is not consciously remembered. The example of the participant, Dennis, who refused to undergo blood tests, serves as an illustration of that phenomenon. A single EMDR session was sufficient to resolve his avoidance of blood tests, which he was initially unable to explain. To his surprise, Dennis recalled witnessing as a child his very agitated sister being restrained by his mother and a nurse to obtain her blood sample. After several sets of eye movements, he achieved complete reduction of his disturbance associated with that memory and went to medical lab the next day to give the blood sample for medical tests.

#### Strengths and Limitations of This Study

As eloquently stated by Weiss et al. (2005) "treatment research is a difficult enterprise and shortcomings can be found in any study..." The shortcomings of this study are discussed in this section along with this study's strengths. This study aspired to being a multiple baseline design but in the end winds up providing more information of a qualitative sort. A segue into a more qualitative approach became necessary in this study when it became apparent that the 80% dropout rate would compromise a thorough

implementation of a multiple baseline design. Although qualitative research does not have the statistical tools for data evaluation that quantitative research has, the main functions of research—its persuasiveness and its ability to inspire the audience—can be found in qualitative research as much as they have been in quantitative research (Henwood & Pidgeon, 1992). From the qualitative research stand point the strength of this study is its systematic triangulation of qualitative and quantitative data in a mutually enhancing way (Flick, 2006), showing that qualitative and quantitative methodologies are not in opposition and can comfortably coexist together (Kelle & Erzberger, 2004). This study captured in significant detail histories and treatment experiences of ten boys with conduct disorder and attempted to offer more general understanding of the issues involved in treating conduct disordered adolescents, which is one of the objectives of qualitative research (Kazdin, 1998). The shortcoming of this study is limited external quality controls (e.g. independent raters of therapy tapes) (Kazdin, 1998).

In this study, detailed descriptions of therapy sessions and analyses of participants' responses to different components of the treatment package revealed both beneficial aspects of, and concerns with, treatment components that would have gone unnoticed in a larger scale controlled study. A good example of this point is the case of the participant with Tourette Syndrome (Greg). The visual inspection of his self-report and staff-rated measures indicates no positive changes associated with the portion of treatment that he received (Motivation Enhancement, Early Warning System, Choices Have Consequences, and Tease Proofing), therefore a treatment failure. The information contained in the description of his therapy sessions seems to show that he was resistant towards parts of treatment that evoked negative emotions or reflected negatively on him (Negative Future Movies, Early Warning System, and negative choices from Choices

Have Consequences). However, Greg willingly participated in the Positive Future Movie and demonstrated a very good recall of them one week later, while reporting no recall of his Negative Future Movie. Greg also appeared more cooperative during the positive choices part of the Choices Have Consequences and Tease Proofing, but resisted the bad choices part of Choices Have Consequences. The above observations led to my suggestions for modifying this treatment package to focus on Positive Future Movies, positive choices part of Choices Have Consequences, and Tease Proofing (when needed) and to at least initially exclude those components (Negative Future Movies, Early Warning System, and negative choices-negative consequences from Choices Have Consequences) likely to elicit negative emotions. I believe that this modified treatment package is likely to be more successful in enhancing motivation for treatment for severely disturbed and poorly functioning adolescents like Greg, who are unable to process effectively negative affect. The anticipated benefits of the modified approach could be ego strengthening, reduction in reactivity to insults and challenges from others, and preparation for the past trauma treatment, if past trauma is present.

Another benefit of this study is its rich in detail presentation of the lives of ten boys with conduct disorder placed in a residential treatment facility. The potential benefits of that could be multiple. First, detailed descriptions of how these boys presented in therapy and in the broader context of the Centre might be of a benefit to both researchers and treatment providers, as both would need to deal with volatility in behaviour and high rates of treatment dropouts. Second, it presents through the lives of ten boys a compelling picture of how troubled they are and how difficult it is to provide them with treatment that could make a meaningful difference. Third, the descriptions of the boys' interactions with the treatment clearly indicate that, with some exceptions (e.g.

inability to tolerate Past Trauma Treatment), MASTR therapy is well tolerated by this population.

### *Baselines*

Multiple baseline designs utilize baselines of various lengths to demonstrate, through the use of visual inspection and/or statistical analysis, the presence or absence of the effect of experimental manipulation. Stable baselines are extremely important in multiple baseline design research, as they add clarity and confidence to visual inspection (Hersen & Barlow, 1976). Most of the baselines in this study provide a strong impression of the volatile nature and significant instability of behaviour of these boys. Unfortunately, this significant volatility of behaviour during baseline undermines the confidence of visual inspection of the data, thus suggesting that multiple baseline design might not be fitting with severely disturbed adolescents with conduct disorder unless much longer baselines, which pose their own problems, could reveal some interpretable stability to the data. There are also clinical considerations that do not bode well for the use of a multiple baseline design with a population like those participating in this study. The baselines of various length required by the study's design resulted in the delay of treatment delivery by three weeks (Phillip, Johnny, Trevor), six weeks (Wesley, Dennis, Peter), or nine weeks (Nathan, Greg, Jason, Michael), raising a question whether treatment delay could have undermined the possibility of a positive treatment outcome. Potentially, the longer the baseline, the more opportunities boys had to be influenced by their deviant peer group which, as discussed earlier, is associated with poor treatment outcomes (Chamberlain, 1999). Consistent with that possibility is the fact that two out of three participants from the three-week delay group completed the treatment and one completed the follow up. The six-week-delay group appears to be less successful than

the three-week baseline group, as no member of that group completed the full treatment package. One out of four participants with a nine-week baseline completed the treatment and follow up. Considering the fact that Greg turned out not to be an inappropriate candidate for this treatment due to his Tourette Syndrome and sedative effect of his neuroleptic medication, the nine-week baseline group appears to be more successful than the group with six-week baseline. Given the fact that some of the treatment participants were admitted to the Centre a number of months before the start of this study, their treatment delay was a combination of that time and the length of their baseline. The closer examination of the length of stay in residential care prior to commencing the treatment for unsuccessful participants does not indicate a strong relationship between those two variables. Three participants who dropped out of treatment had long stays at the Centre prior to starting their treatment: Dennis 21 months, Greg over 12 months, and Michael 12 months and four had relatively short stays: Trevor two months, Johnny four months, Wesley four months, and Jason five and a half months. There are two possible explanations to account for the fact that there were five dropouts with a shorter stay at the Centre and three with a long stay at the Centre prior to commencing treatment. One, the length of wait for MASTR treatment would not have any negative impact on its success. Two, the negative influence of other delinquent youth occurs very quickly, therefore there might not be a significant difference in an iatrogenic effect between four and 12 months stay in residential care. This is a possibility, since some of the concerns about deviancy training were coming from outpatient group therapy, which would involve significantly less frequent and shorter duration of contact among delinquent youth.

The negative influence of delinquent youth would likely be moderated by other factors, for example the quality and strength of participants' relationships with their family and other family related factors. Phillip and Nathan, who successfully completed the program, both had working parents who expressed a sense of caring and concern as well as clear expectations for acceptable behaviour. Peter's mother was in a process of completing her university degree, but according to CFS reports tended to neglect her children. At case conferences she expressed a strong sense of caring and concern for Peter as well as clear expectations, but her visits with Peter at the Centre were irregular and she cancelled some of her scheduled visits with him at the last minute. Peter did not perform as well in the program as did Phillip and Nathan, but continued his treatment involvement until his discharge into his mother's care. Throughout his treatment involvement, Johnny received regular visits from his working class long-term foster parents. Shortly after they terminated their relationship with him at the start of his follow up phase, his drug use and running away increased. The remaining group of boys, all treatment dropouts, had parents who were either not engaged or engaged in an erratic manner, and dealing with multiple problems of their own.

