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# Effects of Language Context on Ratings of Shy and Unsociable Behaviors in English Language Learning Children

# Andrea C. Ash,

University of Kansas, Lawrence, Department of Communication Sciences and Disorders, University of Utah College of Health, 390 S. 1530 E., Rm 1201 BEH SCI, Salt Lake City, UT 84112-0252, Phone: 801-585-7130 andrea.ash@utah.edu Fax: 801-581-7955

# Mabel L. Rice, and

University of Kansas, Lawrence, Child Language Doctoral Program, 1000 Sunnyside Avenue, 3031 Dole, Lawrence, KS 66045, Phone: 785-864-4570 mabel@ku.edu Fax: 785-864-3974

# Sean M. Redmond

University of Utah, Department of Communication Sciences and Disorders, University of Utah College of Health, 390 S. 1530 E., Rm 1201 BEH SCI, Salt Lake City, UT 84112-0252, Phone: 801-581-6725 sean.redmond@health.utah.edu Fax: 801-581-7955

# Abstract

**Purpose**—The primary goal of this study was to explore the effect of the language context on the socially withdrawn behaviors of school aged-children who are English Language Learners (ELLs) from middle to high SES backgrounds. This is one of the first studies to address the frequently confused concepts of shyness and unsociability as independent constructs within the ELL population. This study also investigated the feasibility of an experimental parent and child questionnaire that examines shyness and unsociability across native and English speaking contexts.

**Method**—Children and parents (34 ELL and 37 native English speaking) were administered an experimental questionnaire examining shy and unsociable behavior in native language and English-speaking contexts.

**Results**—Parents and children from the ELL group reported significantly higher ratings of shy behavior in English versus native language contexts, whereas unsociable ratings did not differ across language contexts.

**Conclusions**—Shyness and unsociability are distinguishable behaviors in ELL children and these constructs should be considered when examining withdrawal. Additionally, examining ELL children's behavior across language contexts provides a valuable method for investigating language influenced behavioral problems. This study demonstrates the need for service providers to evaluate behavior across subtype and language context before pathologizing withdrawal in ELL children.

An estimated 5.3 million children between kindergarten and 12<sup>th</sup> grade received English Language Learner (ELL) services in 2008–2009 (National Clearinghouse for English Language Acquisition, 2011). As a group, the social interactions of ELL children in the United States have been understudied. Little is known about the types of social behavior

increased rates of withdrawal relative to monolingual children (Rice, Sell, & Hadley, 1991; Spomer & Cowen, 2001). Children who are ELLs also manifested behaviors during interactions with their peers that are similar to those of withdrawn children, such as lower rates of conversational initiation and social assertiveness, as well as increased anxiety during play (Brice & Montgomery, 1996; Rice et al., 1991). Increased withdrawn behavior has been documented in children who are ELL with mental health referral profiles (Spomer & Cowen, 2001), on-line coding of children's peer interactions (Rice et al., 1991), and teacher ratings of adolescent speech acts (Brice & Montgomery, 1996). Although reports of withdrawn behavior in children who are ELLs have shed some light on the social functioning of children within this group, many questions remain.

To date, withdrawal in ELL children has been examined as a single construct rather than as a complex behavior with multiple subtypes (Spomer & Cowen, 2001). We thus investigated ELL children's shyness and unsociability, which are considered the two major subtypes of withdrawn behavior (Asendorpf, 1993; Coplan, Girardi, Findlay, & Frohlick, 2007; Coplan, Prakash, O'Neill, & Armer, 2004; Coplan, Rubin, Fox, Calkins, & Stewart, 1994; Rubin & Coplan, 2004). We examined the language contexts in which shy and unsociable withdrawn behaviors occur by comparing ELL children's withdrawn behavior across native language and English-speaking contexts with experimental measures that tap subtypes of withdrawn behavior (Coplan et al., 2007; Coplan et al., 2004; Hart & Robinson, 1996; Rubin & Coplan, 2004). The experimental measures included ratings of children's shy and unsociable behavior that were completed by the children and their parents.

#### Withdrawn Behavior

Historically, the term social withdrawal has encompassed a heterogeneous collection of behaviors, including social reticence, shyness, behavioral inhibition, social isolation, sociometric neglect, and sociometric rejection (Rubin, Hymel & Mills, 1989). In an attempt to delineate withdrawn behaviors, investigators have examined children's play and characterized subtypes of withdrawal that include two principal constructs: "shyness" and "unsociability" (Asendorpf, 1993; Coplan, Girardi, Findlay, & Frohlick, 2007; Coplan et al., 2004; & Rubin, 1998; Coplan, Rubin, Fox, Calkins, & Stewart, 1994; Rubin & Coplan, 2004).

Shyness refers to the wariness and anxiety experienced in novel social situations and during perceived social evaluation (Coplan et al., 2007). Two competing social motivations are reflected in shy behavior (Asendorpf, 1990; 1993). Children who are shy have the desire for social interaction, but their social approach motivation is thought to be inhibited by fearinduced social avoidance (Coplan et al., 2004). This inhibition results in children's display of reticent behavior that includes watching other children without joining in, remaining unoccupied while in the presence of peers, and engaging in parallel play (Asendorpf, 1991; Coplan, 2000; Coplan et al., 1994, 2004, 2007). Coplan and Weeks (2009) describe shyness

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as a temperamental trait, where social fear drives children to withdraw from peer interactions.

Unsociability, in contrast, refers to a propensity toward solitary activities. Children who are unsociable are thought to have a low social approach and low social avoidance motivation (Bruch, Gorsky, Collins, & Berger, 1989; Asendorpf, 1990; Coplan et al., 2004). Therefore, children who are unsociable may prefer to engage in solitary activities but they will engage with peers when they choose to do so (Asendorpf, 1993). Unsociable behaviors take the form of solitary-passive play, where children engage in exploration and constructive play in the presence of peers (Rubin, 1982). Unlike children who are shy, children who are unsociable have not been found to experience unusual levels of social anxiety while participating in social situations (for a review see Coplan and Armer, 2007).

Shyness and unsociability are intriguing constructs because they represent two behaviors that may appear outwardly similar (i.e., child is socially isolative) but have differing etiologies and adaptive consequences. For example, shyness as a trait has been associated with poor outcomes across childhood and into adulthood. In children, shyness has been linked to internalizing problems such as negative emotionality, greater depressive symptoms, social anxiety, lower self-esteem, higher levels of academic difficulty, and peer problems which include higher rates of peer rejection and victimization (Bohlin, Haegkull, & Andersson, 2005; Coplan et al., 2004; Coplan et al., 2013; Coplan, Gavinski-Molina, Lagace-Seguin, & Wichman, 2001; Gazelle & Ladd, 2003; Harrist et al., 1997, Hart et al., 2000). Conversely, unsociability in young children has not been associated with psychosocial maladaptation (Coplan, 2000; Coplan et al., 1994, 2001; Rubin, 1982). Unsociability in children is a relatively benign form of social withdrawal (Coplan et al., 2013). Unsociable children may interact with peers less; however, they do not appear to suffer negative consequences as a result of these reduced interactions with their peers (Bowker & Raja, 2011; Coplan et al., 2007; Coplan & Weeks, 2010; Harrist et al., 1997). Because shyness and unsociability represent two similar outward behaviors that are related to different later socioemotional outcomes, they represent important distinctions when investigating children's social behavior (Coplan & Armer, 2005).

Because withdrawal research with ELL children has not differentiated between shy and unsociable, the nature (and potential outcomes) of withdrawal behaviors in ELL children is unknown. If the withdrawn behavior reported for ELL children relates to unsociable behavior in children, educators and parents may be less concerned than if ELL children have increased shy behavior. Therefore, clarifying the types of withdrawn behavior in ELL children.

#### Language and Contextual Influences on Behavior

Extensive research has demonstrated that children with language learning difficulties experience more behavioral issues than children who do not have these difficulties (Baltaxe, Simmons, 1988, 1990; Cohen, 2004; Engfer, 1993; Fujiki, Brinton, Isaacson, & Summers, 2001; Fujiki, Brinton, Morgan, & Hart, 1999; Grove, Conti-Ramsden, & Donlan, 1993; Rice et al., 1991; Rescorla, Ross, & McClure, 2007; Tomblin, Zhang, Buckwalter, & Catts,

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2000). At the same time, for children who are developing language normally, researchers have reported that language proficiency in such areas as pragmatics may act as a protective factor for shy children (Asendorpf, 1994; Coplan & Armer, 2005; Coplan & Weeks, 2009). It is unclear how these findings relate to children who are proficient in their native language yet are in an educational context where they must learn a second language in order to succeed academically and socially. There is no evidence to suggest that children who are sequentially acquiring languages demonstrate social difficulties when interacting with speakers of their native language. Therefore, the withdrawn behavior that ELL children display while interacting with English speakers is assumed to be a function of language difference not temperament. Studying children who are ELLs presents a unique opportunity to examine the potential relationship between withdrawn behavior of ELL children across language contexts.

