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Research and Practice in the Schools: The Official Journal of the Texas Association of School Psychologists

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It is assumed that any manuscript submitted for review is not being considered concurrently by another journal. Each submission must be accompanied by a statement that it has not been simultaneously submitted for publication elsewhere, and has not been previously published.

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We invite proposals for special issues of the journal, with the goal of publishing one special issue each year in addition to the general issue. Special issues will include collections of papers related to some cohesive theme in the field of School Psychology, and will be edited by Guest Editors who will take the lead in soliciting contributions and coordinating the peer review process. In addition to special issues that focus on research and scholarship in School Psychology, we welcome special issues that cover important practical and applied issues in the field.

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Article

Analysis of Teacher Perceptions: BIP Implementation and Collaboration

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This research investigated the perceptions of teachers regarding Behavior Intervention Plan (BIP) implementation and various supports or challenges teachers may experience in the process. The underlying factor structure of teachers' perceptions about BIPs was investigated using a 20-item questionnaire developed by the researchers. Parallel analysis supported the presence of 3 factors, and principal component analysis revealed a clean factor structure, which accounted for 51.82% of the variance. Teachers' ratings of their BIP compliance were regressed on the 3 factors (challenge, collaboration, and effectiveness) sequentially and revealed effectiveness accounted for variance significantly above and beyond challenge and collaboration. Collaboration was not a statistically significant predictor of teachers' self-reported compliance. Teachers with access to school psychologists reported significantly higher perceptions of collaboration and effectiveness and significantly lower perceptions of challenges. Despite limitations associated with teachers' self-report of compliance, evidence was present to suggest the new measure is promising in understanding teachers' perceptions of BIPs. This evidence can help guide school psychology practice in designing, supporting, and implementing BIPs.

Key words: Behavior intervention plan, treatment acceptability, school collaboration, teacher perceptions

School psychological research has focused on what constitutes quality behavior intervention plans (BIPs) in schools (e.g., Van Acker et al., 2005; Weber et al., 2005). However, even the best BIP can be ineffective if not implemented with fidelity or not at all. Teachers who have only recently been introduced to inclusion or those who perceive behavioral problems to be inherent to the student may still expect that students with behavioral problems can and should be relocated to more restrictive settings (Rathvon, 2008). Furthermore, due to the more rigorous use of strategies and interventions as a part of pre-referral and response to intervention procedures, some teachers might perceive that the BIP is similar to what they have already tried with no success. These expectations would likely lower teachers' motivation to implement BIPs. Thus, a lack of acceptability for the implementation

of interventions is well documented (e.g., Fairbanks & Stinnett, 1997; Nastasi & Truscott, 2000; Wilson et al., 1998) despite evidence that the use of behavioral contingencies can positively influence academic achievement (Barth et al., 2004; Perry et al., 2007).

The investigation of teachers' perceptions of treatment acceptability for the implementation of interventions, although extensive, has not addressed the degree to which BIPs developed for students receiving special education services are followed and put into practice (Couvillon et al., 2009). Because BIPs are required by the Individuals

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with Disabilities Education Reform Act (2004) for students whose behavior is adversely interfering with their learning or that of others, the issue of teacher resistance for implementing BIPs with fidelity is especially important. Additionally, the approach needed to study teacher resistance for BIP implementation is fundamentally different from that taken to investigate teacher resistance for behavioral interventions in general. Because BIP implementation is required once it becomes part of the special education student's individual education plan, investigating teachers' attitudes toward the acceptability of the intervention itself might not lend to a practical understanding of their levels of compliance. Teachers may be included in the development of BIPs to address the acceptability; however, it is unlikely that a BIP can be developed with the input and approval of every teacher who will be working with the student. This is especially relevant for middle and secondary students who have different teachers for each subject and as students move from grade level to grade level to changing teachers and campuses. Thus, studying the perceived acceptability of the BIP may not be advantageous or realistic.

Although measures exist to assess teachers' acceptability of and perceived effectiveness for classroom interventions (see Elliott & Treuting, 1991), no instruments are available that investigate teacher perceptions and implementation of the BIP. In a search of the research literature only one study was found to focus on BIP implementation. Couvillon, Bullock, and Gable (2009) surveyed 134 school service providers about how behavior interventions are applied. The teachers were surveyed about the type of behavioral problems that would most likely elicit a functional behavior assessment, or the assessment that provides the foundation for the BIP, and the school personnel involved in implementing the BIP. They were also asked about their formal preparation related to functional behavior assessment and BIPs. Couvillon et al. found that most teachers did not receive training in BIPs until the fifth year of teaching. Therefore, teachers may not understand their responsibilities for implementing the BIP, a finding documented by others (Jolivet et al., 2000).

Couvillon et al. also found that participants preferred behavioral contracts and instruction to replacement behaviors more frequently than school-wide management systems, instruction of self-management techniques, and time-out or token economy

systems. Although these findings may be useful when developing a BIP, BIPs will be based on the student's needs identified through the functional behavior assessment rather than teacher perceptions of what works. Furthermore, perceptions of effectiveness and acceptability likely differ across teachers, which means that BIPs written for students with multiple teachers typically will not please each teacher. Couvillon et al. suggested that consultation models be used to increase implementation but did not measure the degree to which participants reported implementing the BIPs as written or to which they received support and assistance from others to carry out the plan.

The purpose of the present study was to explore the underlying factor structure of teachers' perceptions of BIP implementation. The study involved a pilot of a measure designed to assess teachers' BIP implementation compliance. Thus, the convergent validity of scores associated with the developed measure was explored. Specifically, the following questions were investigated. Does an underlying factor structure of teachers' perceptions of BIP implementation exist? Are the underlying factors of teachers' perceptions of BIP implementation associated with teachers' report of their BIP compliance? Do teachers' perceptions of BIP implementation differ based on teachers' access to support from professionals, such as school psychologists?

Method

Participants

Teachers were solicited through emails and posts associated with professional organizations or agencies, state education support centers, and online social networking sites for educators (e.g., Association of American Educators, American Educational Research Association). Although 132 participants started the questionnaire, only 96 teachers completed the measures. To ensure the anonymity of the questionnaire and encourage responses, detailed location and contact information for participants was not collected, but type of district and general location were collected by the survey platform (see Table 1). The sample was overwhelmingly female (83.3%) and included elementary, middle, and secondary teachers. In addition, about 17.7% reported working in special education. The teachers were fairly evenly distributed across employment in urban, suburban, and rural schools; 30.2%,

Table 1*Questionnaire Respondent Demographics*

Variable	<i>n</i>	%
Gender		
Female	80	83.3
Male	15	15.6
Level of Education		
Bachelor's Degree	10	10.4
Some Graduate Work	32	33.3
Master's Degree	51	53.1
Doctoral Degree	3	3.1
Grade Level		
Elementary	39	40.6
Middle School	30	31.3
High School	15	15.6
Multiple/Undefined	12	12.5
School District		
Suburban	30	31.3
Rural	37	38.5
Urban	29	30.2
US Region		
Midwest	11	11.5
Northeast	19	19.8
South	44	45.8
West	17	17.7
Other/Undefined	5	5.2

31.3%, and 38.5%, respectively, and were located across all major US regions and divisions, including 30 states. The teachers reported teaching an average of 16.08 years ($SD = 9.36$), with a range of 1 to 39 years.

Instrument

A questionnaire, entitled “BIP Implementation Measure (BIM)” was developed to assess teacher perceptions associated with BIP implementation. Teachers were prompted “Suppose you have a student receiving special education services with a Behavior Intervention Plan (BIP) in your class” and asked to rate their agreement with 20 statements using a scale of 1 (strongly disagree), 2 (disagree), 3 (neither agree nor disagree), 4 (agree), and 5 (strongly agree). The statements targeted opinions about BIP effectiveness (e.g., “A Behavior Intervention Plan is an effective tool that improves a child’s classroom behavior”), challenges to implementation (e.g., “I have to change my existing classroom

management for other students to implement Behavior Intervention Plans”), and collaboration (e.g., “I have access to a school psychologist who can help me implement Behavior Intervention Plans”). Since no comprehensive study of BIP implementation in schools existed prior to the development of these items, these statements were developed based on factors or situations that were previously identified as relevant to the implementation of services, such as training, communication, collaboration, and purpose of BIPs (e.g., Couvillon et al., 2009). Educator and practitioner input was also solicited to ensure the previously identified factors were represented in the items and relevant to their experiences and concerns with BIPs. After development of the BIM, a panel of school practitioners was asked to review the questionnaire for clarity and coverage of relevant factors, which resulted in only minor adjustments to the wording of the statements before distribution. Upon rating the 20 statements, the teachers

were asked to rate their BIP compliance using a scale of 0 to 100 percent. They were also asked what professionals they have access to for consultation and support in meeting the needs of special education students.

Procedures

Upon receiving human subject approval, a recruitment invitation was delivered to administrators, supervisors, or directors of several state and national professional agencies (e.g., teacher support centers, advocacy groups) for distribution to the relevant member or constituent email lists. This invitation was also disseminated through professional, online social networking sites for educators nationwide. A link to the questionnaire was included with the invitation to participate. The link directed interested participants to Qualtrics, an online survey development and hosting service, where they were able to complete the BIP Implementation Measure anonymously. The BIM and associated demographic questions took approximately 5 minutes for participants to complete.

Results

Exploration of Factor Structure

Exploratory factor analysis was used to evaluate the underlying factor structure of the BIP Implementation Measure as the items had not been evaluated in the past. Also, the items were developed based on practice rather than theory. To determine the number of factors to retain, parallel analysis (Horn, 1965) was conducted. This method has been found to have the most accurate performance in comparison to traditional subjective methods, such as the scree test and selecting eigenvalues greater than one, which tend to overestimate the number of factors to retain (Franklin et al., 1995; O'Connor, 2000). Parallel analysis indicated the presence of three factors; therefore, Principal Components Analysis (PCA) was conducted with three factors extracted. Because overlap between factors was expected, Promax rotation was used.

The three identified factors accounted for 49.78% of the total variance. The factor structure appeared to be simple, with each item loading on a separate factor. Factor pattern coefficients were considered salient if they were $\geq .40$, and all items reached this cut point with the exception of one: "As a teacher, I should not be required to implement Behavior Inter-

vention Plans." The factor analysis was conducted again without this item, and the three factors accounted for 51.82% of the total variance. The factor structure was simple, with each item loading on a separate factor and all factor pattern coefficients $> .40$ (see Table 2). A review of the items associated with each factor revealed that the statements intended to assess teachers' perceptions of effectiveness, challenges to implementation, and collaboration did load on separate factors. The factors were correlated but only to a small degree to indicate that they indeed measured different constructs (see Table 2). Internal reliability estimates for each of the factors (effectiveness, challenges, and collaboration) were acceptable. Cronbach's alpha reached .78, .83, and .76, respectively. Finally, the factors were not significantly correlated with teachers' reported years teaching or school type (i.e., urban, suburban, or rural).

Perceptions of BIP Implementation and Reported Compliance

Hierarchical multiple regression was conducted to evaluate the relationship between teachers' perceptions of BIP effectiveness, challenges, and collaboration and their reported level of BIP compliance. Perceptions of challenges and collaboration were entered into the equation at steps one and two, and effectiveness entered last. The amount of *R* square change was evaluated at each step to assess whether subsequently entered constructs predicted reported compliance above and beyond those initially entered. In other words, the investigation involved not only exploring what factors were related to compliance but assessing whether teachers' perceptions of collaboration and the effectiveness of BIPs could predict compliance above and beyond perceptions of challenges.

Results revealed that teachers' perceptions of challenge accounted for 9% of the variance in their reported BIP compliance (F change (1) = 7.09, $p = .01$). When entered into the equation, collaboration failed to predict compliance above and beyond challenge (F change (1) = 1.78, $p = .19$). Effectiveness, however, predicted BIP compliance above and beyond the other variables (F change (1) = 7.87, $p = .01$). Interestingly, once effectiveness was entered into the equation, challenge was no longer a statistically significant predictor, which suggests that overlap exists between challenge and effectiveness (see Table 3). The three variables together accounted for 21% of the variance in reported BIP com-

Table 2*Exploratory Factor Analysis Results*

Items	Factor Loadings			<i>M</i>	<i>SD</i>
	Effectiveness	Challenge	Collaboration		
I have completed college coursework that focused on the implementation of Behavior Intervention Plans.	.81	.16	-.15	2.8	1.26
I have completed continuing education hours related to the implementation of Behavior Intervention Plans.	.81	.12	-.24	3.0	1.24
I fully understand the purpose of the Behavior Intervention Plan.	.74	-.04	.04	3.9	0.93
Behavior Intervention Plans help me to address a student's disruptive behavior so that others can learn.	.67	-.09	.26	3.5	0.94
A Behavior Intervention Plan is an effective tool that improves a child's classroom learning.	.61	-.06	.11	3.4	1.01
Behavior Intervention Plan is an effective tool that improves a child's classroom behavior.	.59	-.13	.16	3.4	0.94
I modify the Behavior Intervention Plan so that the plan will work in my classroom.	.45	.03	-.18	3.6	1.01
I have to change my existing classroom management for other students to implement Behavior Intervention Plans.	.11	.95	.21	3.1	1.03
I have to change my teaching to implement Behavior Intervention Plans.	.25	.92	.13	3.2	0.99

Items	Factor Loadings			<i>M</i>	<i>SD</i>
	Effectiveness	Challenge	Collaboration		
My implementation of Behavior Intervention Plans has created learning problems for other students.	-.10	.77	-.13	2.7	1.07
My implementation of Behavior Intervention Plans has created discipline problems for other students.	-.14	.75	-.05	2.6	1.07
I need more training to successfully implement Behavior Intervention Plans.	-.12	.56	-.09	3.4	1.07
I have access to a school counselor who can help me implement Behavior Intervention Plans.	-.17	.17	.81	3.4	1.36
I have access to a school psychologist who can help me implement Behavior Intervention Plans.	-.17	.16	.75	3.2	1.34
I have access to a copy of the Behavior Intervention Plan as soon as the student is assigned to my classroom.	-.13	-.10	.69	3.8	1.21
I can rely on my principal or closest administrator to support me in implementing Behavior Intervention Plans.	-.02	-.17	.67	3.6	1.22
I implement ALL aspects of the Behavior Intervention Plan.	.08	.00	.60	3.8	0.97
I have access to a behavior specialist who can help me implement Behavior Intervention Plans.	.01	.02	.51	2.7	1.34
I am given the opportunity to meaningfully contribute to the development of the Behavior Intervention Plan.	.17	.06	.47	3.7	1.29

Table 3*Hierarchical Multiple Regression Results for Self-Reported BIP Compliance*

Predictor Variable	<i>r</i>	<i>R</i>	ΔR^2	Standardized β	<i>F</i>
Step 1		.31	.09		7.09**
Challenge	-.29**			-.31**	
Step 2		.34	.02		1.78
Challenge				-.25*	
Collaboration	.25*			.16	
Step 3		.46	.09		7.87**
Challenge				-.19	
Collaboration				.10	
Effectiveness	.34**			.32**	

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

pliance. Ratings of BIP compliance were negatively skewed, with an average of 80.42 out of 100 ($SD = 20.49$).

Perceptions of BIP Implementation and Access to Support

Independent measures *t*-tests were conducted to investigate whether teachers with and without access to school psychologists reported differing perceptions of BIP effectiveness, challenges, and collaboration. Not surprisingly, teachers who reported having access to a school psychologist for consultation and support in meeting the needs of special education students ($n = 59$) reported significantly more positive perceptions of collaboration ($t(83) = -2.76, p = .01$) than those without access ($n = 31$). The BIP effectiveness perceptions of teachers with access to school psychologists were also significantly more positive ($t(87) = -2.30, p = .02$) in comparison to teachers without access. However, teachers with access to a school psychologist did not report significantly higher levels of BIP compliance in comparison to their peers without access.

Discussion

The Behavior Intervention Plan (BIP) is required as part of the individual education plan for children receiving special education services whose behavior is interfering with their learning or that of others. Teachers must implement the BIP as it is written and may not have the opportunity to provide input into its develop-

ment. As a result, understanding the variables that lead to teachers' BIP compliance is different from understanding what leads to the implementation of interventions in general. The purpose of the present pilot study was to investigate the underlying factor structure of a measure assessing teachers' perceptions about BIPs. Prior research, although limited, suggested that indicators of BIP effectiveness, challenges to implementation, and levels of collaboration were related to BIP compliance and implementation (e.g., Couvillon et al., 2009); therefore, items for the BIP Implementation Measure (BIM) were written to represent perceptions of these factors.

The results of the exploratory factor analysis supported the presence of the three underlying factors of perceptions of effectiveness, challenges, and collaboration. Perceptions of effectiveness included items not only related to perceptions concerning how well the BIP improved classroom learning and behavior but also the training reported by the teacher. This suggests teachers with BIP training, achieved either through formal coursework or continuing development, tended to view BIPs as effective. Interestingly, this factor also included the item, "I modify the Behavior Intervention Plan so that the plan will work in my classroom," which was not written with the expectation that it would load on this factor. The inclusion of this item on the effectiveness factor suggests that this construct might extend beyond perceptions of effectiveness and represent teachers' investment in BIPs. That is, teachers scoring high on this factor likely have had

more BIP training, recognize its effectiveness, and are willing and able to modify the plan to make it work.

The perceptions of effectiveness factor was negatively correlated with the challenges to BIP implementation factor. As teachers' perceptions of BIPs effectiveness increase, their perceptions of challenges decrease. Challenges included perceptions that existing classroom management and instruction must be changed to implement BIPs. Additionally, this factor included items related to the perception that BIPs create learning and discipline problems for other students. The final item related to this factor focused on teachers' perceptions that they need more training to successfully implement BIPs. Teachers with BIP training may possess more strategies that allow the integration of BIPs into their existing classroom structure. Training seemed more important than years of experience, as statistically significant associations between the number of years teaching and any of the factors, as well as between years teaching and BIP compliance, were not found.

Not surprisingly, the challenge factor was negatively correlated with the collaboration factor, which suggests that teachers perceive more challenges when they are implementing BIPs without access and support from others. The collaboration factor included items assessing teachers' access to school counselors, school psychologists, and behavior specialists. Other items evaluated teachers' ability to rely on their principals for support and access and contribution to the BIP itself. Only one item, "I implement ALL aspects of the Behavior Intervention Plan," was not expected to load on the collaboration factor. The inclusion of this item indicates that with support, access, and collaboration, teachers may be more likely to understand the importance of implementing the plan in its entirety. The collaboration factor was positively correlated with the teachers' perceptions of effectiveness factor, although only to a moderate degree to suggest that teachers with access and support may not necessarily perceive BIPs to be effective.

To investigate the convergent validity of the three factors, multiple regression was used to assess their prediction of teachers' reported BIP compliance. Of the three factors, challenges and effectiveness accounted for most of the variance in reported BIP compliance, and effectiveness predicted compliance above and beyond challenges and collaboration. Even so, the amount of variance accounted for was somewhat small

at 21%. Although these results support that some understanding of teachers' perceptions about BIPs was gained through administration of the measure, the measure only explained a little about teachers' compliance. Further research is necessary to investigate the role of other perceptions and variables that lend to prediction.

Interestingly, collaboration did not significantly predict teachers' reported compliance. This result differs from existing research findings that suggest consultation with school psychologists is associated with intervention implementation, especially if performance feedback is provided (Noell et al., 2005). Results from the current study found that teachers with access to a school psychologist reported higher levels of collaboration and perceptions of effectiveness in comparison to teachers without access to a school psychologist but those with access to the school psychologist did not report higher BIP compliance than those without. Therefore, having access to a school psychologist may influence teachers' perceptions about BIPs, which in turn influence teachers' compliance. Further research is necessary to investigate these relationships, as findings may influence how school psychologists consult to influence teacher perceptions.

Future research is also warranted to cross validate the factor structure of the BIP Implementation Measure. Future efforts should explore the role of the variables beyond BIP perceptions that influence BIP compliance as a considerable amount of variance in BIP compliance was not explained by perceptions alone. This finding could have been related to the nature of the self-report of the teachers. The distribution of the BIP compliance scores was negatively skewed, which likely influenced the ability to find statistically significant associations. Researchers may therefore need to find other ways to measure BIP compliance. Finally, the use of larger sample sizes that include more nationally representative teachers will be important in future work.

In conclusion, the findings from the present pilot study indicate that an underlying factor structure of teachers' perceptions about BIP implementation exists and may have some predictive capability of understanding BIP compliance. Teachers' perceptions related to effectiveness and challenges seem especially important. With an increasing number of students receiving special education services who require BIPs as part of their individual education plans,

understanding and even predicting compliance may direct school psychologists to teachers who need higher levels of support, training, and consultation.

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Article

The Relationship Between Helicopter Parenting and Social Emotional Learning

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Parenting styles play a vital role in children’s development. Research suggests an overinvolved parenting style (helicopter parenting) is negatively associated with children’s overall well-being. Parenting style has important implications for the development of children’s social and emotional learning (SEL). However, there is no clear indication of the association between helicopter parenting and SEL abilities in children. Therefore, the objective of this paper was to examine the relationship between helicopter parenting and SEL in children ages 6 to 11. A correlational design assessed the relationship between helicopter parenting and SEL, with results indicating a negative correlation between these variables. More research is needed to evaluate how targeted behavioral parent training can affect helicopter parenting behaviors.

Key words: Helicopter parenting, Social Emotional Learning, Over-parenting

Introduction

In general, parenting plays an important role in a child’s development. More specifically, parenting style plays an important role in the child’s academic achievement (Spera, 2005) and social-emotional development (Zarra-Nezhad, Aunola, Kiuru, Mulla, & Moazami-Goodarzi, 2015). Parental involvement in child monitoring is related to academic achievement and educational accomplishment (Spera, 2005). This is specifically true when parents are part of and involved in their children’s education and extracurricular school activities (Spera, 2005). Parenting behaviors and parenting style also play a vital role in social-emotional development in childhood. Research suggests that warm and affective parenting and behavioral control are associated with decreased depressive symptoms and problem behaviors in children, while high psychological control is related to increased depressive symptoms, anxiety, and distress in children and adolescents (Zarra-Nezhad et al., 2015).

Parenting Styles

Baumrind (1971; 1991; 2005) was the first to study parenting styles and found that parenting

styles can be described across two dimensions: demanding-ness and responsiveness. Demanding-ness indicates the degree to which parents show supervision and use of developmentally appropriate limit-setting. Responsiveness indicates the degree to which parents show involvement, acceptance and warmth. These two dimensions are described further by four parenting styles, which include: authoritative parenting, authoritarian parenting, permissive parenting, and neglectful parenting (Aunola, Stattin, & Nurmi, 2000; Baumrind, 2005).

Authoritative parents are controlling but not restrictive, have high involvement and communication, trust their child, and encourage autonomy (Aunola et al., 2000; Baumrind, 2005).

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Authoritative parenting is related to increased levels of school achievement in adolescents (Kordi & Baharudin, 2010; Spera, 2005; Steinberg, Elmen, & Mounts, 1989; Steinberg, Lamborn, Dornbusch, & Darling, 1992). In addition, authoritative parenting is associated with high levels of motivation, competency, mastery, and self-efficacy (Turner, Chandler, & Heffer, 2009). Authoritative parenting is also associated with the child's ability to apply adaptive and task-oriented strategies in achievement situations. The authoritative parenting style increases the child's autonomous behavior, self-regulation, independence, intrinsic motivation, problem solving, self-control, and self-esteem (Aunola et al., 2000).

In contrast, authoritarian parents are demanding, but not responsive. Authoritarian parents have a low level of trust and communication with their child and are extremely strict and controlling (Aunola et al., 2000; Baumrind, 2005). Authoritarian parenting is negatively associated with academic achievement (Spera, 2005). Additionally, authoritarian parenting is associated with high levels of children's passivity, task-avoidant behaviors, and an absence of self-enhancing acknowledgements (Aunola et al., 2000).

Permissive parents are responsive, but refrain from effective limit-setting practices. Permissive parents are warm, accepting, and child-centered and allow their child to behave autonomously, whether mature or not (Aunola et al., 2000; Baumrind, 2005). Permissive parenting is associated with decreased self-reliance and self-control, and lower competence in children (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Spera, 2005; Williams, Degnan, Perez-Edgar, Henderson, Rubin, Pine, Steinberg, & Fox, 2009).

Neglectful parents are neither demanding nor responsive. Neglectful parents do not support child self-regulation and do not manage their child's behavior. Neglectful parents lack involvement and control. Neglectful parenting is related to underachievement and difficulties in academic achievement among children and adolescents (Aunola et al., 2000; Baumrind, 2005).

Helicopter Parenting

In 2011, LeMoyné and Buchanan proposed

helicopter parenting as a new dimension within parenting styles. Helicopter parenting is the over-participation or over-involvement of parents in the lives of their children. Parents high in helicopter parenting over-parent and micromanage their child's life. Parents high in the helicopter parenting style are hypothesized to experience extreme fear of separation from their child when their child is distancing from them to become independent and autonomous, or leaves home to go to college (LeMoyné & Buchanan, 2011; Soenens, Vansteenkiste, Duriez, & Goossens, 2006). Additionally, parents with a helicopter style report a belief that they have more responsibility over the child's homework than parents lower in this style (Locke, Kavanagh, & Campbell, 2016). As a result, parents high in helicopter parenting often do their child's homework for them, potentially causing impairment in the child's emotional regulation, resilience, academic achievement, and learning (Locke et al., 2016; Spera, 2005).

According to Locke (2014), helicopter parenting or over-parenting is related to the parents' wish for their child to be constantly happy, and the parents' wish to be friends with their child. Helicopter parents are over-involved in their child's life to ensure that their child is always happy and never faced with any difficulties. Additionally, helicopter parents want to play the role of a friend, in addition to the role of a parent, to their child. Helicopter parents want their child to approve of them and to console them, which is why they ensure that their child is always happy (Locke, 2014). Research has shown that parents' efforts to ensure constant happiness and to make sure that their child is never faced with difficulties has been associated with children lacking the ability to soothe themselves and poor social skills (Gottman, Katz, & Hooven, 1996). Helicopter parents who befriend their child and expect excessive reciprocal support lack sensitivity to their child's needs. Research has shown that children whose mother is seeking that kind of support from their child are more at risk for externalizing and internalizing behavior problems (Peris, Goeke-Morey, Cummings, & Emery, 2008).

When examining the characteristics of helicopter parents and the four parenting styles, it is still unclear how they are related. Research indicates that helicopter parenting is a more

responsive than demanding parenting style and has negative effects in the child's life (LeMoyne & Buchanan, 2011). Padilla-Walker and Nelson (2012) have proposed that helicopter parenting is not a new dimension of parenting, but a new and unique representation of the basic dimensions and patterns of parenting (responsiveness/involvement, control, and autonomy granting). Further, Padilla-Walker and Nelson (2012) suggest that helicopter parenting is unique in the manner in which it prioritizes the dimensions of parenting (high involvement, low autonomy granting, and high presence of emotional support in the relationship). This may indicate that helicopter parenting falls under one of Baumrind's (1971; 1991; 2005) four parenting styles. Since helicopter parenting is considered to be higher on responsiveness and lower on demanding-ness, it may best fall under Baumrind's permissive parenting style, which is also high on responsiveness and low on demanding-ness (Aunola, Stattin, & Nurmi, 2000; Baumrind, 2005; LeMoyne & Buchanan, 2011). However, research conducted by various scholars has indicated different styles and effects of helicopter parenting.

Segrin, Givertz, Swaitkowski, and Montgomery (2015) suggest that helicopter parenting is significantly related to relationship problems. Helicopter parenting tends to be associated with a more critical family environment. Specifically, helicopter parenting is more likely to occur in a critical family environment, in which parents and children do not hold each other in a high regard. A more critical family environment involves the parents having a more critical, rather than a favorable, positive, and supportive approach towards the child. In a criticized family environment, there are less positive parent-child interactions, and more conditional parenting. This means that parents only provide attention to the child when the child acts and behaves in a manner in which the parents want (Segrin et al., 2015). This can eventually lead to negative interpersonal relationships and the lack of social problem solving skills in adults (Segrin et al., 2015).

For the purpose of this paper, helicopter parenting is defined as parents who are over-involved in the lives of their children, while trying to fulfill the role of being their child's friend and

parent, and constantly ensuring that their child is happy.

