Introduction

Tourette’s Syndrome is a neurological disorder. A majority of patients seek medical treatment to manage tics (Piacentini & Chang, 2001). Tic symptoms also fluctuate as function of the environment (Lockman & Cohen, 1999) posing the possibility that a behavioral intervention may be effective in managing tics. Habit Reversal Training (HRT) (Azrin & Nunn, 1973) is a multi-component behavioral treatment package for suppressing nervous habits and tics by creating awareness of the behavior and engaging in an incompatible behavior, or competing response, to replace the nervous habit or tic. Studies using Habit Reversal Training have found the procedure to be effective for tics (Peterson, Campise, & Azrin, 1994; Piacentini & Chang, 2001; Woods & Miltenberger, 1995, 2001).

The competing response (CR) can be seen as a self-administered punishment, where through operant conditioning, tic frequency can be reduced (Miltenberger & Fuqua, 1985). Self-monitoring each time the tic occurs (Awareness Training) is a type of dissimilar competing response that may function as a punisher for the tic (Sharenos, Fuqua, & Miltenberger, 1989).

The purpose of the study is to reduce the frequency of motor tics in a 10-year-old boy diagnosed with Asperger’s Syndrome, Tourette Syndrome, Attention-Deficit/Hyperactivity Disorder and Anxiety Disorder.

Methods

Participant

Karl was a 10-year-old boy diagnosed with Asperger’s Syndrome, Tourette Syndrome, Attention-Deficit/Hyperactivity Disorder and Anxiety Disorder. Karl received approximately 3 hours of Applied Behavior Analysis (ABA) intervention per week.

Instructors

The researcher providing Applied Behavior Analysis (ABA) therapy and parents served as the instructors.

Setting

The study was conducted in the participant’s bedroom at home with the participant, researcher, and parent in the room.

Procedure

A single subject multiple baseline design across tics was implemented.

Awareness Training Condition

At the beginning of each session, the participant was instructed to engage in the incompatible behavior immediately after the occurrence of the tic (as an overcorrection procedure).

Eye Roll:

Eye Roll: Focusing both eyes on a point on the wall eye-level for 15-20 seconds or until urge passes.

Blinks:

Blinks: Gently and slowly close eyes and keep closed for three seconds. Repeat 2-3 times or until urge passes.

Reversal Back to Baseline

Rate per minute of individual tics was recorded.

Awareness Training Condition

At the beginning of each session, the participant was instructed to engage in the incompatible behavior immediately after the occurrence of the tic (as an overcorrection procedure).

Results and Discussion

Results

- Implementing awareness training sufficiently reduced the frequency of the target tic. By then introducing and teaching a competing response, the frequency of the target tic further decreased.

- After teaching a competing response for a target tic, the low frequency of tic occurrences maintained when reversing back to baseline in the same environment (in the participant’s home).

Limitations

- A limitation of the current study is the limited time due to training parents on the implementation of the procedure.

- Due to the time limitation, the experimental design was altered. The implementation of the competing response condition followed the awareness condition.

Future Research

- Future research should examine the frequency of the target tics in different environments outside of therapy as well as to use an experimental design to demonstrate experimental control.

Selective References


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