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Parent Couples' Participation in Speech-Language Therapy for School-age Children with
Autism Spectrum Disorder in the U.S.

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Abstract

This study examined parent couples' participation in and satisfaction with speech-language therapy for school-age children with ASD in the U.S. Responses from 40 father-mother couples ($n = 80$ parents) were examined across therapy components (i.e., parent-therapist communication, assessment, planning, and intervention). Descriptive frequencies, chi-square tests, intraclass correlations, and dyadic multilevel modeling were used to examine participation across fathers and mothers and within parent couples. Compared to mothers, fathers communicated less with therapists and participated less in assessment and planning. Fathers also had lower satisfaction than mothers with parent-therapist communication and planning. Although few parents participated in school-based therapy sessions, 40% of fathers and 50% of mothers participated in homework. However few parents received homework support from therapists. Results are discussed in terms of clinical implications for interventionists to more effectively engage both fathers and mothers in family-centered speech-language therapy for school-aged children with ASD.

Keywords: autism spectrum disorder, communication, intervention, speech-language therapy, parents, fathers

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Parent Couples' Participation in Speech-Language Therapy for School-age Children with Autism Spectrum Disorder in the U.S.

It is currently estimated that as many as one in 59 children meet diagnostic criteria for Autism Spectrum Disorder (ASD; Baio et al., 2018). A defining characteristic of ASD is marked impairment in social communication and the most common special education service received by children with ASD is speech-language therapy (American Psychiatric Association, 2013; Green et al., 2006; Wei, Wagner, Christiano, Shattuck, & Yu, 2015). Parent involvement an essential component of effective speech-language therapy, and intervention that is family-centered is considered best practice (Crais, Poston-Roy, & Free, 2006; National Research Council, 2001). Family-centered intervention provides a framework for clinicians working with children with ASD and other disabilities, to support the family's concerns, strengths, and needs across assessment, planning, and treatment. In family-centered practice, families are recognized for their knowledge and skills and are key decision makers across the therapeutic process (Crais, Poston-Roy & Free, 2006; Dunst, 2002; Hecimovic, Powell, & Christensen, 1999; Marshall & Miranda, 2002; Moes & Frea, 2000; Seligman & Darling, 2007). Involving parents in family-centered intervention has benefits for both children and parents (Bearss, Burrell, Stewart, & Scahill, 2015). For children, parent involvement can lead to more effective intervention and improved language outcomes (Aldred, Green & Adams, 2004; Green, Charman, McConachie, Aldred, Slonims, Howlin, & Pickles, 2010; Hampton & Kaiser, 2016; Iovannone, Dunlap, Huber, & Kincaid, 2003; Moes & Frea, 2002; Roberts & Kaiser, 2011). For parents, involvement in intervention is associated with improved parenting skills, decreased stress and

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marital conflict, and increased positive interactions within the family (Benson, Karlof, Siperstein, 2008, Laxman, et al., 2015; Kuravackel et al., 2018; McConachie & Diggle, 2007).

Research on parent involvement in communication intervention has primarily focused on young children with ASD. Less is known about the role parents play in supporting communication skills for school-age children with ASD (Black & Therrien, 2018). However, the majority of children with ASD are not diagnosed until after 4 years of age (Baio, et al., 2018). Moreover, children with ASD continue to experience deficits in communication skills across school years (Seltzer et al., 2003). Currently, more than 84% of elementary students with ASD receive speech-language services in U.S. schools, and approximately 30% of those students are minimally verbal (Tager-Flusberg & Kasari, 2013; Wei, Wagner, Christiano, Shattuck & Yu, 2014). Although parents may not be present for sessions delivered in school, they nevertheless play important roles throughout the speech-language therapy process. In the United States, parents play a critical role in partnering with schools to develop their child's Individual Education Plan (IEP).

The IEP is a written document that outlines both the needs of students with disabilities and how an educational institution fulfills these needs (U.S. Department of Education, Office of Special Education Programs, 2016). Prior to writing the IEP, assessments are conducted to determine a child's eligibility for special education and therapies. Once eligibility has been established, parents and school staff (e.g., principal, special education teacher, speech-language pathologist) meet to develop the IEP. School districts are mandated to invite parents to the IEP meeting and to make efforts for parents to attend. Parents can invite anyone with knowledge or special expertise about the child (e.g. grandparents, other caregivers, parent advocates) to attend.

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At the IEP meeting, parents work with the educational team to develop their child's goals, select programming, and set levels of related services (e.g., speech-language therapy, occupational therapy). The IEP is required to be reviewed annually and parents and school staff meet yearly to review progress and make necessary changes. Thus, family involvement is essential to the IEP process and is a fundamental component of U.S. education law.

Under the Every Student Succeeds Act (ESSA, 2015) schools receiving funding from the U.S. federal government are required to conduct outreach to all parents. Schools must also have a written family engagement policy that establishes expectations for meaningful family involvement. Despite this mandate for family engagement, studies of parent satisfaction with ASD services have also been conducted primarily with mothers (Azad & Mandell, 2016; Bitterman, Daley, Misra, Carlson, & Markowitz, 2008; Zablotsky, Boswell, & Smith, 2012). Little is known about how fathers' participate in communication intervention for school-age children with ASD. However, understanding fathers' participation is an important step towards more effectively involving all caregivers in family-centered intervention. Currently 64% of children with ASD in the U.S. reside in two-parent households (Freedman, Kalb, Zablotsky, & Stuart, 2012). Moreover, fathers are spending more time in child-rearing activities than fathers in past generations (Lamb & Lewis, 2010). For example, 32% of married fathers (approximately 7 million fathers) are a regular source of care for children under age 15 years (U.S. Census, 2011). Fathers are also taking greater responsibilities in school involvement (Evans & Fogarty, 2005; Baker, 2016). Positive father involvement is associated with better academic, social, and emotional outcomes for both children who are typically developing and children who are at risk (Baker, 2016; McBride, Schoppe-Sullivan & Ho, 2005; National Center for Education Statistics,

2001). Positive father involvement in speech-language therapy may also have benefits for school-aged children with ASD.

Potential Benefits of Involving Fathers in Speech-Language Therapy

Father-child language models are different from mother-child language models and may influence child language development in important ways (Clarke-Stewart, 1980; Gleason, 1975). In general, compared to mothers, fathers tend to use more complex language models, higher-level vocabulary, and more lexically challenging syntax (Bernstein-Ratner, 1988; Walker & Armstrong, 1995). This more linguistically challenging father-child language input may support language development. For example, fathers' vocabulary use at 24 months has been shown to predict levels of child expressive language 1 year later at 36 months (Pancsofar & Vernon-Feagans, 2006), whereas mothers' language did not account for a significant portion of the variance. For children with ASD, few studies have specifically examined the impact of father language input on communication outcomes. However, there is some evidence that when fathers are more verbally responsive with children with ASD, children show more advanced language development (Flippin & Watson, 2015). Given fathers' unique influence on child language outcomes, it is important for clinicians working with children with ASD to consider the potential benefits of positively engaging fathers in intervention. There are potential benefits to involving fathers across all components of communication intervention including parent-therapist communication, assessment, planning, and homework.

Benefits of father involvement in parent-therapist communication. Parent-therapist communication is essential for effective ASD intervention (Azad & Mandell, 2016). Studies

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have examined mothers' perspectives of school-home communication for children with ASD (Azad & Mandell, 2016; Bitterman, Daley, Misra, Carlson, & Markowitz, 2008). In contrast, little is known about how fathers of children with ASD engage in school-home communication. Research with fathers of children with other disabilities has documented that school-home communication is often conducted primarily or solely with mothers (Carpenter & Towers, 2008; Mueller & Buckley, 2014). However when schools limit communication to only mothers, fathers may feel excluded the educational process. In fact, fathers of children with disabilities have described feeling "invisible," and have described themselves as "odd man out" of their child's education team (Mueller & Buckley, 2014). In addition, by not involving fathers in communication, schools may be unintentionally tasking mothers to be a gatekeeper of therapy information. This is an important consideration for professionals working with families of children with ASD. Mothers of children with ASD are at greater risk for experiencing stress and depression than mothers of both typically developing children and children with other developmental disabilities (Hastings et al., 2005; TeHee, Honan, & Harvey, 2009). However, evidence suggests that maternal stress may be mediated by father involvement. Laxman and colleagues concluded that when fathers of children with engaged in responsive caregiving activities (e.g., reading, taking the baby to the doctor) mothers experienced less stress (Laxman et al., 2015). Thus, effectively involving fathers in school-home communication may help fathers feel included in their child's educational team and may also reduce maternal stress.