Multiple theories have been proposed to account for the relation between withdrawn behavior and language proficiency. For example, it has been posited that children who exhibit social problems have reduced interactions with their peers, which in turn prevents them from practicing and developing language proficiency (Brinton & Fujiki, 1993; Evans, 1993, 1996). Socioemotional disorders (including withdrawal) and language impairment also have been proposed to co-occur as a result of shared neurological substrates (Beitchman, Brownlie, & Wilson, 1996; Goodyer, 2000; Locke, 1994). Redmond and Rice (1998) examined two frameworks for the socioemotional behavioral problems of children with language impairment by contrasting the Social Adaptation Model (SAM) with the Social Deviance Model (SDM). The Social Adaptation Model considers the differences in behavior between children with language impairment and their typically-developing peers to be a result of interactions between language limitations, the social context, and the biases that children with language impairment encounter as a result of limited language proficiency. According to the SAM, the compensatory adjustments in behavior that are made by children with language impairment result in genuine social differences and limitations. In contrast, the Social Deviance Model proposes that there is a core underlying socioemotional trait structure that guides children's socioemotional development. The traits may be impaired, such that children with language impairment have altered socioemotional development resulting in symptoms of social and behavioral problems.

The various theories relating social behavior with language ability have direct consequences on the treatment of children demonstrating withdrawn behavior. According to the SAM perspective, support for children who are exhibit withdrawn behavior as a result of a language limitation would be organized around the improvement of language skills and possible modification of peer and teacher attitudes (Redmond & Rice, 1998). Under the SDM perspective, the socioemotional deficits of children with language limitations are a consequence of an impaired psychosocial mechanism, requiring interventions that are psychologically- or pharmacologically-based (Redmond & Rice, 1998). Because the SAM and SDM models necessitate vastly differing intervention methods, there is a compelling need to understand the underlying cause of withdrawn behavior in ELL children.

#### **Multicultural Issues**

The cross-cultural relevance of withdrawn behavior is an important issue. Culturally specific behavior and the potential for Western cultural biases have been discussed widely in the literature examining withdrawn behavior in East Asian cultures. It has been proposed that shyness may be a culturally-specific construct that results in various outcomes dependent upon the specific cultural context (Gudiño & Lau, 2010). Several researchers have examined perceptions of withdrawn behavior in children outside of the United States (Crozier & Badawood, 2009; Hart et al., 2000; Prakesh & Coplan, 2007; Weisz et al., 1988), for example, Chinese children who are living in China as well as those who are immigrants to Western countries (Cheah & Rubin, 2004; Chen et al., 2004; Chen, Cen, Li, & He, 2005; Chen & Tse, 2010; Chen, Rubin, & Li, 1995; Chen, Rubin, & Sun, 1992; Chen, Wang, & Wang, 2009; Hart et al., 2000). Historically, withdrawn behavior in China has been viewed as an adaptive and socially desirable trait. Although withdrawn behavior of children in China appears to have become less socially desirable over the last decade as a result of a move toward a market-oriented economy, the negative consequences associated with shyness appear to be moderated by regional exposure, such as living in an urban or rural area, to social, economic, and cultural transformations associated with the country's increased westernization (Chen et al., 1992; Chen et al., 2004; Chen & Tse, 2010; Chen, Wang, & Cao, 2011; Coplan, Zheng, Weeks, & Chen, 2012; Hart et al., 2000). Comparative studies of Chinese children and children from Italy, Russia, Brazil, Canada, and the United States have illuminated the differences as well as similarities across cultures in the way that shyness is perceived; based upon peer and teacher ratings, shyness and unsociability were identified as differing constructs across groups in each of the countries, although teachers in the United States and Russia made finer distinctions between the subtypes of withdrawal than teachers in China (Hart et al., 2000).

Investigation of shyness and unsociability among children living in India provide further evidence that social withdrawal may be a multifaceted construct in Western and non-Western societies. Bowker and Raja (2011) examined adolescents' self-reported withdrawn behavior and found that shyness, unsociability, and avoidance represented related but distinct forms of withdrawal. Additionally, the authors reported associations between shyness and loneliness and peer exclusion. Prakesh and Coplan (2007), who examined withdrawn behavior in elementary school children in India, similarly reported that higher levels of shy behavior were associated with greater levels of loneliness and depression. Crozier and Badawood (2009) reported that expressive vocabulary development negatively correlated to shyness among children in Saudi Arabia. Thus, investigations of children from China, Russia, Saudi Arabia, and India provide support for shyness as an identifiable trait across multiple cultures, although it may not always be associated with negative outcomes in non-Western societies.

## **Current Study**

The overarching purpose of this study was to gain insight into the influence of language context (native language vs. English) on the social behavior of ELL children in middle to high SES families. Because behavior problems have been related to low SES (Bradley &

Corwyn, 2002; Chen & Miller, 2013; Dodge, Pettit, & Bates, 1994), we elected to examine withdrawn behavior in a population of children who would be at least risk for behavioral issues. This investigation addressed two questions: (a) Are the ratings of shy and unsociable behavior for ELL children in their native language context significantly different than the ratings for native English-speaking children? (b) Do the ratings of ELL children's withdrawn behavior (shyness and unsociability) significantly differ contingent on the language context (native language vs. English) in which ELL children are interacting?

First, we hypothesized that the ratings of withdrawn behavior across the ELL and NE groups would not differ when ratings were performed in the native language context. This study used an experimental measure to investigate withdrawn behavior. Examining potential differences between the groups provided a reference point for the measure. The following hypotheses provided the framework through which multiple contrasts were explored. We hypothesized that ELL children's social judgments of their own behavior would be affected by linguistic context, such that in native language contexts children would rate themselves as more socially competent and less withdrawn than in English language contexts. This finding would suggest self-awareness that social behavior is influenced by linguistic context. This hypothesis was addressed with a self-rating questionnaire of children's shy and unsociable behavior across language contexts. Self-rating measures have been used extensively to document children's beliefs about their own behaviors. To validate the children's ratings of their own social behavior, we compared the association between child and parent ratings. Previous research investigating withdrawn behavior in ELL children has examined withdrawal as a broad construct. To our knowledge, this study is the first to evaluate different types of withdrawn behavior, that is, shyness or unsociability, in a population of ELL children. It is also the first study to evaluate these types of social behavior across language contexts, that is, native language or English speaking.

### Method

Approval for the study protocol was received by the Institutional Review Board at the University of Kansas-Lawrence. Written parental consent and child assent were obtained.

#### Participants

The participants included 71 children and their parents, who were divided into groups based upon language status. The groups included 34 children who were sequential English language learners (ELL) and 37 native English speakers (NE). Children from the ELL group primarily were recruited from schools and churches in the Lawrence and Kansas City, Kansas, areas and from international student organizations at the University of Kansas in Lawrence. These cities are considered suburban and urban regions, respectively. The ELL group (27 girls, 7 boys) had an age range from 6;10 to 13;1 (M = 9;9, SD = 1;7 months). Children from the NE group were recruited from schools and churches in Lawrence, Kansas, and Salt Lake City, Utah, considered suburban and urban areas, respectively. The NE group (20 girls, 17 boys) had an age range of 6;10 months to 12;9 (M = 9;9, SD = 1;10). The ages of the children were comparable to previous study samples in investigations of language and

social behavior in school-age children (Fujiki et al, 1999; Maas, Marecek, & Travers, 1978; Molina, Coplan, & Younger, 2003).

To participate in the study, children met several criteria confirmed by parent report: (a) unremarkable academic performance, (b) no enrollment in special education for academic, behavioral/social, or communication problems, (c) normal hearing ability, and (d) no major neurological or orofacial abnormalities such as gross motor deficits, uncontrolled seizures, or craniofacial defects. Every child in the ELL group had received or was receiving at the time of the study ELL services in the schools. Participants in the ELL group were born outside of the United States in 12 different countries and spoke 9 different languages (see Appendix A). All of the ELL participants were sequential English learners who began to learn English after 3 years of age. The amount of time children in the ELL group had studied English ranged from 9 months to 6 years, with an average time of 2 years, 8 months (SD = 1year, 4 months). Previous studies indicate that it takes approximately 3 to 4 years to acquire basic social language competencies in a new language (Cummins, 1994; Gutierrez-Clellen & Kreiter, 2003). Therefore the majority of children in this study were considered to be still acquiring proficiency with English. Mothers of children in the ELL group had a wider range of English experience; many (but not all) of the mothers reported studying English since childhood (i.e., beginning while living in their native country) while others had studied English for less than a year. The English experience of the ELL mothers ranged from 9 months to 31 years with a mean of 8 years, 9 months (SD = 8 years, 4 months).

