

Special and General Education Teachers' Attitudes about Inclusion for Students with ASD

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ABSTRACT

Background: While inclusion is the most preferred educational placement for students with autism spectrum disorders (ASD), teachers' perceptions and attitudes are likely to influence the success of inclusion within their classroom.

Objective: The goal of this study was to compare the attitudes of special and general education teachers on the appropriateness and challenges of inclusion for their students with ASD.

Methods: This study compared self-report surveys of self-contained autism support teachers (AS, n=27) and general education teachers (GE, n=22) attitudes about their experiences with inclusion for their current students.

Results: The majority of teachers (73% AS and 91% GE), supported their students' current placement, however AS teachers recommended more time in the GE classroom in the future for 70% of their students. Challenges of inclusion identified by teachers varied by the type of teacher: GE teachers struggled with students' communication and social skills and 29% wanted additional support staff. In contrast, 28% of AS teachers wanted more behavioral management training and support for the GE teachers working with their students.

Conclusion: Tailoring administrative resources to AS and GE teachers' needs for successful inclusion remains an ongoing challenge.

Keywords: Autistic disorder; Attitude; Special education; Education placement; Inclusion

INTRODUCTION

Autism spectrum disorders (ASD) are the fastest growing category of disability in the United States. The Centers for Disease Control and Prevention estimate that 1 in 54 children meet criteria for autism [1]. Because children with ASD often require special education, schools are under increasing pressure to adequately service this population [2]. Given the complexity of ASD, determining the most appropriate educational placement and support is not always a straightforward process. Rates of inclusion for students with ASD have increased steadily over the past two decades [3]. Yet, research on the effectiveness of inclusion, by itself, is limited [4-6].

Opinions about the best placement for children with ASD vary greatly. Parents and administrators have more positive attitudes about inclusion than teachers [7-10]. The attitudes of these stakeholders tend to bear more weight than those of teachers when

making placement decisions, despite teachers' significant role post-placement. Teachers have primary responsibility for implementing students' programming. Their understanding of the students' educational needs, overall classroom functioning, and potential barriers to inclusion, therefore, are important to take into account.

The positive attitudes of key staff, especially teachers, are essential for successful inclusion, but the research on teacher attitudes about inclusion has been mixed [10-14]. Teacher attitudes vary depending on how inclusion is operationalized and how attitudes are assessed. Avramidis and Norwich [11] found "evidence of positive attitudes" (p. 129) among teachers in their review. However, in another review conducted in the Netherlands by de Boer and colleagues [15], who examined articles published between 1998 and 2008, most teachers held either neutral or negative feelings about inclusion, and Chung and colleagues [12] found that teachers were more likely to dislike and avoid students with ASD.

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Teacher attitudes about inclusion have been attributed to a wide range of factors. Several studies have concluded that teachers' attitudes towards inclusion are affected by multiple barriers and facilitators across various stakeholders (e.g. individual student, teacher, parents, administrators) and contextual levels (e.g. classroom, school) [16]. Taking the context in which teachers' attitudes form into account can better inform future intervention and support efforts.

Most studies of teachers' attitudes on inclusion have surveyed general education teachers [10,12,16-19]. Next to the children themselves, general education teachers have been most significantly affected by the inclusion movement, which has necessitated a shift in teaching practices and challenged teachers' beliefs about a population historically held to different educational standards [20]. General education teachers have had to adapt to these changes, despite having limited input on their students' placement [10,21].

Special educators have undergone role changes, as well. They increasingly serve as co-teachers or consultants to general education teachers in inclusive classrooms. Thus, these two groups of educators that historically have had little contact with one another within the school setting are now more often required to work together, yet their training and educational philosophies tend to differ.