Benefits of father involvement in assessment. Father-child relationships differ from mother-child relationships, and fathers may have unique perspectives on their child's strengths and needs (Lamb & Lewis, 2010). Inviting fathers to share their perspectives during the

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evaluation process could enhance outcomes for children with ASD (Pancsofar, Petroff & Lewis, 2017). Involving fathers in assessments may also provide support for mothers. At the time of assessments, parents can struggle to process and retain information (Luterman, 2016; Stoner, Bock, Thompson, Angell, Heyl, & Crowley et al., 2005). Having a partner present may allow parents to share understandings of their child's skills and needs as a family. Conversely, if fathers are not included in assessments, they may not have sufficient opportunity to understand results before meeting with the IEP team to select goals and strategies. For example, Stoner and colleagues (2005) interviewed married couples of children with ASD all of whom described the initial IEP meeting as "confusing". One father reported feeling "totally lost" and remarked that he could not "process" the meeting (Stoner, Bock, Thompson, Angell, Heyl, & Crowley et al., 2005). Failing to engage fathers in assessment and review evaluation results before IEP meetings may increase parental concerns and foster attitudes of dissatisfaction with speech-language therapy.

Benefits of father involvement in IEP meetings and planning. For parents of children with other disabilities, medical professionals play a central role in guiding treatment choices. In contrast, parents of children with ASD are commonly tasked with the majority of decision-making regarding their child's interventions (Valentine, 2010). However, choice of services can be stressful, are often time sensitive, and can have important consequences in supporting a child's success (Loomis, 2014; McConachie, Livingston, Morris, Beresford, Le Couteur, Gringras, et al. . . .Parr, 2018). Engaging all caregivers in planning may increase the likelihood that the educational team selects goals and treatment approaches that are valued by families and will be carried over in the home.

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Benefits of father involvement in intervention and homework. Parent involvement is a critical factor in school success for all children (Henderson & Mapp, 2002; Baker, 2016). For children with ASD, parents may not be physically present for therapy sessions in schools. Nevertheless, parents play an essential role in supporting communication outcomes at home. In fact, parents of children with ASD tend to be more involved in homework than parents of children with other disabilities (Zablotsky, Boswell & Smith, 2012). Given that father-child interaction can uniquely enhance language skills, involving fathers in homework activities may supporting carry over of communication skills from school to home (Flippin & Crais, 2011; Pancsofar & Vernon-Feagans, 2006; Shannon, Tamis-LeMonda, London, & Cabrera, 2002; Baker, 2016). Involving fathers' in homework may also reduce stress for mothers and help fathers to feel included in their child's educational team. Overall, positively involving fathers in communication intervention may improve communication outcomes for school-age children with ASD and have benefits across the family.

Study Purpose

The long-term aim of this research is to identify intervention approaches that effectively involve all caregivers in improving social communication skills for children with ASD. As a step towards that aim, the current study was designed to address gaps in our understanding of fathers' and mothers' involvement in and satisfaction with communication intervention for school-age children with ASD. The aims of the present study were to: 1) identify and compare parent participation in assessment, planning, and speech-language intervention for fathers and mothers of children with ASD; and 2) determine the family and child factors associated with greater parent participation in and satisfaction with speech-language services for children with ASD.

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Methods

Procedure

Following Institutional Review Board (IRB) approval, a targeted invitation was emailed to parents of children with ASD who were registered with the Interactive Autism Network (IAN). Parents with more than one child with ASD, were asked to complete the survey for their oldest child with ASD under 10 years of age. Participating parents were directed to the Qualtrics website to complete a 7-10 minute survey. Parents received a \$10 Amazon.com electronic gift code upon completion of the survey.

Measures

The survey instrument was adapted from a survey developed by Crais, Poston-Roy, and Free (2006) designed to assess and compare parents' and therapists' perspectives on family-centered practices. The survey contained 27 questions. Skip logic was used for gender of participant (male/female) to display gender-worded questions and to generate a randomly assigned three-digit family code for participating mothers or prompt for family code entry for participating fathers. First, parents were asked to identify family role (e.g., biological mother/father, etc.) number of children with ASD, marital status, and living arrangement for target child with ASD. Next, questions about parent participation were organized around parental experiences with and perceptions of assessment, planning (e.g., IEP meetings), and speech-language therapy. These were nominal items with three-point scale (i.e., "yes", "no", "not sure"). Parents then rated satisfaction with participation across speech-language therapy components (e.g., "I attend my child's speech-language assessment"; "I get coaching and

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support from my child's therapist"; "I choose my child's speech therapy goals"). These were nominal items with a five-point scale (i.e., "very unhappy", "unhappy", "neutral/neither happy nor unhappy", "happy", "very happy"). Parents were also asked to provide written comments in an open text field. Finally, parents completed questions regarding demographic information (i.e., ethnicity, income/education levels) at the end of the survey. Composite variables for the outcomes were created by summing the binary items related to the construct where "yes" = 1 and "no or not sure" = 0 for participation in their child's assessment, participation in IEP meetings, and participation in therapy. Composite variables for satisfaction with therapy sessions were created by the mean sum (i.e., summing the items and taking an average of the number of items). The composite variables were used as the dependent variable in the dyadic analysis.

Participants

Parents registered with the Interactive Autism Network (IAN) received an email invitation with a link to complete the survey. The IAN is a national research registry comprised of approximately **22,000** parents of children with ASD (Daniels, Rosenberg, Anderson, Law, Marvin, & Law, 2012). There were 262 parents of children with ASD who agreed to take part in the survey. Of those, 253 completed at least one question. Of the 253, results were delimited to the 40 fathers of school-age children with ASD that completed the study and their parent partners ($n = 80$). Parent couples from 17 U.S. states and the District of Columbia participated in the study. Mothers and fathers independently reported on their participation in and satisfaction with speech-language therapy.

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Family social-demographics. The majority of dyad respondents (94%) were biological mothers and fathers with the remaining being adoptive mothers and fathers ($n = 2$, 3% each, respectively) and one stepfather ($n = 1$, 1%). The overwhelming majority of parents were married ($n = 72$, 90%) with the remaining being separated or divorced ($n = 3$, 4%) or single/never married ($n = 2$, 3%). Parents in the sample were generally well educated, 65% holding a bachelors degree or higher ($n = 52$). Household income was coded to reflect low (\$50K or less), middle (\$50,001-\$100,000K), and upper income (more than \$100K) based on U.S. income brackets (Kochhar, 2018), with 45% of families having family incomes of \$50,000-\$100,000 ($n = 56$) and 25% having family incomes of \$100,000 or greater ($n = 20$). Among participating parents, 83% of fathers ($n = 33$) and 33% of mothers ($n = 13$) were employed full-time.

Child demographics. The majority of children were boys ($n = 33$, 83%), and most children lived with two parents ($n = 38$, 95%). Most families had more than one child in the home, with two children being the most common number ($n = 16$, 40%), followed by three ($n = 11$, 28%), and four ($n = 2$, 5%). ‘Only children’ were present in slightly more than one-fourth of the homes ($n = 11$, 28%). All children were enrolled in elementary school, with about 18% in kindergarten ($n = 7$). The largest proportion of children was White ($n = 38$, 95%), followed by African American ($n = 1$, 3%), and Asian ($n = 1$, 3%). Ten percent of children were of Hispanic, Latino, or Spanish origin ($n = 4$). Family and child demographics are described in Table 1.

