

Factors Influencing School Psychologists' Diagnosis of Asperger's Disorder and Autism

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School psychologists play an important role in the diagnosis of pervasive developmental disorders, including Asperger's Disorder and Autism (Harris & Glasberg, 1996). Differential diagnosis of these disorders may present unique challenges for school psychologists and for special education practice (Safran, 2001). Since the inclusion of Asperger's Disorder (AsD) in the DSM-IV, there has been considerable controversy over the current criteria for differential diagnosis of AsD and Autistic Disorder (AuD). Despite differentiating criteria specified in the DSM-IV (e.g., language delay, cognitive delay), there is considerable overlap in the criteria for each disorder and several researchers have questioned the validity of the DSM-IV classification of AsD and AuD (Mayes, Calhoun, & Crites, 2001; Tanguay, Robertson, & Derrick, 1998).

One common criticism of the current criteria for AsD is that the distinguishing characteristics listed in the DSM-IV have not been empirically supported. For instance, the DSM-IV operationally defines significant language delay in terms of developmental milestones. However, research has failed to support the discriminant validity of this language delay criterion (Mayes & Calhoun, 2001). Substantive concerns have also been raised over the DSM-IV criteria pertaining to the nature of differences between AsD and AuD in cognitive development, stereotyped or restricted patterns of behavior, and social interaction. Moreover, the DSM-IV criteria neglect the interactive nature of the core symptom areas of AsD and AuD (Kugler, 1998). Consequently, if clinicians adhere strictly to the DSM-IV criteria, it is virtually impossible to make a diagnosis of AsD (Mayes & Calhoun, 2001). Several studies have documented that most children who receive a diagnosis of AsD should or could have been diagnosed with AuD, suggesting that clinicians must be basing their diagnosis on criteria other than those specified in the DSM-IV (Eisenmajer et al., 1996; Mayes, Calhoun, & Crites, 2001). For instance, Sciotto and Cantwell (2003) found that a higher IQ and a desire to engage others in social interaction when combined with an absence of a language delay significantly increased the likelihood of an Asperger's diagnosis. In their study, the presence of a delay in language milestones decreased the likelihood but did not rule out an Asperger's diagnosis. In fact, many clinicians (55%) recommended a diagnosis of Asperger's Disorder even when there was clear evidence of a language delay, which suggests that other factors may lead clinicians to move beyond the DSM criteria.

In the present study, we used experimental methods to investigate other factors that might influence diagnostic decisions regarding AsD and AuD. Specifically, we investigated the effects of three factors on school psychologists' diagnostic judgments: (a) a delay in language milestones, (b) the extent to which a child seeks to engage others in his preoccupation or circumscribed interest (i.e., social intention), and (c) a delay in motor skills.

Method

Participants

We obtained a random sample of 500 school psychologists from the National Association of School Psychologists (NASP). Of the 500 packets mailed, 152 responses were received. Eight packets were discarded due to missing or incomplete data, resulting in a usable response rate of 29% (144 of 500). The demographic characteristics of the respondents were comparable to recent NASP membership data (see Tables 1 and 2).

Materials and Procedure

We mailed each participant an excerpt from a fictional psychological report containing information about the reason for referral, relevant background information, intelligence test scores, and scores on the Vineland Adaptive Behavior Scales. Each report excerpt described a 5-year-old boy who

exhibited behaviors consistent with an autistic spectrum diagnosis. In each case, the child's intellectual functioning was in the lower end of the average range (FS IQ = 93). Independent ratings from expert judges indicated that the child described in the report met the DSM-IV criteria for AuD. Each participant received 1 of 8 versions of the report in which we manipulated information pertaining to language development (delay vs. no delay), motor development, (delay vs. no delay) and whether the child engaged others in his preoccupation (i.e., social intention). All other information (e.g., family history) was identical across conditions. After reviewing the information in the report, each participant answered a series of questions about the child in the report. Specifically, each participant rated the likelihood of five childhood disorders (ADHD, Asperger's Disorder, Autistic Disorder, PDD-NOS, OCD) on a scale of 1 (very unlikely) to 7 (very likely). We classified the "most likely" diagnosis for each participant by selecting the diagnostic label with the highest likelihood rating. In the case of equivalent ratings (e.g., both Asperger's and Autism given a rating of 6), no disorder was classified as "most likely."

Results

Results indicated that Asperger's disorder was judged to be the most likely diagnosis regardless of language delay, motor delay, or social intention. Overall, fifty-one percent of the school psychologists gave Asperger's Disorder the highest likelihood rating. Respondents were significantly more likely to recommend a primary diagnosis of AsD than AuD, $F(1, 143) = 81.62, p < .001$. With regard to specific factors in diagnosis, the presence of a language delay resulted in a greater likelihood of an AuD diagnosis, $F(1, 136) = 9.27, p = .003$, but did not affect the likelihood of an AsD diagnosis, $F(1, 136) = 0.12, p = .734$. However, a diagnosis of AsD was still the "most likely" diagnosis in a substantial portion (49%) of cases where a language delay was clearly present (see Table 3). The presence of social intention or motor clumsiness did not significantly affect the likelihood of either diagnosis. In addition, there was no significant interaction of social intention, motor clumsiness, and language delay on the diagnosis of AsD or AuD.