Few studies, however, have compared general educators' and special educators' attitudes about inclusion for students with disabilities [22-26]. Findings from these studies suggest that, on average, special educators hold more positive views of inclusion and perceive themselves as having more skills and greater access to supports than general education teachers [22,24]. Some studies have examined teachers' attitudes about inclusion for students with ASD [10,12,18,27-29]. Three have compared special and general education teachers' attitudes about inclusion for children with ASD [23,25,30]. They found that teachers' attitudes towards inclusion were influenced by their previous contact and experience working with students with ASD, knowledge of best practices, and their confidence in their ability to work with students with ASD. These studies asked teachers to respond about their attitudes generally, however, and were not specific to any student.

Capturing teachers' attitudes on specific students within their schools may provide a more accurate assessment of their beliefs about inclusion. The present study queried both AS and GE teachers about factors that may affect their decision-making regarding inclusion for their current students with ASD. It was hypothesized that AS teachers would be more supportive of inclusion efforts than GE teachers overall. Because teachers' attitudes may be multifaceted and context-dependent, we also examined systems-level (classroom/school and parent) factors that may affect attitudes. In addition, we also identified teachers' perceived barriers and resource needs related to inclusion at the child, classroom, and school levels. It was expected that the challenges and resources needed would be different across the two types of teachers.

METHODS

Participants

This survey research compared self-report attitudes of two types of teachers. GE and AS teachers were recruited to complete a survey on their attitudes about inclusion if they had at least one child with ASD in their class. Because the surveys were specific to one

child, any teacher who had more than one student in the class who met the criteria completed multiple surveys. Participants were 27 AS teachers who rated 1-2 (average 1.3) students with ASD and 22 GE teachers who rated 1-4 (average 1.4) students with ASD. All AS teachers taught in self-contained ASD support classrooms in a large urban school district. Seventeen GE teachers with children with ASD in their classroom were recruited from the same school district. To increase the sample size of comparison GE teachers, an additional six GE teachers were recruited online, through university and state list serves in the same state.

Procedure

All procedures were reviewed and approved by two university Institutional Review Boards, and the school district in which the data was collected. All teachers completed a consent form for participation prior to completing the study survey. The survey was distributed to participating teachers within their classroom (or online for those GE teachers completing the measure online), completed by teachers independently, and then collected and entered by study personnel. The survey measured teachers' attitudes about inclusion for students with ASD in autism support and general education classrooms. AS teachers were asked to complete a survey for each student with ASD in their classrooms who performed in the average or above range for overall cognitive ability on the Differential Ability Scales, Second Edition (DAS-II) - Early Years [31] meaning that they had a score ≥ 80 . These students were determined to be likely candidates for inclusion, based on cognitive functioning.

Survey Measure

Teachers' self-reported their educational and teaching background. Demographic information was not collected on the students' background beyond gender and grade level in order to protect child confidentiality.

Teachers reported the following information on up to four eligible students with ASD: 1) the appropriateness of the students' placement (1-4 Likert scale); 2) amount of student time per day in the classroom; and 3) appropriateness of the current time in the general education classroom (1-4 Likert scale). In addition, teachers rated the following Child, Teacher, Classroom/School and Parent characteristics on a 1-4 Likert scale, with higher ratings being more positive (competent or supportive) in each area. See Table 1 for items in each domain.

Child: Four items on the appropriateness of the child's behavior, academic achievement, communication skills, and social competence.

Teachers' experience: Four items assessing their supportiveness of inclusion, prior experience with students with ASD, the availability of trained support staff in the classroom, and experience differentiating instruction for students with ASD compared to peers.

Classroom/School environment: Four items on how well-structured and organized, as well as how calm the classroom was, whether the class was generally well-behaved, and whether the school allocated common preparation time for GE and special education teachers.

Parent support: Two items on parental support for inclusion and active involvement in the class.

A confirmatory factor analysis identified these composites, and a composite score was calculated for each domain reflecting the

Table 1: MANOVA comparisons of Autism Support (AS) and General Education (GE) teachers' mean ratings of child, teacher, classroom/school, and parent support items.

