Published articles reporting research using the Diagnostic Interview for Social and Communication Disorders (DISCO)


Abstract
Background: Few studies have looked at the very long-term outcome of individuals with autism who were diagnosed in childhood.

Methods: A longitudinal, prospective, community-based follow-up study of adults who had received the diagnosis of autism (classic and atypical) in childhood (n = 105) was conducted. A structured interview (the Diagnostic Interview for Social and Communication disorders – the DISCO) was used in order to evaluate symptoms and symptom patterns 13–22 years after original diagnosis. Childhood measures, including IQ-level at time of childhood diagnosis and communicative speech registered before age 5 years, were studied in relation to the presence of autism symptoms at follow-up.

Results: The classical and atypical autism groups were fairly homogeneously impaired in terms of symptoms in the social interaction category whereas other common childhood autism symptoms, including maladaptive and stereotyped behaviours, were more variable in the study group at follow-up. Odd responses to sensory stimuli were still extremely common. Speech before 5 years of age, IQ, gender, diagnosed medical disorder and onset of epilepsy before 5 years were variables that correlated to outcome on the DISCO algorithm for autistic spectrum disorders (Wing & Gould, 1979) concerning style and quality of social interaction, communication style and pattern of self-chosen activities.

Conclusions: Social interaction problems were still present in the vast majority of adults with autism/atypical autism, but behavioural impairments were much more variable in adulthood. Almost all cases were reported to show persistent perceptual problems. Certain childhood measures were found to prospectively predict adult social interaction style, communication type, and pattern of self-chosen activities, which still met diagnostic criteria for autism/atypical autism in adulthood.


Abstract
Context To our knowledge, there is no published information on the epidemiology of autism spectrum disorders (ASDs) in adults. If the prevalence of autism is increasing, rates in older adults would be expected to be lower than rates among younger adults.

Objective To estimate the prevalence and characteristics of adults with ASD living in the community in England.

Design A stratified, multiphase random sample was used in the third national survey of psychiatric morbidity in adults in England in 2007. Survey data were weighted to take account of study design and nonresponse so that the results were representative of the household population.

Setting General community (ie, private households) in England.

Participants Adults (people 16 years or older).

Main Outcome Measures Autism Diagnostic Observation Schedule, Module 4 in phase 2 validated against the Autism Diagnostic Interview–Revised and Diagnostic Interview for Social and Communication Disorders in phase 3. A 20-item subset of the Autism–Spectrum Quotient self-completion questionnaire was used in phase 1 to select respondents for phase 2. Respondents also provided information on sociodemographics and their use of mental health services.

Results Of 7461 adult participants who provided a complete phase 1 interview, 618 completed phase 2 diagnostic assessments. The weighted prevalence of ASD in adults was estimated to be 9.8 per 1000 (95% confidence interval, 3.0-16.5). Prevalence was not related to the respondent's age. Rates were higher in men, those without educational qualifications, and those living in rented social (government-financed) housing. There was no evidence of increased use of services for mental health problems.

Conclusions Conducting epidemiologic research on ASD in adults is feasible. The prevalence of ASD in this population is similar to that found in children. The lack of an association with age is consistent with there having
been no increase in prevalence and with its causes being temporally constant. Adults with ASD living in the community are socially disadvantaged and tend to be unrecognized.

Autism spectrum disorders (ASDs) are neurodevelopmental disorders characterized by impairment of reciprocal social interaction and communication and restricted repetitive behaviors. They have persisting negative effects on learning and development of independence in adulthood. In 2007, the yearly cost to society of each adult with ASD in Great Britain was estimated to be £90 000. Adults with ASDs are more likely to be recognized and supported if they also have severe intellectual disability; those with higher levels of functioning tend to be overlooked in the community.

In childhood, ASDs are associated with intellectual disability and male sex. More recent surveys report higher prevalence estimates. In children, the median rate in 16 surveys published between 1966 and 1991 was 4.4 per 10 000 population; the median rate in 16 surveys published between 1992 and 2001 was 12.7 per 10 000. In 3 recent large regionwide or national community surveys of children and adolescents in England, the prevalence of ASD was approximately 10 per 1000. It is not known whether this reported increased prevalence reflects case finding changes or increasing incidence due to newly emerging causes. Among intellectually disabled adults (<0.5% of the overall adult population), a rate of 75 per 1000 was obtained from an intellectual disability case register that incorporated identification from direct observation, detailed case records, and interviews with caregivers. Although adults with ASD have been studied across a range of age groups, there is no information about community prevalence across the age range in that population. Adults in Great Britain who have responded to postal and online surveys stating that they have ASD are more often male (2:1), rarely 65 years or older, and rarely in full-time employment. They tend to have been given a diagnosis of high-functioning autism or Asperger syndrome, with only 1 in 5 in receipt of psychological or psychiatric services.

