

## **Articles Presenting Research on the ASQ / SCQ Autism Screening Questionnaire / Social Communication Questionnaire**

Rutter, M., Bailey, A., & Lord, C. (2003). *SCQ: Social Communication Questionnaire*. Western Psychological Services: Los Angeles, CA.  
Manual for the SCQ.

Berument, S. K., M. Rutter, et al. (1999). "Autism screening questionnaire: diagnostic validity." *British Journal of Psychiatry* **175**: 444-451.

Background Good interview and diagnostic measures for autism and other pervasive developmental disorders (PDDs) are available but there is a lack of a good screening questionnaire. Aims To develop and test a screening questionnaire based on items in the best available diagnostic interview - the Autism Diagnostic Interview - Revised (ADI-R). Method A 40-item scale, the Autism Screening Questionnaire (ASQ), was developed and tested on a sample of 160 individuals with PDD and 40 with non PDD diagnoses. Results The ASQ has good discriminative validity with respect to the separation of PDD from non-PDD diagnoses at all IQ levels, with a cut-off of 15 proving most effective. The differentiation between autism and other varieties of PDD was weaker. Conclusions The ASQ is an effective screening questionnaire for PDD. Declaration of interest The study was supported by the Medical Research Council.

### **Major Articles Using the ASQ/SCQ**

Barrett, S., M. Prior, et al. (2004). "Children on the borderlands of autism - Differential characteristics in social, imaginative, communicative and repetitive behaviour domains." *Autism* **8**(1): 61-87.

A sample of 37 children aged 4-7 years who all showed some autistic features was investigated. Children with a primary diagnosis of autism were compared with those diagnosed with a language disorder, on behaviours within four domains; social behaviour, imaginative activities, repetitive behaviour and communication. The aim was to identify potentially differentiating features of the two groups using observational ratings and questionnaire measures provided by parents and teachers. Information on participants' intelligence and language skills was also collected. The children with autism showed greater deficits in joint attention, functional play and pragmatic language, and engaged in more repetitive behaviours, than the language disordered children. However, the groups did not differ significantly on formally assessed language skills. A cluster analysis produced three groups of children varying in level of functioning and parent-rated behaviours. The results are informative for clinicians dealing with the challenge of differential diagnosis.

Bishop, D. V. M. and C. F. Norbury (2002). "Exploring the borderlands of autistic disorder and specific language impairment: a study using standardised diagnostic

instruments." Journal of Child Psychology and Psychiatry and Allied Disciplines **43**(7): 917-929.

Background: Two studies were conducted to test claims that pragmatic language impairment (PLI-previously referred to as semantic-pragmatic disorder) is simply another term for autistic disorder or pervasive developmental disorder not otherwise specified (PDDNOS). Method: In Study 1, 21 children aged from 6 to 9 years with language impairments were subdivided on the basis of the Children's Communication Checklist into 13 cases of pragmatic language impairment (PLI) and eight cases of typical specific language impairment (SLI-T). Parents completed the Autism Diagnostic Interview Revised (ADI-R) and the Social Communication Questionnaire (SCQ), and the children were given the Autism Diagnostic Observation Schedule - Generic (ADOS-G). In Study 2, a further 11 children with SLI-T and 18 with PLI were assessed using the SCQ and ADOS-G. In addition, six children diagnosed with high-functioning autism and 18 normally developing children were assessed. Results: There was good agreement between ADI-R and SCQ diagnoses, but poor agreement between diagnoses based on these parental report measures and those based on ADOS-G. In many children, symptom profiles changed with age. Four PLI children from Study I and one from Study 2 met criteria for autistic disorder on both parental report (ADI-R or SCQ) and ADOS-G. Many of the others showed some autistic features, but there was a subset of children with pragmatic difficulties who were not diagnosed as having autism or PDDNOS by either instrument. These children tended to use stereotyped language with abnormal intonation/prosody, but they appeared sociable and communicative, had normal nonverbal communication, and showed few abnormalities outside the language/social communication domains. Conclusions: Presence of pragmatic difficulties in a child with communication problems should prompt the clinician to evaluate autistic symptomatology, but it is dangerous to assume that all children with pragmatic difficulties have autism or PDDNOS.

Bolte, S., K. Crecelius, et al. (2000). "The Questionnaire on Behaviour and Social Communication (VSK): An autism screening instrument for research and practice." Diagnostica **46**(3): 149-155.

The psychometric properties of the Questionnaire on Behaviour and Social Communication (VSK), a German adaptation of the Autism Screening Questionnaire (ASQ), were investigated in this study. It is a 40-item parent-report instrument derived from the Autism Diagnostic interview-Revised (ADI-R) to screen for autism. In a sample of 83 subjects showing autism or autistic features the instrument had an internal consistency of  $\alpha=.85$ , with items mostly being average in difficulty and all item-total correlations exceeding  $r=.40$ . Stability after an interval of 12-24 months in a small subsample of 17 subjects was  $r(ii)=.74$ . The convergence with the ADI-R reached  $r=.66$ . The total score of the questionnaire discriminated highly significantly between 72 autistic subjects, 20 non-autistic/cognitive impaired subjects ( $IQ<85$ ), 26 mixed-clinical subjects and 22 normal controls. A cut-off of 17 had a specificity of 99% and a sensitivity of 92%. Data suggest that the Questionnaire on Behaviour and Social Communication is a valuable tool to generate suspicion of autism for different clinical or research purposes.