The Effects of Helicopter Parenting on College Students and Children

The construct of helicopter parenting originated from research conducted on college students. Research shows that parents engaging in helicopter parenting when their child is an adult and in college relates to lower quality parent-child communication and decreased life satisfaction and family satisfaction (Schiffirin et al., 2013; Segrin et al., 2012). Helicopter parenting may not be related to any socially adaptive traits in young adult children (Schiffirin et al., 2013; Segrin et al., 2012). Helicopter parenting may be associated with low self-efficacy, separation from peers, and the absence of trust among peers (van Ingen et al., 2015). College students who perceived their parents to be high in helicopter parenting had low general self-efficacy and poor peer attachment, indicating low levels of relationship skills (van Ingen et al., 2015). According to McGinley (2018), maternal and paternal helicopter parenting was associated with decreased positive, prosocial and empathetic outcomes in college students and contributed to their moral development. Specifically, college students who perceived their mothers as overbearing had difficulty trusting their peers and felt isolated from their peers, while college students with the perception of overbearing fathers had poor communication with their peers (van Ingen et al., 2015). Additionally, research indicated that helicopter parenting was related to lower levels of psychological needs satisfaction and self-control and higher levels of alcohol use in female college students (Cui, Allen, Fincham, May, & Love, 2018).

Helicopter parenting has negative effects in the child's life (LeMoyne & Buchanan, 2011). Van Ingen, Freiheit, Steinfeldt, Moore, Wimer, Knutt, Scapinello, and Roberts (2015) have suggested that helicopter parenting may cause children to be alienated and detached from peers potentially hindering the child's social and emotional development. In addition, helicopter parenting also may cause the child to become dependent on others, have symptoms of social anxiety, and feel entitled (Locke et al., 2016; Segrin, Woszidlo, Givertz,

Bauer, & Taylor Murphy, 2012). Helicopter parenting constrains the child from developing the skills and abilities needed to be fully independent, limiting the child from taking on adult roles (Padilla-Walker & Nelson, 2012). Higher helicopter parenting style is associated with decreased overall well-being, higher number of prescriptions for anxiety or depression (especially females), difficulties in interpersonal relationships, lower self-efficacy, and little to no likelihood of achieving independence to solve their own problems (Bradley-Geist & Olson-Buchanan, 2014; LeMoyne & Buchanan, 2011; Schiffrin, Liss, Miles-McLean, Geary, Erchull, & Tashner, 2013). Further, helicopter parenting is hypothesized to have negative associations with psychological well-being because children may feel they are not allowed their basic psychological needs for autonomy and competence (Schiffrin et al., 2013). However, in the East Asian population, specifically in Korean emerging adults, helicopter parenting was associated with both positive and negative psychological outcomes. While higher levels of helicopter parenting were associated with increased depressive symptoms through higher levels of pressure from parents regarding career expectations, they were also associated with better psychological adjustment (greater satisfaction with life and lower depressive symptoms) through increased levels of parent-child affection (Hesse, Mikkelsen, & Saracco, 2018; Lee & Kang, 2018).

Social Emotional Learning

Outside of these negative effects, helicopter parenting may also affect social-emotional learning (SEL) development. According to the Collaborative for Academic, Social, and Emotional Learning (CASEL) (CASEL, n.d.; Durlak, Domitrovich, Weissberg, & Gullotta, 2015), social-emotional learning is the method through which individuals learn and use knowledge, attitudes, and skills required to understand and manage emotions. Further, SEL competencies help the individual set and attain positive goals, feel and show empathy for others, establish and sustain positive relationships, and make responsible decisions (Schonfeld, Adams, Fredstrom, Weissberg, Gilman, Voyce, Tomlin, & Speese-Linehan, 2015). SEL competencies include five main core components: including self-

management, self-awareness, social awareness, relationship skills, and responsible decision-making (Zaff, Aasland, McDermott, Carvalho, Joseph & Pufall Jones, 2016). Self-management is the ability to regulate one's behaviors, thoughts, and emotions in various situations. Self-awareness is the ability to identify how one's own thoughts and emotions influence their behavior. Social awareness is the ability to understand others' perspectives and empathize with them, despite their culture and background. Relationship skills are the ability to develop and sustain healthy and rewarding relationships with different people. Responsible decision-making is the ability to make productive decisions about one's behavior and social interactions while keeping in mind ethical standards, safety, and social norms (CASEL, n.d.; Durlak et al., 2015; Elias, Zins, & Weissberg, 2000). However, to date no study has looked at the relationship between helicopter parenting and social-emotional learning.

While there is no research on the relationship between helicopter parenting and SEL competencies, research indicates that parental warmth or responsiveness is positively associated with children's knowledge of emotions and higher emotional intelligence (Alegre, 2011). Parental monitoring is positively correlated to higher emotional intelligence. Punitive parenting (negative sanctions such as yelling, spanking, or withholding privileges or negative parental demanding-ness) is associated with lower levels of emotional understanding and regulation (Alegre, 2011; Fletcher, Walls, Cook, Madison, & Bridges, 2008). Further, while no research has examined the relationship between parenting styles and children's overall SEL competencies, research has examined the associations between parenting styles and each of the five SEL components.

The self-management or self-regulation of children involves three important dimensions, including emotion regulation, behavioral regulation, and susceptibility to peer influence (Grolnick & Farkas, 2002). Emotion regulation research suggests that the children who have a responsive parent that adapts his or her parenting interventions to the child's needs, and models nonintrusive regulatory strategies, have high self-regulation (2002). Behavioral regulation research suggests that

children whose parents are involved in their lives, provide rules and guidelines, and promote individuality have compliant children that also have increased self-regulation (2002). Susceptibility to peer influence research suggests that children who have supportive parents that encourage autonomy and parents that monitor their children and have a close and involved relationship with them have increased self-regulation (2002).

Research on parenting styles suggests that authoritative parenting provides the best foundation for children's relationship skills, including peer competence, social-behavioral skills, and confidence (Ladd & Pettit, 2002). Parenting styles are models from which children learn about relationships skills and interactions. Children's experience with parent's warmth and responsiveness in the parent-child interaction impact the degree to which children establish healthy and rewarding relationships and emotional connections with others (2002). Children who experience coercive, dominating, and low responsiveness parent-child relationships tend to show aggression towards their peers. Children whose parents are controlling, intrusive, or overprotective mistreat and victimize their peers (2002). Children's ability to establish and maintain relationships has been associated with secure, responsive, nonintrusive, and playful parent-child relationships (2002). Difficulties in peer relationships have been associated with asynchronous, harsh, stressful, and disoriented parent-child and parent-parent relationships. Additionally, stressors like unemployment, marital discord, and divorce increase the likelihood of children's difficulty in establishing and maintaining relationships (2002).

When examining responsible decision making behaviors in adolescence, research suggests that adolescents who have neglectful parents are more likely to engage in smoking behaviors, compared to those with parents from authoritative, authoritarian, or permissive parenting styles (Radziszewska, Richardson, Dent, & Flay, 1996). In contrast, research examining adolescent sexual risk taking behavior and parenting styles suggests that adolescents with fathers high in the authoritarian parenting style have increased risk of participating in risky or delinquent behaviors compared to

children with fathers high in the authoritative parenting style (Bronte-Tinkew, Moore, & Carrano, 2006).

Research suggests that some maternal parenting styles impact children's abilities to be self-aware or self-conscious (Uji, Kitamura, & Nagata, 2009). Children with mothers who were indifferent or rejected them have higher levels of shame. In this same study, children with overprotective parents have increased detachment and externalization. Self-consciousness is not affected in children with caring mothers who allowed them independence and autonomy (2009). Another study suggests that negative parenting behaviors including indifference, rejection, and abandonment by parents are associated with children's increased experiences of self-conscious emotions (Muris & Meesters, 2014). This association is higher in the case of negative parenting behaviors and shame. Additionally, this study suggests that the authoritarian parenting style is also associated with increased self-awareness in children, especially in regards to shame (Muris & Meesters, 2014).

Further, SEL competencies also seem to be related to parent's level of warmth. For example, one study found that warmth and harsh parenting styles have different outcomes in regards to children's externalizing behaviors, social awareness, and social competence. Warm parenting is associated with higher levels of social competence and healthy externalizing behaviors, and harsh parenting is associated with children having more externalizing problems, especially in the classroom (Laible, Carlo, Torquati, & Ontai, 2004).

With this limited research, there is still a gap that exists in the literature regarding the relationship between helicopter parenting and overall social-emotional learning in children ages 6 to 11. Therefore, the purpose of this study was to examine how social emotional learning in children is affected by helicopter parenting. Based on previous research, the current study expected to find a significant negative correlation between helicopter parenting and overall social-emotional learning, as well as with the five SEL components (self-awareness, self-management, social awareness, relationship skills and decision making skills).

Method

Participants

Participants were recruited through Amazon Mechanical Turk (MTurk), snowball sampling, and social media (e.g., Facebook and Reddit). Snowball sampling involved asking personal and professional contacts to complete the survey and email the research opportunity to their personal and professional contacts. Participants were at least 18 years old and a parent or guardian of at least one child between the ages of 6 to 11 years. Ages 6 to 11 years are approximately the middle childhood years, when children start to develop skills of self-awareness; a sense of individuality or autonomy, a sense of self-esteem, social relationships outside of the home environment (peers and adults), and the skill to socially compare themselves with their peers (Eccles, 1999). MTurk participants received \$0.01 for filling out the pre-screener and \$0.25 for completing the survey. Those who participated through social media were entered into a raffle for the opportunity to earn one of two \$25 gift cards.

Materials

This study was part of a larger study that examined the differences in the relationship between helicopter parenting and parental accommodations in children ages 4 to 11 presenting with clinical diagnoses. For the purpose of the current study, the materials included a Demographic Questionnaire, the Locke Parenting Scale (LPS; Locke, Kavanagh, & Campbell, 2015), and the Social Emotional Learning Skills Inventory Parent Report – Ages 6-11 (SELSI P 6-11; Schanding, 2017).

Demographic Questionnaire

The demographic form collected information on the participant's ethnicity, age, biological sex, gender, relationship to child, and level of education. Participants were also asked about the child's age and gender.

Locke Parenting Scale (LPS)

The Locke Parenting Scale was used to measure parents' self-reported beliefs, attitudes, and behaviors, which may contribute to helicopter parenting (Locke et al., 2016). There are 8 items on

the LPS that measure two scales (Befriending and Ensuring Constant Happiness) using a 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). These two factors are highly associated with helicopter parenting (Locke, 2014). As indicated by the author, the two scales (Befriending and Ensuring Constant Happiness) were combined to measure helicopter parenting. Befriending is when the parent desires to be a friend of their child and ensuring constant happiness is when the parent desires to keep their child happy, away from difficulty, and seeks to have their child be her/his friend (Locke, 2014). The LPS has adequate reliability over a 16-19-month test-retest interval ($r = .77$), and adequate internal consistency ($\alpha = .73$) for the total scale (Locke et al., 2016). In the current study, the LPS had an $\alpha = .78$ for the Ensuring Constant Happiness subscale, $\alpha = .73$ for the Befriending subscale, and $\alpha = .82$ for the total scale. For more information on the exact items, interested readers should contact the author of the LPS directly.

Social Emotional Learning Skills Inventory Parent 6-11 (SELSI P 6-11)

The SELSI P 6-11 is a parent-report measure for children ages 6-11 that measured the five core areas of social and emotional learning (SEL) as identified by the Collaborative for Academic, Social, and Emotional Learning (CASEL, n.d.; Schanding, 2017). The five core areas of SEL are self-awareness (SFA), self-management (SMG), social awareness (SOC), relationship skills (REL), responsible decision making (RDM), which all combine to yield a Total SEL score (CASEL, n.d.; Schanding, 2017). There are 58 items on the SELSI P 6-11 that use a 4-point Likert scale ranging from 1 (never) to 4 (almost always). For the current data set, all of the theoretically derived SELSI P 6-11 scales demonstrated adequate internal consistency: 1) SFA, $\alpha = .88$; 2) SMG, $\alpha = .87$; 3) SOC, $\alpha = .92$; 4) REL, $\alpha = .91$; 5) RDM, $\alpha = .88$; 6) Total SEL score, $\alpha = .98$.

Procedures

Data collection began after approval from the University of Houston – Clear Lake's Committee for the Protection of Human Subjects

(CPHS). Participants were recruited through MTurk, email snowball sampling, and posting details about the study on social media sites like Facebook and Reddit. Participants completed an online pre-screening question identifying whether they had any children between the ages of 6 to 11 years. If participants did not qualify for the study, the online survey ended. Individuals who qualified for the study were linked to the online consent form. MTurk presented a description of the survey procedures to the participants before they selected the Qualtrics link. Once participants clicked on the link, they were asked to read and acknowledge that they understood the informed consent form and agreed to participate. Once they agreed to participate, participants were asked to complete the online survey. If participants had more than one child, they were asked to think about the child whose first initial is closest to the beginning of the alphabet. Then, they were asked to think about only

Table 1
Descriptive Statistics for Parent/Guardian Participants (N=233)

Demographic Variable	Category	Sample Size (%)
Biological Sex	Female	198 (85)
	Male	35 (15)
Gender	Female	199 (85.4)
	Male	33 (14.2)
	Other	1 (0.4)
Ethnicity	Arab	1 (0.4)
	Asian	7 (3)
	Black (African American, Caribbean)	24 (10.3)
	Caucasian (White, Not of Latino or Asian descent)	181(77.7)
	Latino	10 (4.3)
	Native American	1 (0.4)
	Bi-Racial	7 (3)
Age	Other	2 (0.9)
	18-24	2 (0.9)
	25-34	82 (35.2)
	35-44	117 (50.2)
	45-54	32 (13.7)

this one identified child while completing the online survey. The online survey took approximately 30 minutes to complete. After sufficient data were collected, data were downloaded from the secure Qualtrics website and analyzed.

Data Analysis

A priori power analysis was conducted, and results indicated that a total sample size of 150 would be needed with 80% power using a correlation with an alpha level set at .05 to detect a small to moderate effect size ($r = .20$).

All data were entered into and analyzed using Statistical Package for the Social Sciences (SPSS) version 25. Descriptive analyses were used to describe the participants in our study. For the purpose of this study, a correlational design was used. Specifically, a parametric test, the Pearson correlation coefficient, was used to determine the relationship between helicopter parenting and social-emotional learning for children between the ages of 6 to 11 years. A Pearson's r provided the strength and direction of the relationship between scores on the LPS and scores on the SELSI P.

Results

Demographics

Table 1 shows the descriptive statistics of the parent/guardian participants, including frequency and percent of responses to the demographic questionnaire. Table 2 shows the descriptive statistics of the child participants, including frequency and percent of responses to the demographic questionnaire. A total of 233 parents/guardians and children participated in this study. Data were reviewed to examine any outliers or missing data. No cases were excluded based on the review of outliers. Only those with full data were included for analysis. Fifty-two cases were excluded from the larger dataset due to failure to complete either the SELSI P or LPS.

Relationship between Helicopter Parenting and Social-Emotional Learning

The mean scores for the LPS, the SELSI P 6-11, and the subscales of the SELSI P 6-11 are reported in Table 3. Further, the correlation coefficients between helicopter parenting and the

Table 2
Descriptive Statistics for Children (N= 233)

Demographic Variable	Category	Sample Size (%)
Biological Sex	Female	121 (51.9)
	Male	112 (48.1)
Gender	Female	117 (50.2)
	Male	116 (49.8)
Ethnicity	Asian	5 (2.1)
	Black (African American, Caribbean)	22 (9.4)
	Caucasian (White, Not of Latino or Asian descent)	166 (71.2)
	Latino	11 (4.7)
	Native American	2 (0.9)
	Bi-Racial	24 (10.3)
Age	Other	3 (1.3)
	6	48 (20.6)
	7	38 (16.3)
	8	37 (15.9)
	9	35 (15)
	10	42 (18)
	11	33 (14.2)

Table 3
Mean and Standard Deviation of Helicopter Parenting, Social-Emotional Learning, and the Five Components of Social-Emotional Learning

Measure	M	SD
Helicopter Parenting	18.83	5.41
Overall Social-Emotional Learning	176.62	30.12
Self-Awareness	30.60	5.63
Self-Management	24.80	5.32
Social Awareness	36.59	7.31
Relationship Skills	51.24	8.39
Responsible Decision Making	33.40	5.91

Table 4
Correlations Between Helicopter Parenting, Social-Emotional Learning, and the Five Components of Social-Emotional Learning

Measure	Pearson Correlation Coefficients (Helicopter Parenting)
Helicopter Parenting	-
Overall Social-Emotional Learning	-0.158*
Self-Awareness	-0.184**
Self-Management	-0.106
Social Awareness	-0.129*
Relationship Skills	-0.159**
Responsible Decision Making	-0.147*

Note. * $p < .05$. ** $p < .01$.

total SELSI P 6-11 scores and the subscales of the SELSI P 6-11 are reported in Table 4. There was a small effect ($r = -0.158, p < .01$) in the relationship between helicopter parenting and the total scores on the SELSI P 6-11. Further, there was a significant negative relationship between helicopter parenting and self-awareness ($r = -0.184, p < .01$), social awareness ($r = -0.129, p < .05$), relationship skills for children ($r = -0.159, p < .01$), and responsible decision-making for children ($r = -0.147, p < .05$). We did not find a statistically significant relationship between helicopter parenting and self-management ($r = -0.106, p = 0.053$).

Discussion

Based on the NASP's Practice Domains (NASP, 2010), school psychologists work to promote family-school collaboration, demonstrating the requisite knowledge and skills to facilitate family-school partnerships and meet the needs of the family's culture and context. School psychologists are also charged to deliver appropriate interventions for social and life skills. The current study provides additional data for school psychologists to consider when working with parents and teachers to build social-emotional competencies with children.

This study examined the relationship between helicopter parenting and social-emotional learning skills in children ages 6 to 11. Previous research indicates that helicopter parenting is associated with negative relationship skills, specifically the separation from peers, poor peer relationships, and low trust among peers, and lower levels of emotional awareness and regulation (Alegre, 2011; Fletcher, Walls, Cook, Madison, & Bridges, 2008; van Ingen et al., 2015); however, no research has examined the association between helicopter parenting and overall social-emotional learning or the five components of social-emotional learning (self-awareness, self-management, social awareness, relationship skills, and responsible decision-making). This study “fills a gap” that exists in the literature regarding the relationship between helicopter parenting and overall social-emotional learning in children ages 6 to 11, indicating that helicopter parenting is negatively associated with children’s SEL.

Based on the current data, there was a significant negative correlation between helicopter parenting and overall social emotional learning for children ages 6 to 11, which supported the first hypothesis. This means that as parents endorsed higher ratings on the helicopter parenting scale (LPS), their reported ratings of their children’s social emotional learning may have decreased. Furthermore, we also found a significant negative correlation between helicopter parenting for four of the five core social-emotional learning competencies. We found a significant negative relationship between helicopter parenting and self-awareness, social awareness, relationship skills, and responsible decision-making. This means that as helicopter parenting increased, parents’ perceptions of their children’s self-awareness, social awareness, relationship skills, and responsible decision-making abilities, individually, decreased. We did not find a statistically significant relationship between helicopter parenting and self-management. This was interesting, because self-awareness was negatively associated with helicopter parenting, and self-awareness is related to a person recognizing information about themselves and managing themselves (Goleman, 2001). Additionally, self-management entails children regulating their own emotions, thoughts, and behaviors in various

situations, which is not measured by the Locke Parenting Scale.

The Locke Parenting Scale measures two constructs of helicopter parenting, Befriending and Ensuring Constant Happiness, which evaluate a parent’s motivations for participating in helicopter parenting behavior. It does not measure parent’s specific level of assistance with child-related tasks. Hence, we were unable to measure whether parents were managing and completing tasks for their children or whether children were able to self-manage by starting and completing tasks themselves. It is recommended that the relationship between helicopter parenting and self-management be further explored in adolescents to determine if helicopter parenting impacts adolescents’ self-management skills. Adolescents would be expected to exhibit more skills in the area of self-management developmentally and have more age appropriate autonomy than younger children, with recent research indicating that some adolescents may have enhanced or diminished self-management based on a combination of genetics and responses to environmental cues (Casey & Caudle, 2014).

According to our results, helicopter parenting was associated with decreased overall social emotional learning skills in children ages 6 to 11. This means that children of parents higher in the helicopter parenting style rated their child lower in their attitudes, knowledge, and skills that are required to manage and understand emotions, set and attain positive goals, show and feel empathy for others, establish and maintain positive relationships, and make responsible decisions (CASEL, n.d.; Durlak, Domitrovich, Weissberg, & Gullotta, 2015; Schonfeld, Adams, Fredstrom, Weissberg, Gilman, Voyce, Tomlin, & Speese-Linehan, 2015). This may be because these children are used to having their over-involved parents manage everything in their lives for them, hence, they lack or have reduced opportunities to learn and practice social emotional learning skills. The decrease in overall social emotional learning may be a barrier in the development of friendships and intimate relationships, making and achieving future goals, and making knowledgeable and appropriate decisions.

Helicopter parenting was also associated with decreased self-awareness, social awareness,

relationship skills, and responsible decision-making in children ages 6 to 11. Decreased self-awareness may lead to the inability of children to identify themselves as independent individuals who have strengths and weaknesses. They may only be able to identify themselves as part of their parents and not as a separate individual. This may lead to difficulties in setting personal and individual goals and fulfilling them. This may also reduce the chance of children getting through college and achieving a future professional career, as they may not be able to set or achieve this goal. They may view their parent's involvement as intrusive and this may lead to feelings of low self-efficacy, which may hinder their abilities (van Ingen et al., 2015).

Decreased social awareness may lead to low school performance, loneliness, decreased friendships, and lack of trust (van Ingen et al., 2015). Social awareness seems to be important to understand others' perspectives and empathize with them. In order to communicate, it may be important that an individual is socially aware of other people's needs and wants. When one responds to the needs and feelings of others, they may gain people's trust. Social awareness appears to be essential in any relationship, whether it is a personal or professional relationship. Children with parents high in helicopter parenting style may not have developed strategies for communicating, interacting, or empathizing with others. Similarly, a decrease in relationship skills may be the result of having over-involved parents that do not allow children the space, time, or autonomy to develop age appropriate relationship skills. These children may be more socially awkward in social gatherings and may have a hard time meeting new people and making new friends (CASEL, n.d.; Durlak, Domitrovich, Weissberg, & Gullotta, 2015; Elias, Zins, & Weissberg, 2000). They may not be given the opportunity to interact with others from their parents and learn to pick up social cues or learn from how peers their age interact. Their feelings of diminished ability may also lead to social anxiety and avoidance of social interactions, leading to isolation and/or depression, which is indicated in the research reviewed above (Zarra-Nezhad et al., 2015).

In examining the current data, helicopter parenting was associated with decreased responsible

decision-making about one's behavior and social interactions when considering one's safety, the law, and social norms. Children with parents high in helicopter parenting may be unable to make simple decisions in adulthood, because of the lack of autonomy and independence given to them as children. Parents higher in the helicopter parenting style may not allow children to have a say in decisions as a child, which does not allow for prosocial modeling and reinforcement or appropriate decision-making, resulting in irresponsible and risky decisions.

Limitations and Future Directions

While the current study furthers our understanding of helicopter parenting and its relationship with SEL, a few limitations should be noted. First, the majority of the participants were Caucasian, resulting in a lack of generalizability to the population. A larger sample size, more representative of the composition and geographic representation of the United States, would be preferable. Second, helicopter parenting is still a less studied phenomenon that fits well within pop-psychology, rather than within traditional psychology. Additionally, helicopter parenting is not well defined within the peer-reviewed literature; hence, the lack of research on helicopter parenting may lead to our limited knowledge of helicopter parenting and its constructs. Third, only one parent/guardian reported his/her own parenting behaviors. Parents/guardians may parent differently, and it may be better to get self-reports on the helicopter parenting and the social emotional learning measure from not just one, but both parents/guardians. In addition, the parent reporting his/her own parenting behaviors may be biased in their reporting, and may portray their parenting style to be more favorable when filling out the measure. It may be best to have the child fill out the helicopter parenting measure and the social emotional learning measure as well, to reduce any biased reporting. Fourth, this study did not incorporate longitudinal methods to assess trends or trajectories in development. Conducting a longitudinal study would have allowed for us to measure the differences in helicopter parenting and social emotional learning skills at multiple time points and developmental milestones of the child's

life and further identify how the two are associated. Additionally, a longitudinal study may provide us with information regarding the age at which these behaviors stop being helpful, and rather, become harmful in children. Fifth, although there was a significant correlation found between helicopter parenting and the components of social-emotional learning, the effect sizes were small and this may be because parents higher on the helicopter parenting scale may be biased. Parents higher on the helicopter parenting scale may be presenting their children to be higher on the social emotional learning scale, to indicate that their children are higher functioning than they really are. Hence, having children and both parents complete the helicopter parenting measure and the social-emotional learning measure will help reduce the likelihood of any biased reporting from parents higher on the helicopter parenting scale. Additionally, another possible reason for the presence of a significant correlation found between helicopter parenting and the components of social-emotional learning and small effect sizes, may be that there may have been a smaller number of “helicopter parents” in our sample, than “non-helicopter parents.” Sixth, parents only completed a survey for one child in their household, and it is assumed that the parenting style used with all the children in the household is consistent and the same. In fact, parents can use different parenting styles with one child versus another child in the household, due to age, functioning, mental or physical health, and similar variables. Lastly, this is the first study to use the Social Emotional Learning Skills Inventory. As a new measure, it requires further validation related to the criterion and construct validity.

Future studies should consider the relationship between helicopter parenting, social emotional learning, and different demographic variables and populations. First, future studies should collect data internationally to determine whether helicopter parenting is associated with social-emotional learning in children internationally or just in the United States of America. Culture plays an important role in parenting. In some cultures and countries, helicopter parenting may be an appropriate and acceptable dimension. It may not be negatively associated with social emotional

learning, but rather positively associated with it in children. Second, it would be worthwhile to also look at additional age ranges (e.g., preschool, adolescent) and the relationship between helicopter parenting and SEL skills. Third, future studies should examine if there are differences in the relationship between helicopter parenting, the components of social-emotional learning, and the child’s gender. Lastly, future studies should also compare reports by both parents on helicopter parenting and social-emotional learning skills to get a more accurate picture on how helicopter parenting relates to social-emotional learning.

Future research should also consider comparing helicopter parenting to traditional conceptions of parenting styles - authoritative parenting, authoritarian parenting, permissive parenting, and neglectful parenting - to examine how the styles are related to social-emotional learning skills. As mentioned earlier, while research suggests that helicopter parenting is a more responsive, rather than a demanding parenting style (LeMoyne & Buchanan, 2011), no research has compared helicopter parenting to the four traditional parenting styles. Furthermore, while it is identified that helicopter parenting is not a new dimension of parenting, but rather it is a new representation of the basic dimensions and patterns of parenting (Padilla-Walker & Nelson, 2012), doing this research may help identify how helicopter parenting relates similarly or differently to the social emotional skills displayed by children who have been parented from the principles of one of the other four traditional parenting styles (authoritative parenting, authoritarian parenting, permissive parenting, and neglectful parenting). While helicopter parenting may fall under one of Baumrind’s (1971; 1991; 2005) four parenting styles, no research has examined the relationship between SEL and the four traditional parenting styles. Future research should examine the relationship between helicopter parenting and the permissive parenting style as well as parenting behaviors and how the outcomes of these two parenting patterns are similar and different in relation to SEL skills. Further, the relationship between the four parenting styles, helicopter parenting, and social emotional skills also should be further examined (Aunola, Stattin, & Nurmi, 2000; Baumrind, 2005; LeMoyne &

Buchanan, 2011).

Additionally, future studies should look at ways in which to overcome the negative relationships between helicopter parenting and SEL skills. One way to do this may be by studying what parenting behaviors can be targeted by behavioral parent training to reduce helicopter parenting. Specifically, during behavioral parenting training, psychoeducation can be provided to parents who are high on the helicopter parenting style on how their accommodations may be hampering their child's growth. It may also be helpful to provide them with other parenting strategies to use to help build their child's healthy independence. By educating and providing parents with skills, a decrease in helicopter parenting behaviors may be seen, which then would lead to an increase in social emotional learning. This may indicate that behavioral parent training may be a good intervention for children who have parents higher in the helicopter parenting style and decreased SEL.

