Validity and Reliability of the Childhood Autism Rating Scale with Autistic Adolescents

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The validation and reliability of the Childhood Autism Rating Scale (CARS) for autistic adolescents was tested. In the first study, CARS scores for autistic children and adolescents (matched on nonverbal IQ, sex, and ethnicity) were compared. In the second study, a group of nonautistic, handicapped adolescents were administered the CARS and these scores were compared with those of a group of autistic adolescents (matched on age, nonverbal IQ, sex, and ethnicity). The CARS clearly discriminated the two adolescent groups, suggesting that the scale may be an adequate measure of autism in adolescence. Although the CARS total score did not discriminate the younger from older autistic subjects, some interesting age-related differences emerged for specific items. A recommendation is made for elimination of one of the items on the CARS that negatively correlates with the CARS total score for both autistic groups.

The Childhood Autism Rating Scale (CARS) was designed to assess the presence and severity of autism (Schopler, Reichler, DeVellis, & Daly, 1980).

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The CARS, a 15-item scale, is administered by a trained rater during an observation of the child. Each of the 15 items is scored on a scale from 1 (no abnormality) to 4 (severe abnormality) with half-point scores possible. A score of 30 is the cutoff point for a diagnosis of autism. When necessary, the rater consults with individuals who know the child well (e.g., parents, teachers) and can report on behaviors not elicited during the observation.

The CARS was developed on a group of 537 children, 55% of whom were less than 6 years old and only 11% of whom were 10 or above. The CARS appears to be reliable (Parks, 1983) and valid for children up to the age of 13 years (Teal, 1981/1982). In the present study, the reliability and discriminant validity of the CARS was investigated for autistic adolescents. Although the study of autism has generally focused upon the younger child, there is increasing interest in the older autistic person as evidenced in the recent publication of the first book entirely concerned with the autistic adolescent and adult (Schopler & Mesibov, 1983).

Most of what we know about later autism comes from follow-up studies concerned primarily with outcome (DeMeyer et al., 1973; Eisenberg, 1956; Rutter, 1970; Rutter, Greenfeld, & Lockyer, 1967). Some of what is known about the older autistic person comes from cross-sectional research (Ando & Yoshimura, 1979; Ando, Yoshimura, & Wakabayashi, 1980) and case studies (Bemporad, 1979; Gillberg & Schaumann, 1981; Volkmar & Cohen, 1985). Findings from the above research suggest that there are a number of age-related changes in the autistic syndrome that may make the use of diagnostic instruments designed for young children inappropriate for the older autistic person. The following discussion addresses some of these age-related changes particularly as they relate to the CARS.

A number of behavioral changes appear to occur in autistic persons as they grow older. Rutter et al. (1967) described changes in the behaviors of 63 autistic children with a mean age at follow-up of 15 years 7 months. Autistic people in their sample appeared to become more adaptable with age. Resistance to change tended to become less pronounced. Abnormal preoccupations and other obsessive behaviors also tended to diminish, though in very few subjects did they disappear entirely. Bemporad's (1979) case study of Jerry describes the transformation of the child's insistence upon sameness into the young man's compulsive rituals that revolved around such activities as showering, dressing, and going to bed. "Adaptation to environmental change" is an item on the CARS that might be scored less pathological in the older autistic person as a result of the above changes.

Although language and communication deficits continue to severely handicap the adolescent or adult with autism, there are numerous reports of improvements in this area (Ando & Yoshimura, 1979; Mesibov, 1983). Three items on the CARS, Talking, Imitation, and Pointing and gesturing, might receive lower ratings of autism for adolescents and adults.