The mothers of the participants reported their highest educational level. Educational categories included, "some high school, no diploma = 1", "high school graduate, diploma, or GED = 2", "some college, no degree = 3", "Bachelor's degree = 4", "some graduate work = 5", and "graduate degree = 6." The distribution of maternal education level within each group is shown in Appendix B. If the mother indicated that they did not understand the consent process they were not included in the study. One potential participant from the ELL group was excluded because she did not understand the consent process. One potential participant from the NE group was excluded because she did not understand how to rate her child's behavior. These potential participants were not included in the number of participants for this study.

#### Measures

**Language Measures**—Participants were administered three measures to describe language proficiency: (a) Peabody Picture Vocabulary Test-Fourth Edition (PPVT-4; Dunn & Dunn, 2007), and (b) Expressive Vocabulary Test-Second Edition (EVT-2; Williams, 2007), and (c) Speech and Language Assessment Scale (SLAS; Hadley & Rice, 1993).

The PPVT-4 and EVT-2, norm-referenced vocabulary measures, were administered (a) to ensure that English-speaking participants were performing within normal language levels, and (b) to characterize the English vocabulary levels of children in the ELL group. Vocabulary was examined because it is one of the first ways in which ELL children begin to access the English language. These tests were chosen due to the high levels of reliability and validity reported in the manuals. The PPVT-4 and the EVT-2 were normed on a nationwide standardization sample matched to the most recent United States Census data. The PPVT-4

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is a receptive vocabulary test that contains 228 test items derived across word categories. The EVT-2 is an expressive vocabulary test containing 190 items derived across word categories; it measures vocabulary knowledge with two types of stimuli items, labeling and synonyms.

Children's language knowledge was central to this study, and the SLAS provided a means by which to measure children's language ability in English and in their native language, regardless of what the native language might be. The SLAS was developed to tap parental concerns about children's speech-language development. SLAS is not an age-dependent measure; parents rate their child's language in relation to other same-age children. The SLAS contains 19 questions addressing children's articulation, semantics, and syntax ability for which a parent rates his/her child's proficiency on a 7-point Likert scale. Associated descriptors are 1 "very low," 4 "normal for age," and 7 "very high". Based upon the SLAS ratings, a raw score is obtained for the categories of articulation, semantics and syntax. Raw scores for the various composite scales were based upon an average of the Likert rated items in the individual scale. The mothers of the ELL children answered 19 questions in reference to their children's communication in English and in their native language. Mothers were asked in English to rate their children's language ability. Each mother was first asked to rate a statement about his/her child's language ability in English and also was asked to rate the same statement about his/her child's language ability in their native language. None of the mothers in the ELL group indicated that they did not understand how to complete the SLAS. Children in the ELL group were given SLAS scores for articulation, semantics and syntax in English and in their native language. Mothers of children in the NE group rated the child's language ability only in English (i.e., their native language).

Scores from the PPVT-4, EVT-2, and English SLAS for the ELL and NE participants are shown in Table 1; SLAS scores for English are repeated alongside scores for the native language for ELL children in Table 2. As expected, Table 1 illustrates that the NE group had significantly higher language performance than the ELL group across all of the language measures as determined by one-way ANOVAs. Effect sizes were medium to large across the language measures. As illustrated in Table 2, a one-way ANOVA demonstrated that there were no significant differences in the ELL mothers' ratings on the SLAS of children's language performance between the child's native language and in English. It was unexpected that mothers of children in the ELL group did not rate ability in one language (i.e., English or the native language) as superior to the other language.

**Behavioral Rating Measure: Withdrawn Behavior Scale (WBS)**—Rating scales represent one of the primary methods of examining children's behavior. For the purpose of this study, an experimental rating scale was created to examine children's withdrawn behavior. The Withdrawn Behavior Scale (WBS; Ash, 2009) contains items similar to topics that are addressed in the Preschool Play Behavior Scale (PPBS; Coplan & Rubin, 1998) and Hart and Robinson's (1996) Teacher Behavioral Rating Scale. The WBS contains two subscales that examine children's shyness (seven items) and unsociability (six items), and also five peer relation items. In this study, the peer relation items were atheoretical and were not analyzed; their purpose was to act as positive valence items on the WBS.

Four different versions of the WBS were created for this study. Two versions were for English only speakers, one version was a self-rating scale completed by the child and the other a parent rating scale (see Appendix C for WBS items completed by children in the NE group). Two versions were created for the ELL group, a self-rating scale completed by the child and a parent rating scale (see Appendix D for the version of the WBS completed by children in the ELL group). The questions across the versions of the WBS were similar for the items on the shyness and unsociability subscales, with a language adaptation for parent or child participants and native language or English-speaking contexts. Items on the questionnaire were presented in a single randomized order for all participants and parents. Parents and children were instructed to rate the items based upon the child's interactions with peers at school, home, or in the community. They were asked to rate each item using a 5-point Likert scale (1 = never, 2 = not often, 3 = sometimes, 4 = often, 5 = very often). Children were trained to use the Likert scale with a visual representation of the ratings (see Figure 1). Parents and children used the full range of the Likert scale to respond to items on the WBS.

#### Procedure

The children and mothers were tested in the family's home during one or two home visits, with the total protocol taking approximately 1 to 2.5 hours to complete. The first author met with each mother and child individually, and measures were administered in a counterbalanced order to prevent possible order effects. Questionnaires were read aloud to the children and mothers. Mothers were provided a copy of the questionnaire to read while it was read aloud. Participants were instructed to ask questions if they did not understand any part of a task or any of the questions that were asked. When questions arose during the administration of the questionnaire, a brief explanation was provided. Few questions were asked by children or mothers in the NE or ELL group.

#### Reliability

Each of the measures was scored by the first author and then checked by a research assistant. The research assistant was instructed to fix any scoring disagreements that she identified. All corrections were checked by the first author for agreement. Across the measures, there were few disagreements (fewer than 5% of items).

To assess the reliability of the WBS items, Cronbach's alpha was computed including parent and child ratings in the NE and ELL groups. The alpha for the seven items on the shyness subscale was .78, indicating that this subscale had reasonable internal consistency reliability. The alpha for the six items on the unsociability subscale was .67. The level of reliability for the unsociability subscale thus had minimally adequate reliability (DeVellis, 2003). A Pearson's correlation was computed to assess the relation between shyness and unsociability on the WBS. A significant moderate correlation, r (142) = .41, p < .001, was found between the two subscales, indicating that, although the two subscales were related, they also captured distinct dimensions of withdrawn behavior. The shared variance between shyness and unsociability was 16.8%.

# Results

Complete data were available for all participants. The following assumptions were tested prior to analysis: (a) independence of observations, (b) normality, and (c) sphericity. Independence of observations and normality assumptions were met. The assumption of sphericity was violated; thus the Greenhouse-Geisser correction was used to identify significant group differences. The data were analyzed with a series of repeated-measure ANOVAs, with Greenhouse-Geisser corrections. Interpretations of effect sizes were based upon Cohen's (1998) conventions (small 0.01, moderate 0.09, large 0.25).

#### **Responses to Withdrawn Behavior Scale**

The goal of the analyses on the WBS was to explore differences in the rating of shy and unsociable behavior between native English-speaking children and ELL children. Means, standard deviations, and ranges of the parental and self-ratings on the WBS are reported in Table 3.

#### Differences in ratings of shy and unsociable behavior for the NE and ELL

**groups**—A mixed repeated-measure ANOVA was conducted with Behavior Type (shy, unsociable) and Rater (parent, child self-report) serving as within-subject variables and Language Group (native English speaker, ELL) as a between-subject variable. Because of the unequal numbers of boys and girls in the NE and ELL groups, sex was treated as a covariate. Results (see Table 4) indicated significant main effects of Language Group with a large effect size [F(1, 68) = 39.83, p < .001, eta<sup>2</sup> = .369] and Behavior Type with a large effect size [F(1, 68) = 27.01, p < .001, eta<sup>2</sup> = .284], but not Rater [F(1, 68) = .16, p = .69, eta<sup>2</sup> = .002]. There was also significant Behavior Type × Language Group interaction with a large effect size [F(1, 68) = 32.06, p < .001, eta<sup>2</sup> = .32]. In sum, children in the NE group scored significantly higher on ratings of shyness and unsociability than children in the ELL group. There was also a significant difference between behavior type, with unsociable behaviors rated as occurring more frequently than behaviors related to shyness in the NE and the ELL groups. The significant interaction between ratings of unsociability and shyness in the NE group as compared to the differences in the ELL group.

