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ABSTRACT

The effect of "temperament" in a school-like environment was evaluated for 30 children with mental retardation, 30 children with autism, and 30 typical children (all groups with a mean mental age of 23 to 24 months). Five-minute videotapes of each child attempting to complete a puzzle were viewed and scored by raters on the University of California (Los Angeles) Temperament Form. This instrument results in independent scores on the dimensions of activity, adaptability, approach/withdrawal, attention, distractibility, intensity, mood, and sensitivity. These dimensions are loaded into three factors: task orientation, personal social flexibility, and reactivity. Findings indicated that the children with autism differed significantly on dimensions of temperament in a negative direction from children with mental retardation or normally developing children. (DB)

Comparison of Temperament Ratings in Children with Autism, Children with Mental Retardation, and Typical Children

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ABSTRACT

In order to consider the effect of temperament in a "school-like" environment for children in special education, thirty children with mental retardation and thirty children with autism were matched on mental age (X=23 months) to thirty typical children. These children were seen individually and given a puzzle to complete. The child's mother was available during the taped session to assist her child on the puzzle task if she felt her help was needed. Five minute videotapes of each child completing a puzzle were viewed and scored by blind raters on the UCLA Temperament Form. On this instrument, each dimension and factor is scored directly by the viewer of the videotape on a scale of one to eight. This instrument results in independent scores on the nine dimensions of activity, adaptability, approach/withdrawal, attention, distractibility, intensity, mood, and sensitivity. These dimensions are loaded into three factors; task orientation, personal social flexibility, and reactivity, each of these factors are also given a score. Findings indicate that children with autism differ significantly on dimensions of temperament in a negative direction from children with mental retardation and normally developing children in a simulated school setting.

Differences in temperament across children have been shown to be a powerful contributor to school outcome (Keogh, 1982; Keogh & Burstein, 1988). This appears to be particularly so for children in special education (Keogh, 1983). However, the measurement of temperament in children has been troublesome. There is typically low agreement on an individual child's temperament dimensions between parent and teacher (Billman & McDevitt, 1980). There are multiple explanations for this low agreement, one being that temperament is in the 'eye of the beholder' (Rutter, 1982). However, another explanation for low agreement across raters is the powerful contribution of setting to the rating of temperament (Carey, 1982).

The setting of 'school' and its contribution to temperament has been explored by Richard and Jacqueline Learner and their associates (Lerner, Lerner, & Zabski, 1985). They found very little variability in the expectations and the tasks of 'school' across school settings and describe the school setting as a 'constant'. That is, 'school' can be fairly reliably described as a place where children learn to be patient and wait, where tasks are expected to be started and completed on a specific time line, where following rules, obeying adults, and getting along with other children is highly valued and rewarded. This explanation is supported in the work of Keogh and her associates (Keogh & Pullis, 1980) who found the factor of task orientation to be highly predictive of school outcome, but not a factor of significance in the home setting.

Because the expectations and tasks of school are fairly constant, it is possible to control for setting influences of school by measuring temperament in a typical 'school' situation. In this way, temperament specific to the school environment may be more accurately measured and school outcome may be more powerfully predicted.

Subjects

There were ninety children in this study; thirty children with mental retardation, thirty children with autism and thirty typical children. The children were matched on mental age. The mean mental age of the children with autism was 22.93 months (standard deviation 10.93) and the mean chronological age was 42.53 months (standard deviation 11.28). For the children with mental retardation, the mean mental age was 23.97 months (standard deviation 9.40), while the mean chronological age was 41.67. The typical children had a mean mental age of 23.27 months (standard deviation 10.61) and a mean chronological age of 19.83 months (standard deviation 8.20). The children with autism and the typical children were matched on gender, each group consisting of 27 males and 3 females. The children with mental retardation consisted of 17 boys and 13 girls. Children with mental retardation were identified clinically, as were the children with autism, who met two out of three criteria established for identification of autism.

Procedures

Children's temperament was measured in two ways. To simulate the school setting, five minute videotapes of each child completing a puzzle were viewed and scored by blind raters on the UCLA Temperament Form. The child's mother was available during the taped session to assist her child on the puzzle task if she felt her help was needed. On this instrument, each dimension and factor is scored directly by the viewer of the videotape on a scale of one to eight.

In addition, maternal ratings were measured with the Preschool Temperament Questionnaire. This instrument results in independent scores on the nine dimensions of activity, adaptability, approach/withdrawal, attention, distractibility, intensity, mood, and sensitivity. These dimensions are loaded into three factors; task orientation, personal social flexibility, and reactivity, each of these factors are also given a score.

Findings

Findings for this paper focus on the analyses of the videotape data. Data was analyzed with a series of ANOVA's. On most dimensions, children with autism differed from both other groups, the latter two not differing from one another. Children with autism were rated as lower in mood, less approaching, less adaptable, and lower in task orientation and personal social flexibility than children with mental retardation and normally developing children. In addition, the children with autism were rated as higher in sensitivity, more intense, and more distractible than the other two groups of children. On the factor of reactivity, children with autism were rated lower than children with mental retardation, but not differently from normally developing children. There were no differences between the three groups of children on the dimensions of activity.

Discussion

Children with autism differ significantly on dimensions of temperament in a negative direction from children with mental retardation and normally developing children in a simulated school setting. The implication of this finding is that children with autism enter a typical school setting at risk of "poorness-of-fit" between themselves and the environment. School environments for children with autism may need to be restructured to provide a more appropriate setting for their specific learning needs.

Table 1
Comparisons of Dimensions of Temperament

	Autism N=30	Typical N=30	Down Syndrome N=30	F Value
Activity	5.33 (2.14)	5.43 (1.71)	4.97 (2.09)	
Approach	4.26 (2.03) A	5.43 (1.89) B	5.53 (2.00) B	3.82*
Adaptability	3.37 (2.25) A	5.30 (2.12) B	5.07 (1.96) B	7.47***
Sensitivity	3.37 (1.73)	2.77 (1.38)	2.43 (1.36)	
Intensity	4.60 (2.13) A	3.57 (1.55) B	3.30 (1.54) B	4.57*
Mood	4.77 (1.87) A	6.13 (1.14) B	6.30 (1.53) B	8.92***
Distractibility	5.47 (1.91) A	4.03 (1.97) B	4.27 (1.95) B	4.70*
Attention Span	3.33 (2.06)	4.30 (2.05)	4.43 (2.03)	

Table 2
Comparisons of Factors of Temperament

	Autism N=30	Typical N=30	Down Syndrome N=30	F Value
Task Orientation	3.10 (1.72) A	4.47 (2.14) B	4.30 (1.88) B	4.5*
Personal Social Flexibility	4.57 (2.25) A	6.13 (1.78) B	6.23 (1.45) B	7.59***
Reactivity	5.69 (2.30) A	4.93 (1.74) B	6.20 (1.79) B	3.48*

* $p < .05$
** $p < .01$
*** $p < .001$

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