Cases of ASD in surveys of children have been identified using direct observation and collateral descriptions of behavior (from parents and teachers), techniques that are less feasible in adults. We used a multiple-phase design: an initial screening phase of adults in the community, a direct observation second phase, and developmental interviews of collateral informants in a third phase.

We hypothesized that, in the community, the rate of ASDs in early adulthood would be similar to that reported in older children but that far fewer cases would be found among older adults, particularly those in the retirement age range. We also hypothesized that adults with ASDs would be more likely to be male and disadvantaged socioeconomically and less likely to be receiving support from mental health services than adults with other mental disorders.


Abstract
Summary: Purpose: Little is known about the long-term outcome of epilepsy in autism and the epilepsy characteristics of adults with autism. This prospective population-based study was conducted in an attempt to point out differences on a group basis between adults with autism with or without epilepsy, and to describe the occurrence, the seizure characteristics, and the outcome of epilepsy in autism.

Methods: One hundred eight of 120 individuals with autism diagnosed in childhood and followed up prospectively for a period of 13–22 years were reevaluated at ages 17–40 years. As adults, the majority had mental retardation and autistic disorder or autistic-like condition. Interviews were performed with the caretakers of 42 of 43 individuals with a history of epilepsy, and their medical records were reviewed.

Results: Adults with autism and mental retardation constituted a severely disabled group. On a group basis, both the cognitive level and the adaptive behavior level were lower in the epilepsy group than in the nonepilepsy group (p < 0.05). In all, 38% had epilepsy. One third had epilepsy onset before age 2 years. Remission of epilepsy was seen in 16%. Partial seizures with or without secondarily generalized seizures were the dominating seizure type.

Conclusions: In a community sample of individuals with autism followed up from childhood through to adult age, one of three had epilepsy since childhood/adolescence. Severe mental retardation and autism are significantly associated with epilepsy, especially in female patients. Seizure frequency has a great impact on the individuals' lives. Specialist medical care is needed in this severely communication-disabled population.
Abstract
Only case reports have described the co-occurrence of gender identity disorder (GID) and autism spectrum disorders (ASD). This study examined this co-occurrence using a systematic approach. Children and adolescents (115 boys and 89 girls, mean age 10.8, SD = 3.58) referred to a gender identity clinic received a standardized assessment during which a GID diagnosis was made and ASD suspected cases were identified. The Dutch version of the Diagnostic Interview for Social and Communication Disorders (10th rev., DISCO-10) was administered to ascertain ASD classifications. The incidence of ASD in this sample of children and adolescents was 7.8% (n = 16). Clinicians should be aware of co-occurring ASD and GID and the challenges it generates in clinical management.


Abstract
DSM-IV states that Asperger Disorder may be distinguished from Autistic Disorder by a lack of a delay in early language development. The aim of this study was to establish whether the presence or absence of early language delay would predict autistic symptomatology in children diagnosed with a PDD/autism spectrum disorder. Forty-six language-delayed and 62 normal language onset individuals (M age 11 years) were compared on ICD-10 research criteria and DSM-IV criteria, receptive language, and developmental history variables. Retrospective data were also obtained to determine whether language onset predicted autism symptomatology when young (<6 years). We found that early language delay predicts more autistic symptomatology when young, but not at an older age. Early language delay is also associated with developmental motor milestone delays and lower receptive language abilities. The results question the use of early language delay as a valid discriminating variable between PDD subgroups.


Abstract
The Faroe Islands are considered to be a genetic isolate. This population study of the prevalence of autism sought to identify a representative cohort for future genetic studies. In 2002 all schools were screened for autism spectrum disorders. The target population were all children born in 1985 through 1994 and living in the Faroe Islands on December 31, 2002. Children who screened positive for autism characteristics were examined using the Diagnostic Interview for Social and Communication Disorders (DISCO). Of the children aged 8 through 17 years, 0.56% had childhood autism, Asperger syndrome or atypical autism. The male:female ratio was just under 6:1. The prevalence of autism in the Faroe Islands was very similar to that reported from many western countries.


