Survey of School Psychologists' Autism Knowledge, Training, and Experiences

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INTRODUCTION

Autism spectrum disorders (ASD) have received increasing attention within educational systems in the past decade.
- Many school systems are in a difficult position as they attempt to balance parental demands for more intensive and specialized services for children with autism with the limited knowledge or experience of school staff about children with autism (Williams, Johnson, & Sukhodolsky, 2005).

School psychologists are in a particularly valuable position to have a direct impact on this tentative balance.
- However, research indicates that there has been little investigation regarding school psychologists' knowledge of autism and specific training needs (Akshoomoff, Corsello, & Schmidt, 2006; Allen, Robins, & Decker, 2008)

- This information will help guide recommendations for pre-service as well as internship training of school psychologists as well as increase understanding of the strategies, supports, and resources needed to better improve the services provided by school psychologists for students with autism and their families.

OBJECTIVES

The purpose of this study is to investigate school psychologists' knowledge and skills in identifying, evaluating, and providing interventions for students with autism spectrum disorders. Specifically, the study aims to address the following research questions:
- **How knowledgeable are school psychologists about autism?**
- **What experiences and training opportunities have school psychologists engaged in for children with autism?**
- **What are the training needs of school psychologists in order to better serve children with autism?**

METHODS

School psychologists who were members of NASP as well as school psychologists who were members of their respective state-affiliated school psychology organization were recruited by e-mail or through randomly selected mailings to complete an electronic-based or paper-based survey.
- 1000 surveys were mailed to randomly selected members of NASP. Fifty-seven of these surveys were returned as undeliverable, 238 were returned completed. However, 17 of the surveys were ineligible due to employment in settings other than school systems. Thus, the response rate for survey completion was 27%.

- The president or research chair for 50 state-affiliated school psychology organizations were also contacted via email to obtain consent to sample their membership using an electronic format of the survey. Thirty states did not respond to the consent email, emails were returned as undeliverable to 7 states, and 12 states provided consent to survey their membership. A total of 193 members from these state organizations completed the survey, however, 29 members were ineligible due to employment in settings other than school systems.

RESULTS

Participant Characteristics
- A total of 402 participants from 50 states completed the survey. Using geographic region standards from the U.S. Census Bureau, 35.6% of the respondents were from the South, 29.1% were from the Midwest, 23.6% were from the Northeast, and 11.7% were from the West.

- Eighty-two percent of the respondents were female, the average age of the participants was 41.3 (SD = 13.1), and the average number of years employed as a school psychologists was 11.6 (SD = 9.71). Forty-eight percent of the respondents held a specialist-level degree, 32% held a master's-level degree, and 19% held a doctoral degree.

Experiences, Training, and Beliefs
- The Experiences, Training, and Belief component of the survey was a series of statements that participants rated on a Likert scale, where 1 is 'Not at all true' and 5 is 'Very true'. Also, participants had the option to rate the items as 'Do not know,' which was equal to 0. Descriptive analyses were conducted on the statements (Table 1).

Experience, Training, or Belief Statement	M	SD	% Rated 'Not at all true' or 'Not true'
EXPERIENCE			
I use a range of assessment tools when evaluating students for autism.	4.29	1.21	3.7
I am able to modify assessments in order to enhance the responsiveness and engagement of children with autism.	3.60	1.20	12.1
Many of the children who have been referred to me for evaluation due to possible autism have not qualified for this disability.	2.12	1.02	54.4
TRAINING			
My school system has provided training on identifying students with autism.	3.16	1.51	26.4
My school system has provided me with training on interventions for children with autism.	3.16	1.46	30.0
I had practice observing and identifying students with autism while on internship.	2.83	1.49	45.5
I learned to conduct assessments for identifying autism in my graduate program.	2.69	1.46	51.2
BELIEF			
I am a resource to classroom teachers and parents on behavior management of children with autism.	3.89	1.00	5.7
I feel confident in my abilities to provide information to parents, teachers, staff and administrators about autism.	3.74	1.00	8.2
Knowing how to identify and assess students with autism is irrelevant because the number of students in our system is few.	1.39	.816	83.3
I don't believe it is my role to assist in the educational or behavioral programming for students with autism.	1.37	.750	84.9

