Tourette Syndrome: The Impact Of Co-Morbid Anxiety Symptoms

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Abstract

Children with Tourette syndrome (TS) often present with additional symptomatology indicative of co-morbid psychiatric problems and psychological difficulties (TS+). The current study was undertaken to explore the impact of TS+ in concert with clinical levels of anxiety, on the overall severity level of child/youth psychopathology. Participants included 76 children/youth referred to the "Brake Shop" service for TS+, a highly specialized outpatient clinic for clients with extreme needs. Using clinical scores of anxiety, children were divided into Anxious (A) and Non-Anxious (NA) groups. Clients and families completed various standardized measures at the time of referral. Results indicated that children in the "A" group were at a significantly higher risk for psychopathology indicative of significant depression, self-harm, ADHD symptomatology, social difficulties and poor adaptive functioning, compared to "NA" children/youth.

Introduction

A broad spectrum of psychological and behavioural disorders are often associated with TS. Studies have frequently reported the presence of obsessive-compulsive symptoms [10] Attention Deficit Hyperactivity Disorder [11], self-harm behaviour [11], depression [12], personality disorders [13], aggressive and antisocial behaviours and conduct disorders [14] in children with TS. Literature data reports a higher frequency of anxious traits in patients with Tourette compared with the general population[14]. The current study was designed to assess if clinical levels of anxiety would have an effect on the overall severity level of psychopathology in children/youth with TS+.

Method

Subjects were 62 males and 17 females (*M* = 11.97 years) referred to the "Brake Shop" service for TS+, a highly specialized, outpatient clinic for clients with extreme needs. At the time of referral, clients and their families/caregivers completed the following standardized measures: The Multidimensional Anxiety Scale for Children [15], the Asperger Syndrome Diagnostic Scale [16] the Child Depression Inventory [9], and the Adolescent Anger Rating Scale [17]. Children/youth with clinical scores of anxiety (scores >70) on the MASC were identified as the Anxious group (A), and children/youth with non-clinical anxiety levels (scores <65) were identified as the Non-Anxious group (NA).

Table 1
Measures

Child Depression Inventory (CDI)
The CDI is a 27-item inventory based on the Beck Depression Inventory. It contains the following subscales: Negative Mood, Interpersonal Problems, Ineffectiveness, Anhedonia, and Negative Self-Esteem.

The Multidimensional Anxiety Scale for Children (MASC)
The MASC is a self-report scale which assesses major areas of anxiety in children and youth ages 8-19. The MASC contains 39 items distributed across four major factors, three of which can be divided into two sub-factors. The factors include (1) physical symptoms (tense/restless and somatic/autonomic); (2) harm avoidance (perfectionism and anxious coping); (3) social anxiety (humiliation/rejection and public performance fears); and (4) separation anxiety.

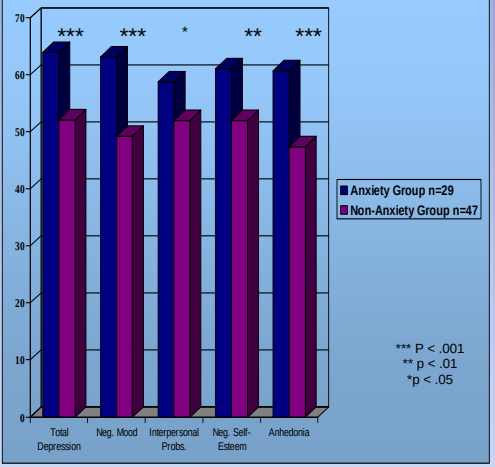
The Aspergers Syndrome Diagnostic Scale (ASDS)
The ASDS is made up of 50 yes/no questions. It provides an Aspergers syndrome Quotient that tells the likelihood that an individual has Asperger syndrome.

The Adolescent Anger Rating Scale (AARS)
The AARS is a 41-item instrument that assesses the intensity and frequency of anger expression in adolescents ages 11-19 years. It yields a score for Total Anger, Instrumental Anger, Reactive Anger, and Anger Control.

Results

Analyses of Variance indicated that children/youth in the "A" group, compared to those in the "NA" group, scored significantly higher on the CDI subscales Total Depression, F (1, 72) = 18.22, p < .001, Negative Mood, F (1, 72) = 19.90 , p < .001, Interpersonal problems, F (1, 72), = 3.87, p<.05, Negative Self-Esteem, F (1, 72) = 11.30 , p < .0001, and Anhedonia, F (1,72) = 20.90, p <. 01(See Figure 1) On the AARS a trend suggested that instrumental anger, F (1, 43) = 3.33, p< .10, was significantly higher for "A", compared to the "NA" group. On the ASDS, Social, F (1,74) = 9.41, p< .01, Maladaptive, F(1, 74) = 9.96, p< .01, and Aspergers syndrome Quotient, F(1, 74) = 8.49, p< .01 were all higher for the "A", compared to the "NA" group. The "A" group also reported higher scores on the ADHD Index, F (1, 33) = 4.17, p< .05, compared to the "NA" group.

Figure 1: Child Depression Index



Discussion

Children/youth with TS+ who presented with clinical levels of anxiety were at a significantly higher risk for psychopathology indicative of significant depression, self-harm, ADHD symptomatology, social difficulties and poor adaptive functioning, compared to non-anxious children/youth. Additionally, children/youth with co-morbid TS and anxiety exhibited features associated with Asperger's syndrome. Anxiety adversely influences the prognosis and appears to contribute to social deficits. Surprisingly, instrumental anger was higher in anxious children/youth, compared to non-anxious children/youth, which may reflect specific coping approaches and styles when dealing with stressful circumstances (i.e. 'using' aggression to achieve anxiety-reducing ends). The importance of comprehensive assessment and individualized treatment plans must be developed to suite the specialized needs of children/youth with Tourette syndrome and associated disorders.

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