Speech-language therapy sessions. Most parents indicated that speech therapy took place in the child’s school with no parent present ($n = 60$, 75%), followed by in a speech clinic with no parents present ($n = 14$, 18%). The remaining parents indicated that therapy took place

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in a speech clinic with parents behind a one-way mirror ($n = 2, 3\%$), in a speech clinic with parents present in the room ($n = 2, 3\%$), or in another location (e.g., home; $n = 2, 3\%$).

Data Analysis Plan

Descriptive frequencies and chi-square tests were used to describe participation across all parents in the sample and identify items that differed significantly between fathers and mothers. Correlations were then conducted separately with mothers and fathers to identify relationships between fathers' and mothers' participation and child variables (i.e., age, gender), family factors (parent education, household income) and parent variables (i.e., gender, educational level). Next, intraclass correlations were conducted to examine patterns of participation and satisfaction within parent couples. Finally, multilevel models were generated to identify predictors of parent participation in and satisfaction with speech-language therapy. Multilevel models were chosen over regression as they allowed the examination of within-couple differences for mothers' and fathers' participation and satisfaction with speech-language therapy. Two-level multilevel models with parent dyad (father and mother) at level one ($n = 80$) and child at level 2 ($n = 40$) in HLM version 7.01 using restricted maximum likelihood were used to estimate fixed and random effects. In modeling parent dyad at level one and child at level two, mother-father pairs were nested within child. Parent dyad was effect coded such as father = 1 and mother = -1, allowing the intercept to be interpreted as the grand mean. Model fit indices were calculated using full maximum likelihood. Binary variables were entered uncentered and continuous variables were grand mean centered.

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Unconditional models were estimated first to determine variation between parents. More specifically, intraclass correlations were computed to identify patterns of participation and satisfaction within parent couples (as compared to between couples). Random intercept fixed slopes models (specifically, one-way ANCOVA with random effects models) were then estimated, first including only parent dyad varying characteristics (i.e., level 1 variables) (see results reported at Model 2, Table 6) and then including dyad invariant factors (i.e., level 2 variables including child's gender, age, and family income). AIC, BIC, and SBIC were examined for model fit. For all models, SBIC suggests that including moderators at level 2 (i.e., represented as Model 3 in Table 6) improved model fit. However, AIC and BIC suggest slightly poorer model fit with inclusion of the moderators. For each model, the hypothesis test for homogeneity of variances at level 1 suggested that equal variances between parents was plausible ($p > .50$). Additionally, normality of residuals was examined via skewness, kurtosis, Q-Q plots, histograms, boxplots, and the Shapiro-Wilk test for normality. With the exception of a statistically significant Shapiro-Wilk test for the model for participation in assessment, indices for the multilevel models suggest normality (including the absence of outliers) can be assumed.

Missing Data

There was a minimal amount of missing data. There was no missing data on the items that comprised the assessment composite variable and a maximum of 2% missing on the items that comprised the IEP composite variable. With the exception of one item that had 6% missing, there was less than 4% missing on all items that comprised the therapy composite variable. For the items comprising the satisfaction composite, missing ranged from 6% (one item) to 11% (one item) with most items having 8% missing. Given the small proportion of missing data, missing

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data on the composite variables were imputed using the expectation-maximization (EM) algorithm. The EM algorithm for missing data replacement is an iterative process that produces maximum likelihood estimates where missing values are estimated in an iterative fashion via a regression-based process with predictors being all other variables in the model (Graham, 2009).

Results

Parent participation for forty married mother-father couples with a school-age child with ASD were examined across four components of the therapeutic process (i.e., parent-therapist communication, assessment, planning, and intervention).

Parent-Therapist Communication

Fathers and mothers were generally in agreement (see Table 2), with approximately 75% of mothers and about 70% of fathers indicating that the speech therapist usually communicated with the mother.

Fathers' and Mothers' Participation in Assessment

Almost all participating mothers and a majority of fathers indicated that they attended their child's assessment. However the proportion of mothers who reported attending assessment was statistically significantly greater than fathers ($\chi^2 = 8.352, p = .004$). Most parents also indicated that they were given a written report after assessment, however few fathers or mothers indicated that they were asked if they agreed with the findings of the child's assessment or had follow up discussions with the speech-language therapist about their child's results. Fewer fathers than mothers indicated that they were asked about their child's strengths and challenges,

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or were given opportunities to discuss the impact of their child's communication difficulties on their family life, however father-mother differences for these items were not statistically significant. In contrast, the proportion of fathers who responded that they were given opportunities to invite other family members and friends to the assessment was significantly less than the proportion of mothers (28% fathers, 73% mothers; $\chi^2 = 16.244, p < .001$) Parent responses by participation item are provided in Table 3.

Fathers' and Mothers' Participation in IEP Meetings and Planning

Almost all participating mothers and a majority of fathers indicated that they attended their child's IEP meeting. However mothers' attendance was significantly greater than fathers ($\chi^2 = 9.038, p = .003$). For all other IEP/planning items, parent participation was at or below 50% and there were no significant father-mother differences in responses. Specifically, less than one-half of responding fathers and mothers responded affirmatively to the following items: 1) I was given information about how my child's communication difficulty affects family life; 2) I helped choose therapy routines; 3) I was given information to help in goal selection; 4) I helped choose goals; 5) I helped decide which communication goals were most important for my child and our family; and 6) I made the final decision about goals (see Table 3).

Fathers' and Mothers' Participation in Intervention and Homework

Few fathers and mothers indicated that they attended therapy sessions or were given an option of choosing how often they would like to be involved in sessions, likely reflecting that for the majority of children in this sample, therapy sessions were delivered in school. A majority of fathers and mothers responded they were given opportunities to suggest intervention activities and goals and helped identify what is most important to work on at home with their child. Most

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parents also reported their child made progress in therapy. With regard to homework, however, less than half of parents reported that they were given activities to do at home or discussed homework progress and difficulties with the therapist. Moreover, few parents practiced with the therapist, or received feedback or video models of targeted skills before completing homework. Fathers in the sample were slightly more likely than mothers to report that the activities they did at home incorporated daily routines. However, across intervention and homework items, differences between fathers and mothers were not statistically significant (see Table 3).

Fathers' and Mothers' Satisfaction with Participation

Within the sample of participating parents, satisfaction ratings were low across many participation components of the therapy process. For both mothers and fathers, the highest rated item for satisfaction was for attending the IEP meeting, with almost all mothers and over half of fathers responding they were satisfied (i.e., indicated 'happy' or 'very happy') with participation. In contrast, only around one third of fathers and mothers indicated they were satisfied with attending speech assessment/evaluation, and choosing speech goals. Less than 20% of participating parents indicated they were satisfied with attendance at speech therapy sessions and choosing therapy activities. Although 36% of fathers and 61% of mothers reported being satisfied with their participation in working on homework, only 23% of fathers and 36% of mothers were satisfied with getting coaching support and feedback from the therapist. Statistically significant differences in responses of fathers and mothers were found for two parent satisfaction items. Specifically, fathers tended to have lower satisfaction than mothers for attending IEP meetings and communicating with the therapist. Parent satisfaction responses by item are provided in Table 4.

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Child, Family, and Parent Factors, and Parent Participation

Bivariate correlations between fathers' and mothers' participation and child variables (i.e., age, gender), family variables (i.e., household income), and parent variables (i.e., gender, and education) are presented in Table 5. Among some of the strongest findings across all participating parents were large, positive correlations for all parents between participation in assessment and participation in IEP meetings ($r = .808$, fathers, $r = .541$, mothers). That is, fathers and mothers who participated in assessment were more likely to attend IEP meetings and vice versa. In addition, there were also strong negative correlations for mothers between participation in therapy sessions and satisfaction with therapy ($r = -.760$), indicating that mothers who participated more in therapy sessions were less satisfied with their child's therapy.