Brereton, A. V., B. J. Tonge, et al. (2002). "Screening young people for autism with the developmental behavior checklist." Journal of the American Academy of Child and Adolescent Psychiatry **41**(11): 1369-1375.

Objective: To determine whether a subset of items from the Developmental Behavior Checklist (DBC) could be selected to construct a reliable autism screening tool. Method: A 29-item scale-the Developmental Behavior Checklist-Autism Screening Algorithm (DBC-ASA)-was developed by using items from the DBC and evaluated in a sample comprising 180 children who met criteria for DSM-IV autism and 180 controls matched for age, sex, and IQ range. Results: This study found that the DBC-ASA has good validity in discriminating young people (4-18 years) with autism and 10 ranging from normal to severe intellectual disability from others using a cutoff score of 17. Conclusion: The DBC-ASA is an effective autism screening questionnaire for at-risk young people, including those with intellectual disability.

Charman, T., P. Howlin, et al. (2004). "Measuring developmental progress of children with autism spectrum disorder on school entry using parent report." Autism **8**(1): 89-100.

Increasing numbers of children with autism spectrum disorder (ASD) are diagnosed in the preschool years, and their educational progress must be monitored. Parent questionnaire data can augment psychometric assessments and individual planning at low cost. One hundred and twenty-five parents of UK children who entered dedicated autism primary schools and units in two consecutive calendar years were asked to complete three questionnaires. Fifty-seven parents repeated the questionnaire measures one year later. Encouraging developmental progress was observed on the Vineland Adaptive Behavior Scales-Screener. Symptom severity as measured by the Social Communication Questionnaire did not change over time. The pattern of change scores on the Autism Treatment Evaluation Checklist was mixed, and confounding disadvantages this questionnaire. The study demonstrated that it is possible to collect useful information on the progress of children with ASD using parents as informants. Such data would assist in judging claims regarding developmental progress within particular programmes.

Michelotti, J., T. Charman, et al. (2002). "Follow-up of children with language delay and features of autism from preschool years to middle childhood." Developmental Medicine and Child Neurology **44**(12): 812-819.

Eighteen children (13 males, five females) who had severe developmental language delay/disorder and some features of autism (although insufficient in severity and combination to meet ICD-10 diagnostic criteria for childhood autism) at preschool age (Time 1; mean age 4 years 4 months) were followed up 4 years later (Time 2; mean age 8 years 7 months). At the initial assessment the diagnostic dilemma was how much the social communication impairments and behavioural problems were secondary to the language problem and how much they constituted a genuine case of a pervasive developmental disorder. It was anticipated that at follow-up some children would continue to show social impairments but that in others social impairments would have receded as language competence improved. Follow-up assessments included the Wechsler Intelligence Scale for Children, the Clinical Evaluation of Language Fundamentals, the Children's Communication Checklist, and the Social Communication

Questionnaire. At follow-up, five children had continuing language disorder and were considered to fulfil diagnostic criteria for childhood autism, four children had continuing language disorder and met criteria for atypical autism, and nine met criteria for atypical autism but had somewhat recovered language skills. Thus, even in the subgroup of children whose language ability had improved the features of autism had not dissipated. Severity of social communication impairments and repetitive behaviours at Time 1, rated retrospectively from case notes, were associated with severity of autism symptoms and pragmatic competence at Time 2. The findings are discussed in relation to the unclear boundary between autism spectrum disorders and language delay/disorder.

Veltman, M. W. M., R. J. Thompson, et al. (2004). "Prader-Willi syndrome - A study comparing deletion and uniparental disomy cases with reference to autism spectrum disorders." European Child & Adolescent Psychiatry **13**(1): 42-50.

Prader Willi Syndrome (PWS) is a neuro-genetic disorder. It has been reported that cases due to paternal deletion 15q11-13 (Del) behave differently to cases due to uniparental disomy (UPD). Comparison of the two forms of PWS has, to date, not included the frequency of autistic behaviours, even though there are reports of an association between maternal duplications of 15q11-13 and autism spectrum disorders (ASD). It was predicted that maternal UPD PWS cases would be more prone to ASD than Del PWS cases due to their duplicated maternally expressed genes. A preliminary test of the hypothesis was conducted using postal and telephone surveys of matched, genetically verified, UPD and Del cases using the Autism Screening Questionnaire (ASQ) and the Vineland Adaptive Behaviour Scales (VABS). As predicted, UPD cases were reported as exhibiting significantly more autistic symptomatology. They also were born to older mothers and were reported on the VABS to have more deficits in motor control problems and fewer adaptive skills in the Daily Living Skills domain. Del cases were reportedly more skilled at jigsaw puzzles. The results lend further support to the notion that abnormality in the expression of maternal imprinted 15q11-13 genes may confer a susceptibility to ASD. They also suggest that there may be cognitive differences between the groups in processing visuo-spatial information.