Social skills, executive function and obsessive behavior in 22q11 deletion syndrome

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22q11 deletion syndrome is characterized by an increased risk for attention-deficit disorder (ADD) and obsessive-compulsive disorder (OCD). Further, the syndrome is often found to be associated with a neuropsychological profile commensurate with non-verbal learning disorder (NLD). A central feature of NLD is poor social skills.

In this study we present some preliminary results, attempting to contribute to a further delineation of the behavioral profile of children with 22q11 deletion. This is accomplished by screening for indices of executive dysfunction, poor social skills and “insistence on sameness”.

Background

22q11 deletion syndrome is characterized by an increased risk for attention-deficit disorder (ADD) and obsessive-compulsive disorder (OCD). Further, the syndrome is often found to be associated with a neuropsychological profile commensurate with non-verbal learning disorder (NLD). A central feature of NLD is poor social skills.

Method

Parents of 35 children with 22q11 deletion syndrome (aged 3-18 years) participated by completing the Brown Attention-Deficit Disorder Scales and Childhood Routines Inventory (CRI) for the preschool children.

Behavior Rating Inventory of Executive Function (BRIEF) and the Leyton obsessive inventory – child version, were completed for the school-aged children.

All participants completed the Social Skills Rating System (SSRS).

Results

72% of the children aged 6-18 years (N=25) were reported to have a global executive functioning within the clinical range. There were indices of changes across age groups. The 6-10 year olds (N=12) had behavior regulation difficulties (BRI: inhibit, shift emotional control) as the most frequent problem area.

77% of the 11-18 year olds (N=13) had metacognition (MI: initiate, working memory, plan/organize, organization of materials, monitor) as the most frequent index within the clinical range.

44% of the preschoolers (N=9) had results indicating executive dysfunction (by applying a T score value >64).

31% of all children (N=35) were reported to have low social skills. 17% reported a high degree of behavioral difficulties.

24% of the school aged children (N=25) were reported to have difficulties, indicating a possible obsessive disorder.

20% of the preschool children (N=10) had scores within the clinical range on “insistence on sameness” and “repetitive behaviors”.

Behavior Regulation Index: inhibition, shift and emotional control

Metacognition: the ability to self-manage tasks and monitor performance, which relates to the ability to actively problem solve in a variety of contexts.

Possible obsessive disorder in 25 school aged children

Possible obsessive disorder
No indication

Conclusions

These preliminary results, indicates a very high incidence of executive dysfunction in the children with 22q11 deletion syndrome. More information is needed about the relation between executive dysfunction, social skills and obsessive behavior.