Autism Knowledge
- Knowledge on autism was rated on a Likert scale, where 1 is 'Not at all true' and 5 is 'Very true.' Items rated as 'Do not know' were equal to 0. Descriptive analyses are reported (Table 2).
- The agreement amongst respondents was analyzed using the mean absolute deviation (MAD; Brubaker, Bundy, Winslow, & Belcher, 2010; Burke & Dunlap, 2002). MAD index scores indicate agreement if they are $c/6$, where c is the number of response options on the Likert scale. The number of response options was 6, thus the critical index was 1 (Table 2).

Autism Knowledge Statement	M	SD	MAD
Autism is an emotional and behavioral disorder.	2.25	1.27	1.08*
A child with a DSM-IV diagnosis of autism must also meet special education criteria for autism before she or he is eligible for services.	4.13	1.35	.999*
It is better to use the classification of developmental delay instead of autism for eligibility for services.	2.04	1.21	.904
Autism may occur with other disorders like mental retardation.	4.11	1.12	.845
After a student with autism is identified, it is necessary to conduct further functional assessments for program planning.	4.09	1.04	.777
Autism is listed as an eligibility category in IDEA.	4.53	1.12	.702
The behavior of children with autism is random, unpredictable, and purposeless.	1.73	.828	.678
I.Q. test results are typically invalid for students with autism.	2.81	.951	.667
Children with autism require specialized teaching strategies.	4.48	.784	.640
Autism is a lifelong disorder.	4.47	.811	.627
Autism should be identified as early as possible.	4.68	.771	.511

Note: Critical index = 1; Scores above 1 indicate disagreement amongst participants on statement veracity. Scores below 1 indicate agreement amongst participants on statement veracity.

Training Needs
- The Training Needs component of the survey was a series of 13 statements that participants rated as 'Yes' or 'No' for perceived training needs.

Training Needs Statement	Yes (%)	No (%)
Developing family-centered educational plans.	79.3	20.7
Training peer mentors.	74.7	25.3
Translating assessment information into teaching goals and activities.	53.7	46.3
Organizing the environment to decrease interfering behaviors.	51.8	48.2
Conducting social skills assessments.	43.6	56.4
Designing and implementing positive behavioral supports.	43.3	56.7
Identifying children with autism.	38.7	61.3
Assessing the causes of problematic behaviors (functional analysis.)	37.6	62.4
Using data to re-evaluate goals.	34.6	65.4
Using data to monitor progress.	34.1	65.9
Facilitating parent-teacher communication and collaboration.	26.7	73.3
Assessing an individual's developmental / learning skills.	25.3	74.7
Engaging in teacher / staff consultation.	18.8	81.2

DISCUSSION

Results demonstrated that most school psychologists self-report knowledge in the expected direction for agreement, despite the modest amount of training the school psychologists noted receiving during their graduate education or pre-service training for working with the autism population.
- However, the differences between emotional and behavioral disorders and autism, developmental delays and autism, and special education eligibility versus DSM-IV diagnoses are gaps in knowledge that need to be addressed through more training, as evidenced by the disagreement amongst practitioners in this area.

The results from the survey also acknowledged the need for additional training opportunities in providing interventions, strategies, and supports for students with autism in the following areas: developing family-centered educational plans; training peer mentors; and translating assessment information into teaching goals and activities
- With added training, school psychologists are in an ideal position to guide the execution of these areas because of their skills in consultation and intervention implementation

Although efforts were made to obtain a representative sample of school psychologists for the study, the marginal number of participants from the Western states are a limitation to the study and may have impacted the results obtained.
- Future research is warranted to determine if these trends can be generalized to larger geographic areas, particularly between other individual states or compared to all states within the United States.

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