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ABSTRACT

The parents of 12 autistic and 12 neurologically impaired/mentally retarded children (4-6 years old) completed the Carey-McDevitt Behavioral Style Questionnaire designed to assess temperament in young children. While numerous significant differences between autistic and normal children were found, autistic and developmentally disabled children differed only along one dimension of temperament (intensity). These findings highlight the essential similarities between these two diagnostic groups, and are consistent with previous research. It is suggested that, considering the overlap between the two groups, the label "autism" should be limited to instances in which clear distinctions can be made which will result in highly specific interventions. A 19-item bibliography is included. (Author/CL)

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TEMPERAMENTAL PATTERNS IN AUTISTIC CHILDREN

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TEMPERAMENTAL PATTERNS IN AUTISTIC CHILDREN:
PARENTAL PERCEPTIONS

by

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ABSTRACT

The parents of twelve autistic and twelve neurologically impaired/mentally retarded children completed the Carey - McDevitt Behavioral Style Questionnaire designed to assess temperament in young children. While numerous significant differences between autistic and normal children were found, autistic and developmentally disabled children differed only along one dimension of temperament. These findings highlight the essential similarities between these two diagnostic groups and are discussed in relation to previous research. Finally, implications for labeling are discussed.

Recent research on temperament has focussed on children with a variety of psychopathologies. For example, investigators have attempted to identify temperamental constellations associated with such entities in children as hyperactivity (Lambert, 1982; Lambert and Windmiller, 1977), neurological impairment (Hertzig, 1983; Heffernan, Black & Poche, 1982; Carey, McDevitt & Baker, 1979; Thomas & Chess, 1975), mental retardation (Chess & Korn, 1970) and Down's syndrome (Bridges & Cicchetti, 1982; Gunn, Berry & Andrews, 1981; Baron, 1972). In general the results of these investigations have emphasized the absence of a relationship between a particular diagnostic entity and a specific temperamental profile. In most of these studies temperament has been viewed as only one of several factors which, through interaction with the environment, act to either mitigate or exacerbate previously defined behavior. For example, Chess (1977) states that for retarded children with temperamentally "difficult" characteristics, "the risk of behavior disorder is greater than with intellectually normal children." However, there has been little or no work done on the temperamental characteristics of autistic children. Moreover, there has been no attempt to differentiate autistic children from other developmentally disabled children based on temperamental variables. The latter issue takes on special significance

in light of Prior's (1979) conclusion that research on learning and performance in autistic children reveals little that is specific to autism as compared with mental retardation. If this is true for learning and performance, is it also true for temperament?

Prior's conclusion is, however, not mainstream. Autism is more generally described, and in fact, defined by qualities, some of which certainly appear to be temperamental in nature, such as social withdrawal and poor adaptability to new situations (Rutter, 1978). If such defining statements are indeed valid, and if it is fair to equate some of the defining qualities with temperament, it follows that the study of autistic children will reveal the presence of such (diagnostic?) temperamental features in them to a greater extent than will be found in other developmentally disabled groups. The present study makes just such a comparison.

METHODSubjects

The study sample consisted of twelve autistic children attending a school for special children. These children had been diagnosed within the past year by psychologists and/or psychiatrists as being predominantly autistic and as meeting the DSM III criteria for this disorder. These children were also mentally retarded (mean IQ=47, S.D.=13) and all had (by definition) severe language deficits. The age range was from 4-6 to 6-2 ($X=5-2$, S.D.=7.2 months).

A comparison group consisted of twelve impaired children who had been identified as developmentally disabled. These children were neurologically impaired, had severe language difficulties and were mentally retarded (mean IQ=67, S.D.=10). The age range was 3-8 to 7-2 ($X=5-5$, S.D.=17.2 months). Age was not significantly different for these two groups.. The mean IQ for the developmentally disabled children was, however, significantly higher than the mean IQ for the autistic children. Because previous research (e.g. Chess, 1977) has not shown any association between temperament and IQ, this difference was not given further consideration in the analysis of the data. There is, at present, nothing to suggest that there are systematic relations between levels or range of intelligence and specific patterning of temperament.

