

# Autism and early development in adults with schizophrenia

## Methodological and clinical aspects

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**Background:** Typical symptoms of schizophrenia usually appear in young adult life, but problems with social interaction, activity control, motor performance, and cognition have often been noted in childhood. This thesis explores similarities and differences regarding early development between individuals with clinical diagnoses of schizophrenia and Asperger syndrome (a clinical variant of autism spectrum disorder/ASD). **Methods:** In one substudy, a Swedish version of the “Reading the Mind in the Eyes Test”, was completed by 158 university students with a view to assessing the psychometric properties of this instrument before applying it in a clinical setting. Fifty-eight of these students completed the test twice, three weeks apart. The Bland Altman test-retest reliability method was used. For the other three substudies 46 individuals (29 men, 17 women) with a clinical diagnosis of schizophrenic psychosis (SP) and 54 (26 men, 28 women) with a clinical diagnosis of Asperger syndrome (AS) were included. In 70% of those with SP and 83% of those with AS, collateral information was provided by parents. The Diagnostic Interview for Social and Communication disorders – eleventh version (DISCO-11) was used when interviewing these relatives. This instrument covers childhood development, adaptive functioning, and symptoms of ASD – current and lifetime. There is a strict algorithm for ASD diagnosis. The clinical schizophrenia diagnoses were confirmed or rejected using the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I). The rate of clinically diagnosed ADHD (and its relation to nicotine use) in adults with SP and with AS was also examined. **Results:** Test-retest findings using the Reading the Mind in the Eyes Test showed that test score variation in the range of  $\pm 4$  (out of 24 possible) is to be expected for the same individual. Thirteen of the 32 cases with SP examined had a DISCO-algorithm diagnosis of ASD. Focusing only on those for whom a schizophrenic psychosis (schizophrenia paranoid or undifferentiated subtype, schizoaffective disorder or schizophreniform disorder) was confirmed by SCID and for whom a DISCO-interview was obtained, 52% met criteria for an ASD diagnosis. The deficits in quality of friendship and social interaction as well as the restricted interests were similar/identical to those found in individuals with AS. These deficits were present prior to the psychosis according to the parental interviews. Ten per cent of the schizophrenia group and 30% of the AS group had a clinical ADHD diagnosis. Nicotine use was common in individuals with schizophrenia, and in the Asperger syndrome group with co-existing ADHD. **Conclusions:** The Reading the Mind in the Eyes Test had poor psychometric properties and was not considered appropriate as a reliable measure of core ASD social interaction problems. Half of the cases with SCID-I verified schizophrenic psychosis had ASD according to the results of the parental interview. The findings suggest the need to revisit the DSM dichotomy between ASD and schizophrenia. Furthermore, ADHD was not uncommon in schizophrenia and quite common in AS, underscoring the need for a full appraisal of childhood onset neurodevelopmental disorders (including ADHD), whenever diagnoses of schizophrenia or ASD are considered in clinical practice.

**Keywords:** Schizophrenia, Asperger syndrome, Autism spectrum disorder, ADHD, Reading the Mind in the Eyes Test, Diagnostic Interview for Social and Communication disorders, Nicotine

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- II. Maria Unenge Hallerbäck, Tove Lugnegård, Christopher Gillberg. Is autism spectrum disorder common in schizophrenia? *Psychiatry Research* 2012 (in press)
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