Abstract
Background: Repetitive behaviours are an essential part of the diagnosis of autism but are also commonly seen in typically developing children. The current study investigated the frequency and factor structure of repetitive behaviours in a large community sample of 2-year-olds.

Methods: A new measure, the Repetitive Behaviour Questionnaire (RBQ-2) was completed by 679 parents.
Results: The RBQ-2 had good psychometric properties. A four-factor model provided the best fit for the data, accounting for 51% of the variance, and suggested 4 sub-scales: unusual sensory interests, repetitive motor movements, rigidity/adherence to routine and preoccupations with restricted patterns of interest. These sub-scales closely resembled repetitive behaviour subtypes within the ICD-10 criteria for autism. Repetitive behaviours of every type were frequently reported. Higher scores were found for all children, and especially boys, on the subscale relating to preoccupations with restricted patterns of interests.

Conclusion: The results support the proposal that repetitive behaviours represent a continuum of functioning that extends to the typically developing child population.


Abstract

Associations between fetal alcohol syndrome (FAS) and other conditions have been reported, but the links between FAS and autistic spectrum disorders (ASD) remain unclear. This study explored the relationship between FAS and ASD in individuals attending a specialist diagnostic clinic. Consecutive referrals over 24 months to a specialist neurodevelopmental clinic were evaluated using gold standard methods for FAS diagnosis and ASD. The first 18-month cohort who met criteria for ASD were compared with controls attending the same clinic but who had not experienced prenatal alcohol exposure (nested data). Data for the whole group were also collected. Twenty-one fetal alcohol spectrum disorder (FASD) individuals were assessed and 16 (72%) met ICD-10 criteria for childhood autism. Further significant differences between the prenatally exposed and non-exposed group with ASD were found in the nested study. The research shows an association between heavy prenatal alcohol exposure and ASD. As this is a small sample in a specialist clinic, the study suggests that a larger, more population-based study of those exposed to heavy prenatal alcohol is warranted.


Abstract

Psychometric properties of the Diagnostic Interview for Social and Communication Disorders schedule (DISCO) have only been studied in the UK. The authorised Swedish translation of the tenth version of the DISCO (DISCO-10) was used in interviews with close relatives of 91 Swedish patients referred for neuropsychiatrical assessment. Validity analysis compared DISCO-10-algorithm diagnoses with clinical diagnoses and with Autism Diagnostic Interview Revised (ADI-R) algorithm diagnoses in 57 cases. Good-excellent inter-rater reliability was demonstrated in 40 cases of children and adults. The criterion validity was excellent when compared with clinical diagnoses and an investigator-based diagnostic interview. The DISCO-10 has good psychometric properties. Advantages over the ADI-R include valuable information of the broader autism phenotype and co-existing problems for clinical practice and research.


Abstract

Comprehensive data on the developmental history and current behaviours of a large sample of high-functioning individuals with diagnoses of autism, Asperger's syndrome, or other related disorder were collected via parent interviews. This provided the basis for a taxonomic analysis to search for subgroups. Most participants also completed theory of mind tasks. Three clusters or subgroups were obtained; these differed on theory of mind performance and on verbal abilities. Although subgroups were identified which bore some relationship to clinical differentiation of autistic, Asperger syndrome, and Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS) cases, the nature of the differences between them appeared strongly related to ability variables. Examination of the kinds of behaviours that differentiated the groups suggested that a spectrum of autistic disorders on which children differ primarily in terms of degrees of social and cognitive impairments could explain the findings.
Abstract

**Aim:** To compare developmental and psychological functioning in two groups of children with autism spectrum disorder (asd), one with epilepsy and one without.

**Methods:** Sixty 7–17-year-old children in each group were recruited through a range of services in order to screen as representative a sample as possible. Parents were interviewed using the diagnostic interview for social and communication disorders (DISCO-11), and children were clinically examined and their medical histories assessed.

**Results:** The asd and epilepsy (asd+e) group demonstrated a substantially more even gender ratio, with a greater proportion of girls. They were more likely to have received later asd diagnoses and additional medical diagnoses. They also showed more motor difficulties, developmental delays and challenging behaviours, but were no more likely to be aloof and passive. The asd-only group experienced more abnormal fascinations with objects and used brief glances as a means of eye contact more than the asd+e group.

**Conclusion:** Results support important between-group differences with diagnostic and therapeutic implications. asds often present atypically in children with seizures. However, both groups showed widely varying social and linguistic presentations.