Survey Item/Composite	Mean		F	df	Sig (2-tailed)	Partial Eta Squared
	AS Teachers (n=27)	GE Teachers (n=22)				
Child	3.3	2.8	10.09	1	0.003	0.234
Appropriate behavior	2.3	2.2	0.28	1	0.601	
Academic competence	3.3	2.9	1.71	1	0.2	
Appropriate communication skills	3.5	2.8	9.5	1	0.004	0.223
Social competence	3.8	2.7	15.75	1	0	0.323
Teacher	2.9	3.2	1.87	1	0.18	
Support inclusion for ASD	3.1	3.6	4.29	1	0.046	0.115
Experience with ASD	2.5	2.9	2.37	1	0.133	
Available support staff	2.7	2.9	0.43	1	0.517	
Experience differentiating instruction	3.4	3.3	0.19	1	0.664	
Classroom/School	3.3	3.2	0.42	1	0.52	
Structured & organized	3.5	3.4	0.25	1	0.62	
Calm environment	3.3	3	1.34	1	0.256	
Well-behaved students	3.1	3.1	0	1	0.98	
Allocated planning time	2.8	2.9	0.09	1	0.772	
Parent	3.5	3.5	0.01	1	0.933	
Support inclusion	3.4	3.9	3.91	1	0.056	
Actively involved	3.6	3.2	1.68	1	0.203	

* All items were rated on a 1-4 point Likert scale.

MANOVA provides an *F*-value statistic and *df* = degrees of freedom

average scale score of positive child, teacher, classroom/school and parent ratings across items in each category.

Teachers were also asked open-ended questions regarding resource needs at the child, classroom and school levels. The range of responses were coded and tallied by two graduate students. Students obtained inter-rater reliability from 92%-95% across domains and the responses were summed across respondents.

Analysis Strategy

A chi square test was used to compare student placement items (dichotomous coding identified appropriate vs non-appropriate placements). Likert scale scores reflecting teachers' attitudes and experiences on items in each of the four composites (child, teacher, classroom/school and parent) were compared using first univariate analyses on each item and a multivariate comparison of the composite scale scores, with partial eta squared used to determine effect size.

RESULTS

Sixty-five surveys were completed by the 59 teachers, with similar numbers of students rated from each classroom. The AS and GE teachers had similar teaching experience - both groups had an average of 10 years of teaching experience (Table 2) and about three years of experience teaching students with ASD. However, as expected, the classroom size was very different: AS teachers had classrooms with about 7.6 students (all with ASD), while GE teachers had 23.8 students (with an average of 1.9 students with ASD). There was no significant difference between the samples in the number of adults in the classroom or in the grade level taught.

Most students of AS teachers (76%) spent the majority of their school day in AS classrooms, while most students with ASD (88%)

from the GE teachers' classrooms spent most or all of their time in the general education setting. A similar percentage of students from AS and GE teacher samples (11% and 7%, respectively) divided their time equally between settings. The remaining 14% of students from the AS teacher sample spent the majority of their day in the general education setting, while 5% of students from the GE teacher sample spent the majority of their day in a self-contained AS setting.

Appropriateness of Placements

AS teachers rated 73% of their students' placement as appropriate, with 91% of GE teachers reporting the same. Only a few students were identified as completely inappropriate placements by the teachers (3% AS, 2% GE). However, AS teachers rated the appropriateness of current placement significantly lower ($M = 3.3$, $SD = 0.9$) than did GE teachers ($M = 3.4$, $SD = 0.7$; $\chi(1) = 3.9$, $p = 0.047$; $\phi = 0.23$), as AS teachers recommended more time in a general education classroom for 70% of their students.

GE teachers recommended that a majority of their students with ASD (86%) be included for most or all of the school day, consistent with their current placement (88%). Specifically, GE teachers thought that 63% of their students should remain in their present placement, 27% should spend less time in general education, and 10% should spend more time in general education.

Composite Scores

A significant difference was found between groups for an analysis of the composite scale scores for child, teacher, classroom/school and parent domains ($F(17, 17) = 2.38$, $p = .041$; Wilks' $\Lambda = 0.296$, partial $\eta^2 = 0.704$). The scale score and individual item ratings for each scale are summarized on Table 1.