#### *Data Collection*

A strength of this study was the use of multiple measures, as recommended by Kazdin (1998), utilizing different informants (self-report and staff-rated scales) and observational data recorded by the staff in the unit chart and later rated by the experimenter. There were, however, various problems associated with the repeated assessments involved in this study. The initial design of the study involved data collection from three sources: clients, the unit staff or parents, and teachers. To ensure that all boys received the same instructions and understood their self-report measures, I

administered the CROPS and Conners-Wells' Adolescent Self Report Scale the first three times in my office. For the remainder of the research project, the completion of the measures occurred in each participant's living unit. Participants completing their self-report measures in the unit had several advantages: a) minimized potential influence of the presence of the therapist on how the boys responded to their self-report measures; b) allowed for all the measures to be done at the end of the week; c) allowed for the entire session time to be used for treatment. The staff role was to hand in the measures to participants at the end of each week and encourage them to fill the questionnaires out in their rooms or other private areas of the unit, but did not exert any pressure when participants refused to complete their questionnaires. According to communications from the staff, refusals to complete the forms seldom occurred, however, more frequently participants accepted their questionnaires from staff and agreed to complete them, but "forgot" to complete them despite reminders. A better solution would have been hiring a research assistant responsible for distributing questionnaires to participants, answering questions, and ensuring the completion of these questionnaires, but I was in no financial position to do this.

As pointed out by Kazdin (1998), one of the problems related to multiple uses of measures during single case research design could result in a reactive assessment—the performance on the measure being altered or influenced by the awareness of being assessed. In this study, some of the participants responded to their self-report measures in ways that seemed to offer exaggerated views of their problems, while others seemed to underreport their problems. As Kazdin (1998) stated, the extent to which assessment data is affected by participants' reactivity is difficult to determine. Other issues likely associated with repeated measurement could include automatic or habitual responding--

responding to questions without fully contemplating their meaning or in terms of consistency with the previous week's responses. The participants were always instructed to think about the past week only when completing their questionnaires, but there can be no certainty about whether they did so.

Reactivity is also to be expected as a factor in questionnaires completed by staff, especially during very busy times, when completing questionnaires represented an extra demand on their time. On a number of occasions staff did not complete their ratings due to their reporting insufficient time or being preoccupied with acting out residents, which resulted in missing data points. An additional and unavoidable problem with staff-rated measures was related to different staff members at different times completing the Conners' Parent Rating Scale, the PROPS, and daily recordings in participants' chart, introducing the inevitable variability associated with multiple raters. A further issue with staff-rated questionnaires would be the influence of their emotions and attitudes on their perceptions and ratings. Greg's case might be a good illustration of this in the particular form of what is sometimes termed a negative halo effect. Staff members from Greg's unit were unanimous in their opinion that Greg's needs were exceeding their capacity to handle and that his presence in the unit had a negative impact on both staff and other residents. Despite the fact that staff ratings of his behaviour on the Conners Parent Rating Scale were unwaveringly very high, the unit chart indicated that his aggressive and nonaggressive problematic behaviours in the unit showed considerable fluctuation.

Attempts to collect data from teachers were mostly unsuccessful, despite the initial positive response from them about participation in the research, and were abandoned. The main problem was that teachers complained of being too busy to complete their questionnaires regularly. Unfortunately, without systematic data from



teachers the possibility of evaluating the potential impact of the treatment on school behaviour was lost. Other problems undermining the reliability of these data will not be discussed in detail as they are typical problems associated with this kind of research including examiner bias, observer bias (staff and the therapist), self monitoring and reporting inaccuracy affecting the quality of self-report measures data, demand characteristics, and impression management (Hersen & Barlow, 1976). The shortcomings and advantages associated with the use of Conners' rating scales were discussed in the Method section and will not be repeated here.

A strength of this study is its use of DSM-IV diagnostic criteria to select candidates for the study, which is very important as more than 60% of studies on treatments for conduct disorder reviewed by Weisz et al. (2005) failed to specify the criteria they used to select treatment participants. A potential shortcoming of this study is not having used cut-off scores on standardized continuous measures of psychopathology to select participants, which is also recommended by Weisz et al.

#### *Length of Treatment*

In this study, 10 to 12 sessions were needed to complete the MASTR therapy including some repetitions of the treatment components that particular participants could not recall during the next session. Although brief treatments seem to dominate the child psychotherapy research literature, Kazdin (2001) argued that conduct disorder in adolescents usually tends to be chronic and well entrenched and longer treatments might well be required to achieve a meaningful change. For example, Cognitive Problem-Solving Skills Training (PSST) that was shown to be an effective treatment for antisocial youth involved 25 individual weekly 50-minute sessions (Kazdin et al. 1992) falls into the upper end of the typical lengths of research treatment programs for youth with

conduct disorder (Kazdin, 2001). Based on their meta-analysis of 96 treatment studies testing 145 different treatments for conduct problems, Weisz et al. (2005), reported the mean number of sessions to be 14.38 and mean total hours of treatment to be 17.61. Weisz et al. reported that 19.79% of the participants in studies on conduct disorder were clinic referred treatment seeking clients, suggesting that the significant majority of participants in clinical trials on conduct disorder have been recruited. Since the clients that have been recruited for the treatment tend to be higher functioning and less disturbed than typical treatment seeking clinic population (Weisz, et al., 1995), treatment in clinic settings would most likely need to be longer than those reported by Weisz et al. (2005) to have a significant impact.

Modifications to the treatment protocol recommended earlier in this chapter would likely much increase the length of treatment but would require a much more ambitious research undertaking than could be accomplished in this thesis. Given the substantial flexibility in how the MASTR therapy could be adapted to address individual needs of clients, the length of treatment could vary significantly among persons. That variability would depend on several factors including completion of Motivation Enhancement in one or several sessions, whether a single session or repeated applications of each component from Adaptive Skills Training would be necessary, and a number and severity of the past traumatic memories addressed in treatment. Prolonged treatment would increase the likelihood of the treatment producing meaningful results, but at the same time it could increase the rate of treatment dropouts and another failure experience for both the clients and therapists. One possible solution could be to offer a brief version of MASTR therapy first to generate some experience of success with the treatment and once that was accomplished, contract again for a more extensive

treatment. The approach used in this study was to complete Motivation Enhancement in one session and also to use one session for each of the Adaptive Skills Training components in order to create a sense of treatment progression, but also the use more time for any component when clinically justified.

### *Treatment Integrity*

Several steps discussed in this section were undertaken to ensure the treatment integrity of this study. To help with the process of insuring treatment integrity, all treatment sessions except for two individuals who did not consent to audio/video taping were audio taped. The recordings of sessions and notes were later used to create the detailed descriptions of sessions that were presented previously. The training and experience of the treatment provider is assumed to play a significant role in ensuring treatment integrity (Shapiro; 1995, Greenwald, 2006b). At the start of the study, I had 16 years of experience at the residential treatment centre where the research was conducted and in providing assessment and therapy with the sorts of boys who were participants in this research. Particular to the treatment protocol used in this study, I have had the basic and advanced level EMDR training recommended by Shapiro (1995) and an additional one year practicum experience with EMDR. Furthermore, the research was supervised by the thesis advisor, John Schallow, who is a clinical psychologist with over 35 years of clinical experience, trained in EMDR with seven years of experience with the technique, and an EMDRIA-certified EMDR trainer. The treatment followed the protocol that was developed based on Greenwald's detailed description presented in his book Eye Movement Desensitization and Reprocessing (EMDR) in Child and Adolescent Psychotherapy (Greenwald, 1999). Unfortunately, I was unable to pursue the training in the application of MASTR offered by Greenwald due to financial and time constraints.

Regular weekly supervision including review of audio-recordings of sessions with John Schallow were used to ensure compliance with the treatment protocol and to decide on protocol variations in response to clinical needs (e.g., Peter receiving three sessions of Choices Have Consequences).