Predictors of Parent Satisfaction with Speech-Language Therapy

Multilevel models for child within parent dyads were conducted to understand the child, family, and parent factors related to parent satisfaction. Prior to considering the moderating effects of age or gender of child, or household income, the results suggest that parent participation in their child's assessment and participation in therapy sessions were statistically significant predictors of perceptions of satisfaction with therapy sessions (see model 2, Table 6). More specifically, parent perceptions of satisfaction decreased as participation in assessment and therapy sessions increased. However, after including age and gender of child and household income (see model 3, Table 6), only participation in therapy session was statistically significant related to perceptions of satisfaction with therapy sessions. As participation in therapy sessions increased, parent satisfaction with participation decreased. There were no moderating effects of

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age or gender of child, or household income in average satisfaction with speech-language therapy.

Qualitative Comments on Participation from Fathers and Mothers

Following satisfaction ratings, an open text question prompted participating parents to “Please let us know any suggestions you have for making your participation in speech-language therapy a better experience for your child and you.” Across participating mothers, two themes emerged related to wanting better communication between therapists and parents, and more support for homework (Table 7). As one mother described,

“Because of the rules of my son's school, parents are unable to be involved in person with speech therapy. I do communicate with the speech therapist and tell her what I am doing with my son. Her response is supportive and she tells me I am doing all of the right things. I have done exhaustive research on speech therapy methods online and utilize them to the best of my ability with my son at home. I appreciate the support I am given from the speech therapist, but it would be much more helpful if she would offer up any alternative methods or possible corrections with what I am doing. It is hard for me to believe that, considering I have zero formal training in this area, I am doing ‘everything right’ as I keep being told when I ask.”

Across the sample of fathers’ comments, a common theme was that mothers managed children’s speech therapy. Comments shared by three fathers suggest that limited involvement may be due to work schedules. As one father noted,

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“I like how my wife handles everything with our children because of the shift I work I'm not there at nights.”

Interestingly, another father also shared that in addition to limited time for participation, social anxiety may be a barrier to participation in his child's speech-language therapy.

“My wife does this as I don't have the time, nor do I want to make the time. I am not comfortable talking to people and have social anxiety.”

Some fathers also commented that they would like greater family involvement, either for themselves, for their spouses, or both. In addition, another father described concerns about therapy costs and expressed a wish for better integration of services (e.g., speech-language therapy, occupational therapy, behavioral therapy). Finally, one father shared that he was very happy with the speech-language therapy his child received and that his child's program had effective school-family communication.

Discussion & Implications for Clinicians and Schools

Parent participation is essential to effective communication intervention for children with ASD (Azad & Mandell, 2016). However, little is currently known about how fathers participate in speech-language therapy for school-age children with ASD, or how participation may differ between parents within married couples. Understanding how father-mother couples participate in speech-language therapy is an important step towards delivering ASD communication intervention that is truly family-centered. Several important findings emerged from the current study related to parent participation in the therapeutic process. Findings are discussed in terms of clinical implications for more effectively supporting fathers' participation across components of

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speech language therapy (i.e., parent-therapist communication, assessment, planning, and intervention).

Parent-Therapist Communication

Participating parent couples reported low levels of satisfaction with parent-school communication. Satisfaction ratings were significantly lower for fathers than for mothers. Across parents in our sample, both fathers and mothers indicated that mothers are the primary, and often the only family contact. This finding is consistent with results of a study of school-home communication conducted with fathers of children with other disabilities (Mueller & Buckley, 2014). This is an important finding to describe here for clinicians working with families of children with ASD. Lack of communication with all parents is likely a result of large caseloads and time constraints. However it is important for therapists to effectively communicate not only with the most convenient point of contact, but with all caretakers in a family. Communication with all caregivers, at the start of the therapeutic process, may set the stage for effective family-centered practice. To that end, advances in social media and messaging technologies (e.g., WhatsApp, TalkingPoints, ClassDojo) make it simpler for therapists and educators to communicate with multiple caregivers at one time. Moreover, establishing a clear, consistent communication process will help therapists and parents organize exchanges and set expectations for school-home communication (Ruble, McGrew, Toland, Dalrymple & Jung, 2013). For example, therapists can send regular, weekly or bi-weekly notes using Google Suite for Education, or other formatted messaging in order to check in with parents and share: a) what goal is currently being targeted; b) how much progress has been made; c) what families can do at home; and d) how the family can report progress or challenges, and ask for needed supports.

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Inclusive and effective school-home communication will help all parents understand targeted therapy goals, identify how goals fit with family needs and wishes for the child, and know what they can do at home to support progress.

Fathers' and Mothers' Participation in Assessment

In addition to communicating more often with therapists, mothers in the parent sample participated in assessment more frequently than fathers. In fact, the most striking father-mother participation differences were for assessment activities, with mothers participating at significantly higher rates than fathers. These results are consistent with current practices in ASD intervention and research involving primarily mothers (Flippin & Crais, 2011). However, fathers' low ratings of satisfaction with attendance in assessment suggest that fathers are less than satisfied with participation in assessment and evaluations and may want to have more involvement than they do currently. Clinicians can more effectively involve families in assessment activities by collaborating with all parents at the start of the assessment process. Effective collaboration will allow both fathers and mothers to describe what the child does at home with each parent and share their unique perspectives on their child's strengths, challenges, and needs. After evaluations are completed, clinicians can review assessment results with both fathers and mothers and give families time to process and respond with any additional thoughts or concerns. Finally, clinicians can ask fathers and mothers to independently identify what is most important to each parent prior to the IEP meeting, so that each parent's perspective is taken into account when setting goals and selecting intervention strategies.

Fathers' and Mothers' Participation in IEP Meetings and Planning

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An encouraging finding of this study was that across the parent sample, more than half of responding fathers participated in IEP meetings and a majority of parents responded that they were either “happy” or “very happy” with attending the IEP meeting. Although this was the highest satisfaction rating for fathers, significantly more mothers attended IEP meetings than fathers. Father-mother differences in IEP attendance may be related in part to employment and work schedules, as almost all participating fathers reported full-time employment versus approximately one-third of participating mothers. One way for clinicians to make the planning process more family-centered is to schedule assessments and planning meetings at family-friendly times (e.g., before/after school). Family-friendly scheduling will allow more parents, and particularly more fathers, to be involved in their child’s speech-language therapy

Fathers’ and Mothers’ Participation in Intervention and Homework

As expected, few mothers or fathers in the sample reported attending therapy sessions, as the majority of sessions were delivered in school. Moreover, for both mothers and fathers, satisfaction ratings were lowest for attending therapy sessions. However, 40% of participating fathers and 50% of participating mothers reported participating in homework. This finding suggests that although most parents do not attend school-based sessions, both fathers and mothers may be involved in homework for children with ASD. The high level of homework involvement reported by parents in this study is consistent with findings of other studies conducted primarily with mothers of school-age children with ASD (Zablotsky, Boswell, & Smith, 2012). It is important to note however, that few participating fathers or mothers practiced homework with the therapist prior to implementing strategies at home. In addition, few parents were given opportunities to discuss issues with homework or received feedback from therapists.

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Without models, practice, and feedback, parents may not be implementing strategies correctly. Parents may also not feel confident in their abilities to target skills at home. In fact, this concern was the most common theme across comments shared by participating mothers. Clinicians can support parents' use of communication strategies at home by offering live coaching sessions or video models when introducing new strategies. Providing homework support can help parents more clearly understand what skill they are working on, why they are working on it, and how to do it correctly. In addition, following up with parents to make sure they are implementing strategies correctly may improve both child communication outcomes and parent satisfaction with therapy.

