

Asperger's and ADD Differences and Similarities- Preliminary Observations

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Introduction

Autistic spectrum disorders are characterized by primary deficits in the ability to interpret, initiate and maintain social interactions, handle anxiety, and sustain external attention. Asperger's do not have the language delays that are characteristic of autism. They exhibit the classic symptoms of Attention Deficit Disorder and are often diagnosed first as ADHD.

In Asperger's, anxiety in social situations appears to be at the core of their difficulties. In ADD, anxiety can be a protective factor that can result in the child doing well academically and not acting out.

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Findings

Preliminary observations concerning the EEG in Asperger's appears to be showing slowing (theta and alpha) in the right parietal and temporal areas (P4, T6) and, at times, frontally at F3 and F4. There are also findings of comodulation (spectral correlation) differences including hyper-comodulation between P4, C4 and F4 and a comodulation 'disconnect' between the right cerebral hemisphere sites and the left frontal area. However, these children also show the

characteristic patterns seen in ADD with slowing at C3, Cz and C4, and/or at F3 and Fz with a 'dip' in 13-15 Hz (SMR) across the central region (C3, Cz and C4). On intellectual and academic testing Asperger's children often show excellent verbal and reading capacities (left hemisphere strengths) and they tend to have symptoms of non-verbal learning disabilities (right hemisphere problems). The ADD children, on the other hand, may perform well on non-verbal performance tasks but demonstrate increased incidence of preschool speech disorders (Love & Thompson) and reading difficulties in the early school years.

Discussion

In Asperger's and ADD excess slow wave activity corresponds to being more in their own world; low SMR is consistent with fidgety and impulsive behaviour and also with the tactile sensitivity exhibited by many; high left prefrontal and frontal slow wave activity is consistent with lack of appropriate inhibition. In Asperger's high slow wave activity in right parietal-temporal area is consistent with inability to interpret social cues and emotions. Improved social interaction found in conjunction with EEG shifts makes sense: more activation means more alert to the outside world and thus better able to benefit from socialization efforts.

References

Love, A. J. & Thompson, M. G. G. (1988). Language disorders and Attention Deficit Disorders in a child psychiatric outpatient population. *American Journal of Orthopsychiatry*, 58 (1).