Although the overall adherence to the treatment protocol was high, some variability in response to clinical needs of participants did occur. The first variation in the treatment protocol occurred when it became apparent that participants experienced difficulties with recalling various components of their treatment. For example, Phillip had poor recall of his Positive Future Movies and positive part of Choices Have Consequences, Nathan claimed no recall of his Early Warning System and positive part of Choices Have Consequences, while Wesley, Greg, and Peter claimed no recall of the entire Choices Have Consequences. While it might be the case that the conscious recall of this material is unnecessary for these procedures to be effective, in light of their poor recall we felt it could not hurt to repractice the forgotten parts of treatment with eye movements. In some instances (Wesley, Nathan, and Johnny) key elements of the Future Movies, usually graduations scenes and incarceration scenes, were re-practiced with eye movements to hopefully reinforce the participants' sense of commitment to their positive future and to heighten their awareness of the likely negative outcomes of their continued delinquent behaviour. On one occasion, Choices Have Consequences was introduced before Early Warning System in a hope to alter one boy's, Trevor's, tendency to impulsively engage in delinquent behaviour. Another variation involved omitting Tease Proofing with a participant (Nathan) for whom overreaction to teasing was not an issue, again consistent with Greenwald's (1999) recommendation to use this component only with youth who have problem with overreacting to provocations. The variability in

sequencing and the length of treatment components appears consistent with Greenwald's (2002a) assertion that "The MASTR approach itself is sufficiently flexible to allow responsiveness to situational demands, such as discussing a pressing issue even if it is not on a therapist agenda" (p. 246). Since the treatment was taking place in a clinical setting, responding to treatment needs of clients seemed sufficiently compelling and justifiable--indeed, even ethically necessary--even though it introduced some variability in treatment delivery.

Some compromise of treatment integrity also resulted from irregular spacing of therapy sessions. The original treatment design intended for psychotherapy sessions to occur weekly, however, for a number of reasons each individual experienced some variability in his pattern of weekly sessions. Boys' AWOLs and behaviour problems resulted in suspensions from school or grounding to the unit, as well as school outings and extended family visits resulted in missed sessions. Occasionally, to compensate for missed sessions or to complete processing of a traumatic memory, two sessions were offered in one week. These missed sessions, especially due to running away and involvement in drug use or delinquent behaviour, could have impacted negatively on treatment in a number of ways by a) weakening the influence of already completed treatment components, b) weakening commitment to treatment established in the first session and c) introducing additional disruptive elements such as the toxic effects of street drugs, sleep deprivation, inadequate food intake, and mental preoccupation with whatever occurred when they were away from the Centre. Those excursions from the Centre usually involved renewal of or forming of new associations with delinquent peer groups, increasing a risk of deviancy training effect—a factor associated with an increased risk of treatment failure (Weiss et al., 2005).

### Areas of Further Study

Future research efforts to find effective treatments for conduct disordered youth such as the boys in my study have a certain urgency to them given the likely dire consequences, both to themselves and society, of their delinquent behaviour going unchecked. While difficult boys in many ways, I hope my descriptions of the circumstances of their lives has lead the reader to a more understanding and compassionate view of them. Unquestionably, these boys' short lives have been very difficult and traumatic. Before getting into parametric research to identify the effective components of treatment, I personally think a critical issue is to increase the size and scope of treatment interventions. It is not realistic to expect a dozens sessions or so of any kind of therapy could have a really meaningful impact on this population.

By no means wanting to be critical of residential treatments and the Knowles Centre in particular, it may be the case that almost any treatment is doomed to failure when delivered in the context of an institution like Knowles. In a developmental period where peer influence is most significant, bringing a bunch of delinquent kids together under one roof may in essence be forming a training academy for delinquency. Warehousing these boys at Knowles and at MYC before moving on to warehousing them as men at Stony Mountain, the federal penitentiary near Winnipeg, may be the best that this society can do at the present, but certainly we must strive to do better.

Future research is needed to understand better how the individual components of this treatment package contribute to the overall treatment effect and what is the right intensity and duration of each treatment component to achieve the maximal end result. The research is also needed to determine if two of the treatment package components, namely Negative Future Movies and the negative choices-negative consequences part of

Choices Have Consequences could have a negative impact on some of the participants. It would also be very useful to determine if the more severely compromised youth with conduct disorder, like Greg, could benefit from a modified treatment package consisting of only those components that evoke positive emotions (Positive Future Movies, good choices-good consequences from Choices Have Consequences and, if able to handle, Early Warning System and Tease Proofing). Because of its anticipated ability to elicit positive emotions, the modified treatment package would be expected to help increase ego strength and, perhaps prepare them for the Past Trauma Treatment. As this study clearly indicates, this treatment package is not effective with some of the conduct disturbed youth, even though they have significant trauma in their background. Future research could address that issue and determine what subject variables (e.g. concurrent disorders or substance abuse, CD subtypes, concurrent pharmacologic treatment, etc.) influence treatment outcome.

### Conclusion

This study attempted to answer three questions: (1) "Does the combination of Adaptive Skills Training and eye movements result in decrease of behaviour problems in conduct disordered children?" (2) "Does EMDR treatment reduce posttraumatic stress symptoms in conduct-disordered children?" and (3) "Does EMDR treatment of past trauma result in reduction of conduct problems?"

The present evidence suggests that the Adaptive Skills Training component elicited cooperation and positive responses from most of the treatment participants, although its overall contribution to the participants' behaviour change is not clear. Two main factors contributing to the difficulty with formulating an unambiguous and more definite answer to the first question are: (a) high treatment attrition rate and (b)

significant volatility of behaviour during baselines. Furthermore, the high degree of traumatization of the boys participating in this study has likely undermined their ability to benefit from the Adaptive Skills Training component. Greenwald's (1999) rationale for delivering Adaptive Skills Training before Past Trauma Treatment is clear and clinically sensible: to enhance clients' coping skills to help them increase their sense of efficacy, improve self-esteem, decrease tendency to overreact to emotionally charged stimuli, thus become better prepared to handle trauma-focused therapy. However, in some cases the interference of past trauma might be too significant (e.g. Wesley, Dennis, Peter, and Jason) to allow for the full benefit of Adaptive Skills Training. The response to the Early Warning System was mostly positive resulting in detailed descriptions of the anger escalation patterns for all boys participating in this treatment segment, including those who initially appeared resistant (Johnny and Greg). Some of the boys (Phillip, Wesley, and Johnny) reported choosing to deescalate their anger and to inhibit their aggressive behaviour, which could suggest a positive impact of this treatment segment. The response to Choices Have Consequences has also been mostly positive, but the problems with cooperation were more prevalent than with the Early Warning System (Wesley, Johnny, Greg, Peter, and Jason). Two participants (Phillip, Nathan) reported remembering only examples of their negative choices and two (Wesley and Peter) claimed not to remember either their positive or negative choices, suggesting that, in order to have an impact, the Choices Have Consequences part of treatment requires more than one session. Five out of six participants still remaining in the treatment (Philip, Wesley, Johnny, Greg, and Peter) experienced problems with overreacting to teasing or provocations were offered Tease Proofing, but only three (Philip, Greg, and Peter) seemed to engage meaningfully in this treatment segment. Due to this small



number of participants completing Tease Proofing, it is not possible to evaluate its effectiveness with any degree of confidence. Overall, this segment proved to be most difficult for the participants from the Adaptive Skills Training phase of treatment eliciting defensiveness in some and aggressiveness in others.

It appears that as a stand alone strategy, the Adaptive Skills Training, as it stands now, is not likely to have a significant impact with this kind of population. They all present with extensive social skills deficits and attachment problems that are not addressed by this treatment package. Other profound problems such as malfunctioning affect regulation and profoundly negative sense of self and others are likely to benefit from the Adaptive Skills Training and Past Trauma Treatment, however, the positive impact of these treatment components might not be substantial enough to counter the profound damaging effects of the years of neglect, abuse, and poor functioning that these boys have experienced. Additional interventions addressing the above mentioned deficits would likely be required to help these boys attain a level of functioning that would be gratifying to them and socially productive.