Fathers' and Mothers' Satisfaction with Speech-Language Therapy

Examination of parents' satisfaction ratings and predictors of satisfaction yielded several interesting results. Overall, with the exception of mothers' ratings for attending IEP meetings, satisfaction rates for both mothers and fathers in this study were low across most participation items. Low levels of satisfaction found in this study were comparable to those reported in other studies of parents of school-age children with ASD (Starr & Foy, 2012; Zablotsky, Boswell & Smith, 2012). Low parent satisfaction may reflect the challenges of treating of ASD in schools and the need for more parent supports. The finding that parents who participated more in therapy sessions were less likely to be satisfied with participation was unexpected. Given that this study focused on school-age children with ASD and sessions were primarily delivered in school, one explanation may be that greater parent involvement of in therapy sessions reflects greater parent concerns with therapy progress. That is, parents who are generally more satisfied with therapy are less involved in sessions. In contrast, parents who are more engaged in therapy sessions and

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homework activities may be more concerned with slow progress or difficulty in achieving communication goals. High levels of parent involvement and low levels of satisfaction for parents of school-age children with ASD were also reported by Zablotzky, Boswell, and Smith (2012). Thus, parents of children with ASD may be more involved than other parents, yet less satisfied with school-based services. Alternatively, given the low percentage of parents in the current study that received support with homework, another explanation is that parents may indicate they are satisfied with therapy without having a clear understanding about what occurs during therapy sessions.

A second interesting finding was that within the sample, mothers and fathers had similar levels of satisfaction with participation in speech-language therapy, yet fathers had less involvement in assessment and planning. Across participating fathers, the most common theme to emerge was that mothers managed child therapy. Thus, a first step for clinicians aiming to deliver effective family-centered therapy may be establishing buy-in with fathers. Specifically, fathers may need greater awareness and understanding of their unique and important contributions to their child's communication development.

Overall, findings from this study suggest four potential strategies for positively engaging both fathers and mothers in communication intervention for school-age children with ASD: 1) establishing buy-in with fathers; 2) clearly and consistently communicating with both mothers and fathers; 3) providing family-friendly scheduling for assessment and planning meetings with processing time and follow-up for additional parent input; and 4) providing parents with models, supports, and feedback for homework activities. Delivering intervention for children with ASD that is truly family-centered will require more time and resources of interventionists and schools.

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However partnering with parents and adopting more family-centered practices may be a worthwhile investment on the part of interventionists and school systems. Inclusive family-centered practices may result in improved communication for children and greater satisfaction with therapy for parents.

Several resources can provide clinicians and schools with frameworks for supporting greater family involvement. For example, two programs, the Collaborative Model for Promoting Competence and Success (Ruble, Dalrymple, & McGrew, 2010) and Partners in School (Azad, Marcus, Sheridan & Mandell, 2018) offer guidelines for schools to foster collaboration with parents of children with ASD. Specifically involving fathers in communication intervention for school-age children with ASD, however, will likely require changing organizational structures to support paternal participation. Towards this end, the National Fatherhood Initiative (www.fatherhood.org) offers resources to engage fathers in organizations, including a Father Friendly Check-Up™. The Father Friendly Check-Up™ allows organizations to assess and plan for father involvement by rating efforts on items such as: “creates a welcoming environment for fathers”; “encourages comfort for staff with differences in parenting styles typical of father and mothers”; “seeks input in fathers’ decision making situations involving child’s day-to-day life”; and “invites fathers to participate in all activity (not just more traditionally male roles)”. Using this tool and other resources, schools can take steps towards making intervention for school-age children with ASD more father-friendly.

Limitations & Future Directions

Although this study makes important contributions to the literature on parent participation in communication intervention for school-aged children with ASD, there are several

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limitations. First, this study examined participation of mother-father couples. Married parent couples are not representative of all families of children with ASD and findings of this study may not generalize to all parents and children. Second, participating parent couples were recruited through the Interactive Autism Network (IAN), and the ratio of IAN enrollment for mothers to fathers is approximately 9:1. Parents, and particularly fathers, who volunteer to take part in this and other research studies, may differ in important ways from parents who do not choose to participate. Moreover, the small sample size of this study may have prevented more detailed examination of father-mother differences in parent participation. In addition, in interpreting findings, it is important to highlight that results of the parent survey must be understood in the context of responses collected at a single time point. Finally, data on some child variables (e.g., gender, age, school level) were collected, however other child characteristics (e.g., age of diagnosis, autism severity, cognitive and language skills) and parent characteristics (e.g., stress levels, hours of work outside the home) were not measured in the current study and thus not examined as potential predictors of parent participation in communication intervention. Future study of father participation in communication intervention for children with ASD should be expanded to include these child and parent characteristics.

Despite these limitations, this study offers important steps towards better understanding the perspectives of fathers and mothers in parent couples on participation in and satisfaction with communication intervention. Findings of this study have important implications for supporting clinicians and researchers in making communication intervention more truly family-centered and thus more effective for children with ASD. Longitudinal research is warranted to examine long-term patterns of parent participation and confirm these interpretations. In addition, extension of

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this study, to examine participation for a more representative sample of caregivers (e.g. single parents, same-sex parents, grandparents) will improve generalizability of findings to more families of children with ASD. Future qualitative research is needed to explore in greater depth the participation needs and preferences of fathers of school-age children of ASD. Finally, future intervention research is also needed to examine the impact of creating more father-friendly intervention and school practices on child, parent, and family outcomes.

Conclusions

This study examined parent couples' participation in and satisfaction with speech-language therapy for school-age children with ASD. Participation was examined both across fathers and mothers and within parent couples using dyadic multilevel modeling to control for shared variance across family units. Taken together, results suggest that fathers are not primary communicators with therapists and may not currently participate in assessment or intervention either as much as mothers or as much as they may like. Both fathers and mothers are involved in doing home activities with children to support communication growth. However few parents indicated that they received support with homework, and parents had low satisfaction ratings for homework supports. Results were discussed in terms of implications for clinicians and strategies were described for more effectively involving both fathers and mothers in family-centered communication intervention for school-age children with ASD.

References

- Aldred, C., Green, J., & Adams, C. (2004). A new social communication intervention for children with autism: Pilot randomised controlled treatment study suggesting effectiveness. *Journal of Child Psychology and Psychiatry*, *45*, 1420-1430.
- American Speech-Language-Hearing Association. (2018). 2018 Schools survey. Survey summary report: Numbers and types of responses, SLPs. Retrieved from <https://www.asha.org/uploadedFiles/2018>.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (Fifth Edition). Arlington: VA: American Psychiatric Association.
- Azad, G., & Mandell, D. S. (2016). Concerns of parents and teachers of children with autism in elementary school. *Autism*, *20*, 435–441.
- Azad, G. F., Marcus, S.C., Sheridan, S. M. & Mandell, D.S. (2018) Partners in school: An innovative parent-teacher consultation model for children with autism spectrum disorder, *Journal of Educational and Psychological Consultation*, *28*, 460-486.
- Baio, J., Wiggins, L., Christensen, D. L., et al. (2018). Prevalence of autism spectrum disorder among children aged 8 years—Autism and Developmental Disabilities Monitoring Network, 11 sites, United States, 2014. *MMWR Surveillance Summary*, *67*(No. SS-6). <https://doi-org.uri.idm.oclc.org/10.15585/mmwr.ss6706a1>.
- Baker, C.E. (2016). When daddy comes to school: Father–school involvement and children’s academic and social–emotional skills. *Early Child Development and Care*, *188*, 208-219.

PARENT COUPLE PARTICIPATION IN SLT

Benson, P., Karlof, K.L. & Siperstein, G.N. (2008). Maternal involvement in the education of young children with autism spectrum disorders. *Autism, 12*, 47-63.

Bearss, K., Burrell, T. L., Stewart, L. M., & Scahill, L. (2015). Parent training in autism spectrum disorder: What's in a name? *Clinical Child and Family Psychology Review, 18*, 170- 182.

Bitterman, A., Daley T., Misra, S., Carlson, E., & Markowitz, J. (2008). A national sample of preschoolers with autism spectrum disorders: Special education services and parent satisfaction. *Journal of Autism and Developmental Disorders, 38*, 1509-1517.

Carpenter, B., & Towers, C. (2008). Recognising fathers: The needs of fathers of children with disabilities. *Support for Learning, 23*, 118–125.