Compliance with Ethical Standards

Funding: This study received no external funding.

Ethical Approval: All procedures performed in this study involving human participants were in accordance with the ethical standards of the institution and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent: Informed consent was obtained from all individual participants included in the study.

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Article

Engaging Families in School-Based Assessment Practices: Current School Psychology Practices

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The National Association of School Psychologists (NASP) emphasizes family-school collaboration services as a domain of school psychology practice (NASP, 2010a). A large role of school psychologists is assessment and data-based decision making, yet recent research has not examined how school psychologists engage families during this process. This study investigated current family engagement practices used by school psychologists during assessment activities, practices noted as effective by school psychologists, and variables associated with family engagement. Survey results from 301 respondents indicated low rates of universal screening data collection in schools, with few engaging families during this process. While more opportunities to engage families were noted during special education evaluations, less than half of school psychologists reported meeting with parents prior to Individualized Education Plan (IEP) meetings to discuss evaluation results and fewer follow up with parents after meetings. Age of students and school socioeconomic status were significantly associated with school psychologists' family engagement practices. Implications for practice and future research are discussed.

Keywords: School Psychology, Assessment, Family Engagement, Home-School Collaboration

Emphasis on family engagement and home-school collaboration has been part of education in the United States given its positive impact on student educational outcomes. Involving parents in the school system and promoting collaboration across environments has historically improved a variety of outcomes, such as student academic achievement (e.g., Wilder, 2018); social-emotional and behavioral functioning (e.g., Walker & Hoover-Dempsey, 2006); increased communication and shared goals between home and school (Christensen & Sheridan, 2001); and increased learning at home through direct instruction and positive reinforcement (Arnold, Zeljo, Doctoroff & Ortiz, 2008). Furthermore, the National Association of School Psychologists (NASP, 2012) advocates for involving parents in the educational process, stating families are "equal partners who share responsibility for the learning and success of all students" (p.1).

Although parental involvement and engagement are used interchangeably, researchers have specified definitions and differences between the two terms.

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Often, parent involvement is more general in nature when compared to parent engagement. Furthermore, parent involvement is considered to include activities directed by the school (e.g., a parent attending a school function), whereas parent engagement is considered to be participation by parents in a meaningful way that can include decision making in their child's learning goals and instructional activities (Harris & Goodall, 2008). As described by Underwood (2010), parent engagement also requires that the school build relationships with parents/families, understand parents' experiences, and create opportunities for parents to voice their perspective in a continuous manner.

With evidence supporting partnership and collaboration across home and school, school-based professional organizations have emphasized the importance of incorporating families into their policy and practice domains. In relation to school psychologists, NASP (2010a) outlines family-school collaboration services as one of the core competencies of all school psychologists. They note "school psychologists use evidence-based strategies to design, implement, and evaluate effective policies and practices that promote family, school, and community partnerships to enhance learning and mental health outcomes for students (National Association of School Psychologists, 2010a, p.7). School psychologists' work with families may span from individual level services, such as working with a family to support student behavioral interventions, to systems level services by consulting with school administration on methods to engage families in school governance and policy development. These model practices are an important element of a comprehensive model of school-based psychological service delivery (NASP, 2010a) and are emphasized in graduate training standards in the field (NASP, 2010b).

School Psychologists and Family Engagement in the Assessment Process

While family-school collaboration services are a foundational piece of service delivery in the field, there is little research on how commonly school psychologists engage in such activities. One recent survey demonstrated that school psychologists do not spend significant time

supporting family-school collaboration. School psychologists spend little time providing services to families and promoting family engagement when compared to their other responsibilities (Walcott, Charvat, McNamara, & Hyson, 2016). According to research, school psychologists spend most of their time completing individual evaluations to determine special education eligibility, followed by participating in Individualized Education Program (IEP) meetings and consulting with school-based multidisciplinary teams (Hosp & Reschly, 2002; Walcott et al., 2016).

Within school psychology practice, family engagement practices and conducting evaluations are not mutually exclusive. Given the importance of family-school collaboration, it is beneficial to understand how family engagement and assessment practices in schools intersect. As indicated by legal requirements (e.g., Individuals with Disabilities Education Improvement Act [IDEIA], U.S. Department of Education, 2004), ethical guidelines, (NASP, 2010c), and best practice approaches to assessment set forth by the field of school psychology (NASP, 2016), parental involvement and participation is an integral part of the special education evaluation process. When school staff suspect students have a disability and refer for a special education evaluation, parents provide permission by signing consent and then contribute to the evaluation process by providing data to the school psychologist and members of the school-based evaluation team. For school psychologists, it can take the form of conducting interviews with parents and/or other family members, requesting their completion of rating scales/questionnaires (e.g., social-emotional, behavioral, adaptive), and seeking additional data relevant to the reason for referral. Depending on the roles of the evaluation team members, the school psychologist may also be the person who reaches out to parents to set up a time for meetings, answer questions parents may have before the meeting, and follow up with parents after the meeting. This provides the school psychologist the opportunity to engage with parents through data collection, conceptualization of the child's difficulties, goal setting with families, and rapport building for further intervention.

Related to conducting evaluations for special education, school psychologists have noted

that they spend a large amount of time participating in IEP meetings (Walcott et al., 2016). As outlined in IDEIA (U.S. Department of Education, 2004), local education agencies must ensure that parents of students with disabilities are present at IEP meetings, have enough prior notice to participate, and meetings are held at a mutually agreeable time and place for all parties to attend. Thus, by definition, school psychologists and parents engage with one another at IEP meetings to discuss results of evaluations and other data that will inform educational services, programming, and placement for students. Interestingly, and despite the additional requirements, parents of children with disabilities report less engagement than parents of children in general education (Rodriguez & Elbaum, 2014).

School Psychologists and Family Engagement Across Tiers

With an emphasis on prevention and early intervention, school psychologists also have the opportunity to support all students by participating in activities to identify at-risk students who may need additional levels of support in the school setting. Some schools employ the practice of universal screening as a “systematic assessment of all students in a given population in order to identify students at risk of emotional, behavioral or related difficulties” (Dever, Raines & Barclay, 2012, p. 108-109). Universal screening is an evidence-based practice that allows schools to identify students who are at-risk for academic and social-emotional/behavioral (SEB) challenges and is one way to gather data in an efficient manner to inform intervention supports. NASP (2010a) advocates for school psychologists to be engaged in multi-tiered systems of supports to ensure that all students have access to needed academic, behavioral, and mental health interventions to support their educational experiences. At a universal level, screening efforts allow for the use of standardized, objective data gathered on all students at various points during the school year. Inclusion of families in screening processes are imperative, as families add vital information about student functioning (Dowdy & Kim, 2012). However, in a systematic review that examined family involvement in school-based behavioral screening in school psychology journals,

Hendricker, Bender, and Ouye (2018) found very few research studies that utilized parents as screening informants. The researchers concluded that the extent to which families are involved in screening practices is currently unknown.

This area is important to explore, as school psychologists have advanced training to implement universal screening practices in schools. They are also in a unique position to make contact with parents to seek their input on universal screening. What is especially interesting about this role is that it would allow all parents to understand the purpose of screening, to provide their perspective, and to be informed of their child’s ongoing progress. The field of school psychology has given recommendations to include families within this area. Chafouleas, Kilgus, and Wallach (2010) suggest that schools include parents in screening and decision-making processes. This can occur by involving parents to “(a) enhance parental acceptance of behavioral screening procedures, (b) facilitate the home-school coordination of services that result from screening, and (c) potentially enhance outcomes of these services” (Chafouleas, Kilgus, & Wallach, 2010, p. 250). Albers and Kettler (2014) also note that parents may be involved in universal screening through multiple gate procedures and similar to Donovan and Cross’s (2002) suggestion, school staff should determine parental acceptability with screening measures. Hendricker and colleagues (2018) discuss that engaging families in the screening process ensures that school psychologists are using multiple sources of information, conceptualizing family risk factors that may be associated with student difficulties, and including parents in educational decision making, thus building rapport with at-risk families and students who may later require intensive interventions.

Variables Affecting Family Engagement

Previous studies have suggested that students and families from minority racial, ethnic, and linguistic groups may be at-risk for less engagement when compared to their majority counterparts due to misconceptions by schools that parents of students from marginalized backgrounds are less interested in their child’s education (Blanchett, Klingner, & Harry, 2009). This is

problematic for a number of reasons. Research over time indicates less parental engagement in these populations is not due to lack of parents' interest in their child's education. Because schools make fewer efforts to make parent engagement culturally relevant for families from diverse backgrounds, parents perceive they are not welcome in the school environment and additional barriers make it difficult to navigate the educational context (e.g., less education themselves, lower SES, and less social capital; Ong-Dean, 2009). Previous studies have also examined home-school engagement efforts by including school factors and demographics to predict parent involvement. For example, higher SES, smaller school size (Stewart, 2008), and frequent contact with parents by school members is associated with greater parent engagement. However, contact with parents appears to decrease as students progress through middle and high school, with parents reporting more teacher contact and engagement efforts in younger grades compared to higher grades (Dunst, 2002). Furthermore, in a study investigating parents of students with disabilities and their perceptions of home-school engagement efforts, researchers examined socioeconomic status, school size, grade level, and student-teacher ratio as predictors of the schools' efforts (Rodriguez & Elbaum, 2014). They found that student-teacher ratios were the strongest predictor of perceived home-school engagement efforts for parents of children receiving special education services, with teachers in classrooms with fewer students having more contact with parents. However, these studies examined family contact by teachers and school administrators, not school psychologists. Given what is known about the benefits of family engagement and the amount of time school psychologists spend in assessment-related activities, it is important to examine if associations exist between demographic variables and school psychologists' assessment practices.

Purpose of the Study

Despite NASP (2010a) advocating for family-school collaboration services and the broad understanding of best practices related to school psychology assessment, there is little research available to examine what actually happens in the field related to family engagement. Understanding

more about school psychologists and their efforts to engage families during the assessment process can help guide practices within the field. This ensures necessary competencies and skills in working with families are established, thereby assisting at-risk students and families who are in need of school-based psychological supports.

The purpose of this study is to understand the status of family engagement practices in school psychology, with a specific focus on assessment, given that assessment appears to be a large role of the school psychologist and may be one of the main times school psychologists interact with families. In addition, variables that may be associated with school psychologists' family engagement practices are critical to understand. Specifically, the research questions within this study include: (1) How do school psychologists engage with families during special education evaluations?; (2) How do school psychologists engage with families during universal screening?; (3) What family engagement practices do school psychologists find effective during assessment?; and (4) How are school psychologists' engagement with families during assessment related practices associated with school, family, student, and personal demographic variables (i.e., racial, ethnic, and linguistic diversity; location; age of students served; SES; participant credentials)?

Method

Participants

Professionals who deliver school psychological services across the United States participated in an online survey measuring family engagement practices. The survey was intended for individuals who were current, practicing school psychologists or those who delivered psychological services (e.g., assessment, consultation, direct intervention) to students in the school setting in some capacity (such as a graduate student in a school psychology program or a behavioral specialist). The survey stated for participants to discontinue the survey if they did not provide psychological services to students within their current job role.

Three hundred and one responses were collected, of which 73 were partially complete and 228 were fully complete. Demographics of the

sample are in Table 1. Participants could skip demographic questions; thus, percentages may not always add up to 100%. In addition, respondents could select more than one racial identity so this variable may exceed 100%. The majority of participants identified as Caucasian (92%), non-Hispanic/Latino (97%), monolingual (90%) females (87%). Over 70% of the sample held a Master's or Specialist level degree, which represents the entry-level degree for the practice of school psychology. The majority of participants (nearly 58%) held the Nationally Certified School Psychologist (NCSP) credential and over 80% of the sample held a primary job as a school psychologist. Respondents had varying amount of experience in the field, with 42.6% reporting six or less years of experience, 32% reporting seven to ten years of experience, and 38.5% reporting more than ten years of experience. The demographics of the current study are consistent with the 2015 NASP Member Survey (Walcott & Hyson, 2018), which was also a primarily female (84%), Caucasian (87%), monolingual (86%) sample. The NASP Survey had a slightly higher number of respondents who have the NCSP credential (67% to the 58% in the current study).

Measures

The researcher-developed "Family Engagement Practices in School Psychology Survey" investigated family engagement practices and trends utilized by school-based psychology professionals (Appendix A). Development of the survey used research published in *School Psychology Quarterly* outlining evidence-based practices to collaborate with parents and families in the school setting. Specifically, a special issue titled "*Evidence-Based Parent and Family Interventions in School Psychology*" (Carlson & Christenson, 2005) summarized the work of the Evidence-Based Interventions in School Psychology Task Force. Effective interventions eliciting school-based academic and behavioral change in children with a family-focused perspective included parenting education (Hoard & Shepard, 2005), parent involvement in schools (Fishel & Ramirez, 2005), home-school collaboration (Cox, 2005), parent consultation (Guli, 2005), parent training and family intervention (Valdez, Carlson & Zanger, 2005), and

preschool family-school interventions (Bates, 2005). The authors examined this special issue, along with other recent relevant literature on evidence-based parenting and family interventions in schools, and identified evidence-based practices and programs to include in the survey. A small segment of practicing school psychologists and university faculty teaching in school psychology programs reviewed the survey for content, length, and wording.

The survey consisted of 66 questions to understand the frequency of school psychologists' use of family engagement practices; the availability of various evidence-based parent consultation and intervention programs in the primary school where they spend their most time; and perceptions of the importance of various family engagement practices. Survey questions were structured in a variety of ways, including dichotomous, Likert Scale, and open-ended questions. For example, some dichotomous questions noted if various programs or interventions were available in the school setting. Likert scale questions primarily focused on how often practitioners integrated families into the special education evaluation process and respondents could answer "Always", "Often", "Sometimes" or "Never" to indicate their use of the practice. Open-ended questions helped gain a broader understanding of the types of family engagement programs, interventions, and consultation methods that respondents utilize.

Specific scales analyzed how schools gather information from multiple informants during universal screening procedures (Universal Screening Scale); how practitioners engage families during the special education process (Special Education Evaluation Scale); and practitioner perceptions of practices used to engage families during assessment procedures (Perceptions of Assessment/Evaluation Scale). Specific survey questions that comprised each subscale are in Table 2. Additional subscales developed within the survey are also in Table 2, but are not the focus of this manuscript. Cronbach's alpha for the Universal Screening Scale and the Special Education Evaluation scale were 0.60 and 0.534, respectively. Cronbach's alpha for the Perceptions of Assessment/Evaluation Scale was not computed because subscale items were not Likert scale

Table 1*Descriptive Characteristics of Sample (N = 286)*

Demographic Variable	Category	Sample Size (%)
Biological Sex	Female	264 (87.7)
	Male	35 (11.6)
	Prefer Not to Answer	1 (0.3)
Gender	Female	264 (87.7)
	Male	36 (12.0)
	Transgender	0 (0.0)
Race	White/Caucasian	277 (92.0)
	Black/African-American	14 (4.7)
	American Indian or Alaskan Native	0 (0.0)
	Asian	6 (2.0)
	Native Hawaiian or Other Pacific Islander	1 (0.3)
	Other	4 (1.3)
Ethnicity	Hispanic/Latino	11 (3.7)
	Non-Hispanic/Latino	282 (93.7)
	Other	3 (1.0)
Multi-Lingual	Yes	32 (10.6)
	No	265 (88.0)
Highest School Psychology Degree	Master's	47 (15.6)
	Specialist	169 (56.1)
	Ph.D.	41 (13.6)
	Psy.D.	8 (2.7)
	Affiliated degree	3 (1.0)
	Currently seeking degree	28 (9.3)
	Other	7 (2.3)
Nationally Certified School Psychologist	Yes	174 (57.8)
	No	125 (41.5)
Primary Job Role	School psychologist or state equivalent	245 (81.4)
	School psychology graduate student/intern	33 (11.0)
	Director of Psychological Services in a school district	7 (2.3)
	School counselor	1 (0.3)
	Behavior interventionist	1 (0.3)
	Diagnostician	1 (0.3)
	School psychological examiner	1 (0.3)
	Special education administrator	5 (1.7)
	University faculty member	4 (1.3)
	Other	4 (1.3)
	Length of School Psychology Practice with Appropriate Credentials	Less than 1 year
1-3 years		39 (13.0)
4-6 years		49 (16.3)
7-10 years		54 (17.9)
11-15 years		44 (14.6)
16-20 years		28 (9.3)
Over 20 years		44 (14.6)
Length of Time in Current Position	Less than 1 year	52 (17.3)
	1-3 years	69 (22.9)
	4-6 years	67 (22.3)
	7-10 years	42 (14.0)
	11-15 years	36 (12.0)
	16-20 years	19 (6.3)
	Over 20 years	15 (5.0)

Table 2*Family Engagement Practices in School Psychology Survey Subscales*

Subscale Names	Survey Items
Demographic Questions	My biological sex is: My gender is: I identify my race as (Please check all that apply): I identify my ethnicity as: I speak more than one language fluently.
Credential Questions	My highest degree in School Psychology is: Are you a Nationally Certified School Psychologist (NCSP)? I have been practicing school psychology with an appropriate credential for:
Current Job Questions	What is your primary job role? How long have you held your job position at the current district/site? In which state are you currently employed? Which district or special education cooperative are you currently employed or practice in? How many schools are you responsible for being the provider of psychological services for? What percentage of time are you employed?
Current School/District Questions	How would you characterize your school district? How would you characterize the racial diversity of the student population in your school district? How would you characterize the ethnic diversity of the student population in your school district? How would you characterize the linguistic diversity of the student population in your school district? Approximately how many school psychologists does your district or cooperative approximately employ? This school can best be classified as: Families at my school are classified in the following ranges:
Universal Screening Scale	My school gathers information for all students in a systematic way from teachers and/or student self-report to determine who is at-risk and may need further behavioral intervention My school gathers information for all students in a systematic way from parents, caregivers or other family members to help determine who is at-risk and may need further behavioral intervention.
Special Education Evaluation Scale	During the special education initial or triennial evaluation process, I send rating scales home to gather information about the child's functioning (including behavioral/social/emotional) outside of school. During the special education initial or triennial evaluation process, I gather qualitative information from the parents about the child's functioning outside of school through interviews or qualitative surveys. Prior to an IEP meeting, I meet with the parents to discuss my evaluation report, recommendations or services proposed for the child. During an IEP meeting, I work collaboratively with the parents to come up with goals, services etc., and utilize their input in these decisions. After an IEP meeting, I contact the parents to follow-up and see if there are any additional questions or needs they may have.
Perceptions of Assessment/Evaluation Practices Scale	Which assessment related practices do you feel are most important in engaging families? Which assessment related practices do you feel are effective in engaging families?
Parent Education Scale	In my school, there is access to parent education programs at the universal level to prevent the future onset of problems. What types of concerns do your parent education programs currently target?

Parent Education Scale Cont.	Who implements these parent education programs? Where do these parent education programs take place?
Perceptions of Parent Education Scale	Which parent education practices do you feel are most important in engaging families? Which parent education practices do you feel are effective in engaging families?
Parent Involvement Scale	In my school, there are established methods for involving all parents within the educational process to support children's behavioral, social and emotional well-being. What methods are utilized to involve parents in the educational process? Who implements these parent involvement methods/programs? Where do these parent involvement methods/programs take place?
Perceptions of Parent Involvement Scale	Which parent involvement practices do you feel are most important in engaging families? Which parent involvement practices do you feel are effective in engaging families?
Parent Consultation Scale	In my school, we utilize family/parent consultation by targeting individual families and collaborating with them when children are experiencing behavioral or emotional difficulties and may require Tier 2 or Tier 3 interventions. What practices are used during family/parent consultation? Who implements family/parent consultation?
Perceptions of Parent Consultation Scale	Which parent consultation practices do you feel are most important in engaging families? Which parent consultation practices do you feel are effective in engaging families?
Family Intervention Scale	In my school, there is access to family intervention programs when children are experiencing significant behavioral or emotional difficulties. In my school, referrals for family intervention programs in the community are provided if the school cannot provide them. What types of family intervention programs are currently available in your school? Who implements these family intervention programs? Where do these family interventions take place?
Perceptions of Family Intervention Scale	Which family intervention practices do you feel are most important in engaging families? Which family intervention practices do you feel are effective in engaging families?
Parent Training Scale	In my school, there is access to specialized parent training programs when children are experiencing significant behavioral or emotional difficulties. What types of parent training programs are currently available in your school? Who implements these parent training programs? Where do these parent training programs take place?
Perceptions of Parent Training Scale	Which parent training practices do you feel are most important in engaging families? Which parent training practices do you feel are effective in engaging families?
Family Engagement Barriers Scale	You indicated that some of the previous family engagement practices, methods and interventions are not being utilized at your school. Please identify the barriers to implementation. What additional methods/programs do you utilize to work with families who may be more difficult to engage or partner with in the school setting? What other family engagement methods or programs are utilized in your school that may have not already been asked about?

questions and instead asked school psychologists what practices they felt were effective to engage and collaborate with families during the special education evaluation process.

Within the survey, participants answered personal demographic information, as well as demographics of the school where they primarily

work (e.g., age of students; linguistic, ethnic, and racial diversity; and socioeconomic status). With regard to diversity variables, participants did not identify which specific linguistic, racial, or ethnic groups were prominent in their schools. Instead, they characterized the student population among various dimensions (e.g., not racially diverse; some

racial or ethnic diversity but majority are Caucasian; or predominantly culturally diverse/majority or students are not Caucasian). Specific survey questions related to these areas are in Appendix A.

Procedures

A tiered recruitment process was used to obtain data from a representative sample of practicing school psychologists in fall 2018. First, the authors compiled email contact information from a random sample of 500 Nationally Certified School Psychologists (NCSPs), 10 from each state, from the publicly accessible database on the NASP website. An initial email requested participation from these five hundred participants. Of these, 69 emails returned to sender and three participants responded to the recruitment email stating that while they held the NCSP credential, they did not deliver school-based psychological services within their current position. Therefore, the initial recruitment sample was 428 participants. The primary author sent two additional email reminders over the course of three weeks. Within this initial recruitment, 112 respondents completed the survey, resulting in a 26% response rate.

A second round of recruitment followed, targeting NASP delegates, school psychology state association presidents, university program directors and colleagues whom were asked to share the study link with their constituents, association members, students, and other school psychology colleagues. Personal social media sites also distributed the survey link. The primary author sent a follow-up email reminder to NASP delegates, state association presidents, and university program directors one week later. The survey closed in December 2018 with 301 responses. We were unable to calculate the exact response rate due to the nature of the distribution (e.g., possibly outdated email addresses, redirection of recruitment email to spam folders, those who chose not to forward the survey link).

Survey data were collected anonymously through a web-based survey management site. Participants received a description of the study, a consent form, and a link to complete the survey. Participants could provide their email address for additional follow-up but this was not required. No other identifying information was collected. Upon

completion of data collection, the researchers assigned each participant with a random research identification number. The university institutional review board approved all study procedures.

Of the items analyzed within the context of this study, 35 participants (11.6%) skipped questions regarding their family engagement practices during assessment activities. The remaining data were analyzed to understand school psychologists' trends concerning these practices.

Results

Research Question 1. How do school psychologists engage with families during special education evaluations?

Participants reported their interactions with families throughout the special education process and descriptive statistics were analyzed. Because a small percentage of respondents (5.0%, $N = 15$) noted they are currently in roles that do not include school psychology in the title (e.g., school counselor, behavior interventionist, university faculty, special education administrator), a one-way ANOVA was conducted to compare the effect of job title on family engagement variables analyzed in the current study. Results indicated one survey item ("During an IEP meeting, I work collaboratively with the parents to come up with goals, services etc., and utilize their input in these decisions") was statistically significant [$F(1, 264) = 5.421, p = 0.021$]. Those with job titles outside of school psychology are less likely to collaborate with parents during IEP meetings when compared to school psychologists, school psychology students, directors of school psychological services and school psychological examiners. Therefore, those with job titles outside of school psychology were removed within the analysis of this specific item. No other survey items used in the study yielded statistically significant results between groups.

When asked, "When a child is initially referred for a special education evaluation, who speaks with the parent (in person or over the phone) about informed consent and the process of the evaluation?", 45.1% of participants ($N = 120$) speak with the parent either in person or over the phone to discuss informed consent and the process of the evaluation. Some school psychologists noted being

part of a team of individuals who share this information with parents (35.3%, $N = 94$), while less (19.5%, $N = 52$) reported not being involved in this initial meeting.

Participants also reported information about data collection during the special education process. In response to the question, “During the special education initial or triennial evaluation process, I send rating scales home to gather information about the child’s functioning (including behavioral/social/emotional) outside of school”, 28.6% ($N = 76$) of participants reported their response as “always”, while 45.9% ($N = 122$) “often” engage in this practice. When asked, “During the special education initial or triennial evaluation process, I gather qualitative information from the parents about the child’s functioning outside of school through interviews or qualitative surveys”, 53.4% ($N = 142$) “always” gather qualitative information from parents through interviews or qualitative surveys, and 29.3% ($N = 78$) “often” engage in this practice. The remaining respondents noted “sometimes” or “never” sending home rating scales (25.5%) or gathering quantitative information through interviews or surveys (17.3%).

Participants indicated their family engagement practices prior to, during, and after IEP meetings with three separate questions. Prior to an IEP meeting, the majority of respondents indicated they either never (24.1%, $N = 85$) or only sometimes (32.0%, $N = 64$) meet with the parents to discuss their evaluation reports or recommendations. During the IEP meeting, almost three-quarters of respondents with school psychology job titles “always” (37.7%, $N = 97$) or “often” (36.2%, $N = 93$) noted working collaboratively with parents to identify goals and services for their child and utilizing this input in their decision-making process. However, despite collaboration during the IEP meeting, only 10.5% of respondents ($N = 18$) contact families after the meeting for follow-up or to see if there are any additional questions or needs they may have.

Research Question 2. How do school psychologists engage with families during universal screening?

Descriptive statistics were used to analyze

the frequency of universal screening data collection methods with teachers, students and families. A small percentage of participants (23.2%, $N = 62$) noted universal screening procedures in their schools. In addition, participants were asked about the inclusion of parents, caregivers, or other family members within the universal screening process. A lesser percentage (15%, $N = 40$) noted schools gathering similar data from parents, caregivers, or other family members. Significantly more schools gathered universal screening information from teachers and/or students versus parents, caregivers, or other family members, $t(300) = -3.23$, $p < .01$. The majority of participants reported their schools did not gather universal screening data to determine behaviorally at-risk students, from either teachers/students (66.7%, $N = 178$) or families (71.9%, $N = 192$). Very few school psychologists reported collecting universal screening data for some grade levels from teachers/students (4.5%, $N = 12$) and families (4.9%, $N = 13$), while some participants were unsure of their schools’ universal screening practices (5.6%, $N = 15$).

Research Question 3. What family engagement practices do school psychologists find effective during assessment?

A list of practices were included in the survey to examine what school psychologists find effective in engaging families during assessment (“Which assessment related practices do you feel are effective in engaging families?”). These strategies mirrored prior questions in the survey measuring what school psychologists actually do to engage families within the assessment process. Participants could check more than one practice, thus totals may exceed 100%. The three practices receiving the most ratings included gathering parent qualitative data during special education evaluations (52.8%, $N = 159$), collaborating with parents during IEP meetings (38.9%, $N = 117$), and meeting with parents prior to IEP meetings to discuss evaluation reports and recommendations (30.2%, $N = 91$). Meeting with parents to obtain consent for a special education evaluation was noted to be effective by 27.9% of participants ($N = 84$). Gathering parent data during universal screening (13.6%, $N = 41$), sending home parent rating scales during special education evaluations (11.6%, $N = 35$), and

following up with parents after IEP meetings (4.0%, $N = 12$) were endorsed least.

Research Question 4. How are school psychologists' engagement with families during assessment related practices associated with school, family, student, and personal demographic variables?

A Chi-Square analysis examined the relationship between level of engagement with families during special education evaluations (Research Question 1); IEP meetings (Research Question 1); universal screening (Research Question 2); and a number of demographic school and student variables. Demographic variables included: (1) racial diversity of the school population; (2) ethnic diversity of the school population; (3) linguistic diversity of the school population; (4) location of school (urban, rural, or suburban); (5) the age of students served (early intervention, early childhood, elementary, middle school, high school or early adult); and (6) the socioeconomic status (SES) of the school population. Data from demographic variables came from categorical responses provided by respondents based on their own understanding of their school population.