To further explore these findings, additional analyses were performed to investigate shyness and unsociability across the language groups. Table 5 presents results from a mixed repeated-measure ANOVA that examined ratings of shyness as the dependent variable, Rater (parent, child self-report) as a within-subject variable, and Language Group (native English speaker, ELL) as a between-subject variable and sex treated as a covariate. There was a significant main effect for Language Group with a small effect size [F(1, 68) = 5.52, p = .02, eta<sup>2</sup> = .075], but not for Rater [F(1, 68) < .001, p = .99, eta<sup>2</sup> < .001]. Children in the NE group had higher ratings than the ELL group. Unsociability also was examined as a dependent variable, with Rater (parent, child self-report) as a within-subject variable, Language Group (native English speaker, ELL) as a between-subject variable, and sex treated as a covariate. Results (see Table 5) aligned with the shyness outcomes, with a significant main effect for Language Group with a large effect size [F(1, 68) = 86.14, p <.

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001, eta<sup>2</sup> = .559], but not Rater [F(1, 68) = .39, p = .53, eta<sup>2</sup> = .006]. Children in the NE group had higher ratings than the ELL group. These findings confirmed the differences in the NE and ELL groups on the ratings of shyness and unsociability, indicating that children in the NE group had higher levels of shyness and unsociability than the ELL group. This finding was not anticipated because it was expected that ratings of shyness and unsociability between the ELL and NE groups would be similar since the ratings were compared in the native language speaking contexts.

ELL children's withdrawn behavior across language contexts-The final analyses involved the ratings of ELL children's shy and unsociable behavior in Englishspeaking as compared to native language contexts. A mixed repeated-measure ANOVA was conducted with Behavior Type (shy, unsociable), Rater (parent, child self-report), and Language Context (native language, English) as within-subject variables. Sex was not examined within the ELL group because it was underpowered in this analysis (boys = 7). Results are presented in Table 6. Significant main effects were found for Behavior Type with a large effect size [F(1, 33) = 63.46, p < .001, eta<sup>2</sup> = .658] and Language Context with a large effect size  $[F(1, 33) = 8.84, p = .005 \text{ eta}^2 = .211]$ , but not for Rater [F(1, 33) = .19, p = .19]p = .66, eta<sup>2</sup> = .006]. A significant interaction was found of Rater × Behavior Type with a large effect size [F(1, 33) = 11.53, p = .002, eta<sup>2</sup> = .259]. As shown in Figure 2, this interaction appears to be a result of differences in parental ratings as and children's selfratings of unsociable behavior across language contexts. Parental ratings of children's unsociable behavior did not appear to change substantially across language context, whereas the children's self-ratings of unsociability increased from native language to Englishspeaking contexts. In the case of shy behavior, both parental ratings and children's selfratings increased from native language to English speaking contexts.

To further explore these findings, additional analyses were performed to examine shyness and unsociability within the ELL group. Table 7 presents results from a mixed repeated measure ANOVA that examined ratings of shyness as a dependent variable, with Rater (parent, child selfreport) and Language Context (native language, English) as within-subject variables. Significant main effects were found for Rater with a moderate effect size [F (1, 33) = 4.02, p = .05, eta<sup>2</sup> = .108] and Language Context with a large effect size [F (1, 33) = 12.54, p < .001, eta<sup>2</sup> = .275]. There was no significant interaction of Rater × Language Context [F (1, 33) = .07, p = .80, eta<sup>2</sup> = .002]. A mixed repeated measure ANOVA examined ratings of unsociability as the dependent variable, with Rater (parent, child selfreport) and Language Group (native language, English) as within-subject variables. The results from the unsociability analyses differed from the shyness outcomes; there were no significant main effects of Rater [F (1, 33) = 2.55, p = .12, eta<sup>2</sup> = .072] or Language Context [F (1, 33) = 1.58, p = .22, eta<sup>2</sup> = .046]. As with the shyness outcomes, there was no significant interaction effect of Rater × Language Context [F (1, 33) = 2.904, p = .10, eta<sup>2</sup> = .081].

### Discussion

One of the main goals of this study was to gain insight into the influence of language context on withdrawn behavior of ELL children from middle to high SES backgrounds. Relatively

little information is available regarding the social behavior of ELL children and what type of service needs they may or may not have. In this study, we examined the withdrawn behavior of native English-speaking children as compared to ELL children by investigating two types of withdrawal across language contexts. The outcomes of this study have been summarized in Table 8.

#### Shy and unsociable behaviors across language groups

The NE and ELL groups differed on the ratings of shyness and unsociability. Contrary to our hypothesis, children in the NE group had significantly higher levels of shyness and unsociability than the ELL children regardless of whether the mother or the child completed the ratings. This was an unexpected finding because it was anticipated that the NE and ELL groups would not differ on ratings of withdrawn behavior when speaking in their native language contexts. One possible explanation for this outcome is the differences in social backgrounds between the ELL and the native English speaking groups. Most of the ELL participants came from families who pursued education outside of their own country, a task that would necessitate a certain level of extroversion on behalf of the parent(s). Therefore, it is possible that, as a group, the families of the ELL children may have been self-selected to be less shy and unsociable in that they were persons who chose to pursue an education in a foreign country. Social experiences, such as moving from one country to another for parental educational purposes and the experience of learning a new language, may have encouraged the ELL children in this sample to develop less withdrawn personalities. However, people immigrate to the United Stated for a variety of reasons, and any behavioral differences based upon differing motivations for entering the country have yet to be determined. Further research is needed to investigate whether similar findings would be apparent with other groups of ELL children who have different life experiences, such as those children whose families enter the U.S. out of economic or political necessity.

#### Shy and unsociable behaviors in ELL children

The main focus of this study was to investigate ELL children's shy and unsociable behaviors across language contexts. We hypothesized that ELL children's behavior would differ based upon the language context in which the child or parent was rating. This was not the case for ratings of children's unsociable behavior; ELL parent and self-ratings of unsociability were not different across native language and English-speaking contexts; raw score means and standard deviations were similar. In contrast, the results for the ratings of shy behavior in the ELL group indicated a significant main effect of Language context (i.e., native language and English context) and Rater (i.e., child vs. parent). This finding indicates that ELL children demonstrate increased shy behavior, which they would not otherwise exhibit during interactions with native language speaking peers, as a result of speaking in non-native language contexts.

These findings have important implications for the consideration of competing models of socioemotional difficulties in children facing communication barriers. We considered the Social Adaptation Model (SAM) and the Social Deviance Model (SDM; Redmond & Rice, 1998) as two frameworks for the type of potential socioemotional difficulties experienced by ELL children. The predicted outcomes of the two models differ in regards to the stability of

the child's behavior across contexts. The SAM model would predict differences in the child's behavior based upon language context, whereas the SDM model would predict similarities in the child's behavior regardless of the language context in which the child was communicating. The ELL children in this study demonstrated lower levels of unsociable behavior across language contexts, whereas ratings of shyness increased significantly from the native language to English speaking context. These findings indicate that for at least one type of withdrawal, that is, shyness, language context influences the frequency of the behavior. There is no evidence to support the notion that ELL's withdrawal behaviors to arise from an underlying socioemotional disorder. The evidence from this study supports the SAM model, indicating that ELL children may exhibit differing levels of shy behavior depending upon language context. It should be noted that it is possible that individual ELL children demonstrate elevated levels of shy behavior regardless of language context, as predicted by the SDM model. However, the results from this study suggest that children demonstrating higher levels of shy behavior across language speaking contexts should be considered the exception and not the rule.

#### **Clinical implications**

The outcomes of this study carry substantial implications regarding how to interpret withdrawn behavior demonstrated by ELL children. Although increased levels of shy behavior have been associated with negative developmental outcomes (Bohlin et al., 2005; Coplan & Armer, 2005; Coplan et al., 2004; Coplan et al., 2001; Engfer, 1993; Harrist et al., 1997, Hart et al., 2000; Rubin et al., 1989), the results of this study suggest that professionals working with children who are acquiring English as a second language use discretion before pathologizing shy behavior. The shy behavior of ELL children was found to be influenced by language context, indicating that, at least in some communication interactions, these children were not producing the types of behavior that result in negative outcomes. Additionally, the increased ratings of shyness, but not unsociability, highlight the complexity of withdrawn behavior and the necessity of examining shyness and unsociability as two separate constructs of withdrawn behavior. Previous research has demonstrated that various types of isolative behavior result in differing socioemotional consequences (Coplan & Armer, 2007), and as a result it would seem prudent for professionals serving this population of children to consider both the context in which withdrawal behavior is occurring and the type of withdrawn behavior exhibited. The type of assistance that is offered to ELL children should be provided within this framework.

#### **Limitations and Future Directions**

One potential limitation of this study is that parents rating scales that parents completed were presented in English and not in their native language. The English abilities of the parents were not examined prior to their participation in this study, nor was there an inclusionary/exclusionary criteria included in the study design for parental participation based upon English proficiency. Additionally, the treatment of the ELL children as a homogenous group may not have accurately represented the various cultural groups had they been studied as individual communities. However, despite the first-language diversity represented in the ELL group, the child self-ratings and parental ratings of withdrawn behavior were consistent. Both the ELL and NE groups showed similar means and

distributions across the SLAS and WBS, which would not have been expected if mothers in the ELL group had not understood the questions or if there had been a large cultural variation within the ELL group.