Crais, E., Poston Roy, V., & Free, K. (2006). Parents' and professionals' perceptions of the implementation of family-centered practices in child assessments. *American Journal of Speech-Language Pathology, 15*, 365-377.

Daniels, A.M., Rosenberg, R.E., Anderson, C. Law, J.K., Marvin, A.R., & Law, P.A. (2012).

Verification of parent-report of child autism spectrum disorder diagnosis to a Web-based autism registry. *Journal of Autism and Developmental Disorders, 42*, 257–265.

Dunst, C. J. (2002). Family-centered practices: Birth through high school. *Journal of Special Education, 36*, 139-147.

PARENT COUPLE PARTICIPATION IN SLT

ESSA (2015). Every Student Succeeds Act of 2015, Pub. L. No. 114-95 Stat. 1177 (2015-2016).

Evans, G. D., & Fogarty, K. (2005). The hidden benefits of being an involved father.

Gainesville: University of Florida Press.

Flippin, M., & Crais, E.R. (2011). The need for more effective father involvement in early

autism intervention: A systematic review and recommendations. *Journal of Early*

Intervention, 33, 24-50.

Flippin, M., & Watson, L.R. (2015). Fathers' and mothers' verbal responsiveness and the

language skills of young children with autism spectrum disorder. *American Journal of*

Speech-Language Pathology, 24, 400-410.

Freedman, B.H., Kalb, L.G., Zablotzky, B., & Stuart, E.A. (2012). Relationship status among

parents of children with autism spectrum disorders: A population-based study. *Journal of*

Autism and Developmental Disorders, 42, 539 –548.

Gleason, J. B. (1975). Fathers and other strangers: Men's speech to young children. In D. P. Dato

(Ed.), *Developmental psycholinguistics: Theory and applications* (pp. 289-297).

Washington, DC: Georgetown University Press

Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of*

Psychology, 60, 549-576.

Green, J., Charman, T., McConachie, H., Aldred, C., Slonims, V., Howlin, P., & Pickles, A.

(2010). Parent-mediated communication-focused treatment in children with autism

(PACT): A randomized controlled trial. *The Lancet*, 375, 2152-2160.

PARENT COUPLE PARTICIPATION IN SLT

- Green, V.A., Pituch, K.A., Itchon, J., Choi, A., O'Reilly, M., & Sigafos, J. (2006). Internet survey of treatments used by parents of children with autism. *Research in Developmental Disabilities, 27*, 70-84.
- Hampton, L. H., & Kaiser, A. P. (2016). Intervention effects on spoken-language outcomes for children with autism: A systematic review and meta-analysis. *Journal of Intellectual Disability Research, 60*, 444–463.
- Hastings, R., Kovshoff, H., Ward, N., Espinosa, F., Brown, T., & Remington, B. (2005). Systems analysis of stress and positive perceptions in mothers and fathers of pre-school children with autism. *Journal of Autism and Developmental Disorders, 35*, 635–644.
- Hecimovic, A., Powell, T. H., & Christensen, L. (1999). Supporting families in meeting their needs. In D. B. Zager (Ed.), *Autism: Identification, education, and treatment* (2nd ed.) (pp. 261–299). Mahwah, NJ: Erlbaum.
- Henderson, A.T. & Mapp, K.L. (2002). *A new wave of evidence: The impact of school, family, and community connections on student achievement*. National Center for Family and Community Connections with Schools, Southwest Educational Development Laboratory.
- IDEA (2004). Individuals with Disabilities Education Act of 2004. 34 CFR §300.321;§300.500-§300.505; §300.510-511 (2004).
- Iovannone, R., Dunlap, G., Huber, H., & Kincaid, D. (2003). Effective educational practices for students with autism spectrum disorders. *Focus on Autism and Developmental Disabilities, 18*, 150–165.

PARENT COUPLE PARTICIPATION IN SLT

Kasari, C., Freeman, S. F., Bauminger, N., & Alkin, M. C. (1999). Parental perspectives on inclusion: Effects of autism and Down syndrome. *Journal of Autism and Developmental Disorders, 29*, 297–305.

Kochhar, R. (2018). The American middle class is stable in size, but losing ground financially to upper-income families. Retrieved from Pew Research Center website:
<http://www.pewresearch.org/fact-tank/2018/09/06/the-american-middle-class-is-stable-in-size-but-losing-ground-financially-to-upper-income-families/>

Kuravackel, G.M., Ruble, L.A., Reese, R.J., Ables, A.P., Rodgers, A.D., & Toland, M.D. (2018). COMPASS for Hope: Evaluating the effectiveness of a parent training and support program for children with ASD. *Journal of Autism and Developmental Disorders, 48*, 404-416.

Lamb, M.E. (2000). The history of research on father involvement. *Marriage & Family Review, 29*, 23-42.

Lamb, M. E. & Lewis, C. (2010). How do fathers affect children's development? Let me count the ways. In M. E. Lamb (Ed.), *The Role of the Father in Child Development* (5th ed.) (pp. 1–26). Hoboken, NJ: Wiley.

Laxman, D. J., McBride, B.A., Jeans, L.M., Dyer, W.J., Santos, R.M., Kern, J. L.,

... Weglarz-Ward, J. M. (2015). Father involvement and maternal depressive symptoms in families of children with disabilities or delays. *Maternal and Child Health Journal, 19*, 1078-86.

PARENT COUPLE PARTICIPATION IN SLT

Leuterman, D. M. (2016). *Counseling persons with communication disorders and their families.*

(6th ed.). New York: Pro-Ed Publishing.

Loomis, J. W. (2014). Supporting parents, siblings and grandparents of individuals with ASD. In

F. R. Volkmar, S. J. Rogers, R. Paul, & K.A. Pelphrey (Eds.), *Handbook of autism and pervasive developmental disorders-4th edition, Volume 2: Assessment, interventions and policy* (pp. 932-948). Hoboken, NJ: Wiley & Sons.

Marshall, J. K., & Mirenda, P. (2002). Parent-professional collaboration for positive behavior support in the home. *Focus on Autism and Other Developmental Disabilities, 17*, 216–228.

McBride, B., Schoppe-Sullivan, S.J., & Ho, M.H. (2005). The mediating role of fathers' school involvement on student achievement. *Applied Developmental Psychology, 26*, 201–216.

McConachie, H., & Diggle, T. (2007). Parent implemented early intervention for young children with autism spectrum disorder: A systematic review. *Journal of Evaluation in Clinical Practice, 13*, 120-129.

McConachie, H., Livingston, N., Morris, C., Beresford, B., Le Couteur, A., Gringras, P., et al. . .

Parr, J.R. (2018). Parents suggest which indicators of progress and outcomes should be measured in young children with autism spectrum disorder. *Journal of Autism and Developmental Disorders, 48*, 1041-1051.

Moes, D. R., & Frea, W. D. (2000). Using family context to inform intervention planning for the treatment of a child with autism. *Journal of Positive Behavior Interventions, 2*, 40–46.

PARENT COUPLE PARTICIPATION IN SLT

Mueller, T. G., & Buckley, P.C. (2014). The odd man out: How fathers navigate the special education system. *Remedial and Special Education, 35*, 40–49.

National Center for Education Statistics (2001). *Fathers' and mothers' involvement in their children's schools by family type and resident status*. Washington, DC: U.S. Department of Education.

National Research Council (2001) *Educating Children with Autism*. Committee on Educational Interventions for Children with Autism. C. Lord and J. P. McGee (Eds). Division of Behavioral and Social Sciences and Education. Washington, DC: National Academy Press.

Pancsofar, N., & Vernon-Feagans, L. (2006). Mother and father language input to young children: Contributions to later language development. *Journal of Applied Developmental Psychology, 27*, 571-587.

Pancsofar, N., & Vernon-Feagans, L. (2010). Fathers' early contributions to children's language development in families from low-income rural communities. *Early Childhood Research Quarterly, 25*, 450-63.

Roberts, M., & Kaiser, A. (2011). The effectiveness of parent-implemented language intervention: A Meta-Analysis. *American Journal of Speech-Language Pathology, 20*, 180-199.