No significant relationships existed with the varying levels of family engagement practices when examining the racial, ethnic, and linguistic diversity of the school population or the location of the school. However, some statistically significant results were identified when examining the age of students attending the school. For example, those participants practicing in early childhood settings (ages 3-5) were more likely to have higher levels of collaboration with parents during IEP meetings, $\chi^2(3, N = 266) = 9.79, p < .05$. School psychologists working at high schools were less likely to gather qualitative information from parents during special education evaluations, $\chi^2(3, N = 267) = 9.28, p < .05$. Working in early intervention settings was associated with a stronger likelihood of gathering universal screening data from students and/or teachers, $\chi^2(3, N = 267) = 10.54, p < .05$. In contrast, those working in high schools $\chi^2(3, N = 267) = 12.39, p < .01$ or early adult settings, $\chi^2(3, N = 267) = 14.04, p < .01$ were less likely to gather similar data.

Findings indicate statistically significant differences in relation to SES of the school. Participants are more likely to be involved in speaking with parents to gain informed consent and describe the process of a special education evaluation when schools have more students in the bottom quartile of SES, $\chi^2(2, N = 266) = 6.83, p < .05$. Results were similar for students in the top 60-80%, $\chi^2(2, N = 266) = 6.45, p < .05$, as well as those in the top quartile, $\chi^2(2, N = 266) = 9.21, p < .01$.

To determine if there were differences in family engagement practices based on the education and training level of the survey respondent, participants' responses regarding their level of engagement with families were also analyzed based on whether or not the respondent was a Nationally Certified School Psychologist. While degree information (e.g., Master's, EdS, PhD) was also collected, the sample was more equally divided between those with the NCSP credential ($n = 160$) and those without ($n = 106$); therefore, this variable was used to measure the impact of education and training level. Nationally Certified School Psychologists were more likely to follow-up with parents after an IEP meeting (16% vs. 6.9% of non-NCSPs), $\chi^2(4, N = 299) = 9.54, p < .05$. They were also more likely to gather screening information from parents, caregivers, or family members to inform who may need further behavioral intervention (25.5% vs. 16.3% of non-NCSPs), $\chi^2(3, N = 266) = 11.73, p < .01$. Individuals who were NCSPs were more likely to rate collaborating during an IEP as an effective practice (45.4%) when compared to non-NCSP respondents (30.4%), $\chi^2(1, N = 266) = 6.87, p < .01$. Those who were not NCSPs were more likely to rate sending home rating scales as an effective assessment practice (15.5%) when compared to respondents who hold the NCSP credential (6.4%), $\chi^2(1, N = 299) = 5.85, p < .05$.

Discussion

The purpose of this study is to understand the status of family engagement practices in school psychology, with a specific focus on assessment. While school psychologists are conducting some practices that support family-school collaboration

within assessment practices, many areas are lacking based on the responses to our survey.

Data Collection for the Assessment Process

Given that conducting evaluations for special education eligibility continues to remain a primary job role for school psychologists, much of the survey data focused on practices during the evaluation process. While best practices emphasize evaluations that include multiple sources, methods, and contexts (McConaughy & Ritter, 2014), participants rely more heavily on qualitative data from parents and caregivers. Slightly over one-quarter of respondents report always collecting rating scales from parents, whereas over one-half always conduct interviews and surveys. Almost one-quarter of respondents report never collecting objective rating scales from parents. Individuals without the NCSP credential valued sending home rating scales as an effective practice to engage families during the assessment practices, whereas individuals with NCSP degrees were more likely to rate collaborating during the IEP meeting as an effective practice. Hanchon and Allen (2013) found similar results, in that many school psychologists do not include recommended sources of data, such as behavioral rating scales, within their assessment practices.

From an engagement perspective, sitting down with parents to conduct interviews and learn about a child's developmental history has immense value in understanding a family's perspective and building rapport. However, school psychologists must also consider best practices in evaluation techniques and methods for engaging families in all aspects of data collection. For example, while objective, standardized rating scales may not appear as important to participants, school psychologists can use this data to follow-up with parents and narrow their line of questioning within interviews to gather additional information. For example, a parent BASC-3 rating scale (Reynolds & Kamphaus, 2015) that includes a high F index may indicate they view their child's difficulties in a particularly negative manner, which may influence their behavioral management strategies, parenting stress levels, and in turn impact the parent-child relationship and child behavior (Dennis, Neece, & Fenning, 2018). While data sources such as rating

scales may seem obligatory or disvalued in some instances, ongoing professional development with school psychologists to expand upon using data in an effort to align with parents should receive emphasis.

Lack of Universal Screening

Researchers advocate for a multi-tiered systems of support model to promote positive student mental health outcomes (August, Piehler, & Miller, 2018). Within the multi-tiered framework, universal screening is a first step (i.e., "tier one") to identify students at risk of behavioral and emotional problems (Albers & Kettler, 2014). However, participants from this survey noted overall low rates of universal screening data collection within their schools, with even fewer engaging families during this process. This is consistent with research indicating less than 5% of all schools nationwide participate in universal screening processes, particularly related to behavioral and mental health difficulties (Vannest, 2012) and very few research studies include families as informants for behavioral screening (Hendrick et al., 2018).

This study had a higher amount of respondents (23.2%) report universal screening activities within their schools when compared with previous studies. This may be a reflection of research growth over the past decade, as well as increased access to research-based, universal screening instruments. Despite this growth reported by respondents, the majority of schools are yet to engage in such practices. Individuals with the NCSP credential were more likely to gather screening information from family members. A small percentage of respondents were unsure if their school collected universal screening data, which may mean that some school psychologists continue to function in the historical role as gatekeepers for special education and their skills utilized primarily when students require intensive supports (Reiser, Cowan, Skalski, & Klotz, 2010).

From an advocacy perspective, it becomes critical for current and future school psychologists to become involved in all aspects of data-based decision making through MTSS. NASP (2010a) emphasizes that school psychologists advocate for the needs of all students at the universal, secondary, and tertiary levels. This may involve educating

school administrators and district leadership about the importance of prevention and early intervention efforts, including universal screening, the importance of involving families in data collection to conceptualize student difficulties, and the cost-benefit analysis of these procedures (Humphrey & Wigelsworth, 2016). While school psychologists may encounter barriers to systems change work, taking on small projects can build behavioral momentum (Castillo & Curtis, 2014). For example, data from the current study shows some schools are collecting universal screening data for some grade levels, which represents a small change that can systematically grow over time.

Effective Strategies for Family-School Collaboration

There appears to be a general trend between school psychologists' beliefs and behaviors, as the practices endorsed as effective are those that are engaged in most often; however, the rates of engagement in some areas are low. While legislation requires parental participation during the IEP process (U.S. Department of Education, 2004) and the majority of respondents collaborate with parents during the IEP meeting, less than half of respondents meet with parents prior to the meeting to discuss evaluation results and very few follow up with parents after the meeting has concluded.

Participants rated the top three effective practices for family-school collaboration as collecting qualitative data from parents, collaborating with parents during IEP meetings, and meeting with parents prior to IEP meetings to discuss evaluation reports and recommendations. While over three-quarters of respondents always or often collect qualitative data, and almost three-quarters of respondents reported that they always or often collaborate during an IEP meeting, over half of respondents report that they never or sometimes meet with parents prior to the IEP meeting. The strategy endorsed the least was following up with parents after an IEP meeting; 4% of participants reported that this was an effective strategy, and only 10.5% of the sample conducts such follow-ups.

A recent study of parent satisfaction with IEP meetings found that the majority of parents are dissatisfied with some element of their child's IEP meeting, including the effectiveness of the IEP team

and the content of the program for their child (Slade, Eisenhower, Carter, & Blacher, 2018). Sullivan (2015) found that the majority of parents did not have enough time to read written documents prior to decisions being made at IEP meetings, as well as poor communication of information prior and during the IEP process (Tucker & Schwartz, 2013), thereby decreasing their educational decision making power. Parents also report limited opportunities for collaboration prior to IEP meetings (Childre & Chambers, 2005). Families from culturally and linguistically diverse backgrounds may experience even less involvement due to differences in cultural values, linguistic challenges, and a complicated IEP process (Lo, 2012), which may lead to families feeling less understood and empowered.

In a practical and research-informed guide for improving IEP meetings, Weaver and Ouye (2015) advocate for providing an agenda prior to the meeting and making contact with the parent(s) prior to the meeting. Meeting with parents prior to IEP meetings, which are often crowded with numerous professionals and follow a structured meeting agenda, may have the advantage of building rapport with parents, thus allowing time for parents to process and digest results. Parents may also feel more comfortable asking questions in a smaller setting with evaluation personnel, than in front of a large committee. In addition, after an IEP meeting, parents may continue to process information and may not understand how to best move forward to help their child. Continual follow-up allows for relationship building and strengthening of family-school partnerships. Parents may also require assistance in accessing resources outside of the school setting for their child, which is part of the school psychologist's role outlined by NASP (2010a).

Variables Impacting Family Engagement

This study found that the most influential variables associated with family engagement during assessment were the age of students and the socioeconomic status of the school, with more family-school collaboration occurring during early childhood years. However, school psychologists have a responsibility to promote parent engagement across all ages, as research indicates the impact of

involving families at the secondary level can positively affect high school completion rates and social/emotional well-being (Jensen & Minke, 2017). School psychologists should evaluate their own practices and involve families and other stakeholders in determining proper engagement methods at all school levels. For example, studies have found positive impacts on capitalizing on transition planning (e.g., from middle school-high school and high school-life beyond graduation) with families to improve postsecondary schooling and job outcomes for students (Mac Iver, Epstein, Sheldon, & Fonseca 2015). School psychologists can assist parents in assessing their strategies, skills and communication in an effort to support their children's educational and post-educational goals. At a school-wide level, school psychologists can educate school administration about proper methods of parent engagement at various levels. For example, parents of elementary-aged students may respond to open houses and curriculum nights, while parents of secondary students may be more apt to check emails or monitor their child's grades across various subjects and teachers via online technology. Diversifying approaches based upon child development theories and data from stakeholders may be one advantageous way to promote parent engagement at all levels of education.

The socioeconomic status of families was also associated with parent engagement practices related to informed consent. NASP Principles for Professional Ethics (2010c) clearly indicate that school psychologists have a responsibility to inform parents of assessment procedures, including the scope and use of evaluation data and results. Yet, participants reported being more involved in the informed consent process for evaluations when school socioeconomic status is in the lower or upper quintiles. Nearly 20% of respondents indicated they are not involved with informed consent procedures at their schools. School psychologists may benefit from ongoing discussion and self-reflection around implicit bias (NASP, 2017), as it appears practices may differ based on perceptions of family knowledge and competency of special education procedures. Rather than leading with assumptions, school psychologists can work within their districts and administrators to ensure all families receive

proper education about the special education process through the development of pamphlets, school newsletters, ongoing trainings, and communication. In addition, setting district standards and policies (e.g., school psychologists will always be present at informed consent meetings) can aid in eliminating biased practices that may be subjective in nature.

Limitations

There were several noteworthy limitations to the current investigation. First, our relatively small sample size (N= 301) prohibits a full understanding of the extent of family engagement practices used in assessment. Of this sample, approximately 24% of respondents had missing data, likely due to the length of the survey. In addition, a subset of respondents were school psychology graduate students, who may have had a limited amount of meaningful opportunities to interact and collaborate with families at this point in their training. While the sample appears representative of the demographics of practicing school psychologists, sampling techniques may limit the generalizability of results. Additional studies can best determine how family-school collaboration and family engagement practices vary across the field based on numerous variables, such as job role and length of time in the field.

Another limitation related to the relatively small sample size is the possibility of reporter bias. Given the study focused on family engagement, inclusion and motivation to be in the study may have been because of the relevance between the research and respondents' personal interests. Participants that engage in less family engagement activities or those with non-traditional roles may have been less inclined to participate, thereby increasing sampling error.

With regard to methodology, the current survey was researcher developed, as there were no other published scales used within the field to measure family engagement techniques across various domains of school psychology practice. Cronbach's alpha for the Universal Screening Scale and the Special Education Evaluation scale were 0.60 and 0.534, respectively, with reliability values of 0.6 to 0.7 often seen as satisfactory for exploratory research (Nunnally & Bernstein, 1994).

In addition, the small number of items in each scale may have minimized these values. Additional survey development to analyze family engagement practices in school psychology may be advantageous to explore this practice area further. The survey was also quite lengthy, which prohibited inclusion of other family engagement techniques and variables that may be of interest, such as how the culture of the school district, school administration, or job roles impact a school psychologist's ability to engage with families. Future survey development may wish to expand on additional engagement practices and emphasize variables that may be associated with the expansion of school psychology roles.

The majority of analysis utilized descriptive statistics to gather information about how school psychologists engage with families during their assessment procedures. This preliminary information is vital, given that data on this topic in school psychology is limited. Further detailed analysis methods should be considered in the future, particularly analyzing variables that are associated with family engagement practices. In addition, gathering data from other stakeholders, particularly families, would further contribute to the literature base in this area.

Conclusions and Future Directions

Collaborating with families to promote home-school partnerships and successful educational outcomes for children is an important role of school psychologists. While school psychologists are competent and skilled in many areas, assessment continues to remain the largest portion of the job role for many school-based practitioners. Understanding how to integrate skills across domains will become an important aspect of ongoing learning and professional development in the field. School psychologists may benefit from ongoing professional development related to self-reflection. Self-assessment data tools are available on the NASP website to develop personal growth plans for school psychologists. Using data-based decision-making skills could also guide practices related to family engagement activities. For example, school psychologists could conduct surveys with families to learn about their experiences with the special education evaluation

process and use this data to guide their practices with future families.

Working with families is a critical point across assessment, consultation and intervention. Further research should investigate how school psychologists conceptualize and utilize family engagement practices across various domains of practice. In addition, understanding barriers school psychologists face when working with families can further increase training and knowledge to make family-school partnerships more effective for all students.

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Appendix A*Family Engagement Practices in School Psychology Survey*

Demographic Data:

My biological sex is:

- Male
- Female
- Prefer not to answer

My gender is:

- Male
- Female
- Transgender
- Other
- Prefer not to answer

I identify my race as (Please check all that apply):

- White
- Black or African-American
- American Indian or Alaskan Native
- Asian
- Native Hawaiian or Other Pacific Islander
- Other: Please specify

I identify my ethnicity as:

- Hispanic or Latino
- Non-Hispanic or Non-Latino
- Other: Please specify

I speak more than one language fluently.

- Yes
- No

My highest degree in School Psychology is:

- Master's degree (M.A. or M.S.)
- Educational specialist degree (Ed.S)/Certificate of Advanced Study (CAS)/Certificate of Advanced Graduate Study (CAGS)
- Doctor of Philosophy (Ph.D.)
- Doctor of Psychology (Psy.D)
- Other: Please specify
- I do not have a degree in School Psychology but have a degree in an affiliated field (e.g., School Counseling, Education, Social Work, Child Development)
- I am currently seeking a degree in School Psychology

Are you a Nationally Certified School Psychologist (NCSP)?

- Yes
- No

What is your primary job role?

- School psychologist or state equivalent of a school psychologist (e.g., Licensed Specialist in School Psychology in Texas)
- School psychology graduate student/intern
- Director of School Psychology or Psychological Services in a school district
- School counselor
- Behavior interventionist
- Diagnostician
- Psychometrician

- School Psychological Examiner
- Private practice
- Educational consultant
- Special education administrator
- PreK-12 School Principal
- PreK-12 teacher
- University faculty member
- Other- Please specify

I have been practicing school psychology with an appropriate credential for:

- Less than 1 year
- 1-3 years
- 4-6 years
- 7-10 years
- 11-15 years
- 16-20 years
- Over 20 years

How long have you held your job position at the current district/site?

- Less than 1 year
- 1-3 years
- 4-6 years
- 7-10 years
- 11-15 years
- 16-20 years
- Over 20 years

Current School/District Information:

Any information that is provided in this section will remain confidential. This information will be used to gather additional demographic information about your district (such as free and reduced lunch status and performance standards).

In which state are you currently employed? (Open text box)

Which district or special education cooperative are you currently employed or practice in? (Open text box)

How would you characterize your school district?

- Urban
- Suburban
- Rural
- Frontier

How would you characterize the racial diversity of the student population in your school district?

- Not racially diverse- primarily Caucasian
- Some racial or ethnic diversity but majority are Caucasian
- Predominantly culturally diverse- majority of students are not Caucasian

How would you characterize the ethnic diversity of the student population in your school district? Ethnicity can be defined as a “social group that shares a common and distinctive culture, religion, or language.”

- Not ethnically diverse (for example, not Hispanic/Latino or another identified subculture such as an immigrant population)
- Some ethnic diversity but predominantly not ethnically diverse
- Predominantly ethnically diverse
- I am unsure of the ethnic make-up of my school district.

How would you characterize the linguistic diversity of the student population in your school district?

- Not linguistically diverse- primarily speak English as a first language
- Some linguistic diversity but the majority speak English as a first language

- Linguistically diverse in the community but not at school- majority of students speak English in the school as a primary language but may speak other languages in the home/community setting
- Predominantly linguistically diverse- majority of students do not have English as a first language

Approximately how many school psychologists does your district or cooperative approximately employ? (Open text box)

How many schools are you responsible for being the provider of psychological services for?

- 1
- 2
- 3
- 4
- 5
- 6 or more

What percentage of time are you employed? (e.g., 50% for part-time, 100% for full-time, etc) (Open text box)

When completing the remainder of the survey, please consider your primary (or one of your primary campus assignments) where you spend the most time completing your job duties.

This school can best be classified as: (check all that apply)

- Early intervention (ages 0-2)
- Early childhood (ages 3-5)
- Elementary (ages 5-11)
- Middle school/junior high (ages 11-14)
- High school (ages 14-18)
- Early adult (ages 18-21)

Families at my school are classified in the following ranges:

- Low socioeconomic status (First quintile or Bottom 20%, approximately \$22,000 per year or less of household income)
- Lower-middle socioeconomic status (Second quintile or 20-40%, approximately \$23,000-\$43,000 per year household income)
- Middle socioeconomic status (Third quintile or 40-60%, approximately \$44,000-\$72,000 per year household income)
- Upper-middle socioeconomic status (Fourth quintile or 60-80%, approximately \$73,000-\$112,000 per year household income)
- Upper socioeconomic status (Fifth quintile or Top 20%, approximately more than \$112,000 per year household income)

Family Engagement Practices in Assessment

My school gathers information for all students in a systematic way from **teachers and/or student self-report** to determine who is at-risk and may need further behavioral intervention (e.g., BASC-3 BESS, Systematic Screening for Behavior Disorders, Social Skills Improvement System)

- Yes, for all grade levels
- Yes, for particular grade levels
- No
- Not sure

My school gathers information for all students in a systematic way from **parents, caregivers or other family members** to help determine who is at-risk and may need further behavioral intervention.

- Yes, for all grade levels
- Yes, for particular grade levels
- No
- Not sure

When a child is initially referred for a special education evaluation, who speaks with the parent (in person or over the phone) about informed consent and the process of the evaluation?

- Myself
- A team of individuals, including myself

- Another school staff member

During the special education initial or triennial evaluation process, I send rating scales home to gather information about the child's functioning (including behavioral/social/emotional) outside of school.

- Always
- Often
- Sometimes
- Never

During the special education initial or triennial evaluation process, I gather qualitative information from the parents about the child's functioning outside of school through interviews or qualitative surveys.

- Always
- Often
- Sometimes
- Never

Prior to an IEP meeting, I meet with the parents to discuss my evaluation report, recommendations or services proposed for the child.

- Always
- Often
- Sometimes
- Never

During an IEP meeting, I work collaboratively with the parents to come up with goals, services etc., and utilize their input in these decisions.

- Always
- Often
- Sometimes
- Never

After an IEP meeting, I contact the parents to follow-up and see if there are any additional questions or needs they may have.

- Always
- Often
- Sometimes
- Never

Which assessment related practices do you feel are **most important** in engaging families? Please check all that apply.

- Gathering information from families at a school wide level to determine students who are at-risk and need further behavioral intervention
- Speaking with parents to discuss informed consent and the process of special education evaluations
- Sending home rating scales to gather data from parents for special education evaluations
- Gathering qualitative data (interviews, additional forms) from parents for special education evaluations
- Meeting with parents prior to the IEP meeting to discuss evaluation report, recommendations or services proposed for the child
- Collaborating with families during the IEP meeting to come up with goals, services etc.
- Contacting parents after the IEP meeting for additional follow-up

Which assessment related practices do you feel are **effective** in engaging families? Please check all that apply.

- Gathering information from families at a school wide level to determine students who are at-risk and need further behavioral intervention
- Speaking with parents to discuss informed consent and the process of special education evaluations
- Sending home rating scales to gather data from parents for special education evaluations
- Gathering qualitative data (interviews, additional forms) from parents for special education evaluations
- Meeting with parents prior to the IEP meeting to discuss evaluation report, recommendations or services proposed for the child
- Collaborating with families during the IEP meeting to come up with goals, services etc.

- Contacting parents after the IEP meeting for additional follow-up

Family Engagement Practices in Consultation/Collaboration

Parent Education is defined as the “systematic presentation of information to parents in order to support their efforts and abilities to promote their child’s development” (Hoard & Shepard, 2005).

In my school, there is access to parent education programs at the universal level to prevent the future onset of problems.

- Yes
- No
- Not Sure

What types of concerns do your parent education programs currently target? Please check all that apply.

- Reading strategies to support learning at home
- Mathematics strategies to support learning at home
- Written language strategies to support learning at home
- Homework compliance and completion
- Behavior compliance
- General parenting strategies
- Other- Please specify
- None- we do not currently utilize systematic parent education programs

Who implements these parent education programs? Please check all that apply.

- Me
- Another school psychologist in the district
- Practicum students or interns
- General Education Teachers
- Special Education Teachers
- Allied professionals (school counselor, school social worker)
- Community-based professionals that partner within the school
- Other: Please specify
- N/A- We do not have systematic parent education programs in our school.

Where do these parent education programs take place? Please check all that apply.

- In the school building
- At another school in the district
- At a district level building (administration office)
- At a family counseling clinic
- Other- Please specify
- N/A- We do not have systematic parent education programs in our school.

Which parent education practices do you feel are **most important** in engaging families? Please check all that apply.

- Reading strategies to support learning at home
- Mathematics strategies to support learning at home
- Written language strategies to support learning at home
- Homework compliance and completion
- Behavior compliance
- General parenting strategies
- Other- Please specify
- NA- we do not currently utilize systematic parent education programs

Which parent education practices do you feel are **effective** in engaging families? Please check all that apply.

- Reading strategies to support learning at home
- Mathematics strategies to support learning at home
- Written language strategies to support learning at home
- Homework compliance and completion

- Behavior compliance
- General parenting strategies
- Other- Please specify
- NA- we do not currently utilize systematic parent education programs

Parent Involvement is defined as “participation of significant caregivers in the educational process of their children in order to promote their academic and social well-being” (Fishel & Ramirez, 2005).

In my school, there are established methods for involving all parents within the educational process to support children’s behavioral, social and emotional well-being.

- Yes
- No
- Not Sure

What methods are utilized to involve parents in the educational process? Please check all that apply.

- Making families aware of positive behavior support strategies that are utilized at school
- Sending home regular information through newsletters, websites, or social media
- Meet the teacher events/parent-teacher conferences
- Curriculum nights for parents to learn about the educational curriculum
- Inviting families to school functions regarding behavior
- Asking families for feedback about strategies and policies that are used at school
- Including family members on PBIS or other school-wide behavioral teams or committees
- Including family members on multi-tiered systems of support teams or other school-wide academic teams or committees
- Sharing information and resources with parents about activities they can do at home to promote learning
- Inviting parents to serve on a parent-teaching organization (PTA or PTO)
- Asking parents to volunteer in the classroom or the school
- Other- Please specify
- None- we do not routinely utilize parent involvement methods/programs in our school.

Who implements these parent involvement methods/programs? Please check all that apply.

- Me
- Another school psychologist in the district
- Practicum students or interns
- General Education Teacher
- Special Education Teacher
- Allied professionals (school counselor, school social worker)
- Community-based professionals that partner within the school
- Other: Please specify
- N/A- We do not have parent involvement methods/programs in our school.

Where do these parent involvement methods/programs take place? Please check all that apply.

- In the school building
- Through email or school newsletter
- At another school in the district
- At a district level building (administration office)
- At a family counseling clinic
- Other- Please specify
- N/A- We do not have parent involvement methods/programs in our school.

Which parent involvement practices do you feel are **most important** in engaging families? Please check all that apply.

- Making families aware of positive behavior support strategies that are utilized at school
- Sending home regular information through newsletters, websites, or social media
- Meet the teacher events/parent-teacher conferences
- Curriculum nights for parents to learn about the educational curriculum
- Inviting families to school functions regarding behavior
- Asking families for feedback about strategies and policies that are used at school

- Including family members on PBIS or other school-wide behavioral teams or committees
- Including family members on RTI or other school-wide academic teams or committees
- Sharing information and resources with parents about activities they can do at home to promote learning
- Inviting parents to serve on a parent-teaching organization (PTA or PTO)
- Asking parents to volunteer in the classroom or the school
- Other- Please specify

Which parent involvement practices do you feel are **effective** in engaging families? Please check all that apply.

- Making families aware of positive behavior support strategies that are utilized at school
- Sending home regular information through newsletters, websites, or social media
- Meet the teacher events/parent-teacher conferences
- Curriculum nights for parents to learn about the educational curriculum
- Inviting families to school functions regarding behavior
- Asking families for feedback about strategies and policies that are used at school
- Including family members on PBIS or other school-wide behavioral teams or committees
- Including family members on RTI or other school-wide academic teams or committees
- Sharing information and resources with parents about activities they can do at home to promote learning
- Inviting parents to serve on a parent-teaching organization (PTA or PTO)
- Asking parents to volunteer in the classroom or the school
- Other- Please specify

Family/parent consultation is defined as a “structured, indirect, collaborative, problem solving relationship between the consultant and one or more parent consultees” (Guli, 2005).

In my school, we utilize family/parent consultation by targeting individual families and collaborating with them when children are experiencing behavioral or emotional difficulties and may require Tier 2 or Tier 3 interventions.

- Yes
- No
- Not Sure

What practices are used during family/parent consultation? Please check all that apply.

- Informing parents when their child meets data-based decision rules requiring more behavioral support through Tier 2 or Tier 3 interventions
- Inviting parents to planning meetings (e.g., parent conferences, SST meetings) to develop Tier 2 and 3 interventions
- Sharing information with parents about child progress during Tier 2 or Tier 3 interventions on at least a weekly basis
- Including parents as part of Tier 2 or 3 interventions (e.g., daily behavior report cards, training parents how to implement interventions at home)
- Utilizing parent data to inform intervention effectiveness
- Gathering additional data from parents regarding home behaviors (e.g., interviews, ongoing consultation, rating scales) to inform intervention
- Assisting parents in developing relationships with community behavioral and mental health supports
- None- we do not use any family/parent consultation methods in our school.
- Other: Please Specify

Who implements family/parent consultation? Please check all that apply.

- Me
- Another school psychologist in the district
- Practicum students or interns
- General Education Teacher
- Special Education Teacher
- Allied professionals (school counselor, school social worker, behavior interventionist)
- Community-based professionals that partner within the school
- Other: Please specify
- N/A- We do not use family/parent consultation methods in our school.

Where does family/parent consultation take place? Please check all that apply.

- In the school building
- On the telephone
- Through email communication
- At another school in the district
- At a district level building (administration office)
- At a family counseling clinic
- Other- Please specify
- N/A- We do not use family/parent consultation methods in our school.

Which parent consultation practices do you feel are **most important** in engaging families? Please check all that apply.

