Abstracts of all the articles from the reference section of ADI-R Encyclopaedia


Abstract
Evidence suggests that autism is associated with impaired emotion perception, but it is unknown how early such impairments are evident. Furthermore, most studies that have assessed emotion perception in children with autism have required verbal responses, making results difficult to interpret. This study utilized high-density event-related potentials (ERPs) to investigate whether 3-4-year-old children with autism spectrum disorder (ASD) show differential brain activity to fear versus neutral facial expressions. It has been shown that normal infants as young as 7 months of age show differential brain responses to faces expressing different emotions. ERPs were recorded while children passively viewed photos of an unfamiliar woman posing a neutral and a prototypic fear expression. The sample consisted of 29 3-4-year-old children with ASD and 22 chronological age-matched children with typical development. Typically developing children exhibited a larger early negative component (N300) to the fear than to the neutral face. In contrast, children with ASD did not show the difference in amplitude of this early ERP component to the fear versus neutral face. For a later component, typically developing children exhibited a larger negative slow wave (NSW) to the fear than to the neutral face, whereas children with autism did not show a differential NSW to the two stimuli. In children with ASD, faster speed of early processing (i.e. N300 latency) of the fear face was associated with better performance on tasks assessing social attention (social orienting, joint attention and attention to distress). These data suggest that children with ASD, as young as 3 years of age, show a disordered pattern of neural responses to emotional stimuli.


Abstract
The Pre-Linguistic Autism Diagnostic Observation Schedule (PL-ADOS) is a semistructured observation scale designed for use as a diagnostic tool for children less than 6 years old who are not yet using phrase speech and are suspected of having autism. The PL-ADOS takes approximately 30 minutes to administer and is appropriate for use with this population because of its emphasis on playful interactions and the use of toys designed for young children. Reliability studies indicated that both individual activity ratings and summary ratings could be reliably scored from videotaped assessments by naive raters. Additionally, PL-ADOS scores of nonverbal preschool-aged children referred for clinical diagnosis and classified on the basis of a diagnostic team's clinical judgment, clearly discriminated between autistic and nonautistic developmentally disabled children. The resulting diagnostic algorithm is theoretically linked to diagnostic constructs associated with ICD-10 and DSM-IV criteria for autism.

Abstract
Autism Diagnostic Observation Schedule (ADOS) Modules 1-3 item and domain total distributions were reviewed for 1,630 assessments of children aged 14 months to 16 years with an autism spectrum disorder (ASD) or with heterogeneous non-spectrum disorders. Children were divided by language level and age to yield more homogeneous cells. Items were chosen that best differentiated between diagnoses and were arranged into domains on the basis of multi-factor item-response analysis. Reflecting recent research, the revised algorithm now consists of two new domains, Social Affect and Restricted, Repetitive Behaviors (RRB), combined to one score to which thresholds are applied, resulting in generally improved predictive value.


Abstract
Autism Diagnostic Interview-Revised (Rutter et al. in Autism diagnostic interview-revised. Western Psychological Services, Los Angeles, 2003) diagnostic algorithms specific to toddlers and young preschoolers were created using 829 assessments of children aged from 12 to 47 months with ASD, nonspectrum disorders, and typical development. The participants were divided into three more homogeneous groups by language level and age. Items that best differentiated the diagnostic groups were selected and arranged into domains based on multifactor item-response analyses. Using the new algorithms for toddlers and preschool children, we were able to improve sensitivity and specificity compared to the previously developed algorithm.


Abstract
Purpose of this study was to systematically examine combined use of the Autism Diagnostic Interview-Revised (ADI-R) and Autism Diagnostic Observation Schedule (ADOS) for children under age 4 using newly developed and revised diagnostic algorithms. Single and combined use of the ADI-R and ADOS algorithms were compared to clinical best estimate diagnoses for 435 children with autism spectrum disorders (ASD), 113 children with nonspectrum disorders, and 47 children with typical development from 12 to 47 months of age. Sequential strategies to reach a diagnostic decision by prioritizing administrations of instruments were also evaluated. Well-balanced sensitivities and specificities above 80% were obtained for ASD diagnoses using both instruments. Specificities significantly improved when both instruments were used compared to one. Scores that can be used to systematically prioritize administrations of instruments were identified. The ADI-R and ADOS make independent, additive contributions to more accurate diagnostic decisions for
clinicians evaluating toddlers and young preschoolers with ASD. Sequential assessment strategies using the scores identified may be appropriate for some children.


Abstract
Data from 10 sites of the NICHD/NIDCD Collaborative Programs of Excellence in Autism were combined to study the distribution of head circumference and relationship to demographic and clinical variables. Three hundred thirty-eight probands with autism-spectrum disorder (ASD) including 208 probands with autism were studied along with 147 parents, 149 siblings, and typically developing controls. ASDs were diagnosed, and head circumference and clinical variables measured in a standardized manner across all sites. All subjects with autism met ADI-R, ADOS-G, DSM-IV, and ICD-10 criteria. The results show the distribution of standardized head circumference in autism is normal in shape, and the mean, variance, and rate of macrocephaly but not microcephaly are increased. Head circumference tends to be large relative to height in autism. No site, gender, age, SES, verbal, or non-verbal IQ effects were present in the autism sample. In addition to autism itself, standardized height and average parental head circumference were the most important factors predicting head circumference in individuals with autism. Mean standardized head circumference and rates of macrocephaly were similar in probands with autism and their parents. Increased head circumference was associated with a higher (more severe) ADI-R social algorithm score. Macrocephaly is associated with delayed onset of language. Although mean head circumference and rates of macrocephaly are increased in autism, a high degree of variability is present, underscoring the complex clinical heterogeneity of the disorder. The wide distribution of head circumference in autism has major implications for genetic, neuroimaging, and other neurobiological research.