Data from the standardization sample reported for the Behavioral Style Questionnaire by McDevitt & Carey (1978) was also used for comparison purposes. There were 350 children in this group, equally divided by sex, between the ages of three and seven, thus making it roughly comparable in age to the present study sample.

Procedure

The Behavioral Style Questionnaire used in this study has a test-retest reliability of 0.89 and an alpha reliability of 0.84 (McDevitt & Carey, 1978). The authors and others (Hubert et. al., 1982) report preliminary evidence of construct and external validity. The Likert-type questionnaire yields scores in each of the nine categories of temperament delineated in the original temperament studies (Thomas, Chess, Birch, Hertzig & Korn, 1963). Scores can range from a low of 1 to a high of seven. Low scores reflect less difficulty and/or relatively good or easy-to-live-with qualities while high scores reflect the opposite. In addition, each child can be assigned to one of five diagnostic categories (easy, intermediate low, slow-to-warm-up, intermediate high, difficult) which in turn is defined by the patterning of temperament variables (Thomas, Chess & Birch, 1968; McDevitt & Carey, 1975).

In all but two incidents in which the father was the respondent, it was the mother who completed the questionnaire.

The parent completed the questionnaire based on his/her view of the child at the present point in time. There were several items which parents omitted as they were not pertinent to their children. For example, they were often unable to respond to questions concerned with complex verbal communications and social interaction patterns since language and social skills were so severely limited in many of the autistic children. This limitation affected only a few items on the questionnaire and therefore exerted no important numerical influence on the total scores, which were based on an average of 95% of the items for the autistic children and 97% of the items for the developmentally disabled children.

RESULTS

Table 1 shows mean temperament category scores for the autistic and the developmentally disabled children and for the normal children in the Carey- McDevitt standardization group. Table 2 shows the F values derived from the analyses of variance comparing the three groups along each of the nine dimensions of temperament. As can be seen from table 2, although numerous significant differences were noted between autistic and normal children along the nine dimensions of temperament, when autistic and developmentally disabled children were compared they differed only along the dimension of Intensity.

The existence of a small but significant difference between the autistic and developmentally disabled children is further substantiated by an additional analysis of variance which, by incorporating all nine dimensions, compared the overall profiles of the two groups. To permit this type of analysis it was necessary to convert each of the mean temperament category scores into standard scores. The results of this ANOVA indicate that a significant interaction does exist between temperament profile and diagnostic group ($F = 2.39, p < .01$) suggesting that the two groups are to some extent temperamentally distinct.

DISCUSSION

Examination of the data reveals that the similarities of temperamental organization in autistic and developmentally disabled children greatly outweigh the differences. While statistical differences do emerge, these differences do not appear to be psychologically significant. This finding is consistent with previous studies which have failed to identify specific temperamental constellations associated with particular psychopathological entities (e.g. Carey, McDevitt & Baker, 1979).

The results of the present investigation are relevant to the continuing controversy which deals with the very nature of autism itself as a meaningful diagnostic category. Some investigators continue to attribute the particular behaviors associated with autism to autism itself whereas Prior (1979) concludes that there is very little in the learning and performance of autistic children that is specific to autism. Instead she posits that most of the difficulties identified in autistic children are essentially attributable to the underlying mental retardation. The present investigation is consistent with Prior's conclusion in that it fails to identify temperamental differences that are intrinsic to autism. Thus, although autistic children display patterns

of temperament which are quite distinct from those of normal children, these patterns are not unique to autistic children and do not serve to differentiate between autistic and other similarly impaired youngsters.

The existence of a defined set of behaviors intrinsic to autism per se has also been questioned by other investigators. Bartak and Rutter (1976) compared the symptoms of mentally retarded and normally intelligent autistic children and concluded that the nature of autism may differ according to the presence or absence of mental retardation. Freeman et al. (1979) examined the behavioral characteristics of autistic and mentally retarded children and found only a small minority of the behaviors studied to differentiate between the two diagnostic groups.