- Informing parents when their child meets data-based decision rules requiring more behavioral support through Tier 2 or Tier 3 interventions
- Inviting parents to planning meetings (e.g., parent conferences, SST meetings) to develop Tier 2 and 3 interventions
- Sharing information with parents about child progress during Tier 2 or Tier 3 interventions on at least a weekly basis
- Including parents as part of Tier 2 or 3 interventions (e.g., daily behavior report cards, training parents how to implement interventions at home)
- Utilizing parent data to inform intervention effectiveness
- Gathering additional data from parents regarding home behaviors (e.g., interviews, ongoing consultation, rating scales) to inform intervention
- Assisting parents in developing relationships with community behavioral and mental health supports
- Other: Please specify

Which parent consultation practices do you feel are **effective** in engaging families? Please check all that apply.

- Informing parents when their child meets data-based decision rules requiring more behavioral support through Tier 2 or Tier 3 interventions
- Inviting parents to planning meetings (e.g., parent conferences, SST meetings) to develop Tier 2 and 3 interventions
- Sharing information with parents about child progress during Tier 2 or Tier 3 interventions on at least a weekly basis
- Including parents as part of Tier 2 or 3 interventions (e.g., daily behavior report cards, training parents how to implement interventions at home)
- Utilizing parent data to inform intervention effectiveness
- Gathering additional data from parents regarding home behaviors (e.g., interviews, ongoing consultation, rating scales) to inform intervention
- Assisting parents in developing relationships with community behavioral and mental health supports
- Other- Please Specify

Family Engagement Practices in Intervention

Family intervention can be defined as “a therapeutic process that helps modify individuals’ psychological distress by targeting their interpersonal relationships in the family” (Valdez, Carlson, & Zanger, 2005).

In my school, there is access to family intervention programs when children are experiencing significant behavioral or emotional difficulties.

- Yes
- No
- Not Sure

In my school, referrals for family intervention programs in the community are provided if the school cannot provide them.

- Yes
- No
- Not Sure

What types of family intervention programs are currently available in your school? Please check all that apply.

- Family therapy
- Multisystemic therapy (MST)
- None- We do not use family intervention methods in our school.
- Other- Please specify

Who implements these family intervention programs? Please check all that apply.

- Me
- Another school psychologist in the district
- Practicum students or interns
- Allied professionals (school counselor, school social worker)
- Community-based professionals that partner within the school
- Other: Please specify
- N/A- We do not have family intervention programs in our school.

Where do these family interventions take place? Please check all that apply.

- In the school building
- At another school in the district
- At a district level building (administration office)
- At a family counseling clinic
- Other- Please specify
- N/A- We do not have family intervention programs in our school.

Which family intervention practices do you feel are **most important** in engaging families? Please check all that apply.

- Family therapy
- Multisystemic therapy (MST)
- Other- Please specify

Which family intervention practices do you feel are **effective** in engaging families? Please check all that apply.

- Family therapy
- Multisystemic therapy (MST)
- Other- Please specify

Parent training “focuses on systematically teaching parents to implement specific behavior management techniques as a method of reducing a particular childhood problem” (Valdez, Carlson, & Zanger, 2005).

In my school, there is access to specialized parent training programs when children are experiencing significant behavioral or emotional difficulties.

- Yes
- No
- Not Sure

What types of parent training programs are currently available in your school? Please check all that apply.

- Incredible Years Training
- Parent Child Interaction Therapy
- Helping the Noncompliant Child
- Kazdin Parent Management Training
- None- We do not use parent training programs in our schools.
- Other- Please specify

Who implements these parent training programs? Please check all that apply.

- Me
- Another school psychologist in the district
- Practicum students or interns
- Allied professionals (school counselor, school social worker)
- Community-based professionals that partner within the school
- Other: Please specify
- N/A- We do not have family intervention programs in our school.

Where do these parent training programs take place? Please check all that apply.

- In the school building
- At another school in the district
- At a district level building (administration office)

- At a family counseling clinic
- Other- Please specify
- N/A- We do not have parent training programs in our school.

Which parent training practices do you feel are **most important** in engaging families? Please check all that apply.

- Incredible Years Training
- Parent Child Interaction Therapy
- Helping the Noncompliant Child
- Kazdin Parent Management Training
- Other- Please specify

Which parent training practices do you feel are **effective** in engaging families? Please check all that apply.

- Incredible Years Training
- Parent Child Interaction Therapy
- Helping the Noncompliant Child
- Kazdin Parent Management Training
- Other- Please specify

Family Engagement Variables

You indicated that some of the previous family engagement practices, methods and interventions are not being utilized at your school. Please identify the barriers to implementation. Please check all that apply.

- Lack of time
- Lack of financial resources
- Lack of staff to implement these methods/interventions
- Lack of administration buy-in or support
- Lack of teacher/staff buy-in or support
- Lack of parent interest/attendance/participation
- Lack of training or ongoing professional development to implement these methods/interventions appropriately
- School psychologist is viewed in a limited/traditional role
- Other efforts are seen as more important and are devoted more resources
- Other- Please specify

What additional methods/programs do you utilize to work with families who may be more difficult to engage or partner with in the school setting? Please check all that apply.

- Researching the family's culture prior to working with the family
- Meeting in a place that may be more comfortable for the family (e.g., church, home)
- Meeting at a time outside traditional school hours to accommodate the family's schedule (e.g., before 7:30am, after 4pm, on the weekends)
- Incorporating other important adults (e.g., extended family, community member, religious figure) in the child/family's life into family engagement activities
- Providing materials/training in the family's native language if their predominant language is not English
- Offering a translator/interpreter or translation services if needed
- Providing transportation for family-based activities hosted by the school or district
- Providing meals for family-based activities hosted by the school or district
- Providing childcare for family-based activities hosted by the school or district
- Going to community events to learn more about the culture and population of my school
- Going to community events so parents see me as an active member of the community
- Other- Please specify

What other family engagement methods or programs are utilized in your school that may have not already been asked about? (Open text box)

In some situations, participants may have interesting information to provide beyond the survey. If you would be willing to be contacted by the researchers for further information, please provide your email address. Should you not wish to be contacted, you can leave this section blank.

Article

A Review of National School Psychology Training Pertaining to ASD Assessment

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Although school psychologists are typically responsible for conducting Autism assessments under the Individuals with Disabilities Education Improvement Act (IDEIA) special education eligibility law, research indicates that school psychologists receive limited training in this area. The aim of this research study is to determine the current status of ASD assessment training in school psychology graduate programs. A total of 145 school psychology programs were contacted and 28 syllabi that include ASD assessment content were obtained from 19 programs. Syllabi were coded and analyzed across various aspects of course content, including a qualitative analysis of course objectives pertaining to ASD assessment. Results demonstrated inconsistent and varied breadth and depth of coverage pertaining to ASD assessment in courses. Implications for the field are presented.

Key words: autism spectrum disorder, assessment, training, school psychology, syllabi

Autism spectrum disorder (ASD) is a neurodevelopmental disorder defined by deficits in social communication and interaction in the presence of restricted and repetitive patterns of behavior, interests, and activities (American Psychiatric Association, 2013). ASD is the fastest growing pediatric neurodevelopmental disorder in the United States. Current estimates from the Centers for Disease Control and Prevention (CDC) show that ASD currently impacts approximately 1 in 54 children (Maenner et al., 2020), which is an increase from the previous estimate of 1 in 59 children (Baio et al., 2018) 2 years prior. The number of students receiving special education services under the eligibility category of Autism is also rising. During the 2010-2011 school year, 6% of students received special education services under the eligibility category of Autism (U.S. Department of Education, National Center for Education Statistics [NCES], 2012), and approximately 10% of students receiving special education services in the 2017-2018 school year qualified under the Autism eligibility category, which represents a 4% increase in 7 years (NCES, 2018). Students receiving

special education services under the eligibility category of Autism must have similar deficits as those with a clinical diagnosis of ASD; however, the Individuals with Disabilities Education Improvement Act (IDEIA) mandates that the disability negatively impact the educational setting (IDEIA, 2004). For clarity, the term “students with ASD” is used throughout this paper to refer broadly to those students who present with concerns of ASD in the school setting or a child receiving special education services under the eligibility category of Autism. Given the rising prevalence rates, it is imperative that schools are equipped with appropriately trained practitioners, such as school psychologists, to best serve the needs of students with ASD.

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School psychologists play a role in the identification of ASD and benefit from specialized training and experience in ASD assessment. The mean age of clinical diagnosis for children with ASD is 4 years (Kozlowski et al., 2011), which is prior to school entry. Many children who are diagnosed with ASD prior to school entry may be evaluated by school psychologists to determine eligibility for special education services under IDEA Part B. For children who are not diagnosed until after they are enrolled in school, school psychologists may be the first to conduct a comprehensive assessment. Students with ASD in schools also require frequent evaluations throughout their educational career for the purposes of re-evaluation, treatment planning, and transition services. In addition to conducting evaluations, school psychologists may also be expected to interpret medical evaluations from outside providers in which knowledge of ASD assessment is important.

While the diagnostic reliability for Autism has improved, the diagnostic process is complicated and requires specialized training. Throughout the country there exists a backlog of children suspected of having ASD waiting to be seen by a select number of specialized providers (Gordon-Lipkin et al., 2016) potentially resulting in a delay of services to children in critical developmental time periods (Volker & Lopata, 2008). As a result, many children may first be evaluated for ASD in schools, making school psychologists the initial point of contact for families. It is crucial for school psychologists to be able to conduct a high quality ASD evaluation not only because it determines school-based eligibility, but may also be used in conjunction with an outside provider (e.g., pediatrician, licensed psychologist) to determine clinical diagnosis. Collaborations between outside providers and school psychologists serving students with ASD are beneficial when these professionals are able to share assessment scores, evaluation observations, and diagnostic impressions (McClain et al., 2020; Shahidullah et al., 2018; Shahidullah et al., 2020). These important partnerships may contribute to a clinical backlog reduction and students receiving critical intervention services at an earlier age.

Evidence-Based ASD Assessment and Professional Standards

For school psychologists, appropriate identification and evaluation is the first step in providing high quality school-based services for students with ASD

(Ruble & Akshoomoff, 2010). Although somewhat limited, professional organizations have put forth standards relevant to school psychologists rendering knowledge and skills pertaining to ASD assessment important. The American Psychological Association (APA) has called for psychologists to use evidence-based practices in schools for assessment and intervention services (APA Task Force on Evidence-Based Practice with Children and Adolescents, 2008) including those typically used with children who receive special education services under the Autism eligibility category (McCrimmon & Yule, 2017; Wilkinson, 2014). The APA also recommends that practitioners are knowledgeable of the characteristics and criteria of ASD, strengths and weaknesses of assessment measures, and how to implement evidence-based interventions (APA, 2008). This includes utilizing best practices in school-based assessment for ASD, which requires school psychologists to use measures that are both reliable and valid (Wilkinson, 2014). Although not specific to ASD, the National Association of School Psychologists (NASP) also includes knowledge and skills of assessment in data-based decision making in their practice model domains (2010) and use of evidence-based assessment (EBA) in a recent position statement (NASP, 2016).

In addition to professional standards, specific EBA practices for ASD exist. Notably, the research on EBA for ASD has been largely applicable to clinical settings, although some has been specific to the school setting. Practitioners should carefully choose assessments that align with the referral question, specific child characteristics, and the practitioner's competence (Klinger et al., 2018; McGrew et al., 2016; Paynter et al., 2015). They should also be aware of the child's gender and how ASD assessments differ between boys and girls (Evans, 2019). Paynter (2015) noted that clinicians should make sure that the child is ready for the assessment and knows what to expect, and because school-aged children with ASD may have behavior or attention problems during testing, it is appropriate to have reinforcing rewards readily available and be prepared to implement behavior management strategies. Another recommendation is to prepare any assessment revisions or modifications beforehand, or be prepared to test the limits of an assessment if applicable (Paynter, 2015).

Although there is some crossover between quality assessment practices in clinical and home settings, the uniqueness of school-based assessment (e.g., differ-

ing eligibility criteria across states; Barton et al., 2014) warrants school-specific EBA practices. Best practices in the assessment and evaluation of students with ASD have been outlined (Wilkinson, 2017), yet empirical research on the topic remains sparse. Current recommendations align with NASP best practice standards for assessment (2010) and include a comprehensive, multi-source developmental assessment using valid and reliable measures (Campbell et al., 2014). School psychologists should be familiar with and competent to provide ASD-specific assessments (e.g., ADOS-2, ADI-R; Campbell et al., 2014; NASP, 2016). School psychologists use comprehensive assessments to assist in making eligibility decisions, including primary and secondary eligibility categories (in some states; NASP, 2016). As co-occurring conditions such as anxiety, attention-deficit/hyperactivity disorder (ADHD), and intellectual disability (ID) are common in students with ASD, an in-depth training in assessment practices are recommended for both differential diagnosis (Craig et al., 2015; Shulman et al., 2020) and determining comorbidities (McClain et al., 2017; Salazar et al., 2015). Esler and Ruble (2015) recommended that school psychologists focus on collecting a detailed developmental history; assessing intellectual ability, language level, and adaptive skills; and providing ASD-specific checklists.

Despite the field highlighting the importance of EBA practices, a recent study (Aiello et al., 2017) found that fewer than 25% of school psychologists used comprehensive EBA practices when assessing for ASD, and those who used best practices reported higher levels of training in ASD than those who did not. Furthermore, the majority of school psychologists reported that they did not conduct a comprehensive assessment of ASD that included evaluation of all areas of development including ASD-specific instruments. Even the ones who did use EBA practices reported using rating scales (like the Gilliam Autism Rating Scale - 2) that provide limited information and have weak psychometric properties (Wilkinson, 2016). The authors also found that training and experience in ASD, working with children between 3-5 years of age, and geographical location were predictors of the use of evidence-based practices in ASD assessment (Aiello et al., 2017).

Research has shown that a lack of comprehensive school-based evaluations for ASD may, in part, be due to a paucity of ASD-specific knowledge and training among school psychologists. Harris and colleagues

(2020) found that school psychology graduate students range in their ASD knowledge. Their self-perceived confidence levels regarding assessment selection and assessment implementation when ASD was the referral question were only moderate, whereas self-perceived assessment and intervention abilities with culturally and linguistically diverse (CLD) students with ASD were lower than other self-perceived competencies (Harris et al., 2020). Similarly, practicing school psychologists were moderately confident when choosing appropriate assessment tools and providing recommendations, but they were only somewhat confident in incorporating culturally responsive assessment practices for CLD students with ASD (Harris et al., 2019). Increased training in graduate programs is warranted in ASD assessment, especially in the area of working with CLD students with ASD (Harris et al., 2019; Harris et al., 2020).

Findings from Aiello and colleagues (2017) as well as Harris and colleagues (2019, 2020) indicate many school psychologists have a lack of knowledge and training in the assessment of students with ASD. This is problematic as school psychology training programs are responsible for preparing future practitioners to be effective across several domains including data-based decision making and accountability, which encompasses assessment and evaluation (Ysseldyke et al., 2006). One explanation for this phenomenon may be a lack of exposure during graduate training; in fact, it has been noted that school psychology training programs lack ASD-specific training (Olley & Rosenthal, 1985; Wilkinson, 2013). School psychologists need and desire more training in ASD than is offered during graduate training (Aiello et al., 2017).

The Current Study

The importance of high quality, diverse training of school psychology graduate students is inarguable. School psychology programs have broad training objectives that emphasize assessment, intervention, and consultation, some of which can be applied to students with ASD. However, given the complexity of and unique characteristics associated with the disorder, school psychology students may benefit from additional training specific to ASD during graduate school, especially pertaining to ASD assessment. To the best of our knowledge, no studies have focused on evaluating ASD assessment training in school psychology programs through syllabi content analysis. Thus, the aim

of the current research is to determine the emphasis on ASD assessment training in school psychology graduate programs by conducting syllabi content analysis. Specifically, we examined: (1) Which courses within school psychology programs cover ASD assessment?, (2) What materials are school psychology programs using for training in ASD?, (3) To what extent is ASD assessment covered in school psychology courses?, (4) What are the core topics and assignments used to train school psychologists in ASD assessment?, and (5) Do school psychology training programs include material related to ASD assessment with CLD students?

Method

Procedures

Previous studies have used a content analysis of syllabi to determine the current status of training in psychology (e.g., Barrett et al., 2015; Merced et al., 2018). As training in ASD assessment for school psychologists is often covered in introductory or advanced assessment courses, ASD-specific courses, and practicum courses, researchers collected and analyzed syllabi from courses taught in NASP approved school psychology specialist and doctoral programs or APA accredited doctoral school psychology programs. We compiled a list of APA accredited and NASP approved graduate training programs through both the NASP and APA program directories. From there, we collected the names and email addresses of program directors from school psychology program websites. A total of 145 school psychology program directors were contacted with a request for syllabi related to ASD assessment practices. Program directors were asked to distribute the request to faculty teaching courses focused on or pertaining to ASD assessment taught to school psychology graduate students. We sent an initial request and two follow up requests if there was no response from the solicitation. Requests were sent over the course of seven weeks between November 2017 and January 2018. Thirteen program directors responded and indicated they would forward requests to relevant faculty although no syllabi were received. Two program directors replied that their universities did not offer coursework specific to ASD assessment. The remainder of program directors did not respond; however, this does not imply they did not forward our request to their faculty.

Faculty were asked to provide one or more syl-

labi covering ASD assessment and whether the course was required or an elective for school psychology graduate students. Nineteen faculty both inside of and outside of school psychology programs teaching school psychology graduate students responded to the request, submitting a total of 28 syllabi from 19 institutions. The 28 syllabi submitted for analysis came from all regions of the United States (West=10, Northeast=7, South=7, Midwest=4). Of the 19 programs that returned syllabi, six programs were specialist level only, seven programs were doctoral level only, and six programs had both specialist and doctoral level programs. All programs were NASP accredited, meeting the initial criteria for contact, and 12 were accredited by APA. Table 1 includes sample characteristics for all contacted programs.

Data Analysis

We analyzed syllabi descriptively for the following content: (1) general course information, (2) pedagogical resources used, (3) course learning objectives, (4) class/module topics, (5) assignments, and (6) emphasis on cultural and linguistic diversity. We used Qualtrics to systematically code included syllabi. Please reference Figure 1 for complete syllabi coding protocol for more details.

To more comprehensively understand course learning objectives, we conducted a thematic analysis (Braun & Clark, 2006) on learning objectives that were ASD-specific. We collaboratively completed thematic analysis steps outlined by Braun and Clark (2006): (1) developed initial codes for the data, (2) jointly collated codes into preliminary themes, (3) reviewed individual themes and codes, (4) modified coding scheme and themes based on consensus process, and (5) defined and named themes. Coding was completed in two sessions. During this process, researchers went through each response, read the text, and discussed applicable codes within the context of the question and response. When creating themes, the researchers collaboratively determined which codes were most appropriate together and decided on an appropriate theme description and name. Researchers resolved any disagreements by discussion until an agreement was reached.

Interrater Agreement

To assess coding bias, nine (30%) of the 28 syllabi were chosen at random to be coded independently by another member of the research team and com-

Figure 1. Coding structure used to code included syllabi.

- (1) General course information**
 - a. Instructor's degree
 - b. Semester in which course was taught (Fall, Winter, Spring, Summer)
 - c. Format of course (Face-to-face, Online, Hybrid, Not reported)
 - d. Course credits
 - e. Course status (Required, Elective, Not reported)
 - f. Course participants' graduate program (Master's, EdS, PhD, PsyD, EdD)
 - g. Title of course
 - i. ASD in course title?
 - h. Training sequence location (Year of training the course offered)
- (2) Pedagogical resources used**
 - a. Required textbook (Author, title, publication date)
 - b. Supplemental resources used (Journal articles, Films/videos, Books, Book chapters)
 - i. Primary?
 - ii. ASD focus (more than 50% of readings focused on ASD)?
 - iii. How many focused on ASD (ASD in the title)?
- (3) Course learning objectives**
 - a. Mentioned developmental delay?
 - b. Mentioned ASD?
- (4) Class/module topics**
 - a. ASD specific topics:
 - i. Specific ASD measures
 - ii. Cultural diversity
 - iii. Linguistic diversity
 - iv. Basic knowledge of ASD (e.g., bilingual learners)
 - v. Special education eligibility of Autism
 - vi. DSM-5 diagnostic criteria of ASD
 - vii. Using ASD assessment to guide intervention
 - viii. Other
- (5) Assignments**
 - a. Assignments that evaluated competencies with populations that have ASD?
 - i. Test/quiz
 - ii. Research paper
 - iii. Theoretical paper (e.g., self-reflection, lit review)
 - iv. Evaluation/assessment (e.g., learning specific measures)
 - v. Presentation
 - vi. Practicum or other applied experience
- (6) Emphasis on cultural and linguistic diversity**
 - a. ASD within diverse populations covered in the course?
 - i. Materials covered included:
 - ii. Readings
 - iii. Lectures
 - iv. Assignments
 - v. Guest speakers
 - vi. Other

pared to the original data input. Interrater agreement was slightly lower than acceptable (76%). This could be explained by the open-ended questions and some ambiguous parts of the syllabi, including assignments. Inconsistencies were discussed and resolved amongst the coders until 100% agreement was reached.

Results

General Information

The majority of instructors teaching courses that included ASD assessment had earned a doctorate degree (n=25, 89.29%). The majority of classes were taught

in a traditional face-to-face format (n=22, 78.57%) for 3 credit hours (n=19, 67.86%) and were offered in the Spring (n=14, 50%). Eleven (39.29%) courses were required for students. ASD was included in the title of 8 (28.57%) courses and 13 (46.43%) included ASD in their learning objectives. Eleven (39.29%) syllabi specifically addressed NASP competency domains.

Pedagogical Resources

Although all courses reported utilizing a variety of supplemental resources, the majority used journal articles (n=20, 71.43%) and books (n=10, 35.71%). Less courses relied on book chapters (n=7, 25%) and films and videos (n=3, 10.71%). The resources emphasized ASD (at least 50% focused on the disorder) in eight courses (28.57%).

ASD Assessment Learning Objectives

Thirteen (46.43%) of the syllabi included learning objectives that addressed ASD specifically. Within these syllabi, 6 themes emerged related to ASD assessment: (1) Assessment Purpose, (2) Presentation of ASD, (3) Assessment Domains, (4) Assessment Strategies and Skills, (5) Theoretical Understanding of ASD, and (6) Tools for Diagnosis and Special Education Eligibility. Within each of these themes, several codes emerged. Please see Table 2 for themes and codes related to ASD learning objectives.

Theme 1: Assessment Purpose

The most commonly occurring theme, Assessment Purpose, captures learning objectives that emphasize students gaining an understanding of why and under what conditions assessment occurs. Seven codes comprised this theme and included: (1) Assessment for Prevention, (2) Assessment for Educational Programming, (3) Assessment – General, (4) Assessment for Intervention, (5) Assessment for Early Identification, (6) Assessment for Special Education Eligibility, and (7) Response to Intervention for ASD.

Theme 2: Presentation of ASD

Presentation of ASD describes learning objectives that cover ASD symptomatology, associated behaviors and co-occurring conditions, and how ASD presents in specific contexts and across development. Four codes fell under this code and included: (1) Characteristics of ASD, (2) Co-occurring Conditions, (3) ASD in the School Context, and (4) Development of ASD.

Theme 3: Assessment Domains

Assessment Domains is a theme that covers learning objectives which focus on specific areas of assessment. The three codes that create this theme are: (1) ASD-specific measures, (2) Related Domains Measures, and (3) Assessment of Communication.

Theme 4: Assessment Strategies and Skills

Assessment Strategies and Skills is a theme that encompasses learning objectives that promote the knowledge and development of specific assessment skills pertaining to ASD. Four codes comprised this theme and included: (1) Effective Communication of Results, (2) Comprehensive Developmental Assessment, (3) Best Practices, and (4) Interdisciplinary Assessment.

Theme 5: Theoretical Understanding of ASD

The fifth theme, Theoretical Understanding of ASD, highlights learning objectives related to the theoretical knowledge of ASD that is required for effective assessment. The three codes in this theme were: (1) Etiology of ASD, (2) History of ASD, and (3) Knowledge of ASD.

Theme 6: Tools for ASD Diagnosis and Special Education Eligibility

The least common theme, Tools for Diagnosis and Special Education Eligibility, encompasses learning objectives that focus specifically on students learning about specific resources to assist them in the diagnostic and special education eligibility determination processes. The three codes in this theme included: (1) Diagnostic and Statistical Manual of Mental Disorders, (2) Individuals with Disabilities Education Improvement Act, and (3) 504 Plan.

Class and Module Topics

Class and module topics specific to ASD ranged in frequency (from one session to 31 sessions) and content. The most frequent topics were basic knowledge of ASD (n=11, 20.0%) and ASD-specific assessments (n=12, 21.82%). Other topics included using ASD assessment to guide intervention (n=6, 10.91%), special education eligibility of Autism (n=6, 10.91%), DSM diagnostic criteria for ASD (n=6, 10.91%), and issues pertaining to ASD assessment broadly (n=5, 7.0%). The topic of speech, language, and communication assessment occurred twice (2.8%). Topics that only occurred once across all syllabi (1.82%) included: applied behavioral analysis, attention and perception, behavioral assessment, consultation, cul-

Table 1

Sample Characteristics of School Psychology Programs

	Sample (<i>n</i> =19)		Nonresponding (<i>n</i> =126)		Total (<i>N</i> =145)	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Region						
Midwest	4	21	42	33	46	32
Northeast	4	21	24	19	28	19
South	5	26	38	30	43	30
West	6	32	22	18	28	19
Level						
Specialist Only	6	32	62	49	68	47
Doctoral Only	7	36	34	27	41	28
Specialist and Doctoral	6	32	30	24	36	25

ture, differential diagnosis, medical issues, single case design, social emotional assessment, and parent and family involvement and perspectives. No topics covered issues related to linguistic diversity.

Assignments

All but two syllabi listed course assignments. Of these syllabi (*n*=26, 92.86%), 17 courses (65.38%) included assignments that evaluated student competencies specific to working with the ASD population. These assignments evaluated proficiency through the demonstration of competency in specific measures (e.g., ADOS-2; *n*=9, 27.27%), theoretical papers (e.g., self-reflection, literature reviews; *n*=8, 24.24%), presentations (*n*=7, 21.21%), applied experiences (e.g., practicum; *n*=5; 15.15%), and tests or quizzes (*n*=4, 12.12%).

Discussion

Syllabi analyzed for this study varied in content, depth, and coverage of ASD assessment. Just under half (46.43%) of syllabi received included course objectives that specifically mentioned ASD. This is significant as the main focus of the majority of the courses was not ASD. Secondly, of the 28 syllabi reviewed, 11 of them were required courses. This indicates that this content is not being accessed by all students and the breadth of training within graduate school psychology programs may be limited.

Regarding the learning objective themes that emerged, 3 of 6 themes explicitly focused on assessment. This indicates that the majority of the training in these courses focused on ASD-specific assessment which aligns with the focus of the requested syllabi. While there were multiple topics coded from the syllabi that aligned with best practices in training pertaining to ASD assessment, many of these topics were coded on an extremely limited basis. Thus, the breadth of training pertaining to ASD assessment was minimal. There was also a small number of syllabi that included clinical experiences in coordination with the course (*n*=5). While the authors acknowledge that this may be difficult due to program structure, obtaining clinical experiences with children with ASD will further expand students' knowledge in this area. Lastly and positively, most of the syllabi (*n*=17) included course assignments that specifically mentioned ASD.

Implications and Recommendations for Practitioners

Based on the findings of this study, it appears that future practitioners may not receive enough coursework on ASD assessment practices. Practitioners who find that they lack competence or training in ASD after graduate school have several options for increasing their knowledge of ASD assessment. One possible resource is the Global Autism Interactive Network (GAIN) based at the University of Missouri. GAIN

Table 2

Qualitative Analysis of ASD Learning Objectives: Themes and Codes

Themes (Number of Codes in Theme)	Codes (Code Frequency)
Assessment Purpose (28)	Assessment for Prevention (8) Assessment for Educational Programming (6) Assessment – General (6) Assessment for Intervention (5) Assessment for Early Identification (1) Assessment for Eligibility (1) Response to Intervention for ASD (1)
Presentation of ASD (14)	Characteristics of ASD (6) Co-occurring Conditions (4) ASD in the School Context (2) Development of ASD (2)
Assessment Domains (10)	ASD-specific Measures (7) Related Domains Measures (2) Assessment of Communication (1)
Assessment Strategies and Skills (9)	Effective Communication of Results (4) Comprehensive Developmental Assessment (2) Best Practices (2) Interdisciplinary Assessment (1)
Theoretical Understanding of ASD (8)	Etiology of ASD (4) History of ASD (3) Knowledge of ASD (1)
Tools for Diagnosis and Special Education Eligibility (5)	Diagnostic and Statistical Manual of Mental Disorders (2) Individuals with Disabilities Education Improvement Act (2) 504 Plan (1)

includes video-conference professional development sessions with expert trainers in the ADOS-2. Once per month, practitioners watch a prerecorded video of an ADOS-2 session and then are invited to attend a professional development session where the trainers review scoring for the ADOS-2 session. Another possible option for practitioners is to join a project ECHO (Extension for Community Healthcare Outcomes) session focused on ASD. ECHO Autism is a teleconferencing training program housed in several universities providing didactics on multiple topics in ASD, including assessment. The monthly session typically also includes a case study example for practitioners to discuss.