Ruble, L. A., McGrew, J. H., Toland, M. D., Dalrymple, N. J., & Jung, L. A. (2013). A

PARENT COUPLE PARTICIPATION IN SLT

- randomized controlled trial of COMPASS web-based and face-to-face teacher coaching in autism. *Journal of Consulting and Clinical Psychology*, 81, 566–572.
- Shannon, J. D., Tamis-LeMonda, C. S., London, K., & Cabrera, N. (2002). Beyond rough and tumble: Low-income fathers' interactions and children's cognitive development at 24 months. *Parenting: Science and Practice*, 2, 77-104.
- Seligman, M., & Darling, R. B. (2007). *Ordinary families, special children: A systems approach to childhood disability* (3rd ed.). New York: Guilford Press.
- Starr, E.M., & Foy, J.B. (2012). In parents' voices: The education of children with autism spectrum disorders. *Remedial and Special Education*, 33, 207–216.
- Stoner, J. B., Bock, S. J., Thompson, J. R., Angell, M. E., Heyl, B. S., & Crowley, E. P. (2005). Welcome to our world: Parent perceptions of interactions between parents of young children with ASD and education professionals. *Focus on Autism and Other Developmental Disabilities*, 20, 39–51.
- Tager-Flusberg, H., & Kasari, C. (2013). Minimally verbal school-age children with autism: The neglected end of the spectrum. *Autism Research*, 6, 468–478.
- TeHee, E., Honan, R., & Hevey, D. (2009). Factors contributing to stress in parents of individuals with autistic spectrum disorders. *Journal of Applied Research in Intellectual Disabilities*, 22, 34-42.
- U.S. Census Bureau (2011). *Survey of Income and Program Participation. American Community*

PARENT COUPLE PARTICIPATION IN SLT

Survey 5-year estimates. Retrieved from

<https://www.census.gov/newsroom/releases/archives/children/cb11-198.html>.

U.S. Department of Education, National Center for Education Statistics. (2016–2017). Parent

and family involvement in education, 2016, from the National Household Education

Surveys Program of 2016: First look. Available at <https://nces.ed.gov/pubs2017/2017102.pdf>

Valentine, K. (2010). A consideration of medicalization: Choice, engagement and other

responsibilities of parents of children with autism spectrum disorder. *Social Science Medicine*, *71*, 950–957.

Wei, X., Wagner, M., Christiano, E. R., Shattuck, P., & Yu, J. W. (2014). Special Education

services received by students with Autism Spectrum Disorders from preschool through High School. *The Journal of Special Education*, *48*, 167–179.

Zablotsky, B., Boswell, K., & Smith, C. (2012). An evaluation of school involvement and

satisfaction of parents of children with autism spectrum disorders. *American Journal on Intellectual and Developmental Disabilities*, *117*, 316-330.

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Table 1

Demographics of Participating Families

	Frequency (Percentage)	
Household income		
\$50,000 or less	12 (30%)	
\$50,000-\$100,000	18 (45%)	
More than \$100,000	10 (25%)	
Child's race/ethnicity		
Caucasian, Non-Hispanic	38 (95%)	
African American	1 (3%)	
Asian	1 (3%)	
Child's gender		
Girl	7 (18%)	
Boy	33 (83%)	
Child's age in years		
	<i>M</i> = 7.90, <i>SD</i> = 1.71, minimum = 5.00, maximum = 10.00	
Education		
	Father	Mother
High school degree or less	9 (23%)	3 (8%)
Some college	8 (20%)	8 (20%)
College degree	23 (58%)	29 (73%)
Employment		
Full-time employment	33 (83%)	13 (33%)
Part-time employment	0 (0%)	9 (23%)

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Not currently employed	3 (8%)	14 (35%)
Student	1 (3%)	4 (10%)
Did not respond	3 (8%)	0 (0%)

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Table 2

Crosstabulation for Parent-Therapist Communication

	Fathers	Mothers	Total
Mostly my spouse/partner	28 (70%)	1 (3%)	29 (36%)
Mostly me	0	30 (75%)	30 (38%)
Both my spouse/partner and me	8 (20%)	6 (15%)	14 (18%)
Other	4 (10%)	3 (8%)	7 (9%)

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Table 3

Crosstabulation for Parent Couples' Participation in Assessment, Planning, and Therapy by Father/Mother Respondent

	Father	Mother	
Participation in Assessment	Yes	Yes	$\chi^2 (p)^*$
I attended my child's assessment	25 (63%)	36 (90%)	8.352 (.004)
I was asked about my child's strengths	25 (63%)	32 (80%)	3.193 (.203)
I was asked about my child's challenges	27 (68%)	35 (88%)	5.032 (.081)
I was given the opportunity to discuss the impact of my child's communication difficulties on our family life	15 (38%)	21 (53%)	1.943 (.378)
I was given an opportunity to invite other family members and friends to the assessment	11 (28%)	29 (73%)	16.244 (<.001)
I was given a written report after my child's speech/language assessment	30 (75%)	35 (88%)	2.051 (.359)
Participation in IEP Meeting/ Planning	Yes	Yes	$\chi^2 (p)^*$
I attended my child's IEP meeting	26 (65%)	37 (93%)	9.038 (.003)
I was given information about how my child's communication difficulties may affect our family life	11 (28%)	12 (30%)	3.120 (.210)
I helped choose the routines my child works on in speech therapy (e.g., bedtime, getting dressed, mealtime)	15 (38%)	9 (23%)	6.088 (.048)
I was given information from the therapist to help me in choosing goals for my child to work on in speech therapy	17 (43%)	17 (43%)	5.641 (.060)
I helped choose the goals I want my child to work on during speech therapy sessions	18 (45%)	20 (50%)	3.093 (.213)

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I helped decide which communication goals were most important for my child and our family	20 (50%)	17 (43%)	1.919 (.383)
Participation in Intervention & Homework	Yes	Yes	χ^2 (p) *
I attend my child's therapy sessions	4 (10%)	3 (8%)	1.149 (.563)
I am given the option regarding how much/often I would like to be involved in my child's speech session	8 (20%)	6 (15%)	.501 (.778)
I am given the opportunity to suggest intervention activities and goals	22 (55%)	17 (43%)	2.539 (.281)
I help identify what is most important to work on at home with my child	21 (53%)	22 (55%)	1.090 (.580)
The therapist gives me activities to do at home with my child between sessions	15 (38%)	15 (38%)	.036 (.982)
The activities for me to do at home incorporate daily routines (e.g., getting ready for bed, getting dressed)	17 (43%)	13 (33%)	3.610 (.164)

**Note: To decrease the chance of a Type I error, the Bonferroni correction was applied wherein alpha was divided by the number of tests (i.e., .05/8). Thus, observed probability values were compared to an alpha of .006.*

Table 4

Crosstabulation for Parent Satisfaction

	Fathers				Mothers				χ^2 (p)		
	Very unhappy	Unhappy	Neither happy nor unhappy	Happy	Very happy	Very unhappy	Unhappy	Neither happy nor unhappy		Happy	Very happy
I attend my child's speech-language assessment	11 (28%)	4 (10%)	9 (23%)	3 (8%)	9 (23%)	8 (20%)	4 (10%)	11 (28%)	4 (10%)	10 (25%)	.228 (.633)
I attend my child's IEP meetings	6 (15%)	2 (5%)	4 (10%)	7 (18%)	16 (40%)	0	0	4 (10%)	5 (13%)	31 (78%)	10.912 (<.001)
I choose my child's speech therapy goals	7 (18%)	6 (15%)	10 (25%)	9 (23%)	3 (8%)	4 (10%)	7 (18%)	12 (30%)	11 (28%)	5 (13%)	.879 (.348)
I attend my child's speech	17 (43%)	5 (13%)	7 (18%)	2 (5%)	4 (10%)	15 (38%)	8 (20%)	7 (18%)	3 (8%)	3 (8%)	0.00 (1.000)