Abstract
The reliable diagnosis of Autism/Autism Spectrum Disorder in pre-school children is important for access to early intervention and for accurate ascertainment for research. This paper explores the combined use of two standardised assessment instruments--the Autism Diagnostic Interview Revised (ADI-R) and the Autism Diagnostic Observation Schedule (ADOS)--in a large sample of pre-school children. The children were recruited to research studies, and a 'best estimate' clinical diagnosis reached. The findings show good agreement between the instruments especially for children with core Autism. The instruments appear to have a complementary effect in aiding diagnosis and confirm the importance of a multidisciplinary assessment process with access to information from different sources and settings. The presence of repetitive behaviours during the ADOS appeared of diagnostic significance.

Abstract
The development of a new standardized investigator-based interview for use in the differential diagnosis of pervasive developmental disorders is described, together with a diagnostic algorithm (using ICD-10 criteria) based on its use. Good interrater reliability for algorithm items was shown between four raters, two in Canada and two in the UK, who rated 32 videotaped interviews. The items also significantly discriminated between 16 autistic and 16 nonautistic mentally handicapped subjects. The algorithm based on ICD-10 identified all 16 autistic individuals and none of the 16 nonautistic subjects.


Abstract
Describes the Autism Diagnostic Interview-Revised (ADI-R), a revision of the Autism Diagnostic Interview, a semistructured, investigator-based interview for caregivers of children and adults for whom autism or pervasive developmental disorders is a possible diagnosis. The revised interview has been reorganized, shortened, modified to be appropriate for children with mental ages from about 18 months into adulthood and linked to ICD-10 and DSM-IV criteria. Psychometric data are presented for a sample of preschool children.


Abstract
The use of an investigator-based interview (Autism Diagnostic Interview—Revised; ADI-R) in the diagnosis of 51 autistic and 43 nonautistic mentally handicapped preschool children of equivalent mental and chronological age is described. Significant differences occurred between the groups on every diagnostic subdomain from the DSM-IV/ICD-10 draft criteria, except specific aspects of stereotyped language, still relatively rare in these young children. All but one of the 51 children judged to be autistic by clinical observation and only two of the 30 nonautistic mentally handicapped children with mental ages of 18 months or higher met criteria for autism on an algorithm to DSM-IV/ICD-10 draft criteria. However, discrimination using domain totals between autistic and the 13 nonautistic, nonverbal mentally handicapped children with mental ages under 18 months was poor. Quality of social overtures to adults and peers, play, and unusual sensory behaviors and mannerisms continued to differentiate these two groups. The relevance of these findings to the diagnosis of autism in preschool children is discussed.

Abstract

BACKGROUND: Standard case criteria are proposed for combined use of the Autism Diagnostic Interview-Revised and Autism Diagnostic Observation Schedule to diagnose autism and to define the broader category of autism spectrum disorders.

METHOD:

Single and combined Autism Diagnostic Interview-Revised and Autism Diagnostic Observation Schedule algorithms were compared to best estimate diagnoses in four samples: U.S. (n = 960) and Canadian (n = 232) participants 3 years and older, U.S. participants younger than 36 months (n = 270), and U.S. participants older than 36 months with profound mental retardation (n = 67).

RESULTS:

Sensitivities and specificities of 80% and higher were obtained when strict criteria for an autism diagnosis using both instruments were applied in the U.S. samples, and 75% or greater in the Canadian sample. Single-instrument criteria resulted in significant loss of specificity. Specificity was poor in the sample with profound mental retardation. Lower sensitivity and specificity were also obtained when proposed criteria for broader spectrum disorders were applied.

CONCLUSIONS:

The Autism Diagnostic Interview-Revised and Autism Diagnostic Observation Schedule make independent, additive contributions to the judgment of clinicians that result in a more consistent and rigorous application of diagnostic criteria.


Abstract

Autistic spectrum disorders (ASD) can be difficult to diagnose in toddlers. This study compared diagnostic measures (ADOS-G, ADI-R, CARS, and clinical judgment using DSM-IV criteria) applied to toddlers. Results indicated that the ADOS-G, CARS, and clinical judgment agreed with each other but not with the ADI-R. Many of the children classified with ASD by the other measures were not classified with autism by the ADI-R because they did not display enough repetitive behaviors and stereotyped interests. These results indicate that young children with ASD may not display repetitive behaviors and stereotyped interests, and for toddlers, the ADI-R would have a higher sensitivity if revised to include a diagnosis of PDD-NOS, for which the requirement of repetitive behaviors is less stringent.

Abstract
Past research shows poor agreement between the Autism Diagnostic Interview-Revised (ADI-R) and other diagnostic measures in toddlers. Our goal was to examine whether exclusion of the ADI-R behavioral domain results in improved diagnostic agreement. Toddlers aged 16-37 months (M = 26 months) received an evaluation because they failed the Modified Checklist for Autism in Toddlers (n = 142). Evaluations included the ADI-R, Autism Diagnostic Observation Schedule, Childhood Autism Rating Scale, and clinical judgment. Results found poor to fair agreement between the ADI-R and other measures; agreement improved when the ADI-R behavioral domain was excluded. These findings suggest that stereotyped interests and behaviors are not as relevant to the ADI-R as other diagnostic criteria when evaluating toddlers for autism spectrum disorders.