Although this study found increased ratings for shy behavior in English versus native language contexts in ELL children, future research is needed to clarify the impact of increased shy behavior on this group of children's development. Increased shy behavior has been associated with negative developmental outcomes; however, it is unknown what level of shy behavior place ELL children at risk for later difficulties or if shyness places the children at risk at all. Although the ELL children in this study had higher ratings of shyness in English-speaking contexts, the children may have less risk for negative outcomes because the shyness they experience is not across all contexts. It is possible that participating in language contexts where they do not exhibit shy behavior, such as interactions in their native language, may buffer these children from any adverse effects associated with shyness in English contexts. Future research should explore whether such a buffering effect exists. Longitudinal research also should describe the trajectory of shy behavior in ELL children. For example, future research should investigate whether ELL children's ratings of shyness are stable or change over time as a result of increased English language proficiency. The SAM would predict that ELL children would experience a decrease in their ratings of shyness as they gain language proficiency and thus lessen their anxiety during interactions with English speaking peers. Alternatively, the SDM would predict that the shy behaviors of ELL children would not change as their English skills developed.

Future research is also needed to validate further the WBS as a measure of withdrawn behavior in children. Many measures that examine withdrawn behavior in children focus on withdrawn behavior as a general construct or only address shyness and unsociability in preschool children. Results from this study demonstrate that the WBS provides a method of examining shyness and unsociability that is not currently addressed by other measures of social behavior. However, this study included a relatively small sample within a limited age range. Future studies should investigate the psychometric properties of the WBS with an aim toward validating this measure.

#### Conclusion

This study has demonstrated the value of investigating the withdrawn behavior of ELL children using methodologies that are widely used in the study of other populations. The differences found in the ratings of ELL children's shy and unsociable behavior between the native language and English speaking contexts highlight the complexity of withdrawn behaviors experienced by children in this group. Based upon the findings in this study, professionals working with ELL children need to be conscious of the type of withdrawn behavior children are exhibiting, and under what linguistic context, before pathologizing an individual's behavior. Future research should focus on establishing what types of withdrawn behavior are truly problematic in ELL children and ways in which such behaviors may be efficiently measured.

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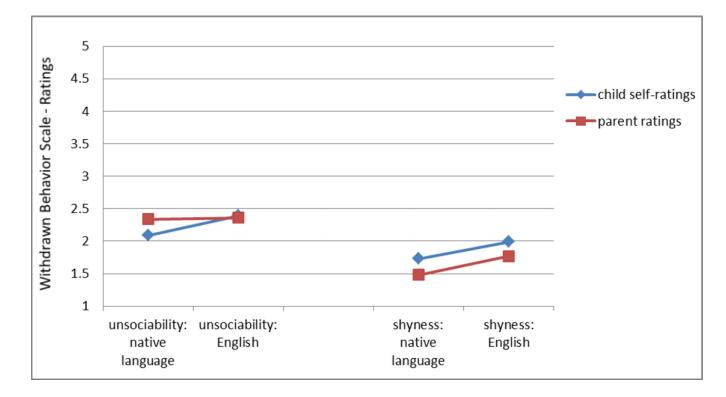
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NEVER	NOT OFTEN	SOMETIMES	OFTEN	VERY OFTEN
	-			

**Figure 1.** Visual Likert Scale

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### Figure 2.

English language learner group, significant interaction for Rater  $\times$  Behavior *Note:* WBS rating of behavior frequency: 1 = never, 2 = not often, 3 = sometimes, 4 = often, 5 = very often

English proficiencies: Peabody Picture Vocabulary Test-4, Expressive Vocabulary Test-2, and Speech-Language Assessment Scale raw scores

Ash et al.