Practitioners with practicum students and interns may also consider other methods of training, such as attending a formal ADOS-2, CARS-2, or ADI-R training together. These trainings typically provide direct opportunities to observe administration and participate in scoring ASD-specific measures. Practitioners may also support trainees through recommending professional webinars related to ASD. APA, NASP, and the International Society for Autism Research (INSAR) frequently provide such professional development webinars, including material related to assessment and, more recently, telehealth assessment with children with ASD.

Within school districts, practitioners can advocate for inservice training or workshops on ASD-specific measures and their use in education settings. It also may be beneficial for early career school psychologists to find a mentor within the district who has conducted several evaluations where the referral question is ASD in order to provide guidance when choosing assessments, learning new assessments, and interpreting behavior observations (Silva et al., 2016). Districts can also create ASD assessment teams to support school psychologists during an ASD evaluation and eligibility determination. Similarly, districts can create interdisciplinary ASD screening teams to enhance identification and assessment of students with ASD.

Implications and Recommendations for Trainers and Students

This study highlights the importance of continual review of course syllabi to ensure they are current and representative of training needs. While some instructors can do these analyses themselves or as program areas, there are other methods for obtaining external evaluation of syllabi. For example, APA Division 2 (The Society for the Teaching of Psychology) has a syllabus project initiative where instructors may

receive feedback on syllabi through a comprehensive analysis. In addition, the journal *Syllabus* publishes syllabi after substantial peer review. Furthermore, many universities offer syllabi review through faculty development offices. Lastly, given the increase of diverse students, it is highly recommended that trainers include content that addresses ASD assessment with culturally and linguistically diverse populations.

It should be recognized that not all programs offer specific courses, or parts of courses, explicitly dedicated to ASD assessment. Although coursework is one way in which students receive high-quality training, professional development and clinical (e.g., practicum) experiences are also important. It is recommended that students who wish to receive training in ASD assessment seek out professional development and clinical opportunities in this area, particularly if coursework on the topic is unavailable.

For graduate students, one way to receive additional training in ASD assessment is by attending a professional conference. INSAR holds an annual conference which includes research on many topics specific to ASD. Likewise, APA's annual conference includes presentations relevant to ASD assessment, particularly Division 33 which focuses on intellectual disability and ASD. NASP also holds an annual conference which includes school-based presentations on ASD assessment, and many state school psychology associations offer ASD workshops at their annual conventions. Outside of coursework and hands-on experiences, conferences can provide an excellent training ground for learning about ASD assessment practices.

Limitations

There are notable limitations associated with this study. The authors only received a total of 28 syllabi, representing a small proportion of school psychology training programs. Although school psychology is a relatively small field, there are likely other courses that include ASD assessment content within graduate school psychology programs. However, we were only able to review the syllabi that were provided. Thus, it is possible that the syllabi received are not entirely representative of the ASD-focused school psychology courses. Faculty that submitted the syllabi may have a stronger focus on ASD within their courses or a greater interest in this research topic. There may be differ-

ent levels of comfort regarding sharing syllabi as some professional associations have advocated for syllabi to be personal intellectual property (e.g. American Association of University Professors). Self-selection in the study might have influenced the types of syllabi that were submitted. Also, only one third of the sample came from specialist-only programs, which make up a majority of school psychologists in the school setting. Therefore, the results may not accurately represent school psychology training received at the specialist level. Programs that offer a doctoral degree may have more resources and may be able to provide more ASD-specific training to their students. Likewise, we did not directly code for specific EBA practices within syllabi, as syllabi for APA accredited and NASP approved programs undergo rigorous review, and many used organizational principles to guide the syllabi. While we coded what is covered in school psychology training courses related to ASD assessment, we were unable to evaluate if courses or assignments aligned with EBA guidelines. Future research should consider going beyond surveying content and evaluating the quality of ASD assessment training in school psychology programs.

Conclusions

To date, no research has been conducted on syllabi within graduate school psychology programs and their inclusion of ASD content. While this study has limitations, there are multiple findings that should be noted. First, the breadth of coverage of ASD topics is highly varied and inconsistent. In addition, multiple crucial topics were covered minimally, and often not at all. It is not clear how competencies to work with populations with ASD are attainable based on the limited coverage of many topics within the majority of syllabi. Furthermore, as the nation becomes more diverse, there is a strong need for training with linguistically diverse populations at risk for ASD, although no syllabi reviewed covered this concept. In the future, research that evaluates knowledge gained regarding ASD in graduate programs in school psychology would be beneficial. In addition, professional associations should consider incorporating more guidance for graduate programs that want to increase training in this area. Due to the rising prevalence of ASD, school psychologists must be prepared to provide evidence-based, culturally and linguistically responsive ASD assessment

in schools. Graduate programs are the primary place where this training occurs and have the responsibility to ensure that school psychologists can meet these needs.

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Graduate Student Section

Support Groups and One-on-One Mentoring for Undergraduates with Autism Spectrum Disorder: A Case Study

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As the number of students with Autism Spectrum Disorder (ASD) increases in institutions of higher education, additional support is warranted. The following case study shares the unique experiences of Toby, an undergraduate with ASD. The structure and impact of student support groups and one-on-one mentoring on his college experience are discussed. Additionally, an overview of current university-based programs is provided, as guidelines to maximize student success. The short-term and long-term benefits of expanded programming are highlighted.

Key words: student support groups, Autism Spectrum Disorder, undergraduates

Individuals with Autism Spectrum Disorder (ASD) are an increasing population within institutions of higher education. Symptoms of ASD include, “persistent deficits in social communication and social interaction across multiple contexts and... restricted, repetitive patterns of behavior, interests, or activities” (American Psychiatric Association, 2013, p. 50). Based on the latest data from the Center for Disease Control in 2014, approximately 1 in 59 children have a diagnosis of ASD with close to half having average or above average intelligence (Baio et al., 2018). Autism Speaks (2012) estimates 50,000 individuals with ASD turn 18 years old annually in the United States, and about 16,000 attend college after high school. Zeedyk et al. (2014) call attention to an increasing prevalence of students with ASD on college and university campuses in recent years. Unfortunately, research indicates individuals with ASD experience greater struggles in postsecondary education environments. Within six years of graduating high school, only 34.7% of students with ASD attempt to enroll in a college or university (Shattuck et al., 2012). Fewer than 20% of college students with ASD have completed courses of study at institutions of higher education (Roux et al., 2015). With regard to graduation rates, while almost half of students with ASD are intellectually capable of completing college coursework, a large number drop out (Jackson, 2018).

There is a high comorbidity for psychiatric disorders among people with ASD. Richa et al. (2014) underscore 94% have at least one other psychiatric

condition. Another study, conducted by Jackson et al. (2018), found that almost 75% of undergraduate participants with ASD exhibited suicidal thoughts and behaviors at least once in their life. Even more alarming, 53.6% reported having had thoughts of suicide within the last year (Jackson et al., 2018). These statistics are startling and help to illustrate the need for support for these students, especially in the undergraduate environment. Because autism is a spectrum disorder, it manifests itself differently in every person (Wozniak, 2016). Considering the distressing statistics and the spectrum aspect of the disorder, individualized, targeted support for undergraduates with ASD is a rising need.

Previously, specific challenges of undergraduates with ASD have not been a part of many institutes’ programs of support; including difficulties with social interactions, communication, and restricted and repetitive behaviors. Challenging behaviors manifesting from ASD can be exacerbated by the struggles all undergraduates face, including socio-emotional (e.g., anxiety, loneliness, and depression), independent living (e.g., developing

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and managing a schedule, adaptive skills for daily living), and self-advocacy challenges (e.g., effectively and appropriately communicating with individuals in positions of power and navigating complex, nuanced social dynamics) (American Psychiatric Association, 2013; Gobbo & Shmulsky, 2013). Gelbar et al. (2015) found within participating undergraduates with ASD 61% reported feeling isolated, 26% felt some kind of disability discrimination on campus, and only 14% reported participating in a peer mentor support program. Some institutions of higher education perceive a high GPA as a measure of success for undergraduates with ASD and deprioritize support for undergraduates' social and emotional well-being (Anderson & Butt, 2017). Gelbar et al. (2015) also found that undergraduates with ASD, "reported academic success while struggling with non-academic aspects of college such as navigating the social environment and difficulties with executive function skills, including study and time management" (p. 49). Clearly, there is a growing need to support undergraduates with ASD, in a multitude of environments within institutions of higher education.

Prevalence of Students with ASD

Many young adults with ASD, approximately half, "are intellectually capable of earning an advanced degree", yet many do not apply to a college or university (White et al., 2016, p. 30). Of the less than 35% of high school graduates with ASD who enroll in higher education, half of these students enroll in community colleges, the other half enroll in either vocational/technical colleges or traditional four-year universities (Shattuck et al., 2012, Newman et al., 2011).

Graduation rates differ dramatically in various populations: about 59% of typically developing students obtain a bachelor's degree, whereas only 41% of students with disabilities obtain a degree once enrolled in an institute of higher education (White et al., 2016). Undergraduates with ASD are capable of attaining a college degree but can struggle to complete their course of study. Many colleges and universities are well-aware of this dilemma and are working to support undergraduates with ASD to address the disproportionate graduate rates.

The Necessity for ASD Support

Supporting undergraduates with ASD is critical for student success and should include developing necessary resources. Many undergraduates with ASD

report struggling with stresses of their new lives, including living away from home, advocating for their educational needs in classes, and making friends (White et al., 2016). Researchers grouped the students' difficulties into four main categories: interpersonal competence (e.g., making small talk with peers), instrumental independence (e.g., managing time wisely), intellectual competence (e.g., understanding how to navigate professor expectations and class policies), and keeping up the pace of demanding academic workload (White et al., 2016). Colleges and universities can provide services and support targeting all four areas of need.

Short-Term Benefits of Support Group Participation

There are numerous potential benefits of a support group for undergraduates with ASD. Short-term benefits include an increased opportunity to socialize with undergraduates, particularly those with a similar disability. At Arizona State University, undergraduates in "Autistics on Campus" (a campus support group), shared that joining the group is a method to meet other people and participate in social activities (Faller, 2015). Similar programs give undergraduates with ASD the chance to practice social skills in an environment that is more understanding of manifestations of ASD.

Other short-term benefits of participating in campus support groups include help with academic and adaptive living skills. At the University of Alabama, students enrolled in the "ASD College Transition and Support Program", participate in weekly sessions focusing on topics such as time management and study skills. Undergraduates have a program staff member monitor their living environment weekly to confirm the completion of necessary daily living activities. This ensures the social support necessary to succeed as an undergraduate (University of Alabama, n.d.).

Long-Term Benefits of Support Group Participation

There are numerous potential long-term benefits for students with ASD participating in support groups and one-on-one mentoring. At Adelphi University in New York, their autism support group, "Bridges to Adelphi", helps undergraduates obtain employment after graduation. The program partners with a workforce development firm to help each undergraduate find well-matched employment upon graduation. Skills highlighted in the support group include creating a resumé and best practices for a job interview. This service

helps undergraduates with ASD to increase the likelihood of securing a job and to improve transition planning for post-graduation (Adelphi University, 2018).

Case Study

For this case study, a pseudonym (i.e., Toby) will be used. All components of his experience and identifying details have been masked. The present case study describes Toby's experiences in college, and how he obtained support. Toby was 19 years old on his first day of community college; he later matriculated to a university as a junior. In high school, he usually ignored homework, but still managed to receive As and Bs in classes. He expected college to be different, since students were attending willingly. Toby was overwhelmed by the large campus, new "home" (being away from his parents' house for the first time), and countless people around him. His hypersensitivity to noises made life in a residence hall increasingly difficult for him. According to personal communication from Toby:

My floor of my residence hall has always had a lot of freshmen while I have lived here. Sound travels well on our floor. My residence hall is strictly for honors students, so it's better than the jock house; but the noise still has consistently caused me grief.

Toby struggled to find coping strategies for several environments around campus. In addition to the residence halls, Toby highlighted larger social situations as scenarios in which he floundered. In personal communication, Toby described another stressor as the pressure to interact with other students on campus:

For most of my life, I often thought I was interacting with peers when I was just around them observing them. I still sometimes just observe instead of interacting when I am with my peers, but now I am aware of it. In lieu of interacting in these situations, I am thinking. Often when I am in a group of my peers, I will find that everyone else has been speaking for a long time, while I have been silent.

Toby needed some additional support. While he used several accommodations to address environmen-

tal factors, those were not sufficient mitigating measures. He used his headphones to shield himself from loud, painful sounds throughout campus; he used the university's testing center to take exams, away from the whispers, breathing, and foot-tapping that can often be heard in a classroom. Neighbors even learned to give Toby warnings when having loud parties so he could leave the residence hall if he chose to do so. Without these self-identified supports, Toby likely would have been less successful as an undergraduate.

Creation of Program of Support

Many colleges and universities are developing programs to address the increased presence of students with ASD. At Designated University (DU) a support system of both student support groups, and one-on-one mentoring was established for undergraduates with ASD. The university's office of learning accommodations expanded the previous programming to ensure students with ASD had targeted support and faculty was trained to improve educational experiences and outcomes for students with ASD.

These voluntary services included talking with a one-on-one mentor during sessions in less-structured, social environments. The focus of the mentorship was student-driven, targeting an area the undergraduate may be worried about or interested in focusing on. Graduate students, largely with a psychology background, acted as one-on-one mentors. These meetings yielded problem solving for students within college experiences – individualized based on the student's needs. Toby received support through a support group and one-on-one mentoring for two years. These one-on-one mentoring sessions would focus on a topic important to him at a given time. For instance, Toby discussed social interactions with others in the dining hall for multiple weeks in a row (Toby was initially reported to campus security in the dining hall because his standing and staring concerned two female undergraduates). He also spoke with his mentor about romantic relationships and how best to communicate with females with whom he was interested in pursuing a potential relationship. Mentoring always occurred on campus and could involve getting coffee, eating a meal together, sitting by a local landmark, or taking a walk.

Typically, the support groups involved four to ten undergraduates with ASD, run by two graduate students (from psychology or counseling disciplines).

The curriculum addressed in these group sessions was created by graduate students and focused on self-help skills necessary for college (e.g., laundry, budgeting), time management, or how to navigate social interactions with undergraduates or professors. One area of focus for the support group of undergraduates with ASD was identifying behaviors that may prove challenging in a given environment on campus or situation. According to Toby, “I have come to enjoy speaking with people, and have worked on being intentional about it. My conversation skills have come a long way over the years, and most people who speak with me now enjoy it”. Through one-on-one mentoring, Toby was provided the opportunity to process through previous interactions and practice communication skills necessary for success in the future. Targeted training was provided to faculty discussing the characteristics and manifestations of ASD. This training aimed to prepare faculty to appropriately respond when an undergraduate with ASD presents challenging behaviors. These trainings took place within the context of departmental meetings, were facilitated by the accommodations office, and included sharing characteristics of ASD, recommended best practices associated with instruction of undergraduates with ASD, and shared the array of supports available to undergraduates with ASD on campus.

Interactions with Faculty and Staff

Undergraduates with ASD exhibit social and communication delays. Within an academic environment a student’s ability to communicate and interact with faculty and staff is paramount to their success. Undergraduates with ASD struggle with social cues and communication, which is compounded when email communication is involved. An example of how Toby responded inappropriately to a solicitation for text feedback is included below. His tone and severity of language was a result of his ASD diagnosis, which could appear off-putting or disrespectful by the faculty member. A portion of the email Toby sent to the aforementioned professor is included below:

My autism spectrum disorder (ASD) caused the problem I encountered with Gulliver’s Travels. ASD affects each individual who has it differently, so once you’ve met one autistic person, you’ve met just one. Thus I would not be surprised if I am the only student you have ever

had or will ever have who encounters this problem with any literature on your syllabus; but I share this with you because of the small chance you might have another student who would encounter this problem...I’m talking about somatosensation (physical feeling) with my nervous system. Gulliver’s Travels physically hurt me. The pain was all over my body, not in specific areas. As the story gradually worsened, it became gradually more painful; yet I continued hurting myself because I wanted to get a good grade in the class. The pain lasted at least for the rest of the day after I finished reading it. That happened because an ASD nervous system is hyper-connected, hyperactive, and hyper-reactive; put simply, we feel too much.

This is just for your consideration as you decide what to cut, add, and keep. Even though the final exam is comprehensive, I’m not going to review Gulliver’s Travels since I don’t want to subject myself to that pain again. I probably know it well enough anyway.

After this written communication occurred, the mentor working with Toby focused on helping him identify and apply appropriate communication approaches in the collegiate environment, specifically how to interact with faculty members and respond to open-ended prompts. The mentor facilitated a timely and thorough discussion with Toby regarding appropriate feedback to an authority figure and the boundaries of self-advocacy.

As well, due to the communication between Toby and his one-on-one mentor, his professor was contacted immediately and consulted regarding the influence of Toby’s ASD on his email communication style. If that support was not in place for prompt and supportive collaboration, the professor may have misjudged Toby’s intent or may not have known how to respond. It is important to help faculty members be aware of characteristics and manifestations of ASD in the collegiate environment.

Crisis Intervention and Support

While the mental health needs increase for college students in general, this increased need is compounded for undergraduates with ASD. The percentage of children with ASD who reported suicidal ideation or attempts was 28 times greater than for neurotypical

cal children (0.5%), and less than individuals with depression (45%; Mayes et al., 2013). Support is needed on campuses when responding to undergraduates with ASD in the midst of a mental health crisis. Challenges with communication and expressing emotions are a primary characteristic of ASD, which could hinder undergraduates with ASD from sharing their thoughts, feelings, and needs with others (Richa et al., 2014). Professionals may not recognize the needs of this population because students with ASD do not have the skill set to directly ask for support or share with others. Toby presented with several instances of suicidal ideations or self-injurious desires. According to Toby, “I had chronic insomnia, chronic panic attacks, and chronic suicidal thoughts during my first two semesters here for other reasons, and the noise added to my already great troubles”. Toby struggled to cope with the sensory overload that compounded his anxiety, even, “seriously considered making myself deaf,” once over frustration at the amount of noise in his residence hall. The stress of college can increase these challenges and lead to some extreme thoughts or behaviors.

Potential Benefits of the Group

Toby made his college experience more manageable through identification and usage of participation in a support group and one-on-one mentoring. Looking beyond just testing accommodations for his disability, Toby received support for multiple areas of his undergraduate experience. The support group and one-on-one mentoring proactively addressed concerns rather than waiting for a significant mental health concern to escalate. Mentor programs can not only help students improve upon themselves, but they can also serve as a way to prevent undergraduates with ASD from struggling with some of the challenges that college life might pose for them (Lucas & James, 2018). Toby received opportunities to develop specific skills that have the potential to impact more than his life on campus. These skills include self-advocacy, explaining his exceptionality or view of the world to others, time management, and knowing where he will need the most help. For Toby, participation in the support group and one-on-one mentoring provided real-time encouragement and problem-solving. These skills eased the stresses of his undergraduate experience and maximized his educational and social success.

Other undergraduates with ASD could benefit from similar support. Systems of support that include one-on-one mentoring or support groups could lead to improved retention rates of undergraduates with ASD and more success while they are enrolled in a given college or university. Undergraduates with ASD can increase their confidence in themselves and improve overall feelings of self-worth and self-esteem by participating in a mentor program (Lucas & James, 2018). Mentor programs can also help undergraduates with ASD to increase their social interactions with others and get more involved in extra-curricular campus activities (Ashbaugh et al., 2017).

Conclusions

The growing population of undergraduates with ASD has become apparent to many colleges and universities. Toby’s story is one case that highlights the positive impact of one-on-one mentoring and support groups on his experiences at college. Other institutions of higher education have reported positive outcomes for students from support programs as well. These include increasing students’ self-confidence, social interactions, and overall college success while possibly preventing some challenging situations from occurring in the future (Ashbaugh et al., 2017; Lucas & James, 2018). More research is needed to confirm and generalize evidence-based best practices for all undergraduates with ASD. Providing support beyond academic accommodations is a powerful place to start for any college or university.

Suggestions for Future Research

Areas for future research include specific areas of expansion that DU is in the process of implementing, including surveys of undergraduates that participated in support groups and one-on-one mentoring. These data will be able to be viewed longitudinally since several students participated over multiple years. For all colleges and universities, areas of research should include the mental health services continuum with targeted support for undergraduates with ASD, including the impact of targeted support services. Finally, quantitative components of future research include evaluating the undergraduates’ self-efficacy, confidence, and graduation rates, as well as success in courses.

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Graduate Student Section

What School Psychologists Should Know about Pediatric Glaucoma

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The purpose of this article is to provide information about Pediatric Glaucoma to school psychologists. Pediatric Glaucoma is an ocular system condition that can result in an array of problematic symptoms in children. Pediatric Glaucoma has various forms, and individuals with Pediatric Glaucoma often receive surgical and pharmaceutical treatment. There are no known neuropsychological correlates with Pediatric Glaucoma. Still, there are cognitive, learning, and social-emotional ramifications that should be considered by school psychologists working with children with Pediatric Glaucoma. School psychologists need to be knowledgeable about how to evaluate these students and how to support them in the classroom.

Key words: Pediatric Glaucoma, School Psychology, intervention, assessment

Pediatric Glaucoma is an eye condition in which there is impairment in a child's vision which causes elevated levels of intraocular pressure. The condition can occur in one eye or both eyes (Yadava, 2010). Pediatric Glaucoma can result in children experiencing blindness, blind spots in their visual field, and headaches due to elevated ocular pressure. A pediatric ophthalmologist typically diagnoses Pediatric Glaucoma. To do so, they will utilize a visual acuity test, pupil dilation, visual field test, and tonometry (a test to measure fluid pressure in the eye; Yadava, 2010). In addition to visual difficulties, children with Pediatric Glaucoma may experience learning difficulties, certain behavioral manifestations resulting from their medications, and social-emotional functioning concerns. The prevalence of Pediatric Glaucoma is approximately 2.29 per 1,000 individuals younger than 20 years of age (Nassiri et al., 2011). Pediatric Glaucoma is a condition that affects infants, children, and adolescents due to various causes, such as characteristics of another condition, structural deformities, and physical trauma to the ocular system. Children with Pediatric Glaucoma in the school setting may face various obstacles. School psychologists must understand the implications and deficits a child may have due to this condition to ensure students have the best services, interventions, and support.

What is Pediatric Glaucoma?

Basic Information

Before understanding the implications of Pediatric Glaucoma, it is essential to know the neuroanatomy of an individual without ocular system deficits. First, light passes through an individual's eye, specifically the cornea, pupil, and lens. During the relay of information, there is a space in the eye between the cornea and iris, called the anterior chamber. The anterior chamber is filled with water or aqueous fluid, assisting the eye to keep its shape. The information must pass through the anterior chamber before proceeding to the iris, which controls the amount of light that comes in. The Trabecular Meshwork (TM), anterior chamber, and Schlemm's canal specifically play a role in the passage of fluids, impacting the regulation of aqueous outflow, elevating the intraocular pressure of the eye. Once the information is passed through, the optic nerve carries

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impulses from the retina to the brain through the optic chiasm to the relay station of the lateral geniculate (Bear et al., 2016). Depending on the location of the stimuli being perceived, it will determine the pathway to which the information is relayed to the brain. Information in the nasal stream will be transported contralaterally (relaying to the opposite side of where it is perceived). In contrast, the temporal stream information will be relayed ipsilaterally (same side of the body; Bear et al., 2016).

Pediatric Glaucoma is a condition classified by abnormalities of the anterior chamber angle, resulting in increased intraocular pressure (IOP). Children with Pediatric Glaucoma have deficits in the central nervous system and the anterior chamber, specifically the trabecular meshwork. Elevated pressure in the eye can cause portions of the nerve fibers to thicken, causing the center portion or the cup to become larger (Bowd et al., 2000). Individuals with Pediatric Glaucoma can exhibit one or more of the following characteristics that are a sign of elevated IOP: optic nerve cupping, photophobia (intolerance to light such as sunlight and fluorescent lighting), epiphora (the overflow of tears onto the face, in which the drainage drips down the face rather than through the nasolacrimal system), enlarged corneas, and cornea clouding (Aponte et al., 2010). Enlarged corneas can result in the swelling of the corneas, which is a result of fluid buildup that causes cloudy vision. These features can result in a child having complete blindness, partial blindness in certain parts of their visual fields, clouded eyes, and/or sensitivity to light. Furthermore, the worst prognosis is severe corneal clouding due to the elevated pressure built up within the eye (Yadava, 2010).

Elevated IOP defines Pediatric Glaucoma; however, various mechanisms cause this to occur. The two classifications are Primary Pediatric Glaucoma or Secondary Pediatric Glaucoma. Primary Pediatric Glaucoma is defined as the anterior chamber's developmental abnormality, which is the most common form of Pediatric Glaucoma (Yadava, 2010). The classification can further be subclassified based on the age of onset as Primary Congenital Glaucoma (PCG; birth to early childhood) and Juvenile Primary Open-Angle Glaucoma (JPOAG; age 4 to the age of 20; Marchini et al., 2014; Nassiri et al., 2011). The genetic mutation associated with Primary Pediatric Glaucoma is such that the CYP1B1 gene is mutated and is autosomal recessive (Fung et al., 2013). As a result, there can be metabolic implications of the eye's development, resulting in cloudiness

and increased intraocular pressure. Although there is no definitive identification of genetic mutation to differentiate PCG and JPOAG, the mutations cause abnormality in the anterior chambers' structures and functions due to incomplete maturation of the TM and Schlemm's canal.

Secondary Pediatric Glaucoma is defined as an acquired condition that occurs secondary to another condition that impacts ocular or systematic diseases (Nassiri et al., 2011). Secondary Pediatric Glaucoma can be associated with a non-acquired ocular anomaly, diseases, or syndromes, and acquired ocular impairment. Children with certain conditions can develop Pediatric Glaucoma secondary to a variety of different conditions as it relates to their genetic deficits and disorders. For example, characteristics of glaucoma can be seen in the following conditions: Peters Anomaly, Microcornea, Congenital Iris Hypoplasia, Chromosomal Disorders (e.g., Down Syndrome), Sickle Cell Anemia, Marfan Syndrome, Stickler-Syndrome, Metabolic Disorders, Neurofibromatosis, Sturge-Weber Syndrome, and Congenital Rubella (Marchini et al., 2014). Acquired Pediatric Glaucoma is due to a situation or a condition that disrupts the intraocular pressures. The condition can be a result of a brain tumor applying pressure to the ocular systems, the usage of steroids, or the development of cataracts.

Secondary Pediatric Glaucoma can occur due to physical trauma to the eye. Kaur et al. (2014) include any post-trauma that increases the intraocular pressure more than 21 mm Hg, which results from penetration of the eye before the age of 12. In 2005, the United States eye injury registry listed approximately 3,627 individuals found to have post-trauma glaucoma (Kaur et al., 2014). However, this could be an underestimation as the numbers could be higher due to children having difficulties verbalizing their symptoms of glaucoma, or the symptoms of glaucoma may be slow to develop and as a result of the delay not attributed to the initial injury. Children are more prone to ocular trauma due to injuries in sports, playing with toys, or any form of activity that can cause blunt trauma to the eye. The structural damage may include blood entering the anterior chamber (hyphemia) or inflammation in the layers of tissues in the eyewall (Uveitis; Kaur et al., 2014).