Table 2: Comparison of AS and GE teachers' classroom experiences.

Variable	Autism Support (AS) Teachers n=27			General Education (GE) Teachers n=22		
	Mean	Standard Deviation	Range	Mean	Standard Deviation	Range
Years of teaching experience	10.1	11.3	Jan-41	10.6	8.6	Jan-31
Years of teaching experience with students with ASD	3.1	2.6	01-Nov	3.8	5.1	0-20
Number of students*	7.6	1.5	03-Nov	23.8	5.5	Jun-30
Number of students with ASD*	7.6	1.5	03-Nov	1.9	1.1	01-Apr
Number of adults in classroom	3.7	1.3	01-Jul	2.3	1.5	01-Jul
Grade	1.3	0.7	K-4	3	1.7	K-6

* $p < .05$.

Ratings on perceptions of children's appropriate behavior varied significantly between AS and GE teachers ($\chi(1) = 4.06$, $p = 0.044$, $\phi = 0.25$), as did students' social competence ($\chi(1) = 9.84$, $p = 0.002$, $\phi = 0.39$). In open-ended questions, AS teachers reported that 49% of students exhibited behavior problems, while only 25% of students in GE teachers' classrooms had similar problems. However, GE teachers felt that 33% of their students experienced deficits in social skills, while only 9% of AS teachers saw such deficits. About 20% of children in both AS (22%) and GE (20%) classrooms experienced academic problems, while only small percentages ($< 5\%$) of children reported communication challenges, sensory deficits, anxiety, motor problems or issues transitioning across settings. Teacher support for inclusion also differed significantly. GE teachers rated their support for inclusion significantly higher than AS teachers expected from the GE teachers in their own school ($F(1)=4.29$, $p=0.046$, $\phi = 0.115$).

Classroom resource needs were also rated significantly differently for AS and GE teachers ($\chi(11) = 20.69$, $p = 0.037$; $\phi = 0.51$). Nearly one third (29%) of GE teachers reported a need for additional support staff in their classrooms to support their students with ASD, with 26% of these teachers wanting specific support with behavior management.

The differences in identified school-level resource needs were also statistically significant ($\chi(12) = 21.80$, $p = 0.040$, $\phi = 0.47$). More GE teachers identified a need for support staff at the school-wide level (29% GE vs. 9% AS) than a need for training. In contrast, AS teachers prioritized training and building awareness of the needs of students with ASD (20% GE vs. 28% AS). AS Teachers also emphasized the need for greater acceptance (6% GE vs. 15% AS), and an inclusive school climate (0% GE vs. 11% AS), than GE teachers. Both AS and GE teachers reported (over 90% in each category) feeling that there were sufficient parent supports, materials, appropriate class size, planning time, differentiation of instruction, and administrative and academic supports within their school.

DISCUSSION

Teacher attitudes on inclusion have strong implications for the successful inclusion of children with ASD in the classroom. Although findings about teachers' attitudes regarding inclusion have been mixed, with few ASD-specific studies, the findings of the current study indicate that GE teachers may be more supportive of inclusion for children with ASD than prior research has indicated [25,32]. In this study, both GE and AS teachers rated the majority of their students' current placement as appropriate. GE teachers were even more likely to perceive their students' placement to be

more appropriate than did AS teachers, as AS teachers felt more of their students should be included in the GE classroom for more of the school day. The fact that all GE teachers in this study were currently implementing inclusion with at least one student with ASD and that these students were already included for the majority of their school day is promising. Experience with inclusion is one factor that has been found to impact teacher attitudes, and positive attitudinal support is critical for inclusion success [10,33]. This study may reflect that trend.