Native language (English) M (SD)95% CISecond language (English) M (SD)95% CIic $13.196$ $95\%$ CI $(English)$ M (SD) $95\%$ CIic $157.35 (29.98)$ $124.5 (24.85)$ $115.80-133.20$ ic $113-196$ $148.02-166.68$ $72-172$ $115.80-133.20$ is $113-196$ $148.02-166.68$ $72-172$ $115.80-133.20$ is $113-196$ $148.02-166.68$ $72-172$ $115.80-133.20$ is $87.62 (19.35)$ $87.62 (19.35)$ $88.762 (19.35)$ is $87-127$ $107.07-115.10$ $49-129$ $80.87-94.37$ is $87-127$ $107.07-115.10$ $49-129$ $80.87-94.37$ is $84-155$ $114.84-128.02$ $60-123$ $89.94-101.47$ is $86-128$ $82.58-93.53$ $89.94-101.47$ is $86-128$ $82.58-93.53$ $89.94-101.47$ is $86-128$ $82.58-93.53$ $89.94-101.47$ is $569(1.19)$ $550-6.09$ $56-128$ $82.58-93.53$ is $569(1.94)$ $5.28-5.91$ $2.00-7.00$ $3.88-4.88$ is $5.59(.94)$ $5.28-5.91$ <th>Innguage         95% CI         F (1,70)           dish)         27.076 ***           (3D)         27.076 ***           (172         115.80-133.20           -172         115.80-133.20           (19.35)         38.293 ***           -172         115.80-133.20           (19.35)         38.293 ***           (129         80.87-94.37           (15.65)         80.94-101.47           (15.65)         35.086 ***           (15.65)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         379-4.79           (1.43)         3.79-4.79           (1.29)         12.542 ***           (1.29)         4.02-4.92</th> <th>Innguage         95% CI         F (1,70)           (32D)         27.076 ***           (32D)         27.076 ***           (172         115.80-133.20           -172         115.80-133.20           (19.35)         38.293 ***           (172)         115.80-133.20           (19.35)         38.293 ***           (129)         80.87-94.37           (15.65)         80.94-101.47           (15.65)         35.086 ***           (15.65)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         37.94.79           (1.43)         20.766 ***           (1.43)         3.794.79           (1.29)         12.542 ***           -6.50         4.02-4.92</th> <th></th> <th></th> <th>(1 - 1)</th> <th></th> <th>(n = 34)</th> <th></th> <th></th>	Innguage         95% CI         F (1,70)           dish)         27.076 ***           (3D)         27.076 ***           (172         115.80-133.20           -172         115.80-133.20           (19.35)         38.293 ***           -172         115.80-133.20           (19.35)         38.293 ***           (129         80.87-94.37           (15.65)         80.94-101.47           (15.65)         35.086 ***           (15.65)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         379-4.79           (1.43)         3.79-4.79           (1.29)         12.542 ***           (1.29)         4.02-4.92	Innguage         95% CI         F (1,70)           (32D)         27.076 ***           (32D)         27.076 ***           (172         115.80-133.20           -172         115.80-133.20           (19.35)         38.293 ***           (172)         115.80-133.20           (19.35)         38.293 ***           (129)         80.87-94.37           (15.65)         80.94-101.47           (15.65)         35.086 ***           (15.65)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         35.086 ***           (1.43)         37.94.79           (1.43)         20.766 ***           (1.43)         3.794.79           (1.29)         12.542 ***           -6.50         4.02-4.92			(1 - 1)		(n = 34)		
core $157.35(29.98)$ $124.5(24.85)$ core $113-196$ $148.02-166.68$ $72-172$ $115.80-133.20$ rd Score $111.08(12.04)$ $87.62(19.35)$ $87.62(19.35)$ rd Score $111.08(12.04)$ $87.62(19.35)$ $89.87-94.37$ re $87-127$ $107.07-115.10$ $49-129$ $80.87-94.37$ core $121.43(19.76)$ $95.71(16.52)$ $89.94-101.47$ core $121.43(19.76)$ $95.71(16.52)$ $89.94-101.47$ core $121.43(19.76)$ $95.71(16.52)$ $89.94-101.47$ core $121.43(19.76)$ $88.06(15.65)$ $82.58-93.53$ core $109.22(12.10)$ $88.06(15.65)$ $82.58-93.53$ cd Score $109.22(12.10)$ $88.06(15.65)$ $82.58-93.53$ ed Score $109.22(12.10)$ $5.6-12.8$ $82.58-93.53$ ed Score $3.67-7.00$	4       27.076 ****         8core       157.35 (29.98)       124.5 (24.85)       27.076 ****         ge       113-196       148.02-166.68       72-172       115.80-133.20       38.293 ****         ge       113-196       148.02-166.68       72-172       115.80-133.20       38.293 ****         ge       87-127       107.07-115.10       49-129       80.87-94.37       35.086 ****         ge       87-127       107.07-115.10       49-129       80.87-94.37       35.086 ****         be       87-127       107.07-115.10       49-129       80.87-94.37       35.086 ****         be       87-127       107.07-115.10       49-129       80.87-94.37       35.086 ****         be       87-125       114.84-128.02       60-123       89.94-101.47       40.834 ****         be       88.06 (15.65)       89.94-101.47       17.768 ****       40.834 ****         ge       90-130       105.18-113.25       56-128       82.58-93.53       40.834 ****         ge       36.77.00       5.30-6.09       2.00-7.00       3.88-4.88       17.768 ****         ge       3.67-7.00       5.30-6.09       2.00-7.00       3.88-4.88       17.768 ****         ge       3.67-7.00 <th><math display="block"> \begin{array}{cccccccccccccccccccccccccccccccccccc</math></th> <th></th> <th>Native language (English) M (SD)</th> <th>95% CI</th> <th>Second language (English) M (SD)</th> <th>95% CI</th> <th>F (1,70)</th> <th>eta<sup>2</sup></th>	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		Native language (English) M (SD)	95% CI	Second language (English) M (SD)	95% CI	F (1,70)	eta <sup>2</sup>
Score $157.35 (29.98)$ $124.5 (24.85)$ ge $113-196$ $148.02-166.68$ $72-172$ $115.80-133.20$ ard Score $111.08 (12.04)$ $87.62 (19.35)$ $87.62 (19.35)$ ge $87-127$ $107.07-115.10$ $49-129$ $80.87-94.37$ score $111.08 (12.04)$ $87.62 (19.35)$ $89.94-101.47$ score $121.43 (19.76)$ $95.71 (16.52)$ $89.94-101.47$ score $121.43 (19.76)$ $88.06 (15.65)$ $89.94-101.47$ ard Score $109.22 (12.10)$ $88.06 (15.65)$ $89.94-101.47$ ard Score $109.22 (12.10)$ $88.06 (15.65)$ $89.94-101.47$ ge $90-130$ $105.18-113.25$ $56-128$ $82.58-93.53$ ge $3.67-7.00$ $5.30-6.09$ $2.00-7.00$ $3.88-4.88$ nicis $5.59 (.94)$ $4.29 (1.43)$ $4.29 (1.43)$ ge $4.00-7.00$ $5.28-5.91$ $2.00-6.33$ $3.79-4.79$ x $5.47 (1.11)$ $4.47 (1.29)$ $5.00-6.03$ $3.79-4.79$			PPVT-4						
ge113-196148.02-166.68 $72-172$ 115.80-133.20and Score111.08 (12.04) $87.62 (19.35)$ $87.62 (19.35)$ $ge$ $87-127$ 107.07-115.10 $49-129$ $80.87-94.37$ $ge$ $87-127$ 107.07-115.10 $49-129$ $80.87-94.37$ Score121.43 (19.76) $95.71 (16.52)$ $89.94-101.47$ $ge$ $84-155$ 114.84-128.02 $60-123$ $89.94-101.47$ $ge$ $84-155$ 114.84-128.02 $60-123$ $89.94-101.47$ $ge$ $90-130$ 105.18-113.25 $56-128$ $82.58-93.53$ $ge$ $90-130$ 105.18-113.25 $56-128$ $82.58-93.53$ $ge$ $3.67-7.00$ $5.30-6.09$ $2.00-7.00$ $3.88-4.88$ $ge$ $3.67-7.00$ $5.30-6.09$ $2.00-7.00$ $3.88-4.88$ $ge$ $4.00-7.00$ $5.28-5.91$ $2.00-6.33$ $3.79-4.79$ $ge$ $5.471(1.11)$ $4.471(1.29)$ $5.00-6.03$ $3.79-4.79$	$-172$ $115.80-133.20$ $(19.35)$ $38.293^{***}$ $-129$ $80.87-94.37$ $38.293^{***}$ $-129$ $80.87-94.37$ $35.086^{***}$ $(15.65)$ $89.94-101.47$ $35.086^{***}$ $-123$ $89.94-101.47$ $40.834^{***}$ $-128$ $82.58-93.53$ $40.834^{***}$ $-128$ $82.58-93.53$ $17.768^{***}$ $-128$ $82.58-93.53$ $17.768^{***}$ $-128$ $82.58-93.53$ $20.766^{***}$ $-128$ $3.88-4.88$ $17.768^{***}$ $-7.00$ $3.88-4.88$ $20.766^{***}$ $-6.33$ $3.79-4.79$ $12.542^{***}$ $-6.59$ $4.02-4.92$ $12.542^{***}$	$-172$ $115.80-133.20$ $(19.35)$ $38.293^{***}$ $-129$ $80.87-94.37$ $38.293^{***}$ $-123$ $89.94-101.47$ $35.086^{***}$ $-123$ $89.94-101.47$ $40.834^{***}$ $-128$ $82.58-93.53$ $40.834^{***}$ $-128$ $82.58-93.53$ $17.768^{***}$ $-128$ $82.58-93.53$ $17.768^{***}$ $-128$ $82.58-93.53$ $17.768^{***}$ $-128$ $82.58-93.53$ $17.768^{***}$ $-128$ $3.38-4.88$ $17.768^{***}$ $-120$ $3.38-4.88$ $17.766^{***}$ $-120$ $3.38-4.88$ $17.768^{***}$ $-120$ $3.79-4.79$ $12.542^{***}$ $-6.50$ $4.02-4.92$ $12.542^{***}$	Raw Score	157.35 (29.98)		124.5 (24.85)		27.076 <sup>***</sup>	.282