Treatment for Pediatric Glaucoma

The goal of treatment is to primarily address the elevation of IOP. The most utilized treatment consists

of surgery and pharmaceutical management. With more severe cases of Pediatric Glaucoma, it is common that an individual receives a combination of both surgical and medication management. For young children, surgical treatment attempts to address structural changes to allow for drainage or address any acquired damage and medication utilization before and after surgery (Marchini et al., 2014). Potential surgeries can be a trabeculectomy (draining the fluid from inside the eye to reduce IOP), nonpenetrating deep sclerotomy (incision in the sclera of the eye), combined trabeculectomy, glaucoma drainage devices (methods to divert the aqueous humor fluid), and cyclodestructive procedures (methods that destroy the ciliary body epithelium cells which produce the aqueous humor, resulting in lower IOP; Nassiri et al., 2011). For children with hyphemia, the surgical intervention involves a surgical washout to the anterior chamber (Nassiri et al., 2011).

It is worth noting that undergoing surgery does not assure that a child will have normal visual development and functional outcomes (Caetano de Souza et al., 2000). The risks of these surgeries can result in inflammation of the anterior chamber, lens injury, deficits in vision with age, and vision loss (Kaur et al., 2014; Marchini et al., 2014). Additionally, it does not ensure that the IOP will remain stable: pharmaceutical interventions can be utilized as an effective intervention to maintain IOP stability. It is common for children to undergo multiple surgeries to address the anterior chamber deficit due to the reconstruction's failure (Marchini et al., 2014).

For certain forms of Pediatric Glaucoma, the first form of treatment is pharmaceutical interventions, such as JPOAG. In addition to the surgical interventions, pharmaceutical interventions will consistently be utilized for a large duration of one's life. These pharmaceutical interventions include topical beta-blockers, carbonic anhydrase inhibitors, alpha2-agonists, and prostaglandin analogs (Coppens et al., 2009). Topical beta-blockers, which are commercially available as Timolol, Betaxolol, and Metipranolol, are a gel-forming eye drop solution. Children are typically able to tolerate the eye drop; however, some local adverse effects include stinging or burning in the eye, itchiness, and dryness of the eyes. Beta-blockers are the most common pharmaceutical treatment with the best long-term impact on children into adulthood (Coppens et al., 2009). Carbonic anhydrase inhibitors are syn-

chronized with beta-blockers, such as dorzolamide and brinzolamide. The side effects of carbonic anhydrase inhibitors can include headaches, dizziness, paresthesia (burning sensation on the hands, arms, legs, or feet), nausea, sinusitis, growth suppression, and urolithiasis (development of stones in the kidney, bladder or urethra; Coppens et al., 2009). Alpha2-agonists, such as Brimonidine, can result in central nervous system toxicity, such as drowsiness, respiratory depression, sleep apnea, and coma (Coppens et al., 2009; Marchini et al., 2014). As a result, Alpha2-agonists are not commonly used with children, especially those under the age of two (Yadava, 2010). Prostaglandin Analogs are medications more commonly used in adults than the juvenile population. The side effects of this medication are sleep disturbances, sweating, and dyspnea (labored breathing; Coppens et al., 2009).

Children with Pediatric Glaucoma in the School Setting

Children with Pediatric Glaucoma can experience visual impairments and other subsequent concerns such as headaches and side effects from their medication. Specifically, children with Pediatric Glaucoma can experience eye clouding, light sensitivity, and vision loss. These deficits can manifest as poor handwriting and spacing, inattentive behavior, reading difficulties, and headaches following visually heavy schoolwork. Additionally, children with Pediatric Glaucoma may constantly rub their eyes, wipe their eyes, and cover or shut one of their eyes (Bradley-Johnson & Sorenson, 1997).

Psychoeducational Evaluations and Neuropsychological Implications

There is limited research on the neurological implications of Pediatric Glaucoma. To date, there are no known correlated neuropsychological sequelae with Pediatric Glaucoma. Dai and Saygili (2007) conducted the first study to utilize Magnetic Resonance Imaging (MRI) scans to investigate the brains of children with Primary Congenital Glaucoma. The study consisted of 17 infants, with 5 displaying abnormal MRI scans. The children with abnormal scans exhibited either agenesis of the corpus callosum or delayed myelination. Infants with agenesis of the corpus callosum had decreased vacuoles near the Schlemm's canal, which is a mech-

anism that aids in alleviating pressure in the anterior chamber of the eye. For those with delayed myelination, the largest area of deficit was found near the optic nerve. Despite the findings of this study, it is difficult to determine the direct neurological implications of, or prognosis for, Pediatric Glaucoma (Dai & Saygil, 2007). However, this does suggest difficulties with perceiving and processing information.

Many children with Pediatric Glaucoma can have a range of visual impairment such as minimal visual deficit, blind spots, partial blindness, or complete blindness. Additionally, this condition can result in progressive blindness (Yavada, 2009). Given the various visual impairments, school psychologists should consider their practice in context to their evaluation, seek consultation, or outsource the evaluation to another evaluator with more experience assessing children with visual impairments.

Before the child's formal evaluation, the school psychologist must have a full understanding of the child's condition, which may be gathered during a clinical interview with the parent. During the interview, the school psychologist should seek specific details about the child's visual deficits and diagnoses, and clarification of other conditions that may be associated with glaucoma. The school psychologist should request information regarding a child's visual abilities beyond what is available from the annual visual screenings provided by the school. It is highly encouraged to seek a release of medical records from the child's optometrist or ophthalmologist to gain more insight into the child's visual strengths and weaknesses. Even though a child may not have the official diagnosis of a Pediatric Glaucoma, it can be beneficial to ask every child if they have experienced any injuries or trauma to their eyes.

School psychologists need to ask about medications currently and previously prescribed to ensure that their potential side effects are considered. These medications can generally cause dizziness, hypotension, sleep apnea, depression, and headaches (Copens et al., 2009). Children may exhibit lethargic-like behaviors in the classroom, such as putting their head down and struggling to start their work. Additionally, they may struggle with the orientation to their environment and may be perceived as a little clumsy. Children who experience sleep disturbance, such as sleep apnea, can struggle with learning, memory, and attention/concentration tasks (Kaemingk et al., 2003). Furthermore,

their overall cognitive and academic performance may be lower as a result of sleep apnea.

When conducting a psychoeducational evaluation, school psychologists should understand there may need to be modifications of their testing tools and the environment. School psychologists should consider either modifying a test battery for the child or using assessments specifically designed for children with vision impairments. As for modifying test batteries, this can include giving only verbal portions of standardized tests or administering nonverbal tests that require spatial manipulation and problem solving without sight (Miller & Maricle, 2019). With training and appropriate supervision, school psychologists can utilize assessments that are specific to children with vision impairments. For example, the Oregon Project for Visually Impaired and Blind Preschoolers (OR Project; Anderson et al., 2007) can be used to evaluate cognitive abilities, language skills, fine and gross motor skills. Depending on the visual abilities of the child, visual subtests can be utilized or utilized in a modified form. For example, pictured test stimuli could be enlarged, or printed in a different font or color. School psychologists should consider conducting their evaluation in a room with dim lighting and allow for frequent breaks. However, any modifications need to be noted on the protocol and the report, and comparisons to normative data and interpretations of skills and deficits need to be made cautiously as a result of the changes to standardized materials and administration. As for interpretation, it is important to understand that cognitive and academic results may be impacted due to the child's visual deficits and lack of opportunity to learn rather than neuropsychological deficits. Additionally, children may struggle with visual-motor tasks due to visual impairment and the lack of opportunity to develop these skills (McDonnall et al., 2012).

As for social-emotional function, children with Pediatric Glaucoma can experience low self-esteem, anxiety, or depression due to concerns with medications and surgeries (Dahlmann-Noor et al., 2017). Specifically, this can result from adjustment difficulties, performance anxiety, and learned helplessness, and these behavioral manifestations can result in the formation of disruptive behaviors. It is also important to consider the medication's implications, such as lethargic behaviors or difficulties with focusing. Therefore, a comprehensive assessment of behavioral and emotional function-

ing is important.

When working with and evaluating a student that may have a visual impairment resulting from Pediatric Glaucoma, the school psychologist should be or will likely be collaborating with specially trained personnel, such as a teacher for students with visual impairments (TVI), low vision specialist, or an orientation and mobility specialist. If the child is functionally or legally blind, the assistance of a brailist or a specially trained paraprofessional may be needed (Dahlmann-Noor et al., 2017). For educational purposes, a specially trained teacher or low vision specialist must determine if the visual impairment impacts the child's ability to learn. To implement appropriate classroom accommodations for students with visual impairment, students are often classified according to their functional vision level. A student with low vision uses vision as their primary mode of learning. Students considered to be functionally blind exhibit limited vision for tasks and rely on tactile and auditory channels for learning. A child identified as blind relies only on tactile and auditory modalities to learn. All classroom modifications, accommodations, or teaching strategies should be individually designed based on the child's needs with visual impairment.

Eligibility, Interventions, Accommodations, and Recommendations

Special education services should always be considered for a child with Pediatric Glaucoma. A child with Pediatric Glaucoma may be eligible for special education under the Individuals with Disabilities Education Improvement Act (IDEIA) classifications of Other Health Impairment (OHI) or Visual Impairment (VI). It is possible that a child with Pediatric Glaucoma might not be eligible for special education services but could be found eligible and provided with services and accommodations through Section 504 of the Rehabilitation Act of 1974. As part of an IEP or 504 Accommodation Plan a health/medical plan for the student with Pediatric Glaucoma might need to be developed. For instance, a child might need to have eye drops applied to their eyes during the school day. However, the majority of the topical medication requires an adult to assist in using the eye drops. The plan may need to address who is responsible for assisting the child with this. The plan may also need to address accommodations for eye

fatigue such as being able to take rest breaks in a dim or darkened area, managing corrective devices such as glasses or contacts, or ensuring modifications to lighting fixtures in the classroom.

The interventions and recommendations should address any visual task the child may encounter. It is not sufficient to provide only modified instruction in the general curriculum. A student with visual impairment is likely to need specialized instruction in essential skills, recreation, or the use of assistive technology (Dahlmann-Noor et al., 2017). In collaboration with the vision specialist, the school psychologist needs to consult with teachers who may have a student with Pediatric Glaucoma. Classroom environments may need to be modified to ensure free and unhindered movement for the child. Chairs need to be pushed in, the floor may need to be kept clear, and cupboards and doors need to be kept fully closed or completely open to avoid accidents. For example, for children with Pediatric Glaucoma, fluorescent lights can cause headaches and frustration due to light sensitivity. Putting light covers in the classroom or allowing the student access to a place without lights may need to be considered (Dahlmann-Noor et al., 2017). Children with visual impairment often benefit from hands-on learning techniques to help them understand concepts. Teachers should allow for both auditory and motor activities to encourage their learning. More frequent breaks may need to be incorporated into their schedule to alleviate strain in their daily schedule. Worksheets, books, and other materials may need to be modified to accommodate for the child's limited vision. Various assistive devices are available and should be considered, such as Braille writers, software and printers, screen readers that convert text to speech, talking calculators, and laptops and tablets with specialized software. As with everything else, assistive technology should be chosen and applied based on the individual child's needs and skills. Finally, school psychologists can work with the child's peers to help them understand the potential physical deficits the child may exhibit, such as eye clouding or liquid in their eyes, how their friend is affected, and how they can be of assistance to their classmate/friend.

Conclusion

Pediatric Glaucoma is an eye condition that causes el-

evated intraocular pressure. Pediatric Glaucoma can be classified as either Primary or Secondary, and can be a congenital condition or an acquired condition. It is common for children with Pediatric Glaucoma to undergo surgery and/or take medications that can have behavior and cognitive implications. School psychologists must understand how to best support children with Pediatric Glaucoma. Children with childhood glaucoma may not

experience sequential cognitive deficits due to their condition; however, it is important to understand how other variables in their environment can impact their progress in the classroom. Table 1 includes resources that school psychologists and teachers can use to identify appropriate services, accommodations, or modifications for children with visual impairments and Pediatric Glaucoma.

Table 1. List of Resources

<p><i>Classroom considerations for students with visual impairments</i></p>	<ul style="list-style-type: none"> • <i>Classroom Considerations: Effective Classroom Adaptation for Students with Visual Impairments</i> (Cox & Dykes. 2001). • Perkins eLearning https://www.perkinselearning.org/teaching-resources
<p><i>Resources for Teachers</i></p>	<ul style="list-style-type: none"> • National Association for Special Education Teachers https://www.naset.org/index.php?id=visualimpairments2#c9692
<p><i>Additional Resources and Techniques</i></p>	<ul style="list-style-type: none"> • Texas School for the Blind and Visually Impaired https://www.tsbvi.edu/

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Graduate Student Section

Yoga and Self-Regulation in Early Childhood

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Many developmental changes occur during early childhood, particularly within the area of social-emotional skills. It is also during this time that young children start school, facing new challenges, routines, and long days. Young children typically struggle to regulate their emotions and the added stressors of a full day of school can compound the issue. To alleviate some of these stressors and improve emotional regulation in children, many schools have begun to implement yoga routines. The purpose of this paper is to review current literature examining the impact of yoga on self-regulation in young children. Recommendations for implementing school-based yoga are included, and the role of the school psychologist is addressed.

Key words: yoga, self-regulation, early childhood

Introduction

Early childhood and early elementary education often focus on areas of development beyond simple academics, such as social-emotional skills. Furthermore, many schools across the country have added interventions or curricula to their school schedules in order to address students' social and emotional needs. Yoga, for example, has increasingly been included in school schedules for early childhood and early elementary students, as well as those transitioning to kindergarten (Butzer et al., 2015).

"Kindergarten transition" refers to the process used to provide continuity between a preschool or home, and a kindergarten program (Nelson, 2004). It is a significant event for children and their families. During the transition to school, children experience developmental changes, particularly in academics and social foundations (National Center on Early Childhood Development, Teaching, and Learning, n.d). Many children entering kindergarten are experiencing school for the first time and the change from the home environment and/or preschool (typically a more unstructured setting), to kindergarten (typically a very structured setting), can cause challenges for some children (Cadima et al., 2015).

Schools typically assess children's readiness for kindergarten based on academics and social-emotion-

al levels prior to entering kindergarten. States such as Maryland, Ohio, and Michigan use the Kindergarten Readiness Assessment (KRA; Michigan Department of Education, n.d.; WestEd, 2020) to conduct these assessments. In the state of Michigan for example, students are assessed on language and literacy, mathematics, social foundations, physical well-being, and motor development. Children entering school for the first time may have little experience with literacy and mathematics, or may lack the opportunity to develop social foundations to the same degree as other children their age. They are then placed in school based on their current skills, including skills and knowledge to which they may not have been exposed (Winsler & Carlton, 2006). It is not uncommon for teachers to report that students in their classrooms are not successfully transitioning to school (Rimm-Kaufman & Pianta, 2000). Transition difficulties may stem from a lack of academic and social foundational skills. Yet, when surveyed, teachers mentioned the most important skills for students to possess when

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transitioning to kindergarten are not actually academic skills, but rather, “soft skills” such as paying attention, following rules, getting along with peers, being independent, self-initiating, and transitioning between activities (Farran, 2011). The most desirable skills, according to teachers, fall under the category of “self-regulation.”

Self-Regulation

Recently, self-regulation, social-emotional skills, and emotional regulation have all been topics in early childhood education research (e.g., Black et al., 2018; Jarraya et al., 2019). Self-regulation is the motivation and ability to control one’s emotions and behaviors in potentially stressful situations, and it affects children’s ability to adapt to and learn in formal school settings (von Suchodoletz et al., 2009). Self-regulation can be difficult for some children, negatively impacting their readiness for kindergarten and overall school performance. Fortunately, studies have shown that there are techniques and strategies to help teach children how to self-regulate (e.g. Kazdin & Weisz, 2003; Reinecke et al., 2006; Weiss et al., 2018; Wyman et al., 2010). Building these self-regulation skills should lead to better emotional and behavioral self-control in the classroom, leading to improved social and academic performance.

Self-regulation has been identified as a key predictor of academic and social competence (Woltering & Shi, 2016). Therefore, strengthening self-regulation in children could assist in building academic and social skills. Moreover, research has shown that instructional lessons teaching skills such as monitoring of emotions, maintaining self-control, reducing escalation of emotions, and regaining equilibrium, have resulted in improved behavior control, on-task learner behaviors, peer social skills, less withdrawn behavior, and more assertive behaviors (Wyman et al., 2010). Additionally, students improved performance on tasks in general, negative behaviors decreased, and positive behaviors increased. Improved school competence frequently leads to improved academic performance. More specifically, self-regulation has been positively correlated with academic achievement (Woltering & Shi, 2016). Thus, research has shown the interconnectedness of self-regulation, social competence, and academic performance, and when given proper instruction, students have the ability to learn how to regulate their emotions, leading to positive effects in their school functioning.

On the other hand, failure to achieve necessary self-regulation skills in preschool has also been shown to be a predictor of problem behaviors in later years. For instance, preschool students, particularly boys, with lower self-regulation skills than their same-aged peers, have been shown to exhibit more externalizing behaviors 2-4 years later (Lonigan et al., 2017). Thus, teaching students how to self-regulate early on could benefit them socially in later years, and it may be especially beneficial for those prone to problematic externalizing behaviors.

Given the significant role self-regulation plays in children’s lives and the substantial impact this skill can have across academic, social, and behavioral development, a number of studies have focused on the efficacy of intervention for self-regulation. For instance, a technique called “Emotion Coaching” has been shown to improve self-regulation in primary and secondary school children (Rose et al., 2015). According to the researchers, emotion coaching is a relational and skills-based approach to supporting children’s and adolescent’s behaviors. Adults use empathy and guidance to help children recognize, label, and validate their emotions (Gottman et al., 1996; Rose et al., 2015). Emotion coaching includes teaching children how to adopt, adapt, and sustain the emotion coaching technique. Results have shown positive changes in children’s meta-emotion philosophy: the relationship between adults and children that reflects the adult’s awareness, acceptance, and regulations of their own emotions and the child’s emotions. Results of emotion coaching have also shown a reduction in disruptive behaviors, and an increase in social-emotional competencies (Gottman et al., 1996; Rose et al., 2015). This illustrates that with proper intervention, children’s ability to self-regulate can be improved, even in early elementary years.

This is encouraging for educators and practitioners working with students with self-regulation difficulties, even those in early childhood. Given the correlations among self-regulation, academic performance, and interpersonal skills (Woltering & Shi, 2016), it is critical that educators and practitioners have evidence-based interventions at their disposal to address any student deficits in self-regulation ability. As can be seen above, several strategies have been shown to be successful interventions for self-regulation. This success paves the way for research on other potential intervention strategies aimed at improving self-regulation skills in young children.

Yoga

More recently, other strategies, such as yoga, have also been used to build self-regulation skills. Research has emphasized that yoga incorporates a mind-body connection through four elements: physical postures, breathing exercises, relaxation techniques, and mindfulness and meditation (Butzer et al., 2015; Ross et al., 2012). Although yoga incorporates elements of mindfulness, mindfulness as a practice seeks to bring calm to the mind and focus on the present moment. Therefore, yoga is one strategy of mindfulness, but others exist as well (e.g., sensory building activities) (Ergas, 2013; Renshaw & Cook, 2017). It is estimated that 8.4% of children participate in yoga (Black et al., 2018). With this increase in the popularity of yoga, research has recently begun to examine the benefits of yoga in early childhood among different genders, socioeconomic backgrounds, disabilities, and emotional-regulation abilities. Some research has examined specific yoga curricula or programs. One such program is YogaEd®. YogaEd® is a nationally recognized yoga curriculum for children ages

3-18 that incorporates relaxation training, yoga postures, a group game, and meditation (Yoga Ed, 2001). In the school setting, Yoga Ed® has been shown to be effective for elementary students with emotional and behavioral disorders (Steiner et al., 2012). Upon conclusion of a Yoga Ed® program, teacher ratings of student behavior on the Behavior Assessment Scale for Children (BASC; Reynolds & Kamphaus, 1994) indicated improved attention in the classroom and a reduction of behavioral symptoms (Steiner et al., 2012). Other programs, such as Resilient Kids™ (Center for Resilience, 2018), have both qualitative and quantitative preliminary school-based data pointing to lower rates of behavioral referrals, fewer reported bullying incidents, and self-reported reductions in stress and emotional regulation difficulties. However, data collection is ongoing, and these results have yet to be published in peer-reviewed journals (Semple et al., 2017). Table 1 provides a brief summary of selected school-based yoga programs.

Although many yoga programs have been tailored towards upper elementary and middle school students (Semple et al., 2017), yoga strategies have also

Table 1

School-based Yoga Reference Table

Program	Grades Targeted	Setting	Supplies	Cost	Interventionist	Training Required?
Calming Kids Yoga	K-12	Classroom and/or outside locations	May need mats, not specified	\$625 to become certified	Certified Yoga Instructor	Yes
Hatha Yoga	Kindergarten	Classroom	May need mats, not specified	Not specified	Certified yoga instructor	Yes
Resilient Kids	K-12	Classroom	Training video	Not specified	Educators	No
Yoga and mindfulness Program	5 th /6 th grade	Classroom	Not specified	Not specified	Trained yoga and mindfulness instructor	Yes
Yoga Ed	PreK-12	Classroom and/or outside locations	Yoga Ed program	Yoga Ed program	Certified Yoga instructor	Yes
Yoga 4 classrooms	K-12	Classroom	E-book	\$29.95	Educators	No

been implemented with preschool and kindergarten students. For instance, Jarraya and colleagues (2019) implemented Hatha yoga, which focuses on physical postures to build strength and endurance, with 15 kindergarten students during their physical education classes for 12 weeks. The intervention was implemented to increase visual motor precision and visual attention, as well as decrease behaviors of inattention and hyperactivity (Jarraya et al., 2019). The students were taught yoga postures, breathing activities, and various yoga games. When compared to a control group, Jarraya and colleagues (2019) found that inattention and hyperactivity behaviors decreased for the group participating in hatha yoga. Additionally, qualitative data and anecdotal reports have also been obtained for classroom-based yoga programs adapted specifically for preschool students (Semple et al., 2017). Reports include improved student relations, enhanced ability to focus (Sheinman et al., 2011), and reduced school violence (Limone, 2011). Thus, yoga programs implemented in the schools have the potential to be successful with early childhood populations.

Because extensive research on yoga in the schools is lacking, case studies and “lessons learned” from students and teachers that have participated in school-based yoga practices, should also be taken into account (Dariotis et al., 2017). In order to gather additional qualitative information, Dariotis and colleagues (2017) conducted yoga and mindfulness focus group sessions. Participants included 122 fifth- and sixth-grade students from 3 schools in Baltimore, Maryland. Twice a week, an instructor guided students through quiet mindfulness strategies, active yoga poses, breathing techniques, and mindful reflection. During focus groups, 22 students and their teachers were asked to provide their opinions about the practices, including whether they liked the program and if they had concerns about the program. Participants in the focus group said they would not change anything about the program itself. However, they reported that they did not like the timing of when the practice took place (many of the students missed special classes such as art). Similarly, teachers expressed concerns that they were never fully aware of all components of the yoga practice. They also expressed the desire to receive training so that they could, in turn, bring the practice into the classroom. Finally, both the teachers and students expressed concern over their ability to generalize the lessons learned

during the intervention to other aspects of their day-to-day lives. This feedback is of particular importance for those considering school-based yoga practices. Although the overall perception of the program was positive, the “lesson learned” here is how critical it is that interventionists take into account teacher and student preferences regarding the logistics of the intervention. Staff training and generalization strategies could assist in a smoother transition into a new program.

Although research on school-based yoga interventions has been described as being in its infancy (Khalsa & Butzer, 2016), preliminary and early evidence has provided support for school-based yoga programs lending positive effects to behavior, attentional control, and self-regulation (Semple et al., 2017). Therefore, school-based yoga programs are potentially feasible and effective interventions for self-regulation in early childhood settings and deserve continued examination, analysis, and research (Khalsa & Butzer, 2016). Following are recommendations for practitioners seeking to implement school-based yoga programs. Readers are encouraged to refer to Butzer et al. (2015), Cook-Cottone (2017), and Semple (2017) for more extensive programmatic information and recommendations.

Recommendations for Implementing Yoga in Schools

Although research on yoga in the schools is relatively new, current literature can help to shape recommendations for practitioners wishing to implement yoga in their own schools. Many school-based programs such as Yoga Ed© (Yoga Ed, 2001), combine all four yoga elements (physical postures, breathing exercises, relaxation techniques, and mindfulness and meditation) into their practice. With the growing interest in school-based yoga programs, educators and practitioners need to be aware of certain considerations, particularly given the fact that research in this area is not extensive and programs are created fairly independently of each other (Butzer et al., 2015).

There may be a tendency to choose a school-based yoga program based largely upon the setting in which yoga will be implemented and the amount of training the teacher has received thus far. Yet, it is critically important to also consider best practices when implementing general school-based interventions. Forman and colleagues (2014) highlight three important

considerations for implementing evidence-based school interventions. First, educators should consider the “fit” of the program. Do the features of a particular type of yoga or program (e.g., implementation strategies, grade levels served, training requirements, evaluation, etc.) fit with the school and educator’s needs? A good fit is more likely to result in a positive outcome. The second consideration is instructor skill level. Depending on the program chosen, the amount of training required of the yoga instructor can vary. Finally, Forman and colleagues (2014) recommend educators and practitioners consider the best way to evaluate the implementation of the yoga intervention. Evaluation, both formative and summative, can provide the practitioner with data on whether the intervention needs to be adjusted or discontinued, and whether or not the intervention was successful.

Programmatic and Logistical Considerations

When choosing a yoga program to implement, the delivery format, and corresponding advantages and disadvantages, must be considered (e.g. online video; in-person curriculum). Many online yoga videos are short, free, and easy to obtain. In younger elementary classrooms, these could easily fit into a scheduled “brain break” (i.e., a break from class instruction, usually in between subjects.). Conversely, choosing a specific yoga curriculum is an option. These programs are usually more in-depth, require more time devoted to implementation and training, and usually have an associated cost (Butzer et al., 2015; Yoga Alliance, n.d.; Yoga Child, 2016).

The interventionist should also be carefully considered. Options include an external certified yoga teacher, or a teacher or staff member already certified, or willing to be certified in yoga instruction (Butzer et al., 2015). Notably, external yoga instructors are able to implement longer, more in-depth sessions. On the other hand, staff members may be better suited to handling student problems or off-task behaviors by nature of their educational background (Jarraya et al., 2019; Semple et al., 2017). In fact, the foremost difference between mainstream yoga programs and school-based yoga programs seems to be the instructor. Mainstream yoga programs tend to have certified yoga instructors, whereas school-based programs do not. It should also be noted that the prerequisite skills and training necessary to implement a school-based yoga program vary significantly and are likely to be program-dependent (Butzer et al., 2015).

Logistical Considerations

When implementing a new program, it is important to consider logistics such as time, location, materials, and funds (Jarraya et al., 2019). A quick internet search of yoga programs for children indicates a wide range of suggested durations for children’s yoga sessions. However, practitioners should be aware that these internet search suggestions may not be based on any particular research findings. Additionally, research evaluating the optimal practice durations for particular age groups is lacking (Semple et al., 2017). Clearly, this area needs additional research.

As previously mentioned, teachers may be able to find short, child-friendly yoga videos online that do not require extensive training. Having an external yoga teacher (not a school staff member), or staff member who is a certified yoga teacher, implement a longer yoga session during the day may be another option, but the logistics need to be planned accordingly. Physical education (PE) classes, for example, may be an appropriate time in a student’s schedule in which to implement longer yoga sessions (see Jarraya et al., 2019). However, with a longer yoga class (e.g., 30-40 minutes), additional materials such as mats, music, and a larger space, may be needed. Beneficially, the instructor would likely have the ability to schedule a specific, cohesive agenda or yoga sequence. For example, the instructor could guide the class through warm-ups and specific breathing techniques, moving on to more active or balance-based poses, then seated poses, and finally into relaxation (Aura Wellness Center, 2012).

Alternatively, a staff member that has yoga training could implement yoga in the classroom for sessions longer than a “break” (e.g. approximately 10 minutes), but shorter than a PE class (e.g., around 20 minutes). Materials may still be needed; the students would likely need yoga mats or perhaps, a towel or blanket for various yoga postures. However, the instructor will likely also need to shorten the agenda or schedule in order to fit the time frame (Cook-Cottone, 2017).