The second question can be answered affirmatively. Four boys received Past Trauma Treatment for some of their traumatic memories and although the treatment was not extensive enough for most of them, their reports (SUDs and VoC) indicated that their negative emotional responses to the memories targeted in treatment were significantly reduced. Three boys (Phillip, Nathan, Peter) reported complete or almost complete reduction in the negative affect associated with their traumatic memories processed with EMDR and one (Johnny) reported complete resolution of two of his past memories and some decrease of the negative affect associated with his third memory.

The third question can be only offered a guarded “likely” response, since most of the participants in this study did not receive any Past Trauma Treatment and those who reached that phase of treatment had only some of their past trauma treatment with EMDR. Two boys (Phillip and Nathan) who maintained their treatment gains during an eight-week follow up also received the Past Trauma Treatment, which could suggest an affirmative answer to question three, however, two cases out of ten can support only a tentative answer at best.

This study also clearly shows, through case histories and reports from Past Trauma Treatments, the pervasive presence of trauma in the lives of adolescents with conduct disorder who are placed in residential treatment centre. This study also amassed enough evidence to support Greenwald’s assertion that treatment of past trauma should be an essential element of treatments delivered to children and adolescents with conduct disorder. The present evidence also seems supportive of the use of EMDR to treat trauma in conduct disordered adolescents.

This study constitutes a very preliminary examination of complex treatment protocol developed by Ricky Greenwald to address complex treatment needs of adolescents with conduct disorder. The study involved 10 adolescent boys with a childhood onset CD and a variety of other comorbid problem including ADHD (Phillip, Johnny, Jason, and Peter), Tourette Syndrome (Greg), depression (Nathan), and learning disabilities, but none of the participants were formally assessed for those. The treatment attempted to adhere to a standardized treatment protocol, although there was some variability in treatment implementation related to clients’ particular behaviour problems and/or pressing clinical issues.

The strength of study's results was compromised by missing data points (all subjects) and a very high attrition (80%) of participants before completion of the treatment. The visual inspection of collected data as well as observations made during treatment indicate that this treatment package may have a potential to contribute to effective treatment of the most difficult to treat youth with CD: a) the treatment showed a potential to engage those clients in treatment; b) elicited emotional responses, including a strong positive response to Positive Future Movies; c) seemed to facilitate significant understanding of anger escalations issues; d) improved awareness of the link between choices and their consequences; and e) achieved relatively quick resolution of emotional reactivity to memories of past trauma and increased strength of belief in positive cognitions that replaced negative self-referential cognitions. The instruments used in the study showed improvement in behaviour and posttraumatic symptoms in three (Phillip, Nathan, and Johnny) of four participants who completed or almost completed the treatment and indicated that two (Phillip and Nathan) of the four participants were able to maintain most of treatment gains eight weeks later.

The extant research clearly demonstrates that to date no treatment has emerged that would be effective with all adolescents with conduct disorder. Future research might determine combinations of proven treatments that will be more effective than any treatment alone. MASTR, being a brief treatment that targets a broad range of problems and issues, including trauma, might be an excellent way to prepare conduct disordered youth for other treatment modalities targeting more intensively the issues not sufficiently addressed by MASTR. MASTR might also help decrease the severity of the psychopathology sufficiently to make severely disordered youth with conduct disorder receptive to other treatments, especially in cases where past trauma would have a

significant contribution to the development of conduct disorder. This study makes it abundantly clear that adolescents with conduct disorder can be severely traumatized and have exhibited a wide range of problems and behaviours associated with traumatization that were discussed in the Introduction to this dissertation. These include problems with affect regulation, impulse control, self-regulation, and self-definition and poor sense of self, no concept of a future, sense of helplessness and hopelessness, control problems, risk taking, running away, and substance abuse. They all presented with significant problems in their interpersonal/social functioning including inability to form trusting and mutual relationships, aggressive/violent behaviour towards others, stubborn or defiant response to authority figures, socially inappropriate expression of emotions and needs, problems with observing boundaries of others or asserting their own boundaries, conflicts with and aggressive behaviour towards peers, and stealing or destroying the property of others. Most of them also presented with a compromised academic functioning including problems with attention and concentration, restless/hyperactive behaviour, limited or no motivation to succeed, defensiveness and avoidance of academic challenges, overreaction to limits and corrections from the teacher, oppositional behaviour/refusal to follow directions, and disruptive classroom behaviour. They tend to overwhelm adults capacity to deal with them effectively, inviting either rejection or increase in attempts to control them. The fact that even a very structured residential treatment setting with extensive resources including a highly specialized school is unable to affect a meaningful change in at least one half of these boys, gives a sense of urgency to the need of finding effective treatment for the most disturbed adolescent boys with conduct disorder. MASTR therapy is promising for at least two reasons. First, it deals with a significant contributor to either development or

maintenance of conduct problems and conduct disorder—past trauma and second, it attempts to increase motivation for treatment and improve coping skills deficits.

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## APPENDIX A

Protocol/Check List for Motivation Enhancement-Adaptive Skills-Trauma Resolution  
(MASTR) Therapy

Note: Rapport building and discussion concerning confidentiality and the limits of confidentiality are extremely important components of this, as well as any other psychological treatment. Although not outlined in the form of a protocol, issues related to confidentiality have been addressed extensively with each participant on several occasions starting at the time of their admission to Knowles Centre and again at the start of their contact with the therapist shortly after. The purpose of treatment, treatment components, and the voluntary nature of their participation in this treatment study was explained to each participant by the Centre's clinical director at the time of obtaining their consent, then one more time by the therapist at the start of the treatment. Every attempt was made to establish rapport with each participant before the commencement of the treatment and to maintain it during the treatment.

*Motivation Enhancement: Future Movies**Positive Future Movies*

Introduction to the Positive Future Movie: We talked about all sorts of things from your life, past and present. Today I would like us to focus on your future [client's name]

Let's say that ten years from now, how old will you be [client's name]? I stop at a video stop on my way home and pick up a movie called "The [client's name] Story." It starts out kind of bad. There's this kid, seems like a good kid, but a lot of things go wrong for him, he does a lot of bad stuff, and I'm saying to myself, "This is a bummer. I used to work with kids like this. Looks like another good

one going down the drain.” But then things start to change. First one good thing, then another, then another... till finally, by the end of the movie, when the credits are rolling, I’m saying, “Way to go – you made it!” So, tell me what happens in this movie? What happens first? (Greenwald, 1999a, pp. 84-85)

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- If the client is unable to start on his own, repeat questions: So, tell me what happens in this movie? \_\_\_\_\_
- What happens first? \_\_\_\_\_
- By the time the movie ends where are you living? \_\_\_\_\_  
\_\_\_\_\_
- Ask questions as needed to develop a detailed description of the place: In your own house or in apartment? \_\_\_\_\_ By yourself, with a buddy, or maybe with a girlfriend? \_\_\_\_\_ Will you be married/have kids? \_\_\_\_\_ Will you have a car? \_\_\_\_\_
- Ask questions as needed to obtain a detailed description of the car: What kind? \_\_\_\_\_ What color? \_\_\_\_\_ What kind of sound system? \_\_\_\_\_
- Once the client imagines and describes a detailed vision of his Positive Future Movie, ask: What kind of feeling goes with it? \_\_\_\_\_ Where do you feel that? (Where in your body?) \_\_\_\_\_

- Help the client develop positive cognition by asking: What do you say to yourself, when you imagine? \_\_\_\_\_  
How about something like “I can do it!” or “I’m gonna do it!” or “I’m gonna make it!”  
\_\_\_\_\_
- Ask the client to concentrate on the image, feeling, and cognition and perform eye movements \_\_\_ [Put a checkmark after completion of the task] Ask about client’s experience. \_\_\_\_\_  
\_\_\_\_\_ Repeat the set \_\_\_\_\_
- it is not necessary to formally introduce EMDR to clients at this stage of therapy Greenwald (1999a, p. 86) and “If the client wants an explanation for the eye movement request, I might just say, ‘This helps drill it in better.’”

Note: The participants in this study received a general overview of the MASTR therapy and had their questions answered by the clinical director of Knowles Centre at the time of signing Consent Form (Appendix E).

