The "Brake Shop": Intervention for Co-Morbid Tourette Syndrome and Intermittent Explosive Disorder

McKinlay, B.D., Stewart, S.L., & Cullion, C

Child and Parent Resource Institute (CPRI)

London, Ontario, Canada

Abstract

Various problems are associated with Tourette syndrome (TS), including Attention-Deficit/Hyperactivity Disorder (ADHD), Obsessive-Compulsive Disorder (OCD), other anxiety disorders, mood disorders, self-esteem problems, oppositional-defiance, and Intermittent Explosive Disorder (IED) or "rage". Evidence regarding psychological treatment for TS and associated disorders (TS+), particularly co-morbid IED, is in its infancy. This study was designed to evaluate an innovative "Collaborative Problem-Solving (CPS)" approach developed by Dr. Ross Greene [1]. It was expanded upon and implemented within the "Brake Shop" service for TS+, a highly specialized, outpatient clinic at the Child & Parent Resource Institute in London, Ontario. Twenty seven children/youth received skills-training, including CPS on a weekly basis for 9 weeks. Various standardized measures were completed pre- and post- treatment. Results indicated skills training with CPS is an effective treatment approach to address TS+ and IED related symptomatology in highly complex children and youth.

Introduction

Of the various behaviours associated with TS, episodes of explosive anger or aggression characteristic of IED are among the most impairing [2]. Approximately 25-70% of patients with TS in clinical settings experience episodic behavioural outbursts and problems with anger management [3]. Despite the use of psychotropic medication and treatment regimens, symptoms of the illness are debilitating to the child/youth and distressing to caregivers, family members and teachers. Researchers addressing effective non-pharmacological approaches to intervention and clinical management of this disorder and its related co-morbidities have suggested the need to implement multi-dimensional approaches to treatment based on the needs of the child/youth and family [4]. Within the "Brake Shop", children/youth can receive a number of services including: assessment, treatment, consultation and education. Given the chronic nature of the symptoms seen in the clinic, outcome measures chosen focused on quality of life issues, as well as symptom reduction. The current study explored the effectiveness of the CPS training model for children with TS+ and co-morbid IED.

Method

Twenty-two males and 5 females (*M* = 12.42 years) made up the Self Management (SM) group and received skills-training, including CPS on a weekly basis for 9 weeks. The SM group included at least one involved adult (parent, residence worker). The overall premise of the group was that these participants had difficulty regulating their emotional arousal due to deficits in inhibitory ability. The following measures were completed pre- and post- treatment: the Child and Adolescent Functional Assessment Scale (CAFAS), Brief Child and Family Phone Interview (BCFPI), condensed Rage and Episodic Dyscontrol Scale (c-REDS) and a satisfaction survey created specifically for the "Brake Shop."

Table 1
Measures

Brief Child and Family Phone Interview (BCFPI)

The BCFPI [5] is a standardized 81 question interview that measures the type and severity of children's problems. It is the mandated intake measure used by all children's mental health centres in the province of Ontario.

Condensed Rage and Episodic Dyscontrol Scale (c-REDS)

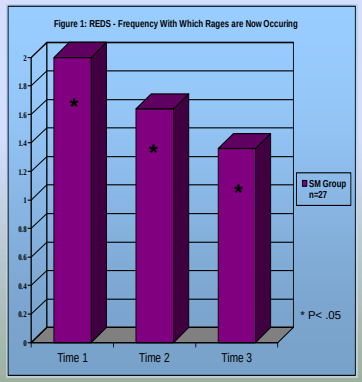
The c-REDS [6] is completed by the parent/caregiver(s) of the child/youth and consists of 6 questions that assess the following: 1) Frequency of rages occurring in a month; 2) Whether or not the child feels guilty about rage attacks and/or regrets his/her actions; 3) The intensity of the attacks over the past week; 4) How often the attacks take place at school or home; 5) How often the rage attacks are directed towards things or objects; classmates; friends; siblings; mother; father and other family members; 6) Does the child ever express a fear that a rage attack may occur.

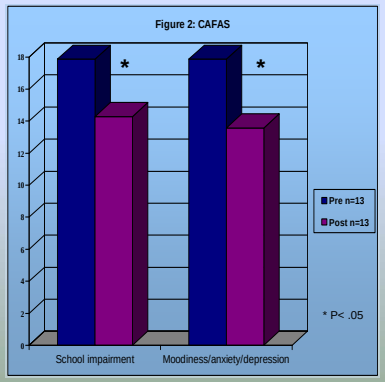
The Child & Adolescent Functional Assessment Scale (CAFAS)

The CAFAS [8] is a multidimensional rating tool which assesses level of functioning. This measure consists of subscales assessing functional impairment in eight domains: school/work, home, community, behaviour toward others, moods and emotions, self-harm, substance abuse, and thinking.

Results

Based on the c-REDS, the frequency of rages, F (2, 20) = 3.49, $p < .05$, exhibited by the children/youth declined from pre- to post-treatment (See Figure 1). On the BCFPI, Regulation of Attention, Impulsivity, & Activity, t (13) = 2.70, $p < .05$, and Externalizing, t (13) 2.43, $p<.05$, subscales decreased from pre- to post-assessment while Family Comfort, t (13) = 2.62, $p < .05$, increased with treatment. CAFAS scores indicated reduced impairment at school, t (13) = 2.11, $p < .05$, with fewer episodes of repeated disruptiveness in the classroom and a decline in non-compliant, truant and defiant behaviours. Similarly, reductions in moodiness, anxiety and depression were found, t (13) = 2.12, $p<.05$ (See Figure 2). Satisfaction questionnaires provided evidence that satisfaction with services received was high.





Discussion

Based on the findings, the frequency of rages exhibited by the children/youth declined from pre- to post- treatment. These frequencies were gauged by the actual explosions occurring with the current treatment in place and were not an estimate of perceived personal control. These rages reduced in frequency from 1 to 3 per week to 1 to 3 per month. These changes were still apparent at the 6-week follow-up. Moreover, treatment gains were noted with the reduction of attention and externalizing problems also declining over time, suggesting skills training with CPS is an effective treatment approach to address TS+ and IED related symptomatology in highly complex children and youth.

This research was funded in part by the Centre of Excellence, project Evaluation Grant # PEG 160206-006.