School psychologists' background characteristics were generally not related to their confidence in diagnosing the child in the report nor to the likelihood of the various diagnostic labels. One exception was that older psychologists tended to see a diagnosis of PDD-NOS as less likely, $r(130) = -.29, p = .001$. Respondents' confidence in their ability to accurately diagnose the child in the report was significantly related to the likelihood of recommending a diagnosis of Asperger's Disorder, $r(140) = .35, p < .001$, and Autistic Disorder, $r(139) = .28, p = .001$.

Discussion

The significant effect of language delay on a diagnosis of AuD in this study suggests that school psychologists are attending to some extent to the differential diagnosis recommendations contained in the DSM-IV. However, many psychologists still recommended a diagnosis of AsD in cases where a language delay was clearly present. These findings in combination suggest that the presence of a language delay appears to make a diagnosis of AuD more likely, but does not seem to dissuade many school psychologists from recommending an AsD diagnosis. In fact, consistent with prior research (Eisenmajer, et al., 1996; Scituito & Cantwell, 2003), many school psychologists perceived a diagnosis of AsD as most appropriate even when there was evidence of a language delay, which should have precluded this diagnosis. It appears that school psychologists are attending to the DSM-IV criteria, but also must be relying on other factors. Although our results do not support the role of motor delays or social intention, other factors appear to be influencing diagnostic judgments. Future research should examine other possible contributing factors that have been associated with AsD, but are not required by the DSM-IV criteria. For example, one possible factor that may influence the differential diagnosis of AsD and AuD is the perceived social stigma of each label. It is possible that, in high-functioning cases, practitioners may err on the side of the diagnostic label that is least stigmatizing, which is likely to be Asperger's Disorder.

References

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Table 1

Demographic and Educational Characteristics for Responders and Target Sample

| Variable | NASP Membership ^a | Responders (N = 144) |
|----------------------------|------------------------------|----------------------|
| Gender | | |
| % Men | 26.9 | 19.3 |
| % Women | 73.1 | 80.7 |
| Highest Educational Degree | | |
| % Ph.D.,Ed.D., PsyD | 25.7 | 37.1 |
| % Masters (incl MS +30) | 50.8 | 46.4 |
| % EdS | 15.7 | 8.6 |
| % Other/Not Specified | 7.7 | 7.8 |
| Years Since Degree | | |
| 1 – 5 | 30.3 | 12.7 |
| 6 – 10 | 15.9 | 11.9 |
| 11 – 15 | 14.1 | 12.7 |
| 16 – 20 | 17.2 | 21.7 |
| 21 – 25 | 9.2 | 14.1 |
| 25 + | 13.3 | 26.9 |

^a Based on the NASP Membership Survey (November, 2000)

Table 2
Geographic Distribution of Responders and Target Sample

| Geographic Region (N = 149) | NASP Membership ^a | Responders (N = 149) ^b |
|-----------------------------|------------------------------|-----------------------------------|
| New England | 9.3 | 7.4 |
| Middle Atlantic | 24.9 | 28.2 |
| East North Central | 17.7 | 19.5 |
| West North Central | 5.9 | 6.0 |
| South Atlantic | 12.5 | 13.4 |
| East South Central | 3.6 | 3.4 |
| West South Central | 5.2 | 4.7 |
| Mountain | 7.5 | 9.4 |
| Pacific | 11.6 | 8.1 |
| Other | 1.4 | |

Note. Numbers in table represent percentages.

^a Based on NASP Membership data as of March 31, 2003.

^b Three additional responses were received but did not include sufficient information on which to base geographic location.

Table 3.
Most Likely Diagnosis by Language Delay Condition

| Most Likely Diagnosis | Language Delay (N = 69) | No Language Delay (N = 75) |
|---------------------------|-------------------------|----------------------------|
| Asperger's Disorder (AsD) | 49.3 | 53.3 |
| PDD-NOS | 13.0 | 9.3 |
| Autistic Disorder (AuD) | 5.8 | 5.3 |
| OCD | 1.4 | 1.3 |
| Multiple ^a | 30.4 | 30.6 |
| AsD and AuD | (4.3) | (4.0) |
| AsD and PDD-NOS | (14.5) | (18.7) |
| AuD and PDD-NOS | (5.8) | (0.0) |
| AsD, AuD, PDD-NOS | (2.9) | (2.7) |
| Other Combination | (2.9) | (5.3) |

Note. Numbers in table represent percentage of psychologists who gave each diagnosis the highest likelihood rating.

^a Cases in which more than one diagnostic label was labeled as the most likely (i.e., higher than all others).

We are currently preparing a manuscript based on this work. If you are interested in reading the completed manuscript, please contact the first author via e-mail (sciutto@muhlenberg.edu) or by mail at Muhlenberg College, Dept. of Psychology, Allentown, PA 18104.