*Negative Future Movie*

Introduction to the Negative Future Movie: “What if it doesn’t go the good way we’ve been talking about? What if you keep on doing the same old stuff, things keep going bad? (Greenwald, 1999a, p. 86). \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Develop a detailed bad ending with picture \_\_\_\_\_  
\_\_\_\_\_
- feelings \_\_\_\_\_ sensations \_\_\_\_\_  
and cognition (e.g. “It’s not worth it”) \_\_\_\_\_
- Ask the client to concentrate on the image, feeling, and cognition and perform eye movements. \_\_\_ Ask about client’s experience. \_\_\_\_\_  
\_\_\_\_\_ Repeat. \_\_\_\_\_

3) Identify Strengths. Say: "It's not easy to get to the good future, but maybe it's possible. What is there about you that might help you get there?" (p. 97).

Make list/offer suggestions if the client is having problems \_\_\_\_\_

4) Identify Obstacles/Barriers: What could get in your way? \_\_\_\_\_

5) Determine percent motivation to work towards the positive future.

- Ask the client what percent is he motivated toward the good future, and what percent toward the bad future (i.e. toward doing the old stuff).
- Explain: the percent means how much out of a hundred and ask: "So, out of a hundred percent, how much of you really wants to work towards the good future that we just talked about?" \_\_\_\_\_
- If the client has problems understanding percentages offer examples to explain percentages (Examples: ask the client to explain his understanding of (a) being 100% behind somebody; b) being 50/50 partners; c) meaning of 3 quarters).

Obtain Commitment to Treatment. \_\_\_\_\_

So you said that your X% motivated to do well ....., but it looks that so far the Y% has been in charge. If you want, we can work on some things to help that X% to get stronger. I have a bag of tricks that we can try.....At this point obtain a commitment from the client to work towards the goals identified during the previous sections. (pp. 88-89)

*Adaptive Skills Training**Early Warning System*

- Start with reference to the Future Movies, the positive future goals that they would like to achieve. \_\_\_\_\_
- Discuss the possibility of the negative future events occurring, as in their Negative Future Movie; bring in their ideas about their negative traits and behaviours that could sabotage their positive future. \_\_\_\_\_
- Mention that some of their behaviour problems might be related to the trauma that they have experienced.
- Explain a stress model: point to the neck and say lets imagine that this is our boiling point. When we were little babies stress was low—up to here (show ankles). Then some things happened, maybe dog died or something else bad happened and the stress went up here (point at the knee). Then something else, maybe a favourite cousin died, more stress piled up (show waist), then a one more thing and the stress is up to here (show the neck), the boiling point.
- Say to client: The self-control skills that you'll be learning might help a lot when you use them, but when you walk around stressed out, ready to blow (show hand on the neck), it might be tough. Later, I will try to help you become less stressed.
- Introduce the Early Warning System, by describing how in the movies the intruder can sneak into someone's place and surprise/ find them unprepared. Explain that the rich people have all sorts of early warning systems such as alarms, cameras, or guards at the gate watching that warn them is someone tries to sneak in. Say: "You need one of those early warning systems for your temper before it gets you. "

- Ask the client about the last time he got mad. Review with the client, in detail, the latest provocation to which he responded with anger and/or aggression. Establish a sequence starting with the provocation followed by client's response \_\_\_\_\_  
\_\_\_\_\_
- Step by step, determine the sequence of anger escalation including thoughts \_\_\_\_\_  
\_\_\_\_\_ physiological reactions \_\_\_\_\_  
\_\_\_\_\_ emotions \_\_\_\_\_  
and behaviours \_\_\_\_\_
- If the client has difficulty identifying his thoughts, emotions, etc., say "Lets look at it carefully, like a movie in slow motion. Close your eyes and start with ...provocation and right away freeze the frame and see what you notice."  
(Greenwald, 1999a, pp. 96-98). Use prompts and questions such as: Concentrate on ..., close eyes if it helps to concentrate. What's going on inside you? How can you tell (you're getting heated)? \_\_\_\_\_ What lets you know?  
\_\_\_\_\_ [When client reports something say: Good! that's what we're looking for.] What's happening in your body? \_\_\_\_\_ Is it hot or cold, is it loose or tense or shaky, is it dry or sweaty? \_\_\_\_\_  
What's going on in your head? \_\_\_\_\_  
Okay, what happens first? \_\_\_\_\_  
When... (event), what's your first sign that something's going wrong? \_\_\_\_\_  
\_\_\_\_\_ Good, first you notice that ....and what you think about it? \_\_\_\_\_ What happens next? \_\_\_\_\_

- Once the sequence of events is established, review imaginally each element of the cycle with a set of eye movements. View the entire sequence with two sets of EM.

*Choices Have Consequences*

A) Negative choice—negative consequence.

- Ask the client to prepare a movie including the following components, in this order:

1. The provocation, or the challenging situation; \_\_\_\_\_  
\_\_\_\_\_

2. The client's internal response (i.e., the Early Warning System); \_\_\_\_\_  
\_\_\_\_\_

3. The acting out, or "bad" behavioural choice; \_\_\_\_\_

4. The client chooses a negative cognition, for example "It's not worth it."  
\_\_\_\_\_

- The movie is viewed imaginally with EM. Client indicates when it's over. Ask what happened. \_\_\_\_\_ Repeat. \_\_\_\_\_

B) Positive choice—positive consequence

- Ask the client to prepare a movie including the following components, in this order:

1. The provocation, or the challenging situation \_\_\_\_\_  
\_\_\_\_\_

2. The client's internal response (i.e., the Early Warning System) \_\_\_\_\_  
\_\_\_\_\_

3. The client imagines making a positive behavioural choice \_\_\_\_\_  
\_\_\_\_\_

4. The client selects a positive cognition (e.g. "I did it!" "Way to go!" "Well done!" "Good Job!" etc.) to go with the good ending \_\_\_\_\_

- The movie is viewed imaginally during eye movements. Client indicates when it's over. Ask what happened. \_\_\_\_\_  
\_\_\_\_\_ Repeat. \_\_\_\_\_

*Tease Proofing*

- Establish that overreaction to teasing or provocations is a problem.
  - a) Ask the client about challenging situations that happened lately, where the client might have overreacted. If the client is unable to identify such situations, go to point 2.
  - b) Ask the client "Who is in charge of you?" question to start a discussion intended to make a point that the client might be allowing someone else to determine how he feels and/or reacts. Give examples if necessary ("Imagine that some guy is saying stuff about your mother that is insulting. Do you let him do that? What would you do? Did you have something like that or similar happen to you?") (Greenwald, 1999a, p. 101-102).

- Interventions

- 1) Play therapy. Identify provoking situation. \_\_\_\_\_  
\_\_\_\_\_ Ask the client to imagine this situation in a playful context (e.g. cartoon), ask to devise a solution in that context \_\_\_\_\_  
\_\_\_\_\_ practice with a set of eye movements. Ask what happened. \_\_\_\_\_  
\_\_\_\_\_ REPEAT \_\_\_\_\_



2) Walls: to teach the client to imagine some sort of solid boundary between him and the provoker. Ask the client to imagine provoking situation and then imagine erecting an imaginary wall, or any other type of barrier, between himself and the other person. \_\_\_\_\_ Practice with a set of eye movements. Ask what happened. \_\_\_\_\_ REPEAT \_\_\_\_\_

3) Role Model: identify role model. \_\_\_\_\_ Ask the client to imagine how the role model would handle situation being discussed (e.g. with humour, by ignoring the provoker, etc.) \_\_\_\_\_ practice with eye movements client imagining his role model handling the situation. Then ask the client to imagine becoming a role model and handling their challenging situation (eye movements). Ask what happened \_\_\_\_\_ REPEAT \_\_\_\_\_

### *Past Trauma Treatment*

This is a very sketchy version of Shapiro's (1995) protocol, incorporating Greenwald's (1999a) suggestions for adapting EMDR for working with children and adolescents. It was meant to serve as a guideline for the treatment process rather than a detailed reproduction of Shapiro's description of her protocol.