The literature on teacher attitudes about inclusion suggests that these attitudes are affected by both child and context-related factors [10-12,30]. This study found differences between AS and GE teachers' perceptions of child competence, and existing classroom and parent support, as well as recommendations for inclusion. GE teachers rated their students as less competent, suggesting that these teachers perceived less child "readiness" for inclusion. AS teachers, on the other hand, felt their students with at least average cognitive functioning demonstrated the skills to be successfully included, but lacked confidence in GE teachers' supportiveness of inclusion for children with ASD.

There were large differences in teachers' perceptions of students' communication and social skills. GE teachers reported greater concern than AS teachers about students' communication skills and less confidence than AS teachers that placement in a general education classroom would improve students' social functioning. These findings aligned with teacher-reported student needs, as well, with nearly half of AS teachers identifying student behavior as the greatest challenge to inclusion. In contrast, the greatest concern among GE teachers was students' social skills. These perceptions may be shaped by the degree to which AS teachers feel prepared to support students with ASD in non-academic domains, where GE teachers may have more limited expertise [14,32,34,35]. This may impact teachers' ability to provide appropriate supports to students with ASD in the absence of specific training, as well as their overall attitudes toward the success of this model.

Proponents of inclusion for students with disabilities, and especially for students with ASD, have focused largely on the social benefits of the general education classroom. Despite mixed research findings on social outcomes of inclusion [27,35-37] stakeholders may believe that exposure to typical peers will improve social functioning. GE teachers in this study do not appear to think that this is the case, while AS teachers maintained this belief, a finding that is consistent with prior studies [23]. AS teacher perspectives may have been based on more of a comparison of the opportunity for socialization within their self-contained AS classrooms versus the general education setting. Within the general education setting,

however, social skills are implicated across tasks and throughout the school day, [38] so this may be why student social impairments are slightly more salient for GE teachers.

While the perceptions and needs of AS and GE teachers have been previously described in the literature [10,12,18,30,32,34,39] our novel comparison suggests that AS and GE teachers prioritized their needs differently. GE teachers indicated a higher need for additional support staff, which places the onus on others to ensure that the needs of the students with autism in their classrooms are met. On the other hand, AS teachers focused more on increasing GE teachers' skills and acceptance of students with autism. AS teachers also indicated the need for a more inclusive climate within the school and that improving climate and building acceptance was essential for all staff and students at their schools. These differences may reflect differing philosophies regarding inclusion, with GE teachers considering it a type of "placement" that is determined by student readiness, while AS teachers perceive it as a student right that must be supported via context change. Understanding the impact of these factors on teacher attitudes though can allow school administrators to directly address common beliefs and misconceptions about student and teacher readiness and resource allocation with teachers to improve the likelihood of successful inclusion within their school.

LIMITATIONS

This study had several limitations, including the small sample size because we limited it to teachers who were presently teaching students with ASD. A relatively small percentage of the GE teachers (14%) also came from smaller, suburban districts within the same state. Those teachers may not have experienced similar classroom or school-level contexts to the large urban district that characterized all AS teachers. Data analysis decisions were made with these concerns in mind, and the most conservative method of analysis was ultimately used to be sure to capture and represent accurate findings.

CONCLUSION

As the number of students with ASD included in general education a classroom grows, it is essential to understand and support the teachers responsible for the day-to-day implementation of inclusion. The more that is understood about the attitudes and concerns of both GE and AS teacher, the more directly these concerns can be addressed.

The findings of this study underscore that inclusion is not synonymous with student placement, and that specific and continuous supports and interventions are necessary for student success. Findings from this study also highlight the unique perspectives of AS and GE teachers, as group differences were found in their views of child readiness and context-related variables essential to including students with autism. As hypothesized, the majority of teachers supported their students' current placement, however AS teachers recommended more time in the GE classroom in the future for the majority of their students. The two types of teachers also differed in their identification of needs within the classroom. GE teachers struggled with students' communication and social skills and wanted additional support staff. In contrast, AS teachers wanted more behavioral management training and support for the GE teachers working with their students. These differences indicate gaps both in teachers' beliefs and perceptions that should be considered, especially since the inclusive educational model rests so heavily on their collaboration.

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