ard Score111.08 (12.04) $87.62 (19.35)$ ge $87-127$ $107.07-115.10$ $49-129$ $80.87-94.37$ score $87-127$ $107.07-115.10$ $49-129$ $80.87-94.37$ score $121.43 (19.76)$ $95.71 (16.52)$ $89.94-101.47$ ge $84-155$ $114.84-128.02$ $60-123$ $89.94-101.47$ ard Score $109.22 (12.10)$ $88.06 (15.65)$ $89.94-101.47$ ard Score $109.22 (12.10)$ $88.06 (15.65)$ $89.94-101.47$ ge $90-130$ $105.18-113.25$ $56-128$ $82.58-93.53$ ge $3.67-7.00$ $5.30-6.09$ $2.00-7.00$ $3.88-4.88$ nicis $5.59 (.94)$ $4.29 (1.43)$ $4.29 (1.43)$ ge $4.00-7.00$ $5.28-5.91$ $2.00-6.33$ $3.79-4.79$ $x$ $5.47 (1.11)$ $4.47 (1.29)$ $5.20-6.10$ $5.20-6.10$	$(19.35)$ $38.293^{***}$ $-129$ $80.87-94.37$ $38.293^{***}$ $(16.52)$ $80.87-94.37$ $35.086^{***}$ $(15.65)$ $89.94-101.47$ $40.834^{***}$ $(15.65)$ $89.94-101.47$ $40.834^{***}$ $(15.65)$ $82.58-93.53$ $40.834^{***}$ $(15.65)$ $82.58-93.53$ $17.768^{***}$ $(1.43)$ $17.768^{***}$ $17.768^{***}$ $(1.43)$ $3.88-4.88$ $17.768^{***}$ $(1.43)$ $3.88-4.88$ $17.768^{***}$ $(1.43)$ $3.79-4.79$ $20.766^{***}$ $(1.29)$ $3.79-4.79$ $12.542^{***}$ $(.29)$ $4.02-4.92$ $12.542^{***}$	$(19.35)$ $38.293^{***}$ $-129$ $80.87-94.37$ $38.293^{***}$ $(16.52)$ $80.87-94.37$ $35.086^{***}$ $(15.65)$ $89.94-101.47$ $40.834^{***}$ $(15.65)$ $89.94-101.47$ $40.834^{***}$ $(15.65)$ $82.58-93.53$ $40.834^{***}$ $(15.65)$ $82.58-93.53$ $17.768^{***}$ $(12.60)$ $3.88-4.88$ $17.768^{***}$ $(1.43)$ $3.79-4.79$ $20.766^{***}$ $(1.29)$ $3.79-4.79$ $12.542^{***}$ $(1.29)$ $4.02-4.92$ $12.542^{***}$	Range	113–196	148.02-166.68	72–172	115.80-133.20		
ge $87-127$ $107.07-115.10$ $49-129$ $80.87-94.37$ $score$ $121.43 (19.76)$ $95.71 (16.52)$ $80.87-94.37$ $ge$ $84-155$ $114.84-128.02$ $60-123$ $89.94-101.47$ $ard$ Score $109.22 (12.10)$ $88.06 (15.65)$ $89.94-101.47$ $ard$ Score $109.22 (12.10)$ $88.06 (15.65)$ $89.94-101.47$ $ge$ $90-130$ $105.18-113.25$ $56-128$ $89.94-101.47$ $ge$ $90-130$ $105.18-113.25$ $56-128$ $82.58-93.53$ $ge$ $90-130$ $105.18-113.25$ $56-128$ $82.58-93.53$ $ge$ $3.67-7.00$ $5.30-6.09$ $2.00-7.00$ $3.88-4.88$ $mics$ $5.59 (9.4)$ $4.29 (1.43)$ $3.79-4.79$ $ge$ $4.00-7.00$ $5.28-5.91$ $2.00-6.33$ $3.79-4.79$ $x$ $5.47 (1.11)$ $4.47 (1.29)$ $3.67 -6.00$ $5.28-5.91$	$-129$ $80.87-94.37$ $(16.52)$ $35.086^{***}$ $(15.65)$ $39.94-101.47$ $(15.65)$ $89.94-101.47$ $(15.65)$ $40.834^{***}$ $(15.65)$ $82.58-93.53$ $(1.43)$ $17.768^{***}$ $(1.43)$ $17.768^{***}$ $(1.43)$ $3.88-4.88$ $(1.43)$ $20.766^{***}$ $(1.43)$ $3.79-4.79$ $(1.29)$ $12.542^{***}$ $(1.29)$ $4.02-4.92$	$-129$ $80.87-94.37$ $(16.52)$ $35.086^{***}$ $(15.65)$ $39.94-101.47$ $-123$ $89.94-101.47$ $(15.65)$ $40.834^{***}$ $(15.65)$ $82.58-93.53$ $(1.43)$ $17.768^{***}$ $-128$ $82.58-93.53$ $(1.43)$ $17.768^{***}$ $(1.43)$ $3.88-4.88$ $(1.43)$ $20.766^{***}$ $(1.43)$ $3.79-4.79$ $(1.29)$ $12.542^{***}$ $-6.50$ $4.02-4.92$	Standard Score	111.08 (12.04)		87.62 (19.35)		38.293 <sup>***</sup>	.357
Score $121.43 (19.76)$ $95.71 (16.52)$ $ge$ $84-155$ $114.84-128.02$ $60-123$ $89.94-101.47$ ard Score $109.22 (12.10)$ $88.06 (15.65)$ $89.94-101.47$ $ge$ $90-130$ $105.18-113.25$ $56-128$ $82.58-93.53$ $ge$ $90-700$ $5.30-6.09$ $2.00-7.00$ $3.88-4.88$ $mics$ $5.59 (.94)$ $4.29 (1.43)$ $4.29 (1.43)$ $ge$ $4.00-7.00$ $5.28-5.91$ $2.00-6.33$ $3.79-4.79$ $x$ $5.47 (1.11)$ $4.47 (1.29)$ $5.20-6.02$ $5.20-6.02$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{llllllllllllllllllllllllllllllllllll$	Range	87–127	107.07-115.10	49–129	80.87-94.37		
Score $121.43 (19.76)$ $95.71 (16.52)$ $ge$ $84-155$ $114.84-128.02$ $60-123$ $89.94-101.47$ ard Score $109.22 (12.10)$ $88.06 (15.65)$ $82.58-93.53$ $ge$ $90-130$ $105.18-113.25$ $56-128$ $82.58-93.53$ $ge$ $90-130$ $5.30-6.09$ $2.00-7.00$ $3.88-4.88$ $ge$ $3.67-7.00$ $5.30-6.09$ $2.00-7.00$ $3.88-4.88$ $ge$ $4.00-7.00$ $5.28-5.91$ $2.00-6.33$ $3.79-4.79$ $x$ $5.47 (1.11)$ $4.47 (1.29)$ $5.20-6.02$ $5.20-6.03$	$ \begin{array}{llllllllllllllllllllllllllllllllllll$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	EVT-2						
ge $84-155$ $114.84-128.02$ $60-123$ $89.94-101.47$ ard Score $109.22(12.10)$ $88.06(15.65)$ $89.94-101.47$ ge $90-130$ $105.18-113.25$ $56-128$ $82.58-93.53$ ge $3.67-7.00$ $5.30-6.09$ $2.00-7.00$ $3.88-4.88$ nics $5.59(.94)$ $4.29(1.43)$ $3.79-4.79$ ge $4.00-7.00$ $5.28-5.91$ $2.00-6.33$ $3.79-4.79$ x $5.47(1.11)$ $4.47(1.29)$ $5.28-5.91$ $5.00-6.33$	$-123$ $89.94-101.47$ $40.834^{****}$ $(15.65)$ $82.58-93.53$ $40.834^{****}$ $-128$ $82.58-93.53$ $17.768^{****}$ $-128$ $82.58-93.53$ $17.768^{****}$ $-128$ $82.58-93.53$ $17.768^{****}$ $-128$ $3.88-4.88$ $17.768^{****}$ $-7.00$ $3.88-4.88$ $20.766^{****}$ $-7.00$ $3.88-4.88$ $20.766^{****}$ $-7.00$ $3.88-4.88$ $17.768^{****}$ $-7.00$ $3.88-4.88$ $17.768^{****}$ $-7.00$ $3.88-4.88$ $17.768^{****}$ $-7.00$ $3.88-4.88$ $12.768^{****}$ $-7.00$ $3.88-4.79$ $12.542^{****}$ $-6.50$ $4.02-4.92$ $12.542^{****}$	$-123$ $89.94-101.47$ $(15.65)$ $40.834^{***}$ $-128$ $82.58-93.53$ $-128$ $82.58-93.53$ $-128$ $82.58-93.53$ $-128$ $82.58-93.53$ $-128$ $82.58-93.53$ $-128$ $82.58-93.53$ $-128$ $82.58-93.53$ $-128$ $82.58-93.53$ $-128$ $82.58-93.53$ $-128$ $82.58-93.53$ $-128$ $82.58-93.53$ $-128$ $82.58-93.53$ $-128$ $20.766^{***}$ $-1.43$ $20.766^{***}$ $-1.43$ $3.79-4.79$ $-1.29$ $12.542^{***}$ $-6.50$ $4.02-4.92$	Raw Score	121.43 (19.76)		95.71 (16.52)		35.086 <sup>***</sup>	.337
ard Score $109.22 (12.10)$ $88.06 (15.65)$ ge $90-130$ $105.18-113.25$ $56-128$ $82.58-93.53$ llation $5.69 (1.19)$ $4.38 (1.43)$ $82.58-93.53$ ge $3.67-7.00$ $5.30-6.09$ $2.00-7.00$ $3.88-4.88$ ntics $5.59 (.94)$ $4.29 (1.43)$ $4.29 (1.43)$ ge $4.00-7.00$ $5.28-5.91$ $2.00-6.33$ $3.79-4.79$ x $5.47 (1.11)$ $4.47 (1.29)$ $5.20-6.02$ $5.28-5.91$	$\begin{array}{ccccc} (15.65) & 40.834^{***} \\ -12.8 & 82.58-93.53 & \\ (1.43) & 17.768^{***} \\ -7.00 & 3.88-4.88 & \\ -7.00 & 3.88-4.88 & \\ -7.00 & 3.88-4.88 & \\ -7.00 & 3.88-4.88 & \\ (1.29) & 17.768^{***} & \\ -6.33 & 3.79-4.79 & \\ -6.50 & 4.02-4.92 & \\ -6.50 & 4.02-4.92 & \\ \end{array}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Range	84–155	114.84–128.02	60–123	89.94-101.47		
ge $90-130$ $105.18-113.25$ $56-128$ $82.58-93.53$ Ilation $5.69$ ( $I.19$ ) $4.38$ ( $I.43$ ) $82.58-93.53$ ge $3.67-7.00$ $5.30-6.09$ $2.00-7.00$ $3.88-4.88$ ntics $5.59$ ( $94$ ) $4.29$ ( $I.43$ ) $3.79-4.79$ ge $4.00-7.00$ $5.28-5.91$ $2.00-6.33$ $3.79-4.79$ x $5.47$ ( $I.11$ ) $4.47$ ( $I.29$ ) $5.28-5.91$ $2.00-6.33$ $3.79-4.79$	-128 82.58-93.53 (1.43) 17.768*** -7.00 3.88-4.88 (1.43) 20.766*** -6.33 3.79-4.79 12.542*** -6.50 4.02-4.92	-128 82.58-93.53 (1.43) 17.768*** (1.43) 3.88-4.88 (1.43) 3.88-4.88 (1.43) 3.79-4.79 (1.29) 12.542*** (1.29) 4.02-4.92	Standard Score	109.22 (12.10)		88.06 (15.65)		$40.834^{***}$	.372
Itation $5.69 (1.19)$ $4.38 (1.43)$ $ge$ $3.67-7.00$ $5.30-6.09$ $2.00-7.00$ $3.88-4.88$ inics $5.59 (.94)$ $4.29 (1.43)$ $3.79-4.79$ $ge$ $4.00-7.00$ $5.28-5.91$ $2.00-6.33$ $3.79-4.79$ $x$ $5.47 (1.11)$ $4.47 (1.29)$ $3.79-4.79$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Range	90–130	105.18-113.25	56–128	82.58–93.53		
ation 5.69 (1.19) 4.38 (1.43) 3.67-7.00 5.30-6.09 2.00-7.00 3.88-4.88 ics 5.59 (.94) 4.29 (1.43) 4.20 (1.43) 5.47 (1.11) 4.47 (1.29) 5.47 (1.11) 5.28-5.91 2.00-6.33 3.79-4.79 5.47 (1.20) 5.28-5.91 2.00-6.33 3.79-4.79	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	SLAS						
ics 3.67–7.00 5.30–6.09 2.00–7.00 3.88–4.88 ics 5.59 (.94) 4.29 (1.43) ics 4.00–7.00 5.28–5.91 2.00–6.33 3.79–4.79 5.47 (1.11) 4.47 (1.29)	$\begin{array}{cccc} -7.00 & 3.88-4.88 \\ (1.43) & 20.766^{***} \\ +6.33 & 3.79-4.79 \\ (1.29) & 12.542^{***} \\ +6.50 & 4.02-4.92 \end{array}$	$\begin{array}{cccc} -7.00 & 3.88-4.88 \\ (1.43) & 20.766^{***} \\ -6.33 & 3.79-4.79 & \\ (1.29) & 12.542^{***} \\ -6.50 & 4.02-4.92 & \end{array}$	Articulation	5.69 (1.19)		4.38 (1.43)		$17.768^{***}$	.205
ics 5.59 (.94) 4.29 (1.43) 4.29 (1.43) 5.47 (1.11) 5.28-5.91 2.00-6.33 3.79-4.79 4.47 (1.29)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	(1.43) 20.766*** -6.33 3.79-4.79 12.542*** (1.29) 12.542***	Range	3.67-7.00	5.30-6.09	2.00-7.00	3.88-4.88		
4.00-7.00     5.28-5.91     2.00-6.33     3.79-4.79       5.47 (1.11)     4.47 (1.29)	-6.33 3.79-4.79 (1.29) 12.542*** -6.50 4.02-4.92	-6.33 3.79-4.79 (1.29) 12.542*** -6.50 4.02-4.92	Semantics	5.59 (.94)		4.29 (1.43)		20.766 <sup>***</sup>	.231
5.47 (1.11) 4.47 (1.29)	(1.29) 12.542*** -6.50 4.02-4.92	(1.29) 12.542*** -6.50 4.02-4.92	Range	4.00-7.00	5.28-5.91	2.00-6.33	3.79-4.79		
	-6.50	L6.50	Syntax	5.47 (1.11)		4.47 (I.29)		$12.542^{***}$	.154
0.20-0.2 48.2-01.2 00.7-02.2	<i>lote:</i> SLAS scores 1 = very low, 4 = normal for age, 7 = very high; $\frac{1}{n < 0.5}$	<i>fote:</i> SLAS scores 1 = very low, 4 = normal for age, 7 = very high; p<.05, * m<01.	Range	3.50-7.00	5.10-5.84	2.50–6.50	4.02-4.92		