#### *Phase 1. Collecting the History of Past Trauma*

Interview the client about his history of traumatic events including accidents, hospitalization, experience of neglect and abuse (parents, siblings, other family members, other adults, peers), experiencing or witnessing of violence (at home, other places/situations), experience of bullying, peer rejection; separations, loss of relationships, etc. Ask the client to choose past trauma memory that they want to work

on (if client chooses a major trauma to start with, discuss starting with something easier).

*Phase 2. Preparation for Treatment*

- Explain EMDR in general
- Explain the procedure: "I am going to ask you to concentrate on some things and will ask you to follow my fingers as I move them in front of your eyes, like this (demonstrate and ask: is this distance/speed comfortable?) back and forth. One psychologist, her name is Francine Shapiro, discovered that moving your eyes like this when you concentrate on some upsetting thoughts or memories, makes the upset feelings go away fast. Some scientists say that's like when we dream and our eyes move back and forth real fast, did you know that? Moving eyes real fast when we dream, helps us get through some upsetting stuff very quickly. Sometimes though, the upsetting feelings can get much bigger and real scary before they shrink. We're not exactly sure how it works, but it is part of my job here, and you are helping me in this, to find out how this treatment will work for you and other guys here at Knowles. I read quite a bit about it and found out that it worked very well with some guys in the States, who had similar kinds of problems. I am trying to find out if it is going to work as well here in Canada. So what do you say if try this with one of your bad memories? Do you have any questions or concerns about starting the work on your upsetting memories. Let me remind you that we can stop at any time. All that it takes is for you to say stop or to raise your hand (show the client raised hand to signal stop). Do you understand?"

[Whenever there is misunderstanding take the blame (e.g. "I guess I did not explain this right. Let me try again. Tell me if it comes out better this time.")]

Say to the client: "When we start working with your memory of the bad stuff that happened to you, I'll ask you from time to time what's going on with that, anything you noticed, like images, thoughts, feelings, anything that you noticed. Sometimes things will happen and sometimes they won't. Either way it is okay. Your job is to watch what happens, like you would watch something on TV, and tell me what you noticed. If you remember or notice something that you don't feel like talking about, that's okay. You don't have to. Do you know what I am asking you to do? Any questions?"

*Phase 3. Assessment (determine the components of the target memory)*

**Memory of traumatic event:** Say: You chose to work with the memory of

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**Picture:** Ask: What picture or image shows the worst part of (name the memory/incident)?

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**Negative Cognition:** Ask: What words would go best with the (image/situation) that represent/show your negative belief/thinking that you have about yourself now?

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Show the client the list of Negative Cognitions; encourage but not insist too strongly).

**Positive Cognition:** Ask: When you bring that picture/situation/up, what would you like to believe/think about yourself now? (Show the client the list of Positive Cognitions)

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**Validity of Cognition (VoC):** Ask: When you think of that picture/situation how true (repeat cognition) sounds to you right now, on scale of 1 to 7, where 1 feels completely false/not true at all, and 7 feels completely/100% true?

1      2      3      4      5      6      7

**Emotions/Feelings**

Ask: When you bring up that picture/situation in your mind and the words (the negative cognition), what feeling do you get? \_\_\_\_\_

**SUDS:** On a scale from 0 to 10, where 0 is no disturbance/bad reaction/neutral and 10 is the highest/worst disturbance/reaction that you can imagine, how disturbing does the incident/what happened/ feel to you right now?

1      2      3      4      5      6      7      8      9      10

**Location of Body Sensations:** Ask: Where do you feel it in your body?

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*Phase 4. Desensitization*

To begin the 1<sup>st</sup> set, say to the client “I would like you to bring up the image/picture, the words (repeat the negative cognition), also the feelings that you just told me about and where your feeling them in your body and follow my fingers.” Perform 20-30 sweeps of eye movements, then ask the client, “What came up” or “What did you get/noticed?” After client finished reporting say, “Go with that;” “Concentrate on that.”

Repeat until SUDS decrease to 0 or 1.

*Phase 5. Installation*

Practice positive cognition (original or a new one if such emerged during processing) until the client reports that it feels completely true (VoC = 7 or 6 if reasonable barrier is

present). Then practice with sets of eye movements the pairing of the positive cognition and the image of the target memory.

#### *Phase 6. Body Scan*

Ask the client to focus on the target memory and positive cognition and scan the body mentally for any remaining tension or discomfort (e.g. "Put a camera inside. Now look all through your body, see if you can find any place where there's a different feeling than usual." (Greenwald, 1999a, p. 200). If any detected, ask the client to focus on it and perform eye movements until it dissipates. If other aspects of trauma emerge, continue reprocessing until resolved.

#### *Phase 7. Closure*

Help the client regain full composure before leaving the office. Use container exercise for any finished processing of past traumas (Client performs eye movements and imagines a locked container where he puts all the disturbing aspects of the traumatic memory targeted in the session, and locks the container until the next session). Explain to the client that the processing may continue after the session, encourage the client to seek assistance from staff if feeling upset. Also encourage the client to contact the therapist between sessions for additional support if needed. Ask staff to monitor the clients for any possibility of upset mood and offer support if needed.

#### *Phase 8. Reevaluation*

At the start of next session review with the client their experiences during previous session and between sessions. Ask the client to concentrate on the memory targeted in the previous session and assess if any aspect of the memory is still disturbing and requiring further focus.

List of Cognitions

*Negative Cognitions*

I don't deserve love

I am a bad person

I am terrible

I am worthless (inadequate)

I am shameful

I am not lovable

I am not good enough

I deserve only bad things

I cannot be trusted

I cannot trust myself

I cannot trust my judgment

I cannot succeed

I am not in control

I am powerless

I am weak

I cannot protect myself

I am stupid

I am insignificant (unimportant)

I am a disappointment

I deserve to die

I deserve to be miserable

I cannot get what I want

I am a failure (will fail)

I have to be perfect (please everyone)

I am permanently damaged

I am ugly (my body is hateful)

I should have done something

I did something wrong

I am in danger

I cannot stand it

I cannot let it out

I do not deserve

*Positive Cognitions*

I deserve love; I can have love

I am good (loving) person

I am fine as I am

I am worthy; I am worthwhile

I am honourable

I am lovable

I am deserving

I deserve good things

I can be trusted

I can (learn to) trust myself

I can trust my judgment

I can succeed

I am now in control

I now have choices

I am strong

I can (learn to) take care of myself

I have intelligence

I am significant (important)

I m okay just the way I am

I deserve to live

I deserve to be happy

I can get what I want

I can be myself (make mistakes)

I am (can be) healthy

I am fine

I am attractive/lovable

I did the best I could

I learned (can learn) from it

It's over; I am safe now

I can handle it

I can choose who to trust

I can choose to let it out

I can have (deserve)



APPENDIX B

Connors-Wells' Adolescent Self-Report Scale

1. My parents only notice my bad behavior.
2. I bend the rules whenever I can.
3. I tend to learn more slowly than I would like to.
4. I am touchy or easily annoyed.
5. I cannot sit still for very long.
6. I feel like crying.
7. I get into trouble with the police.
8. I have trouble organizing my schoolwork.
9. My parents expect too much from me.
10. I have too much energy to sit still for long.
11. Noises tend to put me off track when I am studying.
12. I break rules.
13. I forget things that I have learned.
14. I tend to squirm and fidget.
15. I do not have good judgment about a lot of things.
16. I like to hurt some people.
17. Sticking with things for more than a few minutes is difficult.
18. I feel restless inside even if I am sitting still.
19. My handwriting is poor.
20. I have urges to do really bad things.
21. I have trouble concentrating on one thing at a time.
22. I have to get up and move around during homework.
23. I am behind in my studies.
24. I destroy property that belongs to others.
25. I lose my place when I am reading.
26. I have trouble sitting still through a meal.
27. My parents do not reward or notice my good behavior.