Additional Considerations

It should be noted that some parents and guardians may think of yoga as a spiritual practice (Chen, 2020). Therefore, addressing any concerns and offering information about school-based yoga, as well as collecting permission slips is important. Plan sessions out

in advance, and present to parents and guardians the concepts that will be covered (e.g., feelings, breathing, calming techniques, etc.). It should be emphasized that the focus of school-based yoga is on physical fitness, stress management, and relaxation techniques (Butzer et al., 2015), as opposed to spirituality.

Some final considerations when implementing yoga in schools include physical readiness and behavior management (Steiner et al., 2012). Cook-Cottone (2017) recommends establishing that the school's basic rules are also yoga rules prior to beginning any yoga sessions. Then, create an environment which maintains those rules. If challenging behaviors arise, consider using the borders of a yoga mat/towel/blanket to create boundaries. Indicate to students that they are to stay within their boundaries. Placing paraprofessionals, or another teacher, physically in-between students who may need more guidance could help prevent or eliminate challenging behaviors.

Ensure that all students are physically ready for yoga practice (Cook-Cottone, 2017). Verify that there are no medical conditions that may inhibit a student's ability to practice yoga and that all students are cleared for physical education. During yoga sessions, prioritize learning and allow students to take the lead when appropriate. Encourage them to work hard and challenge themselves without incurring injury or pain (Cook-Cottone, 2017). To achieve this, create a routine that alternates between effort and rest, allowing some challenging postures, but also allowing a break in order to come down from the challenge. Childress and Harper (2015) recommend that physical, psychological, and social aspects of development be considered prior to initiating any school-based yoga practice.

Role of the School Psychologist

Although limited in scope, the research reviewed above lends itself to a variety of roles and levels of involvement for school psychologists. When implementing school-based yoga interventions, as with nearly any school-based intervention, the role of the school psychologist may range from direct to indirect support. For direct support, a school psychologist could potentially be the interventionist if they have prior training in yoga or wanted to become trained. This could mean that the school psychologist could potentially lead large,

classroom-based yoga, a small-group yoga intervention, or both. School psychologists may be in a position to co-teach yoga interventions, or act as an instructional aide during yoga interventions, particularly if the lead instructor requires behavioral support for students.

As school psychologists are experts in the problem-solving model (Merrell et al., 2012), they can also support staff throughout the entire yoga intervention process. They can lead teams in determining the appropriate type of yoga or yoga program to implement, and if necessary, prioritizing the target behaviors. They can then create tools for the interventionist to use to collect data on intervention progress. To determine and maintain the fidelity of the intervention, a school psychologist can observe yoga sessions and complete checklists to ensure all steps of the intervention are being completed (Kratochwill et al., 2014). School psychologists can assist with monitoring the progress of the intervention and making data-based decisions (Merrell et al., 2012). This could include decisions regarding whether the intervention should be continued as is, modified, or discontinued. They can recommend strategies for generalization and maintenance of the yoga intervention, and at the conclusion of the intervention, they can evaluate, analyze, and interpret the overall effectiveness of the intervention.

School psychologists have a wide range of skills that could lend to other roles as well (Merrell et al., 2012). For example, school psychologists involved in school-based yoga programs could conduct research, design community and parent partnerships, or provide in-services for educators. This list is not exhaustive, and the amount and type of support the school psychologist contributes may be determined by a variety of factors, including the individual's comfort level with and knowledge of yoga (Cook-Cottone, 2017). Moreover, even a school psychologist lacking a depth of knowledge of yoga specifically, likely has a number of other skills that could translate into a useful role or service for a school-based yoga program.

Conclusion

Young children are faced with the stressors of attending a full day of school when they may not have prior experiences with school (National Center on Early Childhood Development, Teaching, and Learning,

n.d). With long days and new routines, children often struggle to regulate their emotions throughout the day (Farran, 2011). Thus, self-regulation has been an important focus in early childhood education, with many schools implementing strategies to help young students throughout the day. One of the strategies that schools have started to implement in order to assist with self-regulation is yoga; however, much of the current research targets upper elementary and secondary education students (Semple et al., 2017). More research needs

to be conducted and the effects of yoga on self-regulation in early childhood students examined, yet recommendations for implementing school-based yoga with young children can still be derived based on the current existing literature. Moreover, with their unique skill set, school psychologists are ideal candidates to assist with the implementation of yoga in the schools, conduct research in this area, and further contribute to young children's well-being in yet another way.

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Graduate Student Section

Repeated Readings: Basics, Tips, and Variations for Increasing Reading Fluency

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Research suggests that Repeated Readings is an effective instructional method for improving reading concerns with non-fluent readers. Aimed at early career practitioners and those unfamiliar with Repeated Readings, this paper reviews general research findings, shares the important components of Repeated Readings, and provides instructional variations for Repeated Readings as well as a framework for structuring and implementing Repeated Readings in the classroom. The role of the school psychologist in conducting and consulting on Repeated Readings interventions is also discussed.

Key words: Repeated Readings, reading fluency, reading intervention

Introduction

Reading is typically an everyday event for children throughout their school years and beyond, and is generally considered an essential skill for success later in life. Reading is a complex cognitive process that requires students' brains to engage in several simultaneous tasks each time they sit down to read (National Reading Panel, 2000). The National Reading Panel (2000) indicated that the best approach to reading instruction is one that incorporates explicit instruction (i.e., instruction that is methodical, direct, and engaging [Archer & Hughes, 2011]) in phonemic awareness, systematic phonics instruction, methods to improve fluency, and ways to enhance comprehension. These aspects work together to create the reading experience. As children learn to read, they must develop skills in all of these areas in order to become successful readers (Joseph, 2006). Of these skills, reading fluency is necessary for comprehension and motivated reading, having been described as a "bridge" between early and later reading phases. If readers do not develop adequate levels of fluency, they can become stuck in the middle of the "bridge": able to decode words, but with insufficient automaticity to ad-

equately facilitate comprehension or enjoy the process of reading (International Literacy Association, 2018).

Reading Fluency

According to Rasinski (2003), reading fluency is defined as the ability of readers to read quickly, effortlessly, and efficiently with good meaningful expression. Fluency has three phases which include rate, accuracy, and prosody. Rate is determined by measuring the speed of the reader, typically in words per minute (wpm). Accuracy refers to the ability to read by sight, or decoding with a minimal number of mistakes, whereas prosody refers to the ability to read with appropriate pacing, expression, and phrasing. Because fluency is synonymous with quick, effortless, and accurate reading of text, it is a skill that new and struggling readers often lack (Rasinski, 2003).

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Most students develop solid fluency skills by third grade (Corcoran & Davis, 2005). Third grade is also when students often begin to focus on more expository text as opposed to narrative text, which demonstrates the need for fluency transference to unfamiliar text, presenting another difficulty for struggling readers (Ritchey et al., 2012). To address the needs of struggling readers, school districts must develop a reading intervention program that includes evidence-based core reading instruction that is intensive in phonemic awareness, phonics, fluency, vocabulary, and comprehension (Public Act 306, 2016).

Instruction in reading fluency can be carried out successfully in many ways. Modeling fluent reading by reading aloud, as well as practicing fluent reading with repeated and timed readings, are successful strategies for increasing fluency on practiced text (Chard et al., 2002; Therrien 2004). Developed in the 1960s and 1970s, the Repeated Readings strategy is based on the theory of automaticity. LaBerge and Samuels (1974) proposed a theory of automaticity in reading, arguing that children who struggle with decoding essentially devote all of their attentional resources to decoding, and are therefore unable to allocate sufficient attention to comprehending the text. In contrast, fluent readers decode text automatically while reading, thus enabling them to focus on comprehension of the text. Since the goal of reading is ultimately comprehension, a reader must be fluent before they are able to fully comprehend text.

Chomsky (1978) believed that there was a subgroup of poor readers who knew the letters and their corresponding sounds, could decode words reasonably well, but could not apply these skills fluently during the reading of a text. Chomsky believed that this specific group of readers might benefit from reading texts aloud repeatedly, since it would give them essential practice in applying those known skills.

According to Allinder et al. (2001) struggling readers need direct instruction on how to read fluently, as well as enough opportunities for intense, fluency-focused practice, incorporated into their reading program. This is consistent with Chomsky's (1978) hypothesis that students having difficulty with reading fluency may benefit from repeatedly reading the same passages. One reading intervention that incorporates Allinder and colleagues' recommendations, as well as Chomsky's notion of repetition, is the Repeated Readings strategy.

Repeated Readings

As an intervention, Repeated Readings aim to increase the oral reading fluency of a student. More specifically, the Repeated Readings strategy aims to build automaticity, or the ability to read without occupying the mind with low-level details (e.g. decoding), and thus, improve reading fluency and comprehension (Hasbrouck, n.d.). Repeated Readings can be used with students who have developed initial word reading skills but demonstrate poor reading fluency for their grade-level. A review of research on Repeated Readings has highlighted its effectiveness for increasing reading fluency in students with and without learning disabilities (Sindelar et al., 1990; Therrien & Hughes, 2008; Coleman & Heller, 2010), across a variety of geographical locations, settings, and socio-economic statuses (Alber-Morgan et al., 2007; Musti-Rao et al., 2009), across ages and ethnicities (Turpie & Paratore, 1994), and across various experimental designs (Alber-Morgan et al., 2007; Yurick et al., 2006).

According to Joseph (2006), during Repeated Readings, a student works with a teacher, or interventionist, and reads a passage aloud at least three times consecutively, or until a predetermined criterion is met. Typically, the reading passage is about 50 to 200 words in length, with a smaller amount of words for younger students, or students that are struggling to read, and higher number of words for older students. If the student misreads a word, or hesitates for longer than five seconds, the word is provided to the student, and the student repeats the word correctly. If the student requests help with a word, the teacher reads the word aloud and can also provide the definition. The student rereads the passage until he or she achieves a satisfactory fluency level.

The interventionist, or teacher, must accurately record the number of words read correctly and any miscues, as well as the time spent reading the passage. Further, the interventionist's role in the Repeated Readings intervention is to be a guide to the learner, providing feedback as needed during the readings, and instructing the learner to read repeatedly until the teacher observes the learner reading the passage fluently without making mistakes, or until a predetermined criterion is achieved (Joseph, 2006). If necessary, the interventionist may also decide to modify the intervention, or use Repeated Readings in conjunction with other methods or interventions.

According to Therrien (2004), there are three essential instructional components to include in a Repeated Readings intervention. First, passages should be read aloud to a competent instructor. A competent instructor is imperative because monitoring students' oral reading and providing feedback is directly tied to the success of Repeated Readings. The second instructional component is providing corrective feedback. Feedback on word errors and reading speed needs to be communicated to students participating in Repeated Readings. The third, and final instructional component, is to reread passages until a performance criterion is reached. To ensure that students receive sufficient practice to become fluent, each passage should be reread until the student attains a performance criterion goal. Literature suggests that supplemental reading instruction with Repeated Readings as a core component can result in improvement in both generalized reading fluency and comprehension (Dowhower 1987; Therrien et al. 2006).

Although a thorough and detailed review of all published and unpublished research on the Repeated Readings strategy is beyond the scope of this paper, readers interested in more detailed research and studies are encouraged to read a meta-analysis conducted by Lee and Yoon (2017). Their review of 34 studies from 1990-2014 provides additional support for the Repeated Readings strategy as the strategy provides students repeated opportunities to engage with text that are critical to the development of reading fluency.

Preparation and Implementation of Repeated Readings

Before implementing a Repeated Readings intervention, the interventionist should determine a student's level of reading fluency, or reading rate. Reading rate can be calculated by dividing the number of words read correctly by the total amount of reading time. For example, a teacher can count out 100 words in a passage and then time students as they read the passage. If a student reads 92 words correctly out of the 100 in 1.5 minutes, the words correct per minute (wcpm) would be 61 (Wendling & Mather, 2009). Determining the reading rate gives the interventionist a starting point for the intervention. It also allows the interventionist to adjust and monitor the intervention to best meet the needs of the student.

After determining the reading rate of the stu-

dent, the interventionist should set a words-per-minute (wpm) goal. This can be done by comparing the student's scores to peers of the same age and/or grade-level to understand the level at which the student should be performing. Hasbrouck and Tindal (2017) have provided some suggested targets based on a review of research in the field. For example, a student in 2nd grade, reading 84 correct words per minute in the Winter would be in the 50th percentile. A student reading 35 correct words per minute in the Winter would be in the 10th percentile. Using these research-based rate recommendations helps determine whether a student is making progress toward, or nearing, grade-level standards for oral reading fluency.

The next step, after setting a goal for the student, is to select a reading passage that matches the student's goal. Research recommends selecting interesting passages, using instructional-level text, and using decodable text with struggling readers (Stahl, 2004; Therrien, 2004; Wendling & Mather, 2009). As a side note, this may be more difficult for older readers who are still struggling with decoding. High interest/low vocabulary, or "hi/low", reading passages and books have been shown to motivate older struggling readers. These texts typically are of age-appropriate topics and content, with lower reading level text (Rog & Kropp, n.d). According to Mather and Urso (2008), the recommended length of a passage ranges from 50 to 200 words depending on age, grade level, and reading level. After selecting appropriate reading passages for the student, the interventionist should print two copies of the passages. Further materials that are needed for the intervention include a timer, a writing utensil for the interventionist to track errors, a chart to record the data, and inter-rater reliability forms to assess whether the intervention is being done with fidelity.

To begin the intervention, the interventionist should locate a quiet place to limit distractions during the intervention session. The student should be given a passage that matches the student's interests, if possible, but interventionists can also utilize reading materials that are found in the curriculum. As the student reads the passage, the interventionist should follow along as they read and keep track of any errors. Inserted or repeated words do not count as errors, and thus should not be recorded. The interventionist should only interrupt the student when they are reading if the student pauses for longer than five seconds, the stu-

dent misreads a word, or if the student asks for help with a word. Once corrective feedback is given, the student is required to repeat the word(s) and continue reading the passage. Therrien (2004) also found it critical to include corrective feedback if students were trying to increase both fluency and comprehension.

Lastly, the student should re-read the passage. It is recommended that students engage in rereading the passage at least three times after the initial reading. According to Therrien (2004), students can make the highest gains in fluency and comprehension when they can practice reading the passage at least three to four times. After each reading, the student will become more fluent as they familiarize themselves with the passage. The student's progress should be recorded after each session until the goal is reached and maintained.

Instructional Variations of Repeated Readings

Teachers and researchers have developed and tested several different variations of Repeated Readings, many of which share similar features or the same basic methodology. Repeated Readings is a flexible intervention that can be easily modified to fit a variety of student needs. The variations of Repeated Readings listed below, and shown in Table 1, provide teachers and interventionists ways to continue to focus on fluency without the task becoming monotonous to students. For reading experiences to be both enjoyable and meaningful, students must be given the opportunity to practice the skill across many variations. The different modifications of Repeated Readings provide varying levels of support and encourage students to move towards independent reading of grade-level texts.

Partner or Paired Readings

One strategy designed to help students develop fluency, gain confidence, and free up mental capacity for higher order text processing is Paired Repeated Readings (Wood & Nichols, 2000). According to Rogoff (1990), interactions between peer partners—pairing one student who is at a higher level with a struggling student—contributes to each child obtaining a higher level of understanding than when just working alone. Reading with a peer encourages students to step outside of their comfort zone and read materials that may be above their independent reading level. Partner, or paired readings, also allows teachers to be able to

walk around the classroom and monitor which students may need more intensive help. Peer-Assisted Learning Strategies, or PALS (Fuchs & Fuchs, 2005), can include partner reading to build fluency. In this strategy, the stronger reader reads aloud for five minutes, then the weaker reader reads the same text aloud for five minutes. Research suggests that by pairing a weak reader with a stronger reader, and by discussing the text and rereading aloud independently, simultaneously, or in tandem, reading fluency will improve (Topping, 1995).

Echo Reading

Echo reading is a rereading strategy that is designed to help students develop expressive, fluent reading, as well as print knowledge. In echo reading, the teacher reads a short section of a longer text, something like a sentence or short paragraph, and the student(s) echo it back (Jennings, Caldwell, & Lerner, 2014). Echo reading uses modeling as its basic instructional strategy. Thus, students can gain the support and guidance they need in order to understand print concepts and increase their prosody and reading fluency skills. This strategy works best with beginning, emergent readers. According to Mathes et al. (2001), echo reading has been shown to contribute to the reading growth of low-achieving readers. Echo reading includes the following steps: select a short passage or phrase to read aloud from the larger text material that is being read; model the reading by reading the passage with expression; and prompt the students to read the same line, or passage, modeling the teacher example. Notably, when selecting a passage for echo reading, it is best to select a passage related to the topic that is fairly predictable, with limited text.

Timed Readings

Timed Repeated Readings is another instructional practice for monitoring a student's fluency development. The main goals when implementing timed readings are to increase students' reading fluency and rate, enhance student confidence, and promote learner self-awareness (Lynn, 2018). Timed readings should be done using books, or reading passages, that the student has read before and that are at the student's independent reading level. A student's independent reading level is text that the student can read with at least 95% accuracy (Morris et al., 2019). Teachers, or interventionists, interested in having students complete timed readings should follow the following steps: select a passage

specifically designed for timed reading or any other instructionally appropriate reading passage, obtain the necessary materials (i.e., a reading fluency progress sheet [a simple chart to track a student’s progress-monitoring fluency scores and goals], a timing device, a pencil for each student), provide each student with a pencil and copy of the passage, and then instruct the student to read the passage while you time them. The interventionist should begin timing as soon as the student reads the first word of the passage. At the completion of the passage (or when time is up), the instructor should ask the student to, or they themselves can, use a calculator to determine the words per minute rate score.

Reader’s Theatre

In Reader’s Theatre, students rehearse and perform a play for peers or others. They read from scripts that have been derived from books that are rich in dialogue. Students play characters who speak lines or a narrator who shares necessary background information. Reader’s Theatre provides readers with a legitimate reason to reread text and to practice fluency (Texas Education Agency, 2002). When implementing

the Reader’s Theatre technique, the student repeatedly reads short, meaningful passages until reaching a high level of fluency. The student receives explicit guidance and feedback from a fluent reader, and after reasonable success, moves to a new selection (Dowhower, 1987; Rasinski, 2004; Tyler & Chard, 2000). There is no memorization of text because the children are asked to creatively interpret the meaning of the passage each time they read. Additionally, no acting, props, or costumes are required. The drama is communicated by the children, through phrasing, pausing, and expressive reading of text (Rasinski, 2004).

Audiobooks and Technology

Another variation and a strategy to help students practice reading, is to use audiobooks (Cahill & Moore, 2017; Esteves & Whitten, 2011). Students can listen to a CD, or online mp3, while following along with a print or electronic copy of the book. Students can also use various online platforms that offer audiobooks. Additionally, many local libraries offer free access to audiobooks via electronic online platforms. Online options may be beneficial to younger students, students who

Table 1
Brief Summary of Repeated Readings and Instructional Variations

Instructional Variation	Brief Description	Advantages	Disadvantages
Traditional Repeated Readings	Repeated reading of a designated passage (may be timed) until a predetermined fluency criterion is met.	Provides repeated opportunities for students to interact with text and improve word-level reading and fluency.	Content of passage may need to be modified to be age-appropriate for older readers struggling with fluency.
Partner (Paired) Reading	A more skilled reader is paired with a less skilled reader and they take turns reading to each other.	Students may be more likely to attempt to decode more difficult words with a peer than with a teacher or interventionist.	May be more beneficial for the less skilled reader than the more skilled reader.
Echo Reading	Teacher or interventionist reads aloud a short passage and student(s) echo the passage back.	Students hear a model and can improve print concepts, fluency, and prosody.	This strategy works best with beginning, emergent readers.
Timed Readings	Teacher or interventionist times the student reading a passage (typically for a minute).	A numerical representation of a student’s reading fluency is obtained in the form of words correct per minute.	Timed readings should be done using books, or reading passages, that the student has read before and that are at the student’s independent reading level.
Reader’s Theatre	Students rehearse and perform a play for peers or others.	Reader’s Theatre provides readers with a legitimate reason to reread text and to practice fluency.	Students with more shy, or timid personalities may find this method intimidating.
Audiobooks	Students listen to a CD, or online mp3, while following along with a print or electronic copy of the book.	Preliminary research suggests that students may benefit from hearing the story and highlighted tracking.	Requires technological resources for which all students may not have access.

struggle with reading and often lose their place while reading, and those students who do not have access to print books. Online options can be beneficial because they highlight the words as it reads aloud to the student (Chen, 2004; Warren, 2014). However, it should be cautioned that additional research in this area is still needed.

Recommendations for Repeated Readings

Research has shown that Repeated Readings of texts at an appropriate instructional level can increase reading fluency for students that struggle with reading (Chard et al. 2002; Dowhower, 1987; LaBerge & Samuels, 1974). As stated above, the Repeated Readings strategy is a fluency-based practice that consists of multiple readings of the same passage until a fluent level is reached, and there are multiple ways to carry out Repeated Readings. The following are tips and suggestions for educators and school psychologists interested in implementing Repeated Readings, or a variation of such, as an intervention across an elementary school setting.

Goal Setting

Setting goals is one cognitive processing strategy that can be embedded in an extensive intervention (Wanzek et al., 2020). Creating and tracking goals is a great way for educators to understand a student's current academic standing, to determine the direction of instruction and intervention for the future, and to motivate students (Joseph, 2006). Specifically, sitting down with students and explaining exactly what the student needs to do in order to achieve their goal and the steps to achieve it, can increase motivation. In other words, completing a task analysis (i.e., sequencing smaller skills and tasks in a step-by-step manner towards an end goal) can help educators determine a student's successful completion and progress towards mastery of a skill (Joseph, 2006). Involving the student in this process can provide motivation and reduce frustration and discouragement (Cooper, Heron, & Heward, 2007). In addition to goal setting, students can monitor their reading fluency goals by charting their readings. For instance, students could take a frequency count (i.e., how many words they read correctly) or a duration measure (i.e., how long they took to read) and chart these data after each session (Joseph, 2006). Having students graph their own progress will empower them to meet their goals. For strug-

gling students, seeing their progress will likely motivate them to strive to increase their reading fluency.

Active Engagement

According to Greenwood, Horton, and Utley (2002), another key predictor of academic success is the amount of time the student is actively engaged in learning. A student is considered to be actively engaged when the student is engaged with the task with increased focus and attention. Engaged readers have better text comprehension and reading achievement than dis-engaged readers (Campbell et al., 1997). Teachers must actively involve students in literacy activities, which means holding deeper discussions and giving students the responsibility for holding their own discussions about text. Most importantly, teachers must maintain high pupil involvement (Taylor et al., 2003).

Error Correction

As students practice reading passages, it is essential to provide specific feedback. Providing corrective feedback during Repeated Readings is a simple strategy that can easily be implemented by classroom teachers or interventionists. Corrective feedback for word errors and reading speed is a critical instructional component (Stahl, 2004), and has been shown to increase fluency in students, and help students understand what they should be practicing in their own reading (Wanzek et al., 2020). Honig et al. (2008) noted that it is important for students to correct their mistakes. They proposed to have the teacher say the incorrect word correctly, have the student repeat it, and then have the student read the whole sentence again until they can accurately read it. Corrective feedback techniques are commonly used with Repeated Readings to steer students away from practicing incorrect responses as they read (Begeny et al., 2006).

According to Therrien and Kubina (2006), the error correction procedure can be as simple as providing the word and asking the student to repeat it. There are several error correction strategies besides word repetition. Two such strategies include sentence repetition and word attack hierarchy. In sentence repetition, when the student commits a reading error (e.g., substitution, omission, 5-second hesitation), the interventionist should immediately pronounce the correct word for the student and have the student repeat the word correctly. Next, the student should be directed to reread the

entire sentence in which the error occurred. The student then continues reading the passage. In the word attack hierarchy procedure, the instructor prompts the student to apply a hierarchy of word-attack skills whenever the student misreads a word. In other words, a hierarchy is providing cues to the reader. These cues include having the reader break the word into parts and having the reader pronounce each one, or asking the reader what sound each letter makes and asking them to finish the sentence and guess the word. The instructor gives these cues in descending order. If the student correctly identifies the word after any cue, the instructor stops delivering cues at that point and directs the student to continue reading (Haring et al., 1978).

Progress Monitoring

Interventionists can easily monitor reading fluency by using a reading curriculum-based measure, or CBM. A CBM for oral reading fluency is measured by first having the student read randomly selected, equal difficulty-level, passages for one minute each, and then scoring the number of correctly read words and errors per minute. Repeatedly measuring the student's correctly read words per minute (CWPM) over time and plotting the results as a line graph, can paint a dynamic picture of a student's response to instruction (Daly et al., 2014). This will help educators to continually evaluate the effectiveness of the intervention and make more informed instructional decisions.

Role of the School Psychologist

Research across the decades has continued to demonstrate the importance of reading fluency (Joseph, 2006). Students who do not learn to read fluently at an early age are at a significant disadvantage compared to their peers in the later years (Moats, 1999). Current research also supports the different variations of Repeated Readings (e.g., Lynn, 2018; Warren, 2014; Wood & Nichols, 2000). Repeated Readings improves fluency and comprehension for students with and without disabilities on previously read and potentially new material (Therrien, 2004). Rate, accuracy, and comprehension gains with both practiced, and unpracticed, passages were made with Repeated Readings (Dowhower, 1987).

According to Merrell et al. (2012), school psychologists are in the unique position to make significant contributions to prevention and intervention efforts due

to their knowledge and skills. For example, they are familiar with the latest research findings and recommendations regarding effective scientifically based reading interventions, such as Repeated Readings. Based on the research findings outlined above, it can be said that the role of the school psychologist in Repeated Readings is multifaceted. Activities for school psychologists in Repeated Readings may include, but are not limited to, the recommendations below. Readers are encouraged to refer to Joseph (2006) for more extensive recommendations.

- Engage in the data-driven problem-solving process.
- Help teachers and administrators to understand established benchmarks, or cut scores, that represent evidence-based thresholds indicating the likelihood of reading success, or failure, and recommend that schools intervene with all students who fall below the benchmark.
- After benchmarks are completed, compile all the data, and draw conclusions about the problems.
- Pull together resources throughout the district for the implementation of Repeated Readings.
- Consult with teachers regarding the methods for inclusion of students with disabilities and other diverse learners.
- Run small group interventions and implement Repeated Readings.
- Track the implementation and effectiveness of Repeated Readings interventions.
- Perform interrater reliability checks.
- Partner with educators to ensure evidence-based interventions are in place during Response-to-Intervention (RTI) and Multi-Tiered Systems of Support (MTSS) procedures.
- Consult with educators on strategies to incorporate reading fluency skills across a variety of conditions.

Conclusion

Explicit instruction of foundational reading skills is critical in early elementary school. Fluency is one of those foundational reading skills. Reading fluency is the ability to read text with high accuracy, a quick rate, and appropriate expression (National Reading Panel, 2000). Many students with intensive reading needs struggle to master reading fluency. In turn, teachers struggle to help

them make adequate progress in the area reading fluency.

Repeated Readings is an intensive reading intervention to support fluency. This intervention is a fluency-based practice consisting of multiple readings of the same passage until fluency is reached. Repeated Readings can be used to accelerate students who are not reading at grade-level. In addition, studies have found that instruction in fluency can lead to improvements in comprehension and overall reading proficiency (Stahl & Heubach, 2005).

School psychologists are in a unique position of being able to take on multiple roles when it comes to implementing a Repeated Readings intervention. They have the ability to understand how research translates into practice, and can bridge the gap between research and practice by consulting with teachers to identify students who may benefit from additional services, such as a Repeated Readings intervention. When recommending and implementing a Repeated Readings intervention, a school psychologist can be confident that the intervention is reliable and valid, given the wide base of research on Repeated Readings (Lee & Yoon, 2017). To further support educators in conducting a Repeated Readings intervention, school psychologists can perform interrater reliability checks to make sure the intervention, or a varied approach to Repeated Readings, is done so with fidelity. Due to their training and expertise, school psychologists are well-suited to assist educators with the implementation of well-researched interventions, such as Repeated Readings. This knowledge and expertise, combined with a Repeated Readings intervention, can effect positive change for many students.

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