The present study, in conjunction with several others, suggests that autistic children are more closely resemble their mentally retarded and neurologically impaired counterparts than they in fact differ from them. In light of the above, it may be more productive to regard these autistic children as primarily mentally retarded and who, along the continuum of reproductive casualty, have suffered additional multiple insults.

The present study leads to certain implications. For

example, the "label" autism conjures up the image of a child with severe speech and language problems, peculiar movements and grossly impaired social relatedness. However, since diagnostic labels are mostly useful when they lead the clinician to specific treatment interventions, one must wonder about the utility of such a "label" for this group of children. In fact, the primary modes of intervention are special education and parent counseling and these are the very same procedures used with children with similar disabilities. Moreover, autistic children are often placed in classes with children who are not autistic but whose IQ scores and functional levels most closely approximate theirs.

In conclusion, the present investigation has presented data which suggest that autistic children are temperamentally different from normal children but that the temperamental patterns found in autistic children are not appreciably different from those found in developmentally disabled children. The temperamental similarities between the autistic and developmentally disabled children appear to reflect the basic commonalities in the two groups which have been commented upon by previous authors. Given the overlap between the two groups of children it is suggested that the label "autism" be applied in instances in which clear distinctions can be made which will result in highly specific interventions.

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TABLE 1

MEAN TEMPERAMENT SCORES FOR AUTISTIC, DEVELOPMENTALLY DISABLED AND
NORMAL CHILDREN

| | AUTISTIC | | DEVELOPMENTALLY DISABLED | | NORMAL | |
|-----------------|----------|------|--------------------------|------|--------|------|
| | M | SD | M | SD | M | SD |
| ACTIVITY LEVEL | 4.35 | 0.71 | 4.05 | 0.59 | 3.56 | 0.75 |
| RHYTHMICITY | 3.14 | 0.74 | 3.11 | 0.80 | 2.75 | 0.68 |
| APPROACH | 3.50 | 0.74 | 3.29 | 1.00 | 2.99 | 0.94 |
| ADAPTABILITY | 3.86 | 0.71 | 3.20 | 0.84 | 2.55 | 0.72 |
| INTENSITY | 3.64 | 0.91 | 4.55 | 0.63 | 4.52 | 0.65 |
| MOOD | 3.42 | 0.70 | 3.70 | 0.62 | 3.31 | 0.59 |
| PERSISTENCE | 4.09 | 0.69 | 3.43 | 0.94 | 2.87 | 0.69 |
| DISTRACTIBILITY | 3.74 | 0.74 | 3.92 | 0.66 | 3.89 | 0.81 |
| THRESHOLD | 3.53 | 0.76 | 3.95 | 0.64 | 3.98 | 0.60 |

TABLE 2

F VALUES FOR ANOVAS COMPARING AUTISTIC, DEVELOPMENTALLY DISABLED
AND NORMAL CHILDREN.

| ACTIVITY | AUTISTIC VS. NORMAL | DEVELOPMENTALLY DISABLED VS. NORMAL | AUTISTIC VS. DEVELOPMENTALLY DISABLED |
|-----------------|------------------------|--|--|
| | 12.88 ^b | 4.49 ^a | 1.16 |
| RHYTHMICITY | 4.13 ^a | 3.94 ^a | 0.01 |
| APPROACH | 3.35 | 1.18 | 0.30 |
| ADAPTABILITY | 38.31 ^d | 9.20 ^c | 3.96 |
| INTENSITY | 28.33 ^d | 0.17 | 6.30 ^b |
| MOOD | 0.32 | 4.51 ^a | 1.05 |
| PERSISTENCE | 54.59 ^d | 6.78 ^c | 3.47 |
| DISTRACTIBILITY | 0.35 | 0.01 | 0.38 |
| THRESHOLD | 6.34 ^b | 0.02 | 1.99 |

^a $p < .05$

^b $p < .025$

^c $p < .01$

^d $p < .001$