English language learner group Speech Language Assessment Scale raw scores in English and native language: Means, standard deviations, ranges, and confidence intervals

	English	English Language Learners (n = 34)	earners			
	English M (SD)	95% CI	Native language M (SD)	95% CI	F(1,67)	eta <sup>2</sup>
Articulation 4.38 (1.43)	4.38 (1.43)		4.83 (1.49)		1.619	.024
Range	2.00-7.00	3.88-4.88	2.00-7.00	4.31-5.35		
Semantics	4.29 (1.43)		4.72 (1.40)		1.580	.023
Range	2.00-6.33	3.79-4.79	2.00-7.00	4.24-5.21		
Syntax	4.47 (1.29)		4.72 (1.55)		.525	.008
Range	2.50-6.50	2.50-6.50 4.02-4.92	2.00-7.00	4.18-5.26		
	1	- V	1 for and 7 -	hich wor		

*Note:* SLAS scores 1 = very low, 4 = normal for age, 7 = very high

Withdrawn Behavior Scales by subscale: Child and parent ratings of shy and unsociable behaviors, means, standard deviations, ranges and confidence intervals

	Native En	Native English Speakers $(n = 37)$ M $(SD)$	rs (n = 37)		English Laı	English Language Learners (n = 34) M $(SD)$	(ers (n = 34))	
	Child	95% CI	Parent	95% CI	Child	95% CI	Parent	95% CI
Unsociable Ratings								
Native language	3.10 (.57)	2.91–3.29	3.10 (.57) 2.91–3.29 3.36 (.46) 3.20–3.51	3.20-3.51	2.09 (.60)	1.88 - 2.30	2.34 (.53) 2.15–2.63	2.15-2.63
Range	2.00-4.33		2.33-4.33		1.00-3.50		1.33-4.33	
Non-native language					2.39 (.69)	2.15-2.52	2.36 (.59)	2.15-2.56
Range					1.33–3.83		1.00–3.43	
Shy Ratings								
Native language	2.09 (.69)	1.86–2.32	1.72 (.43)	1.58 - 1.86	2.09 (.69) 1.86–2.32 1.72 (.43) 1.58–1.86 1.73 (.81)	1.45 - 2.02	1.45–2.02 1.48 (.53) 1.29–1.66	1.29 - 1.66
Range	1.29–4.57		1.00–2.86		1.00-4.14		1.00–2.57	
Non-native language					1.99 (.85)		1.69–2.29 1.77 (.72) 1.52–2.02	1.52 - 2.02
Range					1.00-4.14		1.00 - 3.43	

*Note:* WBS ratings 1 = never, 2 = not often, 3 = sometimes, 4 = often, 5 = very often

Language group comparison: Language group (native English, English language learner)  $\times$  Rater (parent, child)  $\times$  Behavior type (shy, unsociable) – Sex treated as a covariate

Source	df	F	eta <sup>2</sup>
Between subjects			
Language group	1	39.83***	.369
Error	68		
Within subjects			
Rater	1	.16	.002
Error	68		
Rater × Language group	1	.15	.002
Behavior type	1	27.01***	.284
Error	68		
Behavior type $\times$ Language group	1	32.06***	.320
Rater $\times$ Behavior type	1	.35	.005
Error	68		
Rater $\times$ Behavior type $\times$ Language group	1	<.001	<.001

\* p<.05,

\*\* p<.01,

\*\*\* p<.001

Shyness and Unsociability: Language group (native English, English language learner)  $\times$  Rater (parent, child) – Sex treated as a covariate

Source	df	F	eta <sup>2</sup>
Dependent variable: Shyness			
Between subjects			
Language group	1	5.52*	.075
Error	68		
Within subjects			
Rater	1	<.001	<.001
Rater $\times$ Language group	1	.11	.002
Error	68		
Dependent variable: Unsociability			
Between subjects			
Language group	1	86.14***	.559
Error	68		
Within subjects			
Rater	1	.391	.006
Rater $\times$ Language group	1	.093	.001
Error	68		

\* p<.05,

\*\*

*p*<.01,

p<.001

English language learner group: Rater (parent, child)  $\times$  Behavior type (shy, unsociable)  $\times$  Language context (native language, English)

Source	df	F	eta <sup>2</sup>
Within subjects			
Rater	1	.19	.006
Error	33		
Behavior type	1	63.46***	.658
Error	33		
Language context	1	8.84**	.211
Error	33		
Rater $\times$ Behavior type	1	11.53**	.259
Error	33		
Rater × Language context	1	1.67	.048
Error	33		
Behavior type $\times$ Language context	1	2.49	.070
Error	33		
Rater $\times$ Behavior type $\times$ Language context	1	1.96	.056
Error	33		

\* p<.05,

\*\* p<.01,

\*\*\* p<.001

English language learner group shyness: Rater (parent, child) × Language context (native language, English)

Source	df	F	eta <sup>2</sup>
Dependent variable: Shyness			
Rater	1	4.02*	.108
Error	33		
Language context	1	12.54***	.275
Error	33		
Rater $\times$ Language context	1	.07	.002
Error	33		

\* p<.05,

\*\* p<.01,

\*\*\* p<.001

# Summary of findings

Analysis	Group Effects	eta <sup>2</sup>	Interaction	eta <sup>2</sup>
Language Group Differences				
Shyness Ratings	NE > ELL	.075		.320
Unsociability Ratings	NE > ELL	.559	Language Group × Behavior Type	
ELL Behavioral Ratings				
Shyness	English > Native Language	.275		.259
Unsociability	English = Native Language	.05	Rater $\times$ Behavior Type	