Connors' Parent Rating Scale – Revised

1. Inattentive, easily distracted.
2. Angry and resentful.
3. Difficulty doing or completing homework.
4. Is always "on the go" or acts as if driven by a motor.
5. Short attention span.
6. Argues with adults.
7. Fidgets with hands or feet or squirms in seat.
8. Fails to complete assignments.
9. Hard to control in malls or while grocery shopping.
10. Messy or disorganized at home or school.
11. Loses temper.
12. Needs close supervision to get through assignments.
13. Only attends if it is something he/she is very interested in.

14. Runs about or climbs excessively in situations where it is inappropriate.
15. Distractibility or attention span a problem.
16. Irritable.
17. Avoids, expresses reluctance about, or has difficulties engaging in tasks that require sustained mental effort (such as schoolwork or homework).
18. Restless in the "squirmy sense."
19. Gets distracted when given instructions to do something.
20. Actively defies or refuses to comply with adults' requests.
21. Has trouble concentrating in class.
22. Has difficulty waiting in lines or awaiting turn in games or group situations.
23. Leaves seat in classroom or in other situations in which remaining seated is expected.
24. Deliberately does things that annoy other people.
25. Does not follow through on instructions and fails to finish schoolwork, chores or duties in the workplace (not due to oppositional behavior or failure to understand instructions).
26. Has difficulty playing or engaging in leisure activities quietly.
27. Easily frustrated in efforts.

#### Conners' Teacher Rating Scale – Revised

1. Inattentive, easily distracted.
2. Defiant.
3. Restless in the "squirmy" sense.
4. Forgets things he/she has already learned.
5. Disturbs other children.
6. Actively defies or refuses to comply with adults' requests.
7. Is always "on the go" or acts as if driven by a motor.
8. Poor in spelling.
9. Cannot remain still.
10. Spiteful or vindictive.
11. Leaves seat in classroom or in other situations in which remaining seated is expected.
12. Fidgets with hands or feet or squirms in seat.
13. Not reading up to par.
14. Short attention span.
15. Argues with adults.
16. Only pays attention to things he/she is really interested in.
17. Has difficulty waiting his/her turn.
18. Lacks interest in schoolwork.
19. Distractibility or attention span a problem.
20. Temper outbursts; explosive, unpredictable behavior.
21. Runs about or climbs excessively in situations where it is inappropriate.
22. Poor in arithmetic.
23. Interrupts or intrudes on others (e.g., butts into others' conversations or games).
24. Has difficulty playing or engaging in leisure activities quietly.
25. Fails to finish things he/she starts.

26. Does not follow through on instructions and fails to finish schoolwork (not due to oppositional behavior or failure to understand instructions).
27. Excitable, impulsive.
28. Restless, always up and on the go.

Items on all three questionnaires were scored on a 4-point scale

0= Not true at all/ Never/Seldom

1= Just a little true/Occasionally

2=Pretty much true/Often, Quite a bit

3=Very much true/Very often, Very frequent

## APPENDIX C

These two questionnaires were purchased from Sidran Traumatic Stress Institute with permission to photocopy and use in research. Permission was sought from the author of those questionnaires, Ricky Greenwald, PsyD, who suggested the Sidran Institute.

## Client Report of Posttraumatic Symptoms (CROPS)

## STUDENT FORM

Mark how true each statement feel for you in the past week.  
Don't skip any, even if you're not sure. There is no right or wrong answer.  
Answer by circling 0 for none, 1 for some, and 2 for lots.

**None   Some   Lots**

|   |   |   |                                                                   |
|---|---|---|-------------------------------------------------------------------|
| 0 | 1 | 2 | I day dream.                                                      |
| 0 | 1 | 2 | I space out.                                                      |
| 0 | 1 | 2 | I find it hard to concentrate.                                    |
| 0 | 1 | 2 | I thin about bad things that have happened.                       |
| 0 | 1 | 2 | I try to forget about bad things that have happened.              |
| 0 | 1 | 2 | I avoid reminders of bad things to make sure nothing bad happens. |
| 0 | 1 | 2 | I do some things that I'm probably to old for.                    |
| 0 | 1 | 2 | Things make me upset or mad.                                      |
| 0 | 1 | 2 | It is hard for me to go to sleep at night.                        |
| 0 | 1 | 2 | I have bad dreams or nightmares.                                  |
| 0 | 1 | 2 | I get headaches.                                                  |
| 0 | 1 | 2 | I get stomach aches.                                              |
| 0 | 1 | 2 | I feel sick or have pains.                                        |
| 0 | 1 | 2 | I feel tired or low energy.                                       |
| 0 | 1 | 2 | I feel all alone.                                                 |
| 0 | 1 | 2 | I feel strange or different than other kids.                      |
| 0 | 1 | 2 | I feel like there's something wrong with me.                      |
| 0 | 1 | 2 | I feel like it is my fault when bad things happen.                |
| 0 | 1 | 2 | I'm jinx, or bad lack charm.                                      |
| 0 | 1 | 2 | I feel sad or depressed.                                          |

|   |   |   |                                                      |
|---|---|---|------------------------------------------------------|
| 0 | 1 | 2 | I don't feel like doing much.                        |
| 0 | 1 | 2 | My future looks bad.                                 |
| 0 | 1 | 2 | I'm on the lookout for bad things that might happen. |
| 0 | 1 | 2 | I'm nervous or jumpy.                                |

### Parent Report of Posttraumatic Symptoms (PROPS)

#### PARENT FORM

Mark how each item describes your child in the past week. (circle the number)  
Don't skip any, even if you're not sure.

| Not True<br>or<br>Rarely<br>True | Somewhat<br>or<br>Sometimes<br>True | Very True<br>or<br>Often<br>True |                           |
|----------------------------------|-------------------------------------|----------------------------------|---------------------------|
| 0                                | 1                                   | 2                                | Difficulty concentrating  |
| 0                                | 1                                   | 2                                | Mood swings               |
| 0                                | 1                                   | 2                                | Thinks of bad memories    |
| 0                                | 1                                   | 2                                | Spaces out                |
| 0                                | 1                                   | 2                                | Feels too guilty          |
| 0                                | 1                                   | 2                                | Anxious                   |
| 0                                | 1                                   | 2                                | Irrational fears          |
| 0                                | 1                                   | 2                                | Repeats the same activity |
| 0                                | 1                                   | 2                                | Clings to adults          |
| 0                                | 1                                   | 2                                | Avoids former interests   |
| 0                                | 1                                   | 2                                | Fights                    |
| 0                                | 1                                   | 2                                | Bossy with peers          |
| 0                                | 1                                   | 2                                | Sad and depressed         |
| 0                                | 1                                   | 2                                | Hyper-alert               |
| 0                                | 1                                   | 2                                | Feels picked on           |
| 0                                | 1                                   | 2                                | Gets in trouble           |
| 0                                | 1                                   | 2                                | Worries                   |
| 0                                | 1                                   | 2                                | Fearful                   |

|   |   |   |                          |
|---|---|---|--------------------------|
| 0 | 1 | 2 | Withdrawn                |
| 0 | 1 | 2 | Nervous                  |
| 0 | 1 | 2 | Startles Easily          |
| 0 | 1 | 2 | Irritable                |
| 0 | 1 | 2 | Quick temper             |
| 0 | 1 | 2 | Argues                   |
| 0 | 1 | 2 | Secretive                |
| 0 | 1 | 2 | Doesn't care anymore     |
| 0 | 1 | 2 | Difficulty Sleeping      |
| 0 | 1 | 2 | Nightmares or bad dreams |
| 0 | 1 | 2 | Wets bed                 |
| 0 | 1 | 2 | Eating problems          |
| 0 | 1 | 2 | Stomach aches            |
| 0 | 1 | 2 | Headaches                |

APPENDIX D

Behaviour Problem Rating Based on Unit Chart

The rating involves crossing a number each time the behaviour was reported in the client's unit chart. The highest number crossed in each row indicates how many times that behaviour was reported by staff in the chart in a given week.