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session

I choose the activities my child does in speech therapy	12 (30%)	7 (18%)	9 (23%)	3 (8%)	3 (8%)	14 (35%)	6 (15%)	11 (28%)	4 (10%)	3 (8%)	.092 (.762)
I work on homework with my child	6 (15%)	4 (10%)	10 (25%)	7 (18%)	7 (18%)	7 (18%)	3 (8%)	5 (13%)	13 (33%)	11 (28%)	5.013 (.025)
I get coaching support and feedback from the therapist	10 (25%)	7 (18%)	8 (20%)	3 (8%)	6 (15%)	13 (33%)	6 (15%)	7 (18%)	6 (15%)	7 (19%)	1.003 (.317)
I communicate directly with my child's therapist	7 (18%)	6 (15%)	11 (28%)	3 (8%)	6 (15%)	5 (13%)	5 (13%)	6 (15%)	9 (23%)	14 (35%)	10.208 (.001)
I get support from other parents of children with	6 (15%)	3 (8%)	14 (35%)	3 (8%)	8 (20%)	10 (25%)	4 (10%)	8 (20%)	4 (10%)	13 (33%)	1.978 (.160)

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ASD

**Note: For the chi-square test of association, Likert responses were recoded to binary where '1' represented 'happy' or 'very happy' and '0' represented all other responses. To decrease the chance of a Type I error, the Bonferroni correction was applied wherein alpha was divided by the number of tests (i.e., .05/9). Thus, observed probability values were compared to an alpha of .005.*

Table 5
Parent Dyad Correlations^a

	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Participation in initial assessment (mother)	.427**	.316*	-.436**	-.247	-.016	.089	.237	-.224	.403*	-.307	-.030	-.009	.321*	-.156
2. Participation in IEP/IFSP meeting (mother)	1	.541**	-.537**	-.320	.166	.292	.303	-.189	.378*	-.265	-.095	-.047	.212	.157
3. Participation in therapy (mother)		1	-.760**	-.181	.174	.131	.479**	-.336*	.074	-.304	-.210	-.238	.295	-.061
4. Satisfaction (mother)			1	.065	-.219	-.202	-.502**	.321*	-.154	.067	-.061	.202	-.206	.160
5. Mothers' education level				1	.134	.127	-.105	.029	.486**	.540	-.105	.391	.077	.300
6. Participation in initial assessment (father)					1	.808**	.503**	-.522*	.265*	.193	.170	-.066	-.247	-.235
7. Participation in IEP/IFSP meeting (father)						1	.607**	-.467**	.313*	.163	.036	.005	-.163	-.278

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8. Participation in therapy (father)							1	-.670**	.066	-.009	-.005	-.084	-.086	-.257
9. Satisfaction (father)								1	-.107	-.042	-.070	-.205	.205	.339*
10. Father's education level									1	.430**	.132	.096	.591*	-.136
11. Family income (as reported by mother)										1	.010	.454	.631	.399
12. Age of child											1	-.066	-.067	-.177
13. Child is boy												1	.567	-.158
14. Therapist communicates mostly with mother (mother reported)													1	.300

^aKendall's tau correlations for ordinal-ordinal and ordinal-interval correlations; phi or Cramer's phi for categorical correlations; all other correlations in the matrix are Pearson; ^bTherapist communicates mostly with mother (father reported)

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

Table 6

Fixed Effects (Top) and Variance-Covariance Estimates (Bottom) for Models of the Predictors of Satisfaction with Speech-Language Therapy

	Model 1	Model 2	Model 3
Fixed Effect Parameters	Coefficient (SE, p)	Coefficient (SE, p)	Coefficient (SE, p)
Level 1			
Mean satisfaction with therapy sessions	3.02 (.11, <.001)	2.96 (.09, <.001)	3.17 (.22, <.001)
Parent dyad		-.07 (.08, .38)	-.08 (.08, .30)
^a Parent education: High school diploma		.32 (.21, .14)	.22 (.24, .36)
^a Parent education: Some college		.24 (.18, .21)	.23 (.19, .24)
Participation in assessment		-.09 (.04, .03)	-.08 (.04, .05)
Participation in IEP meeting		.02 (.05, .76)	.02 (.05, .64)
Participation in therapy session		-.17 (.03, <.001)	-.19 (.03, <.001)
Level 2			
Child's age			-.02 (.05, .60)

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Qualitative Comments from Participating Parent Couples

Theme	Comments from Participating Mothers
Parent - Therapist Communication and support	<i>I wish there was more communication between the therapist and myself. Wish she would provide more feedback on areas that we could work on with him.</i>
	<i>Including me in the process of goal writing</i>
	<i>Direct feedback from the therapist would be great on a weekly basis so I knew what they were working on and what we could be doing at home to strengthen that work done at school</i>
	<i>I don't feel like I am a part of the program, and when I ask questions or want homework, it is not given. It is not the back and forth relationship I would like to have with his therapist. I would like more direction and more support so I feel comfortable doing the homework. My son has apraxia and it is very frustrating, so I feel lost much of the time.</i>
	<i>I would like to at least be included in his therapy sessions and goals, as well as get weekly progress reports from his therapist. At the moment, I do not even know who his speech therapist is, just that she works at the school. I have never met her and would like to communicate directly with her. I would like to feel like I was actually part of his IEP team, instead of an outsider that they just allow to sit in on their meetings.</i>
	<i>I wish there was more communication between the therapist and myself. Wish she would provide more feedback on areas that we could work on with him.</i>
	<i>Including me in the process of goal writing</i>

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<p>Support for Working on Communication Skills at Home</p>	<p><i>Because of the rules of my son's school, parents are unable to be involved in person with speech therapy. I do communicate with the speech therapist and tell her what I am doing with my son. Her response is supportive and she tells me I am doing all of the right things. I have done exhaustive research on speech therapy methods online and utilize them to the best of my ability with my son at home. I appreciate the support I am given from the speech therapist, but it would be much more helpful if she would offer up any alternative methods or possible corrections with what I am doing. It is hard for me to believe that, considering I have zero formal training in this area, I am doing "everything right" as I keep being told when I ask.</i></p> <p><i>Video feedback as a part of speech therapy would be an ideal thing to learn as a parent of a child with disability. It could translate into video modeling for behavior ultimately if needed. Giving moms and dads skills to support video modeling interventions I would love to participate in that I'm never quite sure how to structure it or do it.</i></p> <p><i>More involvement and knowing what I can do at home to help. They only provide vague descriptions of what they are working on.</i></p>
<p align="center">Comments From Participating Fathers</p>	
<p>Mothers Manage Speech-Language Therapy</p>	<p><i>My wife does this as I don't have the time, nor do I want to make the time. I am not comfortable talking to people and have social anxiety</i></p> <p><i>I like how my wife handles everything with our children because of the shift I work I'm not there at nights</i></p> <p><i>Unfortunately, I work out of town and am away from my family for months at a time, only getting to come home to visit for one weekend every 4 to 6 weeks.</i></p> <p><i>More support from school to home for my wife. My wife works hard with my son. I work hard and long hours outside of the home.</i></p>
<p>More Family</p>	<p><i>Allowing us as parents to at least watch my son's speech therapy at school.</i></p> <p><i>More involving both parents & the family in the process would help</i></p>

PARENT COUPLE PARTICIPATION IN SLT

Involvement	<i>Well, I see my son making some progress but I think it would be better if I knew when the sessions were occurring.</i>
Concerns About Service Choices and Costs	<i>For our family (and this is specific to our family), the ability to integrate speech therapy with occupational and behavior therapy would be very beneficial. Currently, speech and occupational therapy are fairly well integrated, but the cost of intensive behavior therapy has prevented adding this important component to the overall therapeutic plan. I strongly believe that this would be very helpful for our son.</i>
Overall Happy with Services	<i>The services my child receives are exceptional. Our school system is fantastic and we are always welcome to participate and give feedback. Open communication is very important and I feel we have everything we need for our child's growth and success. All school districts should implement a program like the one we have.</i>