Client \_\_\_\_\_  
 Week from \_\_\_\_\_ to \_\_\_\_\_

|                                              |                               |
|----------------------------------------------|-------------------------------|
| Bullying, threatening, intimidating others   | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Verbally abusing adults                      | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Verbally abusing peers                       | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Arguing/verbally fighting                    | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Physically Fighting/assaulting others        | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Hitting or kicking walls, doors, and objects | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Destroying own possessions                   | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Destroying possessions of others             | 1 2 3 4 5 6 7 8 9 10 11 12 13 |

Total No of aggressive/abusive behaviours \_\_\_\_\_

|                                            |                               |
|--------------------------------------------|-------------------------------|
| Disobedient/noncompliant behaviour         | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Stealing                                   | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Lying                                      | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Running away (number of days)              | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Skipping classes                           | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Swearing                                   | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Refusing to complete chores/assigned tasks | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Smoking cigarettes                         | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Alcohol/illicit drug use                   | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Threatening self-harm                      | 1 2 3 4 5 6 7 8 9 10 11 12 13 |

Total No of nonaggressive behaviour problems \_\_\_\_\_

APPENDIX E  
Consent Form

**This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.**

We are from the University of Manitoba's Department of Psychology and Miroslaw Grygo also works for Knowles Centre as a therapist. We would like (name of client) \_\_\_\_\_ to participate in a research project investigating the effectiveness of a new treatment program for children and adolescents with conduct problems that utilizes the treatment method called Eye Movement Desensitization and Reprocessing (EMDR). The purpose of the study is to determine how effective this program is as a treatment for boys with conduct problems. This treatment program consists of three parts called phases: (1) increasing motivation to work towards a positive future; (2) learning coping skills; and (3) resolving past trauma.

During the **first phase**, the therapist will guide clients to imagine two future movies about themselves: one with a positive ending and one with a negative ending. In the process of filling these movies with details clients tend to realize that their choices can influence the kind of future they will have. In the process of creating future movies, the clients discover what their short- and long-term goals are, and what they can do to achieve their positive goals. In **phase two** the therapist will help the clients learn or improve several skills important in daily living: handling anger, making responsible decisions, and handling teasing. **Phase three** will deal with the effects of past trauma. While phase one and two can produce noticeable positive results in a relatively short time, this phase can bring up a variety of intense negative feelings related to the past trauma, such as hurt, fear, anger, etc. Although reconnecting with these feelings and disturbing memories is seen as an important part of the process of recovery from the effects of past trauma, they can be unpleasant, disturbing, and difficult to handle. The therapist will deal with these disturbing feelings and memories whenever they arise, and clients will always have full control of how much they disclose and when. Any time the client wishes to stop the treatment, saying stop or raising a hand, will stop the treatment. Eye Movement Desensitization and Reprocessing (EMDR), when used to treat trauma, requires the client to simultaneously focus on (a) an image representing a traumatic memory, (b) a negative belief related to that memory, and (c) physical sensations associated with the memory, and perform tracking eye movements by following the therapist's hand moving in his visual field. After each set of eye movements (10 to 60sec.), the client will be asked to tell the therapist everything that came up (image, thought, emotion, physical sensation); that report will determine the focus of the next set. The treatment continues until the client's report indicates that the recall of the traumatic memory is no longer disturbing, at which point it is assumed that the working through (reprocessing) has been completed. The research and clinical literature indicate that older children and adolescents can perform these tasks relatively easily. Eye



movements will also be used in phase one two of this treatment procedure and their aim is to help the client process the information faster. Other forms of bilateral (two-sided) stimulation such as auditory tones and hand tapping might be used, if preferred by the client.

The therapy sessions will occur weekly and the treatment will take approximately two to six months to complete, depending on the extent of the past trauma addressed in phase three of the treatment. Since weekly therapy is already part of the treatment program at Knowles Centre, the clients participating in this research will not be required to attend any extra sessions. This treatment program has a specific structure described earlier as treatment phases; however, the client's needs will always be the most significant factor determining the course of treatment. Following completion of treatment, each participant will be followed for three months to determine how well the treatment gains have been maintained. This treatment program has been evaluated in some research studies in the United States of America, producing surprisingly positive results, but it is still considered new, and we would like to find out how well it works with Canadian youngsters.

To help evaluate the effectiveness of this treatment program, we will ask the participants to fill out two questionnaires at the start of each session and evaluate on a ten point scale how disturbing their trauma related memories (0 – not disturbing; 10 – extremely disturbing). The questionnaires will take approximately 5 to 10 minutes to complete and are not likely to cause much discomfort, however, rating how disturbing memories of past trauma are can cause emotional distress. Special care will be taken to support anyone who may become upset during the process of treatment. The residential staff working with the clients will also be asked to fill out four questionnaires both at the beginning and at the end of treatment, and two questionnaires weekly, which will help us determine the effectiveness of the treatment. To ensure that the treatment is delivered in the most effective way and that clients are cared for in a best possible way, and to meet the requirements of the Psychological Association of Manitoba, this research project will be supervised by a registered clinical psychologist. We ask that you consent to either video or audio taping of the treatment sessions to aid in the process of supervision and to help ensure that the treatment was delivered as intended. Supervision is the only place where personal information concerning clients will be shown or discussed with another person. Aside from this exception, all information will be kept in under strict conditions of professional confidentiality. The videos and audiotapes will be erased at the end of this research project. This research project is a part of Miroslaw Grygo's doctoral thesis, but only the information about treatment outcomes, and not identifying or personal information about the participants, will be used for that purpose.

No form of deception or misinformation will be used in this study, and both clients and their parents or guardians will be able to obtain an update on the treatment progress any time they wish. The clients will receive regular feedback about their behaviour and functioning from the therapist as well as the residential staff and teachers, and at the end of treatment a special feedback session will be offered to both the clients and their parents or legal guardians. All are welcome to ask for a progress report at any time during the treatment or follow up.

This research has been approved by the Psychology/Sociology Research Ethics Board of the University of Manitoba. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at 474-7122. A copy of this consent form has been given to you to keep for your records and reference.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/ or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. All requests for information should be directed to Mirosław Grygo (phone: \_\_\_\_\_ ext. \_\_\_\_\_ ; fax: \_\_\_\_\_ ).

|                           |                                |             |
|---------------------------|--------------------------------|-------------|
| <b>Participant's Name</b> | <b>Participant's Signature</b> | <b>Date</b> |
|---------------------------|--------------------------------|-------------|

|                                                            |                                     |             |
|------------------------------------------------------------|-------------------------------------|-------------|
| <b>Parent's/Guardian's Name<br/>Relationship to Client</b> | <b>Parent's/Guardians Signature</b> | <b>Date</b> |
|------------------------------------------------------------|-------------------------------------|-------------|

|                                              |                                                     |             |
|----------------------------------------------|-----------------------------------------------------|-------------|
| <b>Researcher and/or Delegate's<br/>Name</b> | <b>Researcher's and/or<br/>Delegate's Signature</b> | <b>Date</b> |
|----------------------------------------------|-----------------------------------------------------|-------------|

Consent to video- or audiotape therapy sessions (circle one or both, depending on your consent).

|                           |                                |             |
|---------------------------|--------------------------------|-------------|
| <b>Participant's Name</b> | <b>Participant's Signature</b> | <b>Date</b> |
|---------------------------|--------------------------------|-------------|

|                                                            |                                     |             |
|------------------------------------------------------------|-------------------------------------|-------------|
| <b>Parent's/Guardian's Name<br/>Relationship to Client</b> | <b>Parent's/Guardians Signature</b> | <b>Date</b> |
|------------------------------------------------------------|-------------------------------------|-------------|

|                                              |                                                     |             |
|----------------------------------------------|-----------------------------------------------------|-------------|
| <b>Researcher and/or Delegate's<br/>Name</b> | <b>Researcher's and/or<br/>Delegate's Signature</b> | <b>Date</b> |
|----------------------------------------------|